

THE EFFECTIVENESS OF HEALTH PROMOTION THROUGH DYSMENORRHEA EXERCISE ON YOUTUBE ON KNOWLEDGE AND ATTITUDES OF ADOLESCENT GIRLS

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Abstract

Dysmenorrhea, or menstrual pain, is a common health issue among adolescent girls that can interfere with daily activities and academic performance. Unfortunately, it is often considered a normal condition and thus receives little attention. As an alternative solution, education on pain management and dysmenorrhea exercises through interactive media such as videos or educational games can be an effective approach. The purpose of this study is to understand the effectiveness of health with Dysmenorrhea exercises through YouTube on the knowledge and attitudes of adolescent girls. This study is a quantitative study with a Quasy Expreiment Pretest-Posttest design with control group design. The sample in this study were 38 students of class VII junior high school, using random sampling technique, then analysed using the Wilcoxon test. The results of the average analysis after the intervention obtained an increase in the average knowledge and attitude of the YouTube media intervention group greater than the control group using tiktok media, namely knowledge of the intervention group 8.97 control group 8.81 attitude of the intervention group 36.63 control group 36.63. The results of this study indicate that YouTube media is more effective than the TikTok group with knowledge and attitude p value = 0.000. It is anticipated that this study will be used to promote health by disseminating information about menstrual dysmenorrhea and improving people's knowledge and skills.

Keywords: Attitudes, Dysmenorrhea, Knowledge, YouTube

1. INTRODUCTION

Menstruation, often referred to as a period, is a natural bodily process that occurs in women. Menstruation happens when the uterine lining (endometrium) continues to shed despite the absence of fertilization. A woman's menstrual cycle ranges from 23 to 35 days, with an average of 28 days (Wulandari et al., 2018).

Dysmenorrhea, or menstrual pain, is a common yet often misunderstood condition among adolescent girls. Poor knowledge about dysmenorrhea can lead to misinterpretation of symptoms, delayed treatment, and the use of ineffective or harmful coping strategies, such as ignoring the pain or relying on unprescribed medication. Meanwhile, a poor attitude, such as accepting severe pain as "normal" or being embarrassed to discuss menstrual issues, can result in reduced help-seeking behavior and low participation in school or social activities. According to Safitri et al. (2023), dysmenorrhea is caused by an increase in prostaglandin hormones that can make the endometrium contract and constrict blood vessels, resulting in uterine muscle spasms or excessive pain that may last for 2–3 days.

The prevalence of dysmenorrhea is very high worldwide. Research in the United States shows that its prevalence is about 60%, while in Sweden it is 72%. According to studies conducted in the U.S., dysmenorrhea affects 30–50% of suburban women and 10–15% of men (likely an error in the original text), leading to missed workdays, decreased academic performance, and disrupted social life (Marlina, 2019).

In Indonesia, the prevalence of dysmenorrhea among women of reproductive age ranges from 45–95% (Ministry of Health, Republic of Indonesia, 2020). In Bengkulu City, among the 20 Public Health Centers (Puskesmas), the highest number of dysmenorrhea cases was reported at Jalan Gedang Puskesmas, totaling 54 cases. At SMPN 4 Bengkulu City in 2021, 54 cases of dysmenorrhea were recorded (12%).

The impact of dysmenorrhea prevalence can disrupt daily activities, even making it difficult for adolescents to concentrate in school. The discomfort caused by dysmenorrhea can result in decreased academic achievement and frequent absenteeism from school or the workplace, affecting 60–85% (Nurjanah, 2019).

Efforts to increase adolescents' knowledge about dysmenorrhea can now be carried out through various methods, both traditional and digital. One widely used digital platform is YouTube. Broadcast advertisements now have a significant impact on behavioral change, especially in the field of information and media through smartphones, which also help expand audience reach (Marlina, C & Setyono, 2020). A study by Weni Sartiwi et al. (2019) explained that the management of dysmenorrhea is still inadequate. Ridawati (2019) also found that adolescents have limited knowledge about dysmenorrhea. Therefore, this study aims to examine the effectiveness of dysmenorrhea exercise through the YouTube application in improving the knowledge and attitudes of adolescent girls.

2. METHODOLOGY

This study is a quantitative study using a quasi-experimental method with a pre-test and post-test with control group design. The study involved two groups: an intervention group and a control group. The intervention group received education through YouTube, while the control group received education using TikTok media.

The population in this study consisted of 165 junior high school female students, with a sample size of 38 participants. The sampling technique used in this study was simple random sampling. The study was conducted from December to July 2023. Data analysis in this study was performed using the Wilcoxon test. The instrument used to collect data in this study was a structured questionnaire designed to measure the knowledge and attitudes of respondents toward dysmenorrhea. The questionnaire consisted of multiple-choice and Likert-scale items that had been validated for clarity and reliability through a pilot test.

3. RESULTS

Table 1. Characteristics of Students Based on Age

No	Characteristic	Intervention Group		Control Intervention	
		F	%	F	%

1	Age				
	12 Age	7	18,4	14	36,8
	13 Age	28	73,7	23	60,5
	14 Age	3	7,9	1	2,6
	Total	38	100	38	100

Table 1 shows that in the intervention group, where respondents used YouTube videos, the majority (73.7%) were 13 years old, while in the control group, where respondents used TikTok, the majority (60.5%) were also 13 years old.

