

The effect of counseling using video media on knowledge of dysmenorrhea among adolescent students

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Abstract

The high incidence of dysmenorrhea among adolescent girls is often not balanced with sufficient knowledge about its management. Limited information and lack of education cause adolescents to be unable to manage pain properly, which results in disrupted learning activities. This study aimed to determine the effect of counseling using video media on the level of knowledge of adolescent girls regarding dysmenorrhea management. This study applied a pre-experimental design with a one-group pre-test post-test approach. A sampel total of 29 adolescent girls were selected through purposive sampling. The intervention consisted of counseling delivered through video media. The research instrument was a knowledge questionnaire, and data were analyzed using the Wilcoxon test with a significance level of 0.05. The findings showed an improvement in knowledge categories from fair (51.72%) and poor (48.28%) to good (51.72%) and fair (48.28%). The Wilcoxon test indicated a significant difference ($p = 0.001$). In conclusion, counseling using video media had a significant effect on improving the knowledge of adolescent girls regarding dysmenorrhea management. Routine education is recommended so that adolescents are able to manage dysmenorrhea independently and remain active in learning.

Keywords: adolescent girls; dysmenorrhea; education; knowledge; video media

1. Introduction

Dysmenorrhea is one of the most common menstrual disorders experienced by adolescent girls. According to the World Health Organization (2017), more than 50% of women worldwide suffer from dysmenorrhea. Its prevalence varies across countries, such as the United States (85%), Italy (84.1%), and Australia (80%). In Asia, the average prevalence reaches 84.2%, with relatively high rates reported in Thailand (84.2%) and Malaysia (69.4%) (Anriyani, 2024). The incidence of dysmenorrhea in Indonesia is also considerably high, with a prevalence of 64.2% (Florentina Kusyanti 2023).

Dysmenorrhea not only disrupts daily activities due to physical pain but also affects psychological conditions, such as irritability, sleep disturbances, difficulty concentrating, and reduced participation in learning activities. Many adolescents perceive menstrual pain as a normal condition. however, if not managed properly, dysmenorrhea may indicate more serious conditions such as endometriosis. Therefore appropriate management is required to help alleviate dysmenorrhea. (Marliany., 2023). The low level of knowledge among adolescent girls regarding the management of dysmenorrhea is one of the factors that can exacerbate its impact. A lack of understanding causes adolescents to be unprepared physically and mentally in facing menstruation, making them more likely to panic or feel confused when experiencing menstrual pain. This condition may also lower the pain tolerance threshold, causing complaints that could actually be managed to feel more severe. As a result, many students are forced to rest in the school health unit for long periods or even return home, missing school lessons. If this situation persists, the impact extends not only to health but also to school attendance and academic performance (Marliany, 2023). This highlights the importance of providing accurate information from health professionals so that adolescents are able to manage dysmenorrhea properly and continue to participate in learning activities (Shopiatul & Asri, 2022).

A study conducted at IT Cendekia Junior High School Doyo Baru showed that the majority of adolescent girls had low knowledge about dysmenorrhea, with 53.3% of respondents categorized as poor, 40% as fair, and only 6.7% as good. This lack of knowledge was attributed to limited sources of information on reproductive health. Health education is considered one of the effective efforts to improve adolescents' understanding of dysmenorrhea management. (Yuliyanti dkk., 2022).

Health education has been proven effective in improving adolescent girls' knowledge about dysmenorrhea, as it provides clear and easily understandable information regarding its causes, symptoms, management, and prevention. Through a structured educational process, adolescent girls can gain new insights that were previously unknown, enabling them to recognize the signs of dysmenorrhea

