

The Influence of Menstrual Hygiene Education on the Knowledge of Adolescent Girls at SMP Negeri 3 Gamping

Ode Fitri^{1*}, Dewi Rokhanawati²

¹Undergraduate Midwifery Study Program, 'Aisyiyah University Yogyakarta, Indonesia

²Faculty of Health Sciences, 'Aisyiyah University Yogyakarta, Sleman 55581, Indonesia

Corresponding author:

E-mail: fitriode3@gmail.com

Abstract

Menstrual hygiene remains a significant reproductive health issue for adolescent girls, affecting reproductive hygiene and menstrual comfort, as well as increasing the risk of reproductive tract infections. According to the World Health Organization (WHO), approximately 75% of adolescent girls worldwide do not practice proper menstrual hygiene (Hutasoit et al., 2024). Based on previous research in Sleman Regency, the research Mukaromah et al (2025) At SMP Negeri 2 Gamping, 80% of female students experienced genital itching during menstruation, and 70% did not practice recommended vulvar hygiene. Nurlaeli & Mahmudah (2025). Research at Ma'arif Gamping Middle School showed that 70% of adolescent girls were unaware of menstrual hygiene and had never received health education related to personal hygiene during menstruation. Furthermore, research Nadia (2023) at SMPN 1 Mlati showed that 43.4% of female students had insufficient knowledge regarding personal hygiene during menstruation. This condition indicates the need for effective health education to improve adolescent girls' knowledge regarding menstrual hygiene. Method: This study used a quantitative method with a pre-experimental design through the One Group Pretest-Posttest Design approach. The research sample consisted of 68 female students in grades VII and VIII who were selected using a purposive sampling technique. Data were collected using a menstrual hygiene knowledge questionnaire given before (pretest) and after (posttest) the health education intervention. Data analysis was carried out univariately and bivariate using the Wilcoxon test because the data were not normally distributed. Results: The results showed that before being given health education, most respondents had a good level of knowledge of 61 female students (90%) and a sufficient level of knowledge of 7 female students (10%). After being given health education, the number of respondents with a good category increased to 65 female students (96%), while the sufficient category decreased to 3 female students (4%). The Wilcoxon test results showed a p-value of 0.001 ($p < 0.05$), indicating that menstrual hygiene education had an effect on the knowledge of adolescent girls at SMP Negeri 3 Gamping. Thus, health education has been proven effective in improving students' knowledge of menstrual hygiene. Conclusion: Menstrual hygiene health education is effective in increasing the knowledge of adolescent girls at SMP Negeri 3 Gamping. Suggestion: It is recommended that schools and health workers implement reproductive health education on an ongoing basis to improve adolescents' understanding and health behavior.

Keywords: Menstrual hygiene, Health education, Knowledge and Adolescent girls.

I. INTRODUCTION

Menstrual hygiene is a crucial part of adolescent girls' reproductive health because it relates to cleanliness and physical and psychological well-being during menstruation. However, many adolescent girls still have poor personal hygiene knowledge and practices, such as infrequently changing sanitary napkins, improperly cleaning the genital area, and a lack of understanding of the importance of maintaining hygiene during menstruation (Nurlaeli & Mahmudah, 2025). Lack of menstrual hygiene can lead to serious health consequences, such as itching, irritation, vaginal discharge, reproductive tract infections, and even an increased risk of cervical cancer. This occurs because poor hygiene can trigger the growth of bacteria and pathogenic microorganisms in the genital area during menstruation (Agustin et al., 2026).

This problem is widespread. Data shows that approximately 75% of adolescent girls do not practice good menstrual hygiene. In Indonesia, of the 69.4 million adolescents, approximately 63 million still have poor menstrual hygiene habits. Studies at various schools in Sleman also show that the majority of female students have poor knowledge regarding menstrual hygiene (Ayuni et al., 2026).

The Indonesian government has demonstrated its commitment to addressing this issue through adolescent reproductive health programs, such as UKS and PKPR, and is supported by Law Number 17 of 2023 concerning Health and Government Regulation Number 28 of 2024. These policies emphasize the importance of education, promotion, and prevention of reproductive health issues in adolescents (Ministry of Health, 2023).

