Jurnal Kesehatan Akimal
e-ISSN: 2963-3338
Volume 5 No. 2 Edisi Oktober 2026
https://jurnal.akimal.ac.id/index.php/jka

The Relationship Between Knowledge and Adolescent Behavior in Managing Menstrual Pain

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ARTICLE INFO

Received DD Month 20XX
Accepted DD Month 20XX
Published DD Month 20XX

Keywords:
Knowledge; Menstrual Pain; Behavior; Adolescent Girls.

ABSTRACT

Menstrual pain known as dysmenorrhea, is a common health problem experienced by adolescent girls and may interfere with their daily activities, academic performance, and quality of life. Adequate knowledge is considered an important factor in promoting appropriate menstrual pain management. However, knowledge does not always translate into appropriate health behaviors. This study aimed to determine the relationship between knowledge and behavior in managing menstrual pain among adolescent girls. A quantitative study with a cross-sectional design was conducted involving 55 female students. Data were collected using structured questionnaires assessing respondents' knowledge and behaviors related to menstrual pain management. The collected data were analyzed using univariate and bivariate analyses, with the chi-square test applied to examine the relationship between the variables. The results showed a p-value of 0.232, which was greater than the significance level of 0.05. This finding indicates that there was no statistically significant relationship between knowledge and behavior in managing menstrual pain among the respondents. These results suggest that adequate knowledge alone may not be sufficient to encourage appropriate menstrual pain management practices among adolescents. Therefore, healthcare providers and educational institutions should implement comprehensive health education programs that not only improve knowledge but also address attitudes, personal experiences, family support, environmental influences, access to healthcare services, and individual health habits. Such an approach may help adolescents develop more appropriate and effective menstrual pain management behaviors.

How to cite: Mariyati1., Ida Suryawati2., & Rahmat Muhajir3. (2026). The Relationship Between Knowledge and Adolescent Behavior in Managing Menstrual Pain. *Jurnal Kesehatan Akimal, Vol 5 (No2)*, xx-xx. https://doi.org/10.58435/jka.xxxxxxxx

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INTRODUCTION

Dysmenorrhea refers to pain experienced during menstruation and may be accompanied by nausea, dizziness, fatigue, and lower back pain. When the pain is severe, it can interfere with daily activities and women's quality of life. This condition is particularly important among adolescents, as they are actively engaged in educational activities and social interactions. Menstrual pain is commonly described as cramping in the lower abdomen or back and may also be accompanied by headaches and other symptoms. These conditions indicate that dysmenorrhea can negatively affect adolescents' academic performance and social activities (Pujiati, 2024).

Dysmenorrhea is commonly experienced during adolescence, making adolescent girls an important population in studies of menstrual health. According to the World Health Organization (WHO), adolescence generally refers to the age range of 10–19 years. In Indonesia, the definition of adolescence may vary depending on the reference used. This study adopts the age classification presented by Pratiwi et al. (2024).

Dysmenorrhea is a frequently reported health problem among women of reproductive age, although its prevalence varies across countries and study populations. Several studies have reported that the prevalence of primary dysmenorrhea exceeds 50% in some countries. Munir et al. (2024) reported prevalence rates from various regions, including approximately 59.7% in the United States and 72% in Sweden. These figures indicate that menstrual pain represents a considerable health concern among women worldwide.

In Indonesia, several reports have indicated that dysmenorrhea remains relatively common, including both primary and secondary dysmenorrhea (Hadi & Stefanus Lukas, 2024). In Aceh Province, Wirda et al. (2022) reported that 85% of respondents experienced menstrual pain. The duration of pain ranged from one to five days, with one day being the most frequently reported duration (57%). These findings suggest that menstrual pain remains a relevant reproductive health issue among adolescent girls in the region.

Appropriate management of menstrual pain is essential to prevent dysmenorrhea from interfering with adolescents' daily activities and learning processes. Management strategies can involve both pharmacological and non-pharmacological approaches. Non-pharmacological methods include warm compresses, physical activity or light exercise, relaxation techniques, and adequate rest. A study involving adolescent girls at SMA Negeri 7 Kerinci found that warm compress application was associated with a reduction in menstrual pain, with a statistically significant result ($p = 0.000$). This finding suggests that simple and properly applied interventions may help relieve menstrual pain (Safitri et al., 2023).

A preliminary study conducted among 15 female students at Dayah Modern Ihyaussunnah Lhokseumawe found that all respondents had experienced menstrual pain, although its intensity varied. Eleven students

reported that they usually managed the pain by sleeping or resting, while four continued their daily activities to distract themselves from the discomfort. Furthermore, five of the 15 students stated that they would ask their caregivers for medication if the pain did not subside. These findings indicate variations in adolescents' behaviors when managing menstrual pain and highlight the need to examine factors that may influence their management practices.

Based on these observations, knowledge about menstrual pain management is considered an important factor that may influence adolescents' health behaviors. However, having adequate knowledge does not necessarily guarantee appropriate management practices. Therefore, this study aimed to determine the relationship between knowledge and behavior in managing menstrual pain among adolescent girls at Dayah Modern Ihyaussunnah Lhokseumawe.