earlier and apply appropriate management strategies to reduce discomfort (Marliany, 2023). The effectiveness of health education is influenced by the media and methods used for its delivery. Printed media such as leaflets, brochures, and posters are considered effective because they provide detailed information and can be reread, contributing to a knowledge increase of around 50–60%. Visual media such as videos are more engaging and easier to remember, with an effectiveness rate of 70–80% (Santoso B, 2020). Meanwhile, television reaches a wide audience with an effectiveness rate of 60–70% (Dewi C, 2021). In contrast, audio media such as radio and tapes are less effective for adolescents due to their limited appeal and accessibility (Arifin D, 2022). In addition to media, the method of delivery also plays an important role. Counseling allows participants to ask questions directly, demonstrations provide real practice, and group discussions encourage interaction and the sharing of experiences. Therefore, the combination of appropriate media and methods is recommended to achieve optimal outcomes in dysmenorrhea education. (Nur Khasanah., 2023).

The provision of health education on dysmenorrhea management is a program designed to enhance adolescent girls' understanding of this condition. Through this approach, essential information such as causes, symptoms, and management strategies is delivered using various effective methods and media (Santoso B, 2020). A study by Evin Viorano (2023) at State Junior High School 11 Jambi City implemented an educational package through lectures combined with audiovisual media. The results showed a significant difference in students' knowledge before and after the intervention, indicating the effectiveness of lectures and audiovisual media in improving knowledge about self-management of dysmenorrhea. Similarly, research conducted by Arini Agriani et al (2023) at MAS PP Yarsib Lapajung provided education using video and poster media. The findings demonstrated that both video and poster interventions had a significant impact on improving knowledge and attitudes toward dysmenorrhea among adolescent girls.

Unlike previous studies, this research employed an educational approach that combined counseling methods with video media to improve adolescent girls' knowledge of dysmenorrhea management. This combination has not been widely applied in earlier studies. Video media is considered effective in delivering information systematically and engagingly, thereby facilitating better understanding. Meanwhile, counseling serves as a non-formal method of delivering health information aimed at increasing knowledge and shaping healthy behaviors. The effectiveness of counseling is influenced by the interaction between the educator and participants, as well as their shared understanding of the material. This study is expected to demonstrate the positive impact of video-based educational packages on improving adolescents' knowledge. Therefore, the purpose of this study was to determine the effect of educational packages on the knowledge level of adolescent girls regarding dysmenorrhea management.

2. Method

This study employed a quantitative approach with a pre-experimental design. The design applied was a pretest and posttest with control group design (Farhan Arib et al., 2024). The research was conducted at Muhammadiyah 2 Junior High School Gamping, Sleman, Yogyakarta, from August 2024 to June 2025. The independent variable in this study was counseling using video media, while the dependent variable was the knowledge level of adolescent girls regarding dysmenorrhea management. The study population consisted of adolescent girls at Muhammadiyah 2 Junior High School Gamping who had experienced menstruation. A total of 29 respondents were selected as the sample using a purposive sampling technique.

The research instruments included a knowledge questionnaire on dysmenorrhea and an educational package in the form of video media delivered through counseling. The intervention consisted of counseling sessions using video media. The knowledge questionnaire was adopted from Dewi (2021) and had been validated through expert content review by specialists in a previous study. The questionnaire comprised 20 items assessed using the Guttman scale, with a score of 1 for correct answers and 0 for incorrect answers. The results were categorized into three levels of knowledge: good (76–100%), fair (56–75%), and poor (<56%). Data collection was conducted directly by distributing printed questionnaires to respondents at the research site. Measurements were carried out using pretests and posttests administered to the participants. Data were analyzed using the Wilcoxon test with a

significance level of $p < 0.05$. Ethical approval was obtained from the Ethics Committee of Universitas 'Aisyiyah Yogyakarta under approval number 4416/KEP-UNISA/V/2025.

