



## Factors Influencing Personal Hygiene During Menstrual Period Among Adolescent Girls

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### Abstract

**Background.** In West Java, 83% of adolescents lack understanding of reproductive health, and 74% feel insufficient family support during menstruation. Around 70% of genital hygiene problems are caused by the use of inappropriate sanitary pads, compounded by poor practices such as infrequent pad changes or incorrect cleaning techniques. Consequently, adolescents are at risk of experiencing leucorrhea, irritation, and vaginitis.

**Objective.** To examine the factors influencing personal hygiene among adolescent girls during menstruation at SMPN 7 Cirebon City in 2025.

**Methods.** An analytical survey approach was used to explore how and why health-related phenomena concerning menstrual personal hygiene occur. The study employed a cross-sectional design, which observes correlations between risk factors and effects through data collection at a single point in time using an observational approach.

**Conclusion.** Logistic regression analysis showed that knowledge was the most influential factor affecting personal hygiene ( $p=0.045$ ,  $OR=0.70$ ). Adolescents with good knowledge were 0.70 times more likely to practice proper personal hygiene compared to those with poor knowledge.

**Implementation.** It is necessary to improve adolescents' knowledge about personal hygiene through school-based learning.

**Keywords:** menstruation, personal hygiene, knowledge, health, reproduction



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## INTRODUCTION

According to the World Health Organization (WHO, 2022), more than 50% of women worldwide do not practice proper personal hygiene during menstruation, including 55% of women in Indonesia (Mayang Sari et al., 2024). In Indonesia, approximately 43.3 million adolescent girls aged 10–14 years exhibit inadequate hygiene behaviors, particularly in

maintaining reproductive organ cleanliness during menstruation (Alfi, 2022). Limited knowledge is a key contributing factor, which can lead to health issues such as vaginal discharge, reproductive tract infections (RTIs), and even cervical cancer (Laswini, 2022).

In West Java, 83% of adolescents lack understanding of reproductive health, and 74% report insufficient family support during menstruation (Lestari et al., 2024). About 70% of genital hygiene issues are attributed to the use of inappropriate sanitary pads and poor hygiene practices, such as infrequent pad replacement or improper cleaning techniques (Sunarti & Mutmainnah Kamaruddin, 2023). Consequently, adolescents are vulnerable to conditions such as leucorrhea, irritation, and vaginitis (Mukarramah, 2020).

Socioeconomic factors, education, and family support, particularly from mothers, play a crucial role in shaping menstrual hygiene behavior (Hamidah et al., 2021). A study conducted in Cirebon found that health education through videos and leaflets significantly improved adolescents' knowledge, with the average pretest score increasing from 58.75 to 77.50 (Jubaedah et al., 2024). However, 74.7% of adolescents still lacked adequate understanding of how to maintain reproductive organ hygiene (Pane et al., 2022). A preliminary study conducted on June 20, 2025, at SMPN 7 Cirebon involving 12 female students aged 13–14 years revealed that 50% experienced itching during menstruation, indicating poor personal hygiene practices.

The Indonesian government, through the National Medium-Term Development Plan (RPJMN) 2020–2024 and the 2021 Government Work Plan (RKP), has emphasized improving adolescent reproductive health. Furthermore, the Qur'an, Surah Al-Baqarah verse 222, highlights the importance of maintaining cleanliness. Therefore, this study aims to examine the factors influencing personal hygiene among adolescent girls during menstruation at SMPN 7 Cirebon City in 2025.

## **METHOD**

### **Type and Research Design**

This study employed an analytical survey approach to explore how and why health-related phenomena concerning personal hygiene during menstruation occur (Sukma, 2022). The design used was a cross-sectional study, which examines the correlation between risk factors and outcomes through data collection conducted at a single point in time using an observational method (Muhammad, 2023).

### **Time and Research Location**

#### **Location:**

The research was conducted at SMPN 7 Cirebon City.

**Time:**

The study took place from July to August 2025.

**Population and Sample****Population:**

The population refers to all individuals with specific characteristics who serve as the source of research information (Abunawas, 2023). In this study, the population consisted of 205 eighth-grade female students aged 13–14 years at SMPN 7 Cirebon City who had experienced menstruation.