Community support for improving menstrual hygiene is evident through the existence of the Youth Information and Counseling Center (PIK-R), the School Health Unit (UKS), and the involvement of health workers, such as midwives, in providing reproductive health education and counseling. These efforts demonstrate a shared awareness of the need to improve adolescent knowledge about menstrual hygiene (Meha and Hermayerni Teguh., 2025).

Various studies have shown that adolescent girls' lack of knowledge regarding personal hygiene during menstruation remains a major contributing factor to poor menstrual hygiene practices. Many adolescent girls still lack an accurate understanding of how to maintain reproductive hygiene during menstruation, such as infrequently changing sanitary napkins, not drying the genital area after urinating, and improperly cleaning the genital area. This can impact adolescent health, such as causing itching, irritation, vaginal discharge, reproductive tract infections, and increasing the risk of reproductive health problems in the future. Therefore, effective health education efforts are needed to ensure adolescent girls have better knowledge and hygiene practices during menstruation (Afriyani et al., 2025).

Efforts to increase knowledge about menstrual hygiene require educational methods that are appropriate to the characteristics of adolescents. Health education is an effective strategy for conveying information regarding the importance of personal hygiene during menstruation. Through health education, adolescent girls can obtain accurate information on how to maintain personal hygiene during menstruation and thus adopt healthy lifestyle behaviors. Several studies have shown that health education has an impact on increasing adolescent knowledge about menstrual hygiene. Mukaromah et al (2025) At SMP Negeri 2 Gamping Sleman, 80% of adolescent girls with poor knowledge experienced genital itching during menstruation, 60% still made mistakes in cleaning the feminine area, and 80% used sanitary napkins incorrectly. Nurlaeli & Mahmudah (2025), in Ma'arif Gamping Middle School students showed that before being given counseling, most of the students had a level of knowledge in the sufficient and poor categories, but after being given health education there was an increase in knowledge with the good category to 48.4%. In addition, the study Sari et al (2026) A study at SMP Negeri 01 Gamping showed that 60% of adolescent girls lacked knowledge about personal hygiene during menstruation because they only received information from their peers and the school environment. Nadia (2023) At SMPN 1 Mlati, Sleman, 43.4% of female students still lack knowledge about personal hygiene during menstruation. These studies demonstrate that health education plays a crucial role in improving adolescent girls' knowledge about menstrual hygiene.

Although various studies have demonstrated the effectiveness of health education in improving the knowledge of adolescent girls, some adolescents still lack optimal reproductive health education, particularly regarding menstrual hygiene. A preliminary study conducted at SMP Negeri 3 Gamping found that most female students still have limited knowledge about menstrual hygiene and have never received health education related to personal hygiene during menstruation. This situation indicates the need for appropriate educational methods to improve adolescent girls' understanding of the importance of menstrual hygiene.

Based on this description, this study was conducted to determine the effect of menstrual hygiene education on the knowledge of female students at SMP Negeri 3 Gamping. The results are expected to contribute to the development of effective reproductive health education methods and serve as a reference for health workers and educational institutions in improving adolescent girls' knowledge of personal hygiene during menstruation.

II. METHOD

This research is a quantitative study with a pre-experimental design using the One Group Pretest-Posttest Design approach. This design was used to determine the effect of menstrual hygiene health education on the knowledge of adolescent girls by conducting measurements before and after being given an intervention in the form of health education. The research framework began with measuring the level of respondents' knowledge through a pretest, then continued with the provision of health education on menstrual hygiene using lecture methods and presentation media (PowerPoint), and concluded with a re-measurement through a posttest to determine changes in the level of respondents' knowledge after the intervention was given.

The research was conducted at SMP Negeri 3 Gamping in April 2026. The data source used in this study was primary data obtained directly from respondents through filling out questionnaires. The population in this study were all 205 female students of grades VII and VIII of SMP Negeri 3 Gamping. The research sample consisted of 68 respondents who met the inclusion and exclusion criteria. The sampling technique used purposive sampling, namely the selection of respondents based on criteria set by the researcher. This research has obtained ethical approval from the Research Ethics Committee of 'Aisyiyah University Yogyakarta with ethics number No. 2301/KEP-UNISA/III/2026, and obtained approval from the school. The implementation of the research also paid attention to the ethical principles of research by providing informed consent to all respondents before data collection was carried out.

