

FACTORS RELATED TO PERSONAL HYGIENE BEHAVIOR DURING MENSTRUATION AMONG ADOLESCENT GIRLS AT TOBU STATE JUNIOR HIGH SCHOOL

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Abstract

Personal hygiene during menstruation plays an important role in determining a person's health status in relation to reproductive health. During menstruation, the blood vessels in the uterus are easily infected because germs can enter more readily, which can lead to infections that may subsequently cause various disorders or diseases affecting the reproductive organs. This study aims to determine the factors related to personal hygiene behavior during menstruation among adolescent girls at Tobu State Junior High School. This type of research is analytic survey with a cross-sectional design. The sample consisted of 56 adolescent girls selected using the proportional stratified random sampling technique. Each variable in this study was tested using the chi-square test to determine the relationship between the dependent variable (personal hygiene behavior during menstruation) and the independent variables (knowledge, attitude, availability of supporting facilities, support from parents and peers). The results of this study showed that factors related to personal hygiene behavior during menstruation among adolescent girls were knowledge (p-value = 0.002), parental support (p-value = 0.002), and peer support (p-value = 0.004). Variables that had no relationship with personal hygiene behavior during menstruation among adolescent girls at Tobu State Junior High School were attitude (p-value = 0.932), and availability of supporting facilities (p-value = 0.557). Schools need to provide reproductive health material, especially related to personal hygiene during menstruation, so that adolescent girls can practice good personal hygiene behavior.

Keywords: Personal Hygiene, Menstruation, Adolescent Girls

Introduction

Adolescence is the age at which puberty begins, and therefore is closely related to reproductive health. Adolescents are defined as people aged 10-19 years (WHO, 2022). Adolescents are defined as people aged 10-18 years according to Health Regulation No. 25 of 2014. Changes in adolescent girls are related to sexuality, namely the first menstruation (menarche), usually occurring between the ages of 11 and 20 (Diana, 2024).

Menstruation is an important part of reproductive health and is one of the signs that a woman has entered puberty (the maturation of human reproductive organs). Menstruation, more commonly known as a monthly period or menses, under normal bleeding conditions is typically experienced by women once in each monthly cycle upon entering their fertile years, except under certain conditions such as pregnancy (Apsari, 2025). The menstrual process can give rise to various potential health problems in the reproductive organs, so women should always maintain personal hygiene, including during menstruation.

World Health Organization (2024) shows that poor personal hygiene remains a high global problem. Each year, approximately 1.4 million people die due to poor personal hygiene. In Indonesia, 43.3 million adolescent girls aged 10-14 years old exhibit very poor hygiene practices (Apsari, 2025). Poor personal hygiene during menstruation can lead to fungal growth, which can lead to vaginal discharge, irritation, itching, odor, urinary tract infections, and other reproductive health problems (Palupi, 2020).

East Nusa Tenggara (NTT) is one of 38 provinces with numerous health issues, including urinary tract infections (UTIs). Previous research indicates that UTIs remain a serious problem in NTT, with the number of UTI sufferers reaching 90-100 cases per 10,000 residents (Mokos, 2023). This issue requires attention in adolescent health education, as improving adolescents' basic knowledge about menstrual hygiene can reduce the risk of reproductive problems in the future.

Personal hygiene is a person's effort to maintain personal hygiene, both physical and psychological. Personal hygiene behaviors during menstruation relate to activities to maintain health and maintain cleanliness of the reproductive organs during menstruation. The implementation of good personal hygiene behaviors during menstruation is influenced by various factors, such as knowledge, attitudes, availability of supporting facilities, parental support, and peer support (Utami, 2022).

The preliminary survey was conducted by researchers at Tobu State Junior High School, South Central Timor Regency with ten female student out of 134 adolescent girls. The results showed that respondents were unclear about proper personal hygiene practices during menstruation. The girls tend to change their sanitary napkins when blood had already leaked; some of them were also unaware of how often they should change their sanitary napkins. Four were unaware of the problem of itching in the genital area during menstruation. One respondent had been diagnosed with a urinary tract infection (UTI).

Based on the background description, the researcher is interested in conducting a study to further examine the factors associated with personal hygiene behavior during menstruation among adolescent girls at Tobu State Junior High School, as this condition directly affects adolescent reproductive health and must not be overlooked.