**Sample:**

The sample represents a subset of the population that serves as the primary source of research data (Abunawas, 2023). The sample was drawn from female students aged 13–14 years who had begun menstruating at SMPN 7 Cirebon City. The sample size was determined using the Slovin formula, resulting in a total of 67 respondents. The sampling technique applied was purposive sampling, which involves selecting participants based on specific criteria relevant to the study objectives, such as accessibility, respondent availability, and timing. Samples were taken from approximately 15 students per class at SMPN 7 Cirebon City.

**Inclusion and Exclusion Criteria****Inclusion Criteria:**

1. Eighth-grade female students aged 13–14 years.
2. Have experienced menstruation.
3. Present during data collection.
4. Willing to participate as respondents.

**Exclusion Criteria:**

1. Students who were sick or went home during data collection.
2. Respondents who filled out the questionnaire incompletely.

**Data Analysis****Univariate Analysis:**

Univariate analysis was used to describe the frequency and distribution of a single variable without relating it to other variables (Rahmat, 2022). The variable analyzed was the personal hygiene of adolescent girls during menstruation.

**Bivariate Analysis:**

Bivariate analysis was conducted to examine the relationship between independent and dependent variables using the Chi-Square test (Aris, 2021).

**Multivariate Analysis:**

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Multivariate analysis was used to identify relationships between multiple independent variables (such as knowledge, family support, and environment) and the dependent variable (personal hygiene during menstruation) simultaneously. Logistic regression analysis was employed to determine the most influential factor affecting personal hygiene while considering interactions among variables and controlling for potential confounding variables.

## RESULT

### Univariate Analysis

**Table 4. The Frequency Distribution of Adolescent Girls' Knowledge About Personal Hygiene at SMPN 7 Cirebon City**

<b>Knowledge</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
Good Knowledge	32	47.8
Sufficient Knowledge	19	28.4
Lack of Knowledge	16	23.9
Total	67	100

Based on the knowledge distribution table above, it can be seen that most respondents had good knowledge, totaling 32 individuals or 47.8%.

**Table 5. The Frequency Distribution of Peer Influence on Adolescent Girls Regarding Personal Hygiene at SMPN 7 Cirebon City**

<b>Peer Support</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
High	30	44.8
Medium	21	31.3
Low	16	3.9
Total	67	100

Based on the peer influence distribution table above, it can be seen that most respondents received a high level of support from their peers.

**Table 6. The Frequency Distribution of Parental Support for Adolescent Girls Regarding Personal Hygiene at SMPN 7 Cirebon City**

Parental Support	Frequency (N)	Percentage (%)
High	29	43.3
Medium	17	25.4
Low	21	31.3
Total	67	100

Based on the parental support distribution table above, it can be seen that most respondents received a high level of parental support, totaling 29 individuals or 43.3%.

**Table 7. The Frequency Distribution of School Facilities for Adolescent Girls Regarding Personal Hygiene at SMPN 7 Cirebon City**

School Facilities	Frequency (N)	Percentage (%)
High	58	86.6
Medium	9	13.4
Low	0	0
Total	67	100

Based on the school facilities distribution table above, it can be seen that most respondents rated the school facilities as good, totaling 59 individuals or 86.6%.

**Table 8. The Frequency Distribution of Personal Hygiene Among Adolescent Girls at SMPN 7 Cirebon City**

Personal Hygiene	Frequency (N)	Percentage (%)
High	20	29.9
Medium	38	56.7
Low	9	13.4
Total	67	100

Based on the frequency distribution table of the personal hygiene variable above, it can be seen that most respondents were in the moderate category, totaling 38 individuals or 56.7%.

**Analisis Bivariat**

**Table 9. The Relationship Between Knowledge and Personal Hygiene During Menstruation Among Adolescent Girls at SMPN 7 Cirebon City**

Personal Hygiene									
	High		Medium		Low		Total		P-value
	N	%	N	%	N	%	N	%	
High	7	21,9%	18	56,3%	7	21,9%	32	100%	0.048
Medium	10	52,6%	8	42,1%	1	5,3%	19	100%	
Low	3	18,8%	12	75%	1	6,3%	16	100%	
Total	20	29,9%	38	56,7%	9	13,4%	67	100%	

The analysis results indicate a significant relationship between knowledge and personal hygiene, with a p-value of 0.048 (<0.05). Most respondents with good knowledge had moderate personal hygiene (18 individuals or 56.3%), while only 7 individuals (21.9%) demonstrated good hygiene practices. This pattern suggests that the higher the adolescents' level of knowledge about personal hygiene, the better their menstrual hygiene practices. These findings support the previous statistical test results, which also showed a significant relationship between knowledge level and personal hygiene during menstruation, as indicated by the Chi-Square test (p-value = 0.048).