The research instrument used was a menstrual hygiene knowledge questionnaire containing questions regarding the definition of menstruation, personal hygiene during menstruation, the use of sanitary napkins, and the prevention of reproductive health problems. Before use, the instrument underwent validity and reliability tests to ensure its suitability as a research measurement tool. Data collection was carried out in two stages: a pretest before providing health education and a posttest after the intervention. The collected data were then processed through editing, coding, data entry, and data cleaning. Data analysis was performed univariately to describe the frequency distribution of respondent characteristics and knowledge levels before and after the intervention. Bivariate analysis was performed to determine the effect of health education on respondents' knowledge using the Wilcoxon test because the normality test results indicated that the data were not normally distributed. Decision making was based on a 95% significance level ($\alpha = 0.05$), with a p-value < 0.05 indicating an effect of menstrual hygiene health education on adolescent girls' knowledge.

III. RESULTS

**Table 4.1 Frequency Distribution of Age of Female Adolescents in Grades VII-VIII
State Junior High School 3 Gamping**

Age	Frequency (f)	Percentage (%)
13 years old	33	49%
14 years	34	50%
15 years	1	1%
Total	68	100%

Based on table 4.1, the distribution of respondents' ages, the majority of respondents were 14 years old, amounting to 34 respondents (50%).

**Table 4.2 Frequency Distribution of Respondents Based on Knowledge Before and After
Menstrual Hygiene Counseling**

Variables	Pre-Test		Post_Test		P Value
	(f)	(%)	(f)	(%)	
Good	61	90%	65	96%	.001
Enough	7	10%	3	4%	

Not enough	0	0%	0	0%
Total	68	100%	68	100%

Based on Table 4.2 above, it is known that the frequency distribution of the level of knowledge of adolescents in grades VII-VIII at SMP Negeri 3 Gamping, before being given counseling about menstrual hygiene, shows that 68 female students are still inadequate, namely with a sufficient value of 7 respondents (10%), then with a less than sufficient value of 0 (0%) and with a good value of 61 respondents (90%). But after being given counseling about menstrual hygiene, their level of knowledge increased, namely with a good value of 65 respondents (96%), then with a sufficient category that decreased to 3 respondents (4%) and with a less than sufficient category of 0 respondents (0%).

Table 4.3 Results of data testing using the Wilcoxon statistical test

		<i>Respondents</i> (N=68)	<i>Mean Rank</i>	<i>z</i>	<i>P Value</i>
Post-Pre knowledge	Negative Rank	11 ^a	21.59	-4.252 ^b	.001
	Positive Rank	42 ^b	28.42		
	Rank Ties	15 ^c			

^aPost knowledge < Pre knowledge

^bPost knowledge > Pre knowledge

^cPost knowledge = Pre knowledge

Based on Table 4.3, it can be seen that the p-value = 0.001 (p-value < 0.05) shows a significant difference between the pre-test and post-test knowledge levels after being given menstrual hygiene health education intervention.

IV. RESULTS AND DISCUSSIONS

Level of Knowledge of Students in Grades VII and VIII Before Being Given Counseling on Menstrual Hygiene

The results showed that before being given counseling on menstrual hygiene, the majority of seventh and eighth grade students at SMP Negeri 3 Gamping (61 respondents) had a good level of knowledge, while 7 respondents (10%) were in the sufficient category. No respondents had a poor level of knowledge. These results indicate that the majority of respondents already had a fairly good understanding of menstrual hygiene before being given health education interventions.

According to Notoatmodjo (2020) A person's knowledge is influenced by age, education, experience, environment, and sources of information. As a person ages, their ability to receive and understand information also develops. Personal experiences related to menstruation can be a learning resource that plays a role in shaping adolescents' knowledge about proper menstrual hygiene practices.