METHOD

This study employed a quantitative correlational design with a cross-sectional approach to examine the relationship between knowledge and menstrual pain management behavior among female adolescents at Dayah Modern Ihya Sunnah Lhokseumawe. In a cross-sectional study, the independent and dependent variables are measured during the same period.

The study was conducted at Dayah Modern Ihya Sunnah Lhokseumawe in September 2025. The study population consisted of 55 female adolescents who met the research criteria. Since the eligible population comprised 55 students, a total sampling technique was applied, in which all eligible population members were included as respondents. The inclusion criteria were female students enrolled at Dayah Modern Ihya Sunnah Lhokseumawe, able to communicate effectively, had experienced menstruation, and were willing to participate in the study.

Data collection was conducted after obtaining permission from the management of Dayah Modern Ihya Sunnah Lhokseumawe. Eligible respondents were informed about the objectives, benefits, procedures, and data collection process. Those who agreed to participate provided informed consent and completed the questionnaire. The collected data were subsequently processed through several stages, including editing, coding, cleaning, and tabulating, before statistical analysis was performed. Data analysis consisted of univariate and bivariate analyses. Univariate analysis was used to describe respondents' characteristics and the distribution of study variables in terms of frequencies and percentages. Bivariate analysis was performed using the Chi-square test to determine the relationship between knowledge and menstrual pain management behavior.

RESULT AND DISCUSSION

Table 1. Frequency Distribution of Univariate Data

Nomor	Variabel Data Univariat	N	%
1	Usia Responden		
	9 Tahun	1	1,8
	12 Tahun	9	16,4
	13 Tahun	12	21,8
	14 Tahun	9	16,4
	15 Tahun	7	12,7
	16 Tahun	10	18,2
	17 Tahun	7	12,7
	Total	55	100.0
2	Kelas		
	VII	12	21,8
	VIII	12	21,8
	IX	8	14,5
	X	7	12,7
	XI	8	14,5
	XII	8	14,5
	Total	55	100,0
3	Lama Mondok		
	3 Bulan	10	18,2
	4 Bulan	3	5,5
	1Tahun	6	10,9
	2 Tahun	13	23,6
	5 Tahun	8	14,5
	6 Tahun	15	27,3
	Total	55	100,0
4	Lama Haid Tiap Bulan		
	1 Hari	1	1,8
	4 Hari	1	1,8
	5 Hari	3	5,5
	6 Hari	1	1,8
	7 Hari	29	52,7
	8 Hari	10	18,2
	9 Hari	6	10,9
	10 Hari	2	3,6
	14 Hari	1	1,8
	15 HARI	1	1,8
	Total	55	100,0
5	Apakah Mengalam i Nyeri Haid		
	Ya	39	70,9
	Jarang	7	12,7
	Tidak	9	16,4
	Total	55	100,0
6	Hari Nyeri Terberat		
	Hari Pertama	29	52,7
	Hari Kedua	26	47,3
	Hari Ketiga	15	27,3
	>Hari Ketiga	2	3,6
	Total	55	100,0
7	Gejala Penyerta		
	Mual	6	10,9
	Nyeri Pinggang	34	61,8
	Sakit Perut	10	18,2
	pusing	13	23,6
	Total	55	100
8	Olahraga Lebih >3 Kali / Minggu		
	Ya	33	60,0
	Tidak	32	40,0
	Total	55	100,0
9	Sumber Informasi Nyeri Haid		
	Teman	20	36,4
	Guru	20	36,4
	Dokter	1	1,8
	Keluarga	46	83,6
	Media Sosial	21	38,2
	Total	55	100,0

Table 2. Relationship Between Knowledge and Menstrual Pain Management Behavior Among Adolescents

		Perilaku Mengatasi Nyeri Haid				
		Kurang	Cukup	Baik	Total	*P Value*
Pengetahuan tentang penanganan nyeri haid	Kurang	10	24	5	39	0,232
	Cukup	0	12	2	14	
	Baik	1	1	0	2	
Total		11	37	7	55	

Based on Table 1, the respondents' characteristics showed that the largest age group was 12 years, comprising 12 students (21.8%). Regarding grade level, the highest proportions of respondents were from Grades VII and VIII, with 12 students each (21.8%). In terms of length of stay at the boarding school, 15 respondents (27.3%) had lived there for six years. Most respondents reported a menstrual duration of seven days (29 students; 52.7%), while 39 students (70.9%) experienced menstrual pain. The most severe menstrual pain was commonly reported on the first day of menstruation (29 students; 52.7%), with lower back pain being the most frequently experienced symptom (34 students; 61.8%). Regarding physical activity, 33 respondents (60.0%) exercised more than three times per week. Meanwhile, friends and teachers were the most frequently reported sources of information about menstrual pain (36.4%). These findings indicate that menstrual pain is a common experience among the respondents and highlight the importance of appropriate menstrual health education and pain management practices during adolescence.