**Table 10. The Relationship Between Peer Influence and Personal Hygiene During Menstruation Among Adolescent Girls at SMPN 7 Cirebon City**

Personal Hygiene									
	High		Medium		Low		Total		P-value
	N	%	N	%	N	%	N	%	
High	12	40%	16	53,3%	2	6,7%	30	100%	0.047
Medium	2	9,5%	13	61,9%	6	28,6%	21	100%	
Low	6	37,5%	9	56,3%	1	6,3%	16	100%	
Total	20	29,9%	38	56,7%	9	13,4%	67	100%	

The analysis results show a significant relationship between peer influence and personal hygiene, as indicated by a p-value of 0.047 (<0.05). Most respondents with high peer

support had moderate personal hygiene (16 individuals or 53.3%) and good personal hygiene (12 individuals or 40%).

This pattern suggests that the stronger the peer influence regarding personal hygiene, the better the menstrual hygiene practices among adolescents. These findings support the previous statistical test results, which also demonstrated a significant relationship between peer influence and personal hygiene during menstruation, as indicated by the Chi-Square test (p-value = 0.047).

**Table 11. The Relationship Between Parental Support and Personal Hygiene During Menstruation Among Adolescent Girls at SMPN 7 Cirebon City**

Personal Hygiene									
	High		Medium		Low		Total		
Parental Support	N	%	N	%	N	%	N	%	P-value
High	7	24,1%	16	55,2%	6	20,7%	29	100%	0.025
Medium	2	11,8%	14	82,4%	1	5,9%	17	100%	
Low	11	52,4%	8	38,1%	2	9,5%	21	100%	
Total	20	29,9%	38	56,7%	9	13,4%	67	100%	

The analysis results indicate a significant relationship between parental support and personal hygiene, with a p-value of 0.025 (<0.05). Most respondents who received good parental support had moderate personal hygiene (16 individuals or 55.2%). This pattern suggests that the higher the level of parental support regarding personal hygiene, the better the menstrual hygiene practices among adolescents. These findings support the previous statistical test results, which also demonstrated a significant relationship between parental support and personal hygiene during menstruation, as shown by the Chi-Square test (p-value = 0.025).

**Table 12. The Relationship Between School Facilities and Personal Hygiene During Menstruation Among Adolescent Girls at SMPN 7 Cirebon City**

Personal Hygiene									
	High		Medium		Low		Total		
School	N	%	N	%	N	%	N	%	P-value

Facilities									
High	14	24,1%	36	62,1%	8	13,8%	58	100%	0.031
Medium	6	66,7%	2	22,2%	1	11,1%	9	100%	
Total	20	29,9%	38	56,7%	9	13,4%	67	100%	

The analysis results show a significant relationship between school facilities and personal hygiene, as indicated by a p-value of 0.031 (<0.05). Most respondents who rated the school facilities as good had moderate personal hygiene (36 individuals or 62.1%). This pattern suggests that the better the school facilities, the better the menstrual hygiene practices among adolescents. These findings support the previous statistical test results, which also revealed a significant relationship between school facilities and personal hygiene during menstruation, as shown by the Chi-Square test (p-value = 0.031).

**Multivariate Analysis**

Independent Variable	Sig.	OR
Knowledge	0,045	0,70
Parental Support	0,439	0,97
Peer Support	0,122	1,07
School Facilities	0,309	0,78

Based on the results of the multivariate analysis, it was found that only the knowledge variable had a significant influence on personal hygiene, with a significance value of 0.045 (<0.05). The knowledge variable showed an odds ratio (OR) of 0.70, indicating that respondents with good knowledge were 0.70 times more likely to practice good personal hygiene compared to those with low knowledge.

**Output :**

**Parameter Estimates**

		Estimate	Std. Error	Wald	Df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[personal_hygiene = 1]	-7.290	5.166	1.992	1	.158	-17.416	2.835
	[personal_hygiene = 2]	-4.263	5.101	.699	1	.403	-14.260	5.734
Location	pengetahuan2	-.356	.177	4.028	1	.045	-.703	-.008
	dukungan_orang_tua2	-.031	.040	.598	1	.439	-.108	.047
	teman_sebaya2	.072	.047	2.386	1	.122	-.019	.163
	sarana_sekolah2	-.242	.238	1.034	1	.309	-.707	.224

Link function: Logit.