Methods

This study used a quantitative research design with an analytical survey approach and a cross-sectional study design. The study population comprised all adolescent girls at Tobu State Junior High School, Tobu District, TTS Regency. The total population consisted of 134 adolescent girls. The sample size was determined using the Lameshow formula. Samples were selected using a proportional random sampling technique, supplemented by a spinner tool (spinning wheel) to ensure that samples were drawn randomly and represented the population of each class. The independent variables included knowledge, attitudes, availability of supporting facilities, parental support, and peer support, while the dependent variable was personal hygiene behavior.

Knowledge was categorized as low (score <60%), moderate (60–80%), and good (>80%). Attitude was categorized as negative (score <50%) and positive ($\geq 50\%$). Availability of supporting facilities was categorized as unavailable (score <50%) and available ($\geq 50\%$). Parental support and peer support were each categorized as low (score <50%) and high ($\geq 50\%$). Personal hygiene behavior during menstruation was categorized as poor (score <mean 55.5%) and good ($\geq$ mean 55.5%).

Data were collected using a questionnaire. Data analysis was conducted univariately and bivariately using the chi-square test at a significance level of $\alpha = 0.05$, through the stages of editing, coding, entry, tabulating, and cleaning using IBM SPSS Statistics Version 22.

Results

1. Respondent Characteristics

Majority of respondents were in the 12-years old age group, accounting for 28%, while the fewest respondents were in the 14-years old age group, accounting for 14%. The highest number of respondents were in grade IX, accounting for 38%, while respondents in grade VIII accounted for 30%, representing the smallest number.

Table 1. Frequency Distribution of Respondents Characteristics at Tobu State Junior High School

Characteristic		Frequency (n)	Percentage (%)
Age	12	16	28
	13	12	21
	14	8	14
	15	11	19
	16	9	16
Class	VII	18	32
	VIII	17	30
	IX	21	38

2. Univariate Analysis

Table 2. Frequency Distribution of Research Variables

Variables		Frequency (n)	Percentage (%)
Knowledge	Low	17	30
	Moderate	19	34
	Good	20	36
Attitude	Negative	16	29
	Positive	40	71
Availability of Supporting Facilities	Not available	35	63
	Available	21	37
Parental Support	Low	38	68
	High	18	32
Peer Support	Low	31	55
	High	25	45
Personal Hygiene Practices	Poor	32	57
	Good	24	43

Table 2 shows the univariate analysis results showed that the majority of respondents had good knowledge (36%), while 30% had low knowledge. Most respondents demonstrated a positive attitude (71%) toward personal hygiene during menstruation. Regarding the availability of supporting facilities, the majority of respondents reported that facilities were not available (63%). In terms of parental support, most respondents received low parental support (68%), and similarly, the majority also received low peer support (55%). With respect to personal hygiene practices during menstruation, more than half of the respondents exhibited poor practices (57%), while only 43% demonstrated good practices.

3. Bivariate Analysis

The Relationship Between Knowledge and Behavior During Menstrual Personal Hygiene among Adolescent Girls at Tobu State Junior High School

Table 3. The Relationship Between Knowledge and Personal Hygiene Behavior During Menstruation among Adolescent Girls at Tobu State Junior High School

Knowledge	Personal Hygiene Behavior during Menstruation				Total		p-value
	Poor		Good				
	n	%	n	%	n	%	
Low	11	19	6	11	17	30	0, 002
Moderate	5	9	14	25	19	34	
Good	16	29	4	7	20	36	

Table 3 showed that of 20 respondents with good knowledge, 4 respondents exhibited good personal hygiene practices and 16 respondents (29%) exhibited poor practices. Conversely, of 17 respondents with low knowledge, 11 respondents (19%) exhibited poor practices. The statistical analysis revealed a p-value of $0.002 < \alpha (0.05)$, indicating that there was a significant relationship between knowledge level and personal hygiene behavior during menstruation among adolescent girls at Tobu State Junior High School

The Relationship Between Attitudes and Personal Hygiene Behavior During Menstruation among Adolescent Girls at Tobu State Junior High School

Table 4 results showed that of 40 respondents with a positive attitude, 17 respondents exhibited good personal hygiene practices and 23 respondents (41%) exhibited poor practices. Conversely, of 16 respondents with a negative attitude, nine respondents (16%) exhibited poor practices. The statistical analysis revealed a p-value of $0.932 > \alpha (0.05)$, indicating that there was no significant relationship between attitude and personal hygiene behavior during menstruation among adolescent girls at Tobu State Junior High School.