Based on Table 2, the majority of respondents had poor knowledge regarding menstrual pain management, accounting for 39 of the 55 respondents (70.9%). Among those with poor knowledge, 10 respondents demonstrated poor management behavior, 24 demonstrated moderate behavior, and 5 demonstrated good behavior. Of the 14 respondents with moderate knowledge, 12 demonstrated moderate behavior and 2 demonstrated good behavior. Meanwhile, among the 2 respondents with good knowledge, one demonstrated poor behavior and the other demonstrated moderate behavior. Overall, menstrual pain management behavior was predominantly classified as moderate (37 respondents; 67.3%), followed by poor behavior (11 respondents; 20.0%) and good behavior (7 respondents; 12.7%). The Chi-square test yielded a p-value of 0.232 (>0.05), indicating no statistically significant relationship between knowledge and menstrual pain management behavior among adolescent girls at Dayah Modern Ihya Sunnah Lhokseumawe.

These findings suggest that knowledge alone may not be sufficient to determine how adolescents manage menstrual pain. Although most respondents had poor knowledge, a considerable proportion demonstrated moderate management behavior. This indicates that adolescents may adopt certain pain management practices based on personal experiences, habits, or recommendations from others, even

when their understanding of menstrual health is limited. However, these potential explanations were not directly examined in the present study and therefore require further investigation.

The findings are consistent with the study conducted by Mardianti, Setianingsih, and Suprawati (2024), which examined the relationship between knowledge, attitudes, and primary dysmenorrhea management among adolescent girls. Their study found that most respondents had good knowledge and practiced non-pharmacological approaches to managing dysmenorrhea. However, no statistically significant relationship was identified between knowledge and dysmenorrhea management ($p = 0.800$). Similar findings were reported by Saputri, Astuti, and Rizky (2023), who found that 72.7% of respondents had good knowledge and 93.2% practiced non-pharmacological dysmenorrhea management, yet no significant relationship was observed between knowledge and management practices ($p = 0.800$). These studies support the present findings by demonstrating that higher levels of knowledge do not necessarily correspond to better menstrual pain management behavior.

From a theoretical perspective, Notoatmodjo (2018) explained that health behavior represents an individual's response or action toward health-related stimuli. Behavioral development is influenced not only by knowledge but also by various factors affecting how individuals understand and apply health information in everyday life. Similarly, Glanz, Rimer, and Viswanath (2015) emphasized that health behavior is shaped by multiple influences at the individual, interpersonal, organizational, and environmental levels. Therefore, knowledge may contribute to the development of appropriate health behavior, but it should not be regarded as the sole determining factor. This perspective provides a possible explanation for the present findings, in which respondents with different levels of knowledge demonstrated varying menstrual pain management behaviors.

Furthermore, Dixon et al. (2024) reported that menstrual health knowledge and education may improve adolescents' ability to practice self-care and adopt effective pain management strategies. Nevertheless, knowledge does not automatically translate into appropriate health behavior. Adolescents often obtain information about menstruation from family members, peers, and teachers, suggesting that social interactions and personal experiences may influence their management practices. This is relevant to the present study, in which 24 respondents (61.5%) with poor knowledge demonstrated moderate menstrual pain management behavior. Dixon et al. (2024) also highlighted that perceiving menstrual pain as a normal condition that must be tolerated may discourage adolescents from seeking appropriate treatment or professional assistance. Such perceptions may contribute to differences between knowledge and actual management practices, although these factors were not specifically measured in the present study.

Finally, the absence of a statistically significant relationship between knowledge and menstrual pain management behavior ($p =$

0.232) suggests that other factors may contribute to adolescents' management practices. These may include personal experiences, attitudes toward menstrual pain, family and peer support, access to health information, and perceptions regarding the need for medical assistance. Therefore, menstrual health education should not focus solely on increasing knowledge but should also emphasize practical self-care skills, supportive communication, and appropriate healthcare-seeking behavior. Further research is recommended to investigate these potential contributing factors and provide a more comprehensive understanding of menstrual pain management among adolescent girls.

CONCLUSION

Based on the findings involving 55 respondents, most adolescents had poor knowledge regarding menstrual pain management, comprising 39 respondents, while their menstrual pain management behavior was predominantly classified as moderate. The Chi-square test yielded a p-value of 0.232 (>0.05), indicating no statistically significant relationship between knowledge and adolescents' behavior in managing menstrual pain. Healthcare providers are encouraged to strengthen continuous reproductive health education for adolescents through approaches that provide not only information but also practical skills, including warm compress application, relaxation techniques, light physical activity, safe medication use, and guidance on when menstrual pain requires further medical evaluation.

ACKNOWLEDGMENT

The authors would like to express their sincere gratitude to the management of Dayah Modern Ihya Sunnah Lhokseumawe, the teachers, and all female students who participated in this study. Special thanks are also extended to everyone who provided support and assistance throughout the research and manuscript preparation.

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