The results of this study are in line with research Wahyuni et al (2023) which states that adolescents' knowledge about menstrual hygiene is influenced by menstrual experiences and access to reproductive health information. In addition, research Fiya et al (2025) This study shows that adolescents' knowledge can increase through exposure to information from parents, teachers, health workers, and the mass media. Thus, the level of knowledge respondents had before the counseling indicated that information about menstrual hygiene had been obtained from various sources, although further education is needed to improve overall understanding.

Level of Knowledge of Students in Grades VII and VIII After Being Given Counseling on Menstrual Hygiene

After receiving health education, the majority of respondents (96%) had good knowledge of

menstrual hygiene, while 4% were in the fair category. These results indicate an increase in knowledge after receiving education on the importance of maintaining hygiene during menstruation. Health education delivered through lectures and presentations significantly improved respondents' understanding of proper menstrual hygiene practices.

Based on the data, it is known that of the 68 respondents who took the posttest, the score in the good category increased to 65 respondents (96%). This indicates a very significant increase compared to the pretest results where only 61 respondents (90%) received a score in the good category. Based on the opinion Lestari and Sinaga (2025), health education includes all activities aimed at providing and improving understanding, attitudes and behavior in maintaining and improving individual health.

This is in line with research conducted by Lubis & Zaen (2025), which shows that after being given a health education intervention, the majority of female students experienced an increase in knowledge and attitudes regarding personal hygiene during menstruation. The analysis results showed a significant difference between before and after the intervention ($p < 0.05$), so it can be concluded that the health education was effective in increasing knowledge and forming better attitudes among female students towards personal hygiene practices during menstruation.

The Effect of Menstrual Hygiene Counseling on the Knowledge of Grade VII-VIII Students of SMP Negeri 3 Gamping

The results of the study showed that menstrual hygiene counseling had an impact on the knowledge of female students in grades VII–VIII of SMP Negeri 3 Gamping. This was indicated by an increase in the proportion of respondents with good knowledge from 90% before the counseling to 96% after the counseling. The Wilcoxon test showed a p-value of 0.001 ($p < 0.05$), indicating a significant difference in knowledge before and after the intervention. This increase in knowledge indicates that the information provided through the counseling was well received and understood by the respondents.

The results of this study are in line with research Hadina et al (2023) which states that reproductive health education regarding menstrual hygiene can significantly increase adolescents' knowledge. This finding is also supported by Inda I. Lestari and Retno (2025), which shows that health education has a positive effect on increasing adolescent awareness and knowledge regarding menstrual hygiene. According to Ulfa et al (2025) Knowledge is a crucial factor in shaping health behaviors, so increasing knowledge through education is expected to encourage better menstrual hygiene practices. Therefore, health education has proven effective in increasing adolescent girls' knowledge about menstrual hygiene. Eunuch (2025) stated that health education programs about personal hygiene during menstruation can increase a person's knowledge about personal hygiene.

Research Limitations

- a. Limited space for implementing extension services
The lack of a dedicated space for outreach resulted in the activity being conducted in the school prayer room. The cramped environment forced students to sit close together or crowded together, facilitating discussions and influencing respondents' answers throughout the research process.
- b. Low respondent participation
Student participation in research is still low, resulting in less than optimal data collection processes and increased research implementation time, so researchers need to involve class teachers to increase respondent involvement.
- c. Limited facilities and number of respondents
The presentation of the material using an infocus was less than optimal because the display size was not large enough to reach all participants. Furthermore, the large number of respondents, namely 68 female students, meant that not all participants could see and absorb the material clearly simultaneously. This situation potentially affected respondents' level of understanding of

the material presented.

d. Limitations of research design

This study uses a one-group pretest-posttest design without a control group so that it cannot control all factors that influence changes in respondents' knowledge levels.

Cumulatively, the data analysis results show that the benefits aspect achieved an overall average score of 3.39. This score is very high and indicates that respondents responded in agreement. The majority of users strongly agreed that the educational video provided tangible and targeted benefits.