Table 4. The Relationship Between Attitudes and Personal Hygiene Behavior During Menstruation in Adolescent Girls at Tobu State Junior High School

Attitude	Personal Hygiene Behavior during Menstruation				Total		p-value
	Poor		Good				
	n	%	n	%	n	%	
Negative	9	16	7	13	16	29	0, 932
Positive	23	41	17	30	40	71	

The Relationship between the Availability of Supporting Facilities and Personal Hygiene Behavior During Menstruation among Adolescent Girls at Tobu State Junior High School

Table 5. The Relationship between the Availability of Supporting Facilities and Personal Hygiene Behavior During Menstruation among Adolescent Girls at Tobu State Junior High School

Availability of Supporting Facilities	Personal Hygiene Behavior during Menstruation						P- value
	Poor		Good		Total		
	n	%	n	%	n	%	
Not available	21	37	14	25	35	62	0,577
Available	11	20	10	18	21	38	

Table 5 showed that of 35 respondents who reported that supporting facilities were not available, 14 respondents exhibited good personal hygiene practices and 21 respondents (37%) exhibited poor practices. Conversely, of 21 respondents who reported that supporting facilities were available, 11 respondents (20%) exhibited poor practices. The statistical analysis revealed a p-value of $0.577 > \alpha$ (0.05), indicating that there was no significant relationship between the availability of supporting facilities and personal hygiene behavior during menstruation among adolescent girls at Tobu State Junior High School.

The Relationship between Parental Support and Personal Hygiene Behavior During Menstruation among Adolescent Girls at Tobu State Junior High School

Table 6. Relationship between Parental Support and Personal Hygiene Behavior During Menstruation among Adolescent Girls at Tobu State Junior High School

Parental Support	Personal Hygiene Behavior during Menstruation				Total		p-value
	Poor		Good		n	%	
	n	%	n	%			
Low	27	48	11	20	38	68	0,002
High	5	9	13	23	18	32	

Table 6 showed that of 38 respondents with low parental support, 11 respondents exhibited good personal hygiene practices and 27 respondents (48%) exhibited poor practices. Conversely, of 18 respondents with high parental support, 13 respondents exhibited good practices and 5 respondents (9%) exhibited poor practices. The statistical analysis revealed a p-value of $0.002 < \alpha$ (0.05), indicating that there was a significant relationship between parental support and personal hygiene behavior during menstruation among adolescent girls at Tobu State Junior High School.

The Relationship between Peer Support and Personal Hygiene Behavior During Menstruation among Adolescent Girls at Tobu State Junior High School

Table 7. Relationship between Peer Support and Personal Hygiene Behavior During Menstruation among Adolescent Girls at Tobu State Junior High School

Peer Support	Personal Hygiene Behavior during Menstruation				Total		p-value
	Poor		Good		n	%	
	n	%	n	%			
Low	8	14	23	41	31	55	0,004
High	16	29	9	16	25	45	

Table 7 showed that of 31 respondents with low peer support, 8 respondents exhibited good personal hygiene practices and 23 respondents (41%) exhibited poor practices. Conversely, of 25 respondents with high peer support, 16 respondents exhibited good practices and 9 respondents (16%) exhibited poor practices. The statistical analysis revealed a p-value of $0.004 < \alpha (0.05)$, indicating that there was a significant relationship between peer support and personal hygiene behavior during menstruation among adolescent girls at Tobu State Junior High School.

Discussion

The Relationship Between Knowledge and Behavior During Menstrual Personal Hygiene among Adolescent Girls at Tobu State Junior High School

The Precede-Proceed Model states that knowledge is a predisposing factor that facilitates, underlies, or motivates behavior (Rachmawati, 2007). Knowledge is the result of awareness, which can occur after an individual perceives a particular object through sensory experience, primarily through sight and hearing (Ramly, 2020).

Knowledge of personal hygiene during menstruation is essential for women, both adolescents and adults, in efforts to maintain and improve personal cleanliness and health. Adolescent girls who possess good knowledge tend to demonstrate good personal hygiene behavior (Qolbah, 2024). However, there are also adolescent girls who have good knowledge but fail to adequately practice personal hygiene.