**DISCUSSION**

This study aimed to identify the factors influencing personal hygiene during menstruation among adolescent girls at SMPN 7 Cirebon City. Data analysis was conducted using univariate, bivariate (Chi-Square test and cross-tabulation), and multivariate (logistic regression) approaches.

**Adolescents’ Knowledge About Personal Hygiene**

The univariate analysis revealed that 47.8% (32 respondents) had good knowledge, 28.4% (19 respondents) had moderate knowledge, and 23.9% (16 respondents) had poor knowledge regarding personal hygiene during menstruation. These findings suggest that most adolescent girls understood the importance of menstrual hygiene, which can encourage hygienic behaviors (Adelia, 2024). A study by Adelia (2024) in Denpasar found a significant relationship between knowledge and menstrual hygiene behavior ( $p=0.006$ ), showing that 71.59% of adolescents with good knowledge demonstrated good hygiene behavior, while 51.92% of those with poor knowledge exhibited poor hygiene practices.

**Peer Influence on Personal Hygiene**

The univariate analysis indicated that 44.8% (30 respondents) had strong peer support, 31.4% (21 respondents) had moderate support, and 23.9% (16 respondents) had low support. Peers play a crucial role in shaping adolescents’ behavior due to frequent social interactions (Latifah, 2023). Latifah’s (2023) study confirmed that peer support contributes significantly to menstrual hygiene behavior among adolescent girls.

**Parental Support and Personal Hygiene**

Univariate analysis showed that 43.3% (29 respondents) received strong parental support, 25.4% (17 respondents) moderate support, and 31.3% (21 respondents) low support. Parental involvement, such as providing information and hygiene facilities, enhances

adolescents' hygienic behavior (Maharani, 2023). Maharani's (2023) study in North Lampung also demonstrated a significant association between parental support and personal hygiene during menstruation.

### **Availability of School Facilities**

A total of 86.6% (59 respondents) rated their school facilities as good, while 13.4% (9 respondents) rated them as adequate. The availability of facilities such as clean toilets, water, and sanitary pad disposal areas supports proper hygiene practices (Kristina, 2024). Kristina's (2024) study in Kupang confirmed that adequate school facilities positively influence personal hygiene among female students.

### **Adolescent Girls' Personal Hygiene Behavior**

Most respondents (56.7% or 38 individuals) demonstrated moderate personal hygiene behavior, while 29.9% (20 individuals) showed good behavior, and 13.4% (9 individuals) had poor behavior. Although many students made efforts to maintain cleanliness, aspects such as the frequency of changing sanitary pads and genital cleaning techniques still require improvement.

### **Relationship Between Knowledge and Personal Hygiene**

The Chi-Square test showed a significant relationship between knowledge and personal hygiene ( $p=0.048$ , Pearson Chi-Square=9.561). Cross-tabulation results indicated that adolescents with better knowledge tended to demonstrate better hygiene behavior, consistent with Rika's (2025) study in Deli Tua (Notoatmodjo, 2016). Higher knowledge levels increase awareness of the importance of reproductive hygiene.

### **Relationship Between Peer Influence and Personal Hygiene**

A significant relationship was found between peer support and personal hygiene ( $p=0.047$ , Pearson Chi-Square=9.636). Peer influence affects behavior through shared information and modeling (Puspa, 2020). A positive social environment encourages adolescents to maintain good menstrual hygiene (Notoatmodjo, 2012).

### **Relationship Between Parental Support and Personal Hygiene**

Parental support was significantly associated with personal hygiene ( $p=0.025$ , Pearson Chi-Square=11.114). Guidance and provision of adequate facilities from parents strengthen healthy hygiene behavior (Alinka, 2025; Nursalam, 2008). Adolescents who receive consistent parental support are more disciplined in maintaining cleanliness during menstruation.

### **Relationship Between School Facilities and Personal Hygiene**

The availability of school facilities was significantly associated with personal hygiene ( $p=0.001$ , Pearson Chi-Square=18.681). Adequate facilities, such as clean toilets, running

water, and sanitary disposal bins, enable students to practice good menstrual hygiene (Kristina, 2024; Nursalam, 2008).

## CONCLUSION

The logistic regression analysis revealed that knowledge was the most influential factor affecting menstrual personal hygiene ( $p = 0.045$ ,  $OR = 0.70$ ). Adolescents with good knowledge were 0.70 times more likely to practice proper personal hygiene compared to those with poor knowledge.

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