V. CONCLUSION

Health education about menstrual hygiene effectively increases the knowledge of female students of SMP Negeri 3 Gamping, as evidenced by the increase in the proportion of female students with good knowledge from 90% in the pretest to 96% in the posttest and the results of the Wilcoxon test which showed a significant effect ($p = 0.001$); based on these findings, the school is advised to integrate menstrual hygiene education continuously into the School Health Program (UKS), health workers are expected to make this counseling part of routine promotive efforts with more varied educational media, and further researchers need to develop a research design with a control group and a follow-up period to evaluate the sustainability of changes in attitudes and practices of adolescent girls regarding menstrual hygiene.

REFERENCES

- [1]. Afriyani, L., Mariana, S., Kebidanan, P. S., Sarjana, P., Tinggi, S., Kesehatan, I., Bunda, K., Kebidanan, P. S., Diploma, P., Ilmu, T., Keluarga, K., Jambi, B., Tinggi, S., Kesehatan, I., & Jambi, K. B. (2025). Penyuluhan Tentang Pentingnya Menjaga Kebersihan Diri Saat Menstruasi. 3(1), 7–13. <https://doi.org/https://ojs.stikeskeluargabunda.ac.id>
- [2]. Agustin, L. N., Juliastuti, D., Royani, & Tantri, W. S. (2026). Pengaruh Edukasi Digital Dalam Meningkatkan Pengetahuan Dan Sikap Tentang Personal Hygiene Saat Menstruasi Di SMP Negeri 19 Kota Tangerang Selatan. *Jurnal Riset Ilmu Kesehatan*, 72–79. <https://doi.org/https://journal.universitasisichsansatya.ac.id/index.php/JRIKES/article/view/93>
- [3]. Ayuni, B. P., Zakiyyah, M., & Iriyani, T. (2026). Hubungan Antara Personal Hygiene Menstruasi Dengan Terjadinya infeksi. 3(2), 599–607. <https://doi.org/https://doi.org/10.61722/jinu.v3i2.8821>
- [4]. Fiya, D., Retni, Jumita, & Des, M. (2025). Masalah Gizi (Tiple Burden) di Wilayah Urban (F. Diniarti (ed.)). <https://doi.org/https://books.google.co.id/>
- [5]. Hadina, Batjo, S. H., & Hadriani. (2023). *Jurnal Pengabdian Bidan Nasuha Promosi Menstrual Hygiene Management pada Remaja Putri : Sebuah Inisiatif Pengabdian Masyarakat*. 3, 33–39. <https://doi.org/10.33860/jpbn.v3i2.1313>
- [6]. Hutasoit, M., Purnamaningsih, N. A., Trisetiyaningsih, Y., & Susanti, D. (2024). Upaya Pencegahan Infeksi Sistem Reproduksi pada Remaja Putri melalui Edukasi Menstrual Hygiene di SMP Negeri 3 Kalasan , Yogyakarta. 3(2), 168–175. <https://doi.org/https://doi.org/10.37905/damhil.v3i2.29084>
- [7]. Kasim, N. (2025). Edukasi Terhadap Pengetahuan Vulva Hygiene Saat Menstruasi Pada Siswi Di SMA PGRI 2 Kairatu Desa Rumahkay. 4(2), 342–346. <https://doi.org/https://doi.org/10.57218/jompaabdi.v4i2.1853>
- [8]. Kemenkes, R. (2023). Undang-Undang Republik Indonesia Nomor 17 Tahun 2023 Tentang Kesehatan. 187315. <https://doi.org/https://www.kemkes.go.id/id>
- [9]. Lestari, D., & Sinaga, E. W. (2025). Penyuluhan Personal Hygiene Saat Menstruasi Pada Remaja Putri Di Smp Persatuan Amal Bakti (Pab) 2. Jurnal Ilmiah Pengabdian Kepada Masyarakat (Ji-SOMBA), 5(1), 9–15. <https://doi.org/https://doi.org/10.52943/jisomba.v5i1.1930>
- [10]. Lestari, I., & Retno, A. (2025). Hubungan Pengetahuan Kesehatan Reproduksi Dengan Perilaku Higienis Menstruasi Pada Remaja Putri. c. <https://doi.org/https://doi.org/10.56840/jkgsh.v15i1.173>
- [11]. Lubis, A. D., & Zaen, N. L. (2025). Pengaruh Pendidikan Kesehatan Terhadap Penegetahuan Tentang Personal Hygiene Saat Mnestruasi Dalam Pencegahan Pruritus Vulvae Pada Remaja Putri di SMK