Table 2. Average Knowledge Scores Before and After the Use of YouTube and TikTok Dysmenorrhea Videos Among Junior High School Students

Variable	Mean \pm SD	Min-Max	CI95%
Treatment Group			
Before	5,21 \pm 0,741	3-8	4,97-5,45
After	8,97 \pm 0,915	6-10	8,67-9,27
Control Group			
Before	5,74 \pm 0,601	5-7	5,54-5,93
After	8,81 \pm 0,755	7-10	8,36-8,85

Table 2 shows that the average knowledge score in the intervention group before the intervention using YouTube media was 5.21, which increased to 8.97 after the intervention. Meanwhile, in the control group, the average knowledge score before the intervention using TikTok media was 5.74, which increased to 8.81.

Table 3: Average Attitude Scores Before and After the Use of YouTube and TikTok Dysmenorrhea Videos Among Students of SMPN 4 and Other Junior High Schools

Variable	Mean \pm SD	Min-Max	CI95%
Treatment Group			
Before (pre)	23,29 \pm 2,470	20-33	22,48-25,10
After (post)	36,63 \pm 0,998	28-39	36,30-36,96
Control Group			
Before (pre)	23,50 \pm 1,310	20-35	23,07-23,93
After (post)	36,63 \pm 0,751	26-38	36,38-36,88

Table 3 shows that the average attitude score in the intervention group before receiving the intervention using YouTube media was 23.29, which increased to 36.63 after the intervention. In the control group, the average attitude score before the intervention using TikTok media was 23.50, which also increased to 36.63.

Table 4: Effectiveness of Health Promotion Through Dysmenorrhea Exercise Using YouTube and TikTok on the Knowledge and Attitudes of Adolescent Girls in Junior High School

Variable	Mean	Δ Mean	P Value
Knowledge	8,97	3,76	0,000
	8,81	3,07	
Attitude	36,63	13,34	0,000
	36,63	13,13	

Table 4 shows the results of the Wilcoxon test, with a p -value = 0.000 \leq 0.05. This indicates that YouTube and TikTok media are effective in improving knowledge and attitudes.

In this study, the majority of adolescent girls in the intervention group who used YouTube videos were 13 years old (73.7%), while in the control group, the majority were also 13 years old (60.5%). Primary dysmenorrhea usually occurs 2 to 3 years after a girl's first menstruation. Nationally, the average age of menarche in Indonesia is between 13 and 14 years (Rskesdas, 2013).

This finding is supported by Andriana (2018), who conducted research on primary dysmenorrhea and physical fitness, and found that women who were menstruating often experienced dysmenorrhea—nearly 75% of them. Primary dysmenorrhea commonly occurs within 12 months or more after menarche, typically in girls aged 10 to 16 years, with an average age of 13. Knowledge in the intervention group increased from 5.21 before the intervention to 8.97 after receiving education using YouTube media. In the control group, knowledge increased from 5.74 to 8.81 after using TikTok media.

These results are consistent with the findings of Sormin (2018), who studied the effectiveness of dysmenorrhea exercises in reducing pain among female students at SMK YPIB Majalengka in 2018. The study showed that dysmenorrhea exercises effectively reduced dysmenorrhea pain in adolescent girls. In the control group, which did not receive any treatment, there was no change in pain levels. The duration of the intervention and post-test period influenced the increase in adolescent knowledge, as memory retention was still strong (Salamu et al., 2021).

Attitude scores in the intervention group increased by 13.34%, while in the control group, they increased by 13.13%. This is due to the fact that a person's attitude tends to be positive if they like a certain topic or possess psychological interest in it. On the other hand, a negative attitude may arise due to disinterest or lower comprehension. The findings of Rosita Ade (2021) also show an improvement in knowledge before and after health education. The average score before the session was 55.60, which increased to 69.80 afterward. Similarly, Sianipar (2021) also found an increase in knowledge post-intervention. According to Sunaryo (2004), attitude is a tendency to consistently respond positively or negatively to an object or situation. It represents a closed response to a stimulus. Based on the analysis, it can be concluded that there is a significant difference in knowledge and attitudes between the intervention and control groups. It has been established that media such as YouTube and TikTok are effective in enhancing knowledge and understanding of dysmenorrhea, with YouTube being more effective in improving knowledge and confidence among young women experiencing menstrual dysmenorrhea.

Health education increases one's knowledge and capabilities through direct techniques or one-on-one teaching, aiming to raise health awareness and encourage positive behavior changes. The most crucial aspect of health education is the selection of appropriate materials and media. Currently,

educators use video media via YouTube to disseminate information that can significantly improve knowledge and skills. The study by Marlina (2020) stated that increased knowledge about reproductive health, particularly menstruation, can enhance women's confidence in managing menstruation and may have both positive and negative impacts. This research, conducted with a sample of 30 people, evaluated the effect of video media on understanding PMS and menstruation. The results were statistically significant, with $p = 0.012$, indicating a significant difference in knowledge before and after the intervention, and thus confirming the impact of Marlina's study.

One of the influencing factors on knowledge is the media, which helps individuals better understand complex information. This increase in knowledge reflects the success of health promotion through social media, which can also lead to changes in attitude. Knowledge is also acquired through sensory learning: approximately 13% through hearing and 35–55% through both sight and hearing. This supports the strategy of using video content, such as YouTube, to raise public awareness and understanding of menstruation and menstrual health (Pratiwi, 2021).

4. CONCLUSIONS

Most of the students were 13 years old. There was an increase in students' knowledge and attitudes after being provided with Maze Chase Game media. Additionally, there was an improvement in students' attitudes after being given dysmenorrhea exercise video media through YouTube.

YouTube video media was found to be more effective in enhancing knowledge and attitudes related to dysmenorrhea exercises compared to TikTok media. This study is expected to serve as an alternative media recommendation for health promoters in delivering information about dysmenorrhea exercises to improve students' knowledge and attitudes.

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