3. Results and Discussion

3.1. Characteristics of Respondents

The study was conducted at Muhammadiyah 2 Junior High School Gamping and involved female students from Grade VII, Grade VII A, and Grade VIII B, with a total of 29 respondents. The educational intervention consisted of counseling using video media, which lasted for approximately 60 minutes. The characteristics of the respondents based on class and age are presented in Table 1:

Table 1. Characteristics by Class and Age

Respondent Characteristics	Group (N=29)	
	F	Percentage (%)
Class		
VII	12	41.38
VIII A	10	34.48
VIII B	7	24.14
Age		
12 Years Old	2	6.90
13 Years Old	9	31.03
14 Years Old	14	48.28
15 Years Old	4	13.79

Based on Table 1, it can be seen that most of the respondents were from Grade VII, totaling 12 students (41.38%). Furthermore, 10 respondents (34.48%) were from Grade VIII A, while the smallest proportion was from Grade VIII B with 7 respondents (24.14%). This indicates that the distribution of respondents was relatively even across the classes, although the majority were in Grade VII.

In terms of age, the majority of respondents were 14 years old, totaling 14 students (48.28%), followed by 9 students aged 13 years (31.03%). Meanwhile, 4 respondents were 15 years old (13.79%), and the smallest proportion was 2 respondents aged 12 years (6.90%). Thus, it can be concluded that most respondents were in the age range of 13–14 years, which represents early adolescence, in line with the characteristics of the study population.

3.2. Knowledge Levels of Adolescent Girls Regarding Dysmenorrhea Management Before and After Education

The level of knowledge of adolescent girls regarding dysmenorrhea management before and after being given education through counseling and video media is presented in Table 2:

Table 2. Knowledge Level Distribution Before and After Video-Based Counseling

Knowledge	Pretest		Posttest	
	F	%	F	%
Score 16–20: Good	0	0	15	51.72
Score 12–15: Adequate	16	55.27	14	48.27
Score 0–11: Poor	13	44.82	0	0
Total	29	100	29	100

Based on the results presented in Table 2, before the educational intervention, the majority of respondents were in the fair knowledge category (55.27%), while the remaining were in the poor category (44.82%). After the intervention in the form of counseling using video media, a significant improvement was observed, with 51.72% of respondents reaching the good knowledge category and 48.27% in the fair category, with none remaining in the poor category. These findings indicate that counseling through video media has a positive effect on improving the level of knowledge of adolescent girls regarding dysmenorrhea management.

These findings are consistent with a study by Arini Agriani (2023) entitled “Comparison of the Effect Between Video and Poster Media on Knowledge and Attitudes About Dysmenorrhea Among Students at MAS PP Yasrib Lapajung, Soppeng Regency”, which demonstrated that the use of video media is more effective than posters in improving students’ knowledge and attitudes regarding menstrual pain. In her study, the average knowledge score in the video group increased significantly from 2.43 in the pretest to 7.37 in the posttest, with a p-value of 0.000. This reinforces the notion that video media has advantages in delivering information systematically and engagingly, as it combines both visual and audio elements, making it easier for adolescents to understand (Santoso B, 2020).

The counseling method, as a form of interactive education, plays an important role because it enables two-way communication between the presenter and the participants. This allows information to be received more clearly, and participants have the opportunity to provide immediate feedback (Ira Nurmala et al., 2018). Therefore, counseling using video media has been proven to effectively improve adolescent girls’ knowledge regarding the management of dysmenorrhea.

3.3. Comparison of Adolescent Girls’ Knowledge on Dysmenorrhea Management Before and After Education

The results of the comparison of knowledge levels regarding dysmenorrhea management before and after education using counseling and video media are presented in Table 3:

Table 3. Comparison of Knowledge Levels Before and After Video-Based Counseling

Pengetahuan Remaja Putri Tentang Dismenore	Kelompok Intervensi (N=29)	
	Mean $\pm$ SD	P-Value
Pretest	11,48 $\pm$ 1,430	0,000
Posttest	15,79 $\pm$ 1,082	
	4,31 $\pm$ 0,348	

Based on the results presented in Table 3, there was an increase in the mean knowledge score of adolescent girls from a pretest mean of 11.48 to a posttest mean of 15.79, with a mean difference of 4.31 ± 0.348 and a p-value of 0.000. This indicates that the improvement in adolescent girls’ knowledge regarding dysmenorrhea management was statistically significant after receiving the intervention in the form of counseling and educational video media.