- PAB 8 Sampali. Indonesian Trust Health Journal, 8(1), 45–54. <https://doi.org/https://doi.org/10.37104/ithj.v8i1.354>
- [12]. Meha, Y. C. S., & Hermayerni Teguh, R. (2025). Pengaruh Edukasi Terhadap Tingkat Pengetahuan Remaja Putri Tentang Perilaku Personal Hygiene Pada Saat Menstruasi Di Smp Swasta Rk Makmur Medan. *Jurnal Pendidikan Multidisiplin*, 2, 1–13. <https://doi.org/https://doi.org/10.71282/at-taklim.v2i11.1119>
- [13]. Mukaromah, M., Rini, S., & Hapsari. (2025). Gambaran Tingkat Pengetahuan Perilaku Vulva Hygiene pada Remaja Putri Selama Menstruasi di Smp Negeri 2 Gamping Tahun 2025. 02(03), 582–587. <https://doi.org/https://ojs.ruangpublikasi.com>.
- [14]. Nadia, N. (2023). The Effect of Counseling on Knowledge about Personal Hygiene During Menstruation at SMPN 1 Mlati Sleman Yogyakarta. *Menara Journal of Health Science*, 2(4), 659–670. <https://doi.org/https://jurnal.iakmikudus.org/article/view/141>
- [15]. Notoatmodjo. (2020). Promosi Kesehatan dan Perilaku Kesehatan. Rineka Cipta. [https://www.google.co.id/books/edition/Dasar_Dasar_Kesehatan_Masyarakat/yw2IEAAQBAJ?hl=id&gbpv=1&dq=Notoatmodjo.+\(2020\).+Promosi+Kesehatan+dan+Perilaku+Kesehatan.+Rineka+Cipta&pq=PA249&printsec=frontcover](https://www.google.co.id/books/edition/Dasar_Dasar_Kesehatan_Masyarakat/yw2IEAAQBAJ?hl=id&gbpv=1&dq=Notoatmodjo.+(2020).+Promosi+Kesehatan+dan+Perilaku+Kesehatan.+Rineka+Cipta&pq=PA249&printsec=frontcover)
- [16]. Nurlaeli, S., & Mahmudah, N. (2025). Pengaruh Penyuluhan Terhadap Pengetahuan Tentang Personal hygiene Saat Menstruasi Pada Siswi SMP Ma'arif Gamping. *Bemj, Bunda Edu-Midwifery Journal*, 8, 592–598. <https://doi.org/https://doi.org/10.54100/bemj.v8i1.339>
- [17]. Sari, putri mayang, Dita, K., & Belian, A. E. (2026). Bunda Edu-Midwifery Journal (BEMJ). *Bemj, Bunda Edu-Midwifery Journal*, 9, 825–835. <https://doi.org/https://doi.org/10.54100/bemj.v9i1.633>
- [18]. Ulfa, K., Nadiya, S., Hanum, F., & Andala, S. (2025). Edukasi Personal Hygiene Saat Menstruasi Melalui Media Animasi Terhadap Peningkatan Pengetahuan Remaja. *Jurnal Assyifa: Jurnal Ilmu Kesehatan Lhokseumawe*, 10(2), 149–156. <https://doi.org/https://doi.org/10.54460/jifa.v10i2.218>
- [19]. Wahyuni, N. I., Sr, N., Bidan, P. P., Abdi, S., & Jakarta, N. (2023). Efektivitas Pemberian Video Health Education Dan Leaflet Terhadap Pengetahuan Ibu Hamil Tentang Effectiveness Of Video Health Education And Leaflet On Pregnant Women ' S Knowledge About Personal Hygiene. 12(2), 146–151. <https://doi.org/10.31314/mjk.12.2.145-151.2023>.