This study revealed that the majority of respondents had good knowledge regarding personal hygiene during menstruation. Knowledge in this study encompassed an understanding of menstruation and an overview of the application of personal hygiene practices during menstruation. This finding is consistent with a study conducted by Putu (2025), which showed that respondents had good knowledge of personal hygiene during menstruation. A previous study at Southwest Sumba also found that the majority of adolescent girls had a good level of knowledge regarding personal hygiene during menstruation (Bili, 2023).

The study at Tobu indicates a relationship between knowledge and personal hygiene behavior during menstruation. Adolescent girls who have good knowledge of personal hygiene during menstruation will understand the health risks that can arise from poor personal hygiene practices. This understanding then fosters awareness and motivation to apply proper personal hygiene practices during menstruation. Research by Sine (2023) also showed a relationship between knowledge and personal hygiene behavior during menstruation in eleventh-grade female adolescents at SMA Negeri 1 Ende.

Interestingly, the study at Tobu found that girls with good knowledge demonstrated poor personal hygiene behavior. Researchers assume that a person's knowledge is good but their behavior is still

lacking due to adolescent girls who are lazy to find out information about the benefits of these actions for themselves, lack of support from people around them about personal hygiene behavior, the unavailability of supporting facilities and the absence of special programs or lessons that discuss the benefits of personal hygiene during menstruation in schools. Respondents who have good knowledge actually show more poor personal hygiene behavior during menstruation because adolescent girls perceived that personal hygiene during menstruation is not an important thing to do. This situation requires a broader approach, encompassing various factors, such as information, the availability of supporting facilities, and social support, to optimize the results of existing knowledge. The lack of information can affect respondents' ability to understand and correctly apply personal hygiene practices during menstruation (Fransisca, 2020).

The Relationship Between Attitudes and Personal Hygiene Behavior During Menstruation among Adolescent Girls at Tobu State Junior High School

A person's knowledge of an object contains two aspects, namely positive aspects and negative aspects. Attitude is described as a form of evaluation or emotional reaction, where a person's attitude toward an object reflects either a favorable or unfavorable feeling toward that object (Fitriwati, 2021). Attitude can also be defined as a tendency to respond to people, objects, or certain situations either positively or negatively.

This study showed that the majority of respondents had a positive attitude. The positive attitude referred to in this study encompasses all favorable responses or assessments from adolescent girls toward health issues related to the steps taken to maintain personal hygiene during menstruation. This is consistent with a previous study which showed that adolescent girls had a positive attitude toward personal hygiene during menstruation (Suryani, 2019).

This study conducted at Tobu State Junior High School found that attitude was not significantly associated with personal hygiene behavior during menstruation. According to Suryani (2019), a person will engage in a particular behavior only when that behavior is perceived as positive, beneficial, and useful to themselves. This aligns with research conducted by Azzahra (2020), which showed no relationship between attitudes and personal hygiene behavior during menstruation. This contrasts with research conducted by Tyas (2022), which showed a relationship between attitudes and menstrual personal hygiene behavior among adolescent girls at Jombang, East Java. However, attitudes can also be influenced by various factors. Positive attitudes and poor behavior are associated with a lack of intention to engage in personal hygiene behaviors (Khairunnisa, 2024).

The factor influencing respondents' attitudes toward personal hygiene behavior was their lack of intention due to the unavailability of hygiene facilities in the toilets. Adolescent girls wanted to practice personal hygiene behavior but were constrained by inadequate facilities, laziness, and a lack of information about the dangers of not properly maintaining personal hygiene. Respondents were also influenced by the minimal implementation of special learning programs or counseling regarding hygiene during menstruation, which limited their awareness of the importance of applying personal hygiene behavior.

The Relationship between the Availability of Supporting Facilities and Personal Hygiene Behavior During Menstruation among Adolescent Girls at Tobu State Junior High School

Facilities refer to infrastructure or a set of tools used in an activity, both as supporting tools and primary tools that function to achieve a goal. The availability of facilities refers to the resources needed by adolescents to practice personal hygiene during menstruation in order to prevent infection of the reproductive organs. Facilities that every school must have include, for example, clean toilets/washbasins, clean water, clean and dry underwear, clean and germ-free sanitary pads, clean and dry towels and tissues, hand washing soap, trash bins, and others (Suryani, 2019).