These findings demonstrate a significant difference in the level of knowledge about dysmenorrhea management among adolescent girls before (pre-test) and after (post-test) receiving education through video-based counseling. This result aligns with the study by Purwaningsih (2023) titled “The Effect of Dysmenorrhea Video Education on Knowledge Levels of Adolescent Girls at SMP Negeri 2 Polokarto” which reported an increase in the mean knowledge score from 15.50 in the pre-test to 19.05 in the post-test after education using video media, with $p = 0.000$. Similarly, the study by Tyas Mayasari (2022) titled “The Effect of Health Education on Dysmenorrhea on Improving Knowledge of Adolescent Girls at SMP Muhammadiyah 2 Gisting, Tanggamus, Lampung, 2022,” also found a significant difference in knowledge levels before and after health education on dysmenorrhea through counseling ($p = 0.000$).

Knowledge is the result of the process of knowing, acquired through sensory experiences and social interactions, and it develops over time (Darsini, fahrurrozi, 2019). According to Bloom as cited in Stevany Paskarina (2024) knowledge stems from human curiosity and can influence one’s attitude toward an object. In the context of dysmenorrhea, adolescent girls with adequate knowledge are better able to recognize its causes and symptoms and to determine appropriate management strategies. Therefore, enhancing knowledge through health education is an essential step in preparing adolescents to cope with menstrual pain more effectively and confidently (Marliany et al., 2023).

Health education is a learning process aimed at improving individuals’ knowledge, attitudes, and behaviors regarding specific health conditions, including dysmenorrhea (Aulia Husna Luthfi, 2021). The use of audiovisual media, such as videos, has been shown to provide visual and auditory stimulation that can enhance information retention more effectively (Arini Agriani et al., 2023). This media not only presents information in a systematic and clear manner but also helps improve participants’ memory retention (Santoso, 2020).

The combination of counseling methods with video media has been proven to be more effective because, in addition to presenting information in an engaging and easily understandable manner, audiovisual media can elicit both cognitive and emotional responses from participants, thereby reinforcing the formation of positive attitudes toward reproductive health (Arini Agriani et al., 2023; Aulia Husna Luthfi, 2021). This media can be accepted by diverse groups with varying educational backgrounds, as information is conveyed through both sound and visuals, making it easier to understand (Santoso, 2020). Moreover, educational videos can be replayed, providing participants with the opportunity to reinforce their understanding of the material.

Thus, it can be concluded that the improvement in adolescent girls' knowledge regarding dysmenorrhea management in this study was influenced by the effectiveness of combining audiovisual media with counseling methods. Video media has advantages in capturing attention, presenting information clearly, and facilitating better understanding, thereby contributing to enhanced preparedness of adolescents in coping with menstrual pain.

4. Conclusion

This study demonstrates that counseling using video media has a significant effect on improving adolescent girls' knowledge regarding dysmenorrhea management at SMP Muhammadiyah 2 Gamping. The results showed an improvement in knowledge categories, from "adequate" and "low" before the intervention to "good" and "adequate" after receiving the educational package through video-based counseling.

These findings underscore the importance of providing structured and engaging health education for adolescents. Regular reproductive health education using audiovisual media is recommended so that adolescent girls can manage dysmenorrhea independently, reduce its negative impact on learning activities, and support their overall well-being.

5. Acknowledgments

The authors would like to express their sincere gratitude to all respondents who participated and took the time to be involved in this study. Thanks are also extended to the school authorities for granting permission and providing facilities during the data collection process. Special appreciation is conveyed to the Nursing Study Program and 'Aisiyiah University Yogyakarta (UNISA) for their support throughout the academic process and the smooth preparation of this publication manuscript.

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