Study at Tobu shows the school has unavailable supporting facilities. Similarly, research at Kupang shows that supporting facilities for personal hygiene during menstruation are inadequate and uncomfortable to use due to dirty toilets (Tanda, 2024). The availability of hygiene facilities is crucial for achieving good hygiene behaviors. Adequate supporting facilities can enable individuals to practice good personal hygiene during menstruation. The lack of facilities supporting personal hygiene was a factor contributing to adolescent girls' poor personal hygiene practices during menstruation. This aligns with previous research showing that schools with limited facilities tend to exhibit poor menstrual behavior among adolescent girls (Nisa, 2020).

However, the result showed no relationship between the availability of supporting facilities and personal hygiene behavior during menstruation among adolescent girls at Tobu. Similar results were also found in a study conducted at Bekasi Regency, which found no relationship between the availability of school facilities and personal hygiene behavior during menstruation among adolescent girls (Qolbah, 2024).

The lack of a relationship between the availability of school facilities and menstrual hygiene practices doesn't mean it should be ignored, as hygiene practices cannot be achieved without supporting facilities. Beyond the availability of facilities, other factors may influence the behavior. A lack of social support can make adolescent girls reluctant to practice good hygiene during menstruation.

The Relationship between Parental Support and Personal Hygiene Behavior During Menstruation among Adolescent Girls at Tobu State Junior High School

Parental support is the attitude and actions of parents toward their family members, so that family members feel cared for (Febrina, 2021). Forms of support provided by parents include informational support, instrumental assessment, and emotional support (Mara, 2022). Parental support is a motivating factor for adolescent girls to behave well regarding personal hygiene during menstruation. Parents serve as social support and primary educators, providing information that then becomes a reference for adolescent girls in their behavior (Amalia, 2021).

The results of this study indicate that most respondents have low levels of parental support regarding personal hygiene during menstruation. This is in line with research conducted by Tanda (2024) at Kupang, which stated that the majority of respondents also had low levels of parental support. This contrasts with the results found among adolescent girls at Lampung, where there was high parental support regarding personal hygiene during menstruation (Maharani, 2023).

The study conducted at Tobu State Junior High School revealed a relationship between parental support and personal hygiene behavior among adolescent girls. Based on low parental support, adolescent girls tend to have poor personal hygiene behavior. This is in line with previous research, which shows that there is a relationship between parental support and personal hygiene and assumes that children who receive parental support tend to have good personal hygiene behavior, compared to children who do not receive such support (Maharani, 2023).

Adolescents need parental support in shaping their behavior from birth (Musfiroh, 2020). Parental support, particularly from mothers, plays a crucial role in educating adolescent girls about reproductive health, including personal hygiene during menstruation. This is because mothers have experience and can instill good behaviors in maintaining reproductive health and hygiene during menstruation in adolescent girls (Bili, 2023).

However, communication between parents and children can determine the likelihood of a child engaging in poor or even very poor personal hygiene practices during menstruation. The less communication, the greater the likelihood of a child engaging in poor personal hygiene practices during menstruation.

The Relationship between Peer Support and Personal Hygiene Behavior During Menstruation among Adolescent Girls at Tobu State Junior High School

Peers in adolescence are a group of individuals consisting of several adolescent members of the same age, who begin to become aware of social relationships and social pressure from their peers (Ruaidah, 2023). The development of adolescents' social life is characterized by the increasing influence of peers. Adolescents spend more of their time engaging in social interactions with their peers. Peers exert a significant influence on adolescents' attitudes, interests, appearance, and behavior. This is because communication among peers is more easily understood and accepted than communication with parents or those older than adolescents (Fitriwati, 2021). Peer support is one of the reinforcing factors for adolescent girls in maintaining good personal hygiene behavior during menstruation. Adolescents can share their feelings and difficulties with friends because they feel they share the same experiences (Amalia, 2021).

The results of this study indicate that adolescents with low peer support have lower levels of personal hygiene behaviors during menstruation. This is consistent with research conducted among adolescents in West Jakarta, which showed low levels of peer support for personal hygiene behaviors (Ramadhani, 2023).

The study conducted at Tobu State Junior High School showed that there was a significant relationship between parental support and personal hygiene behavior. This is consistent with a study conducted in Jambi, which demonstrated a relationship between peer support and personal hygiene during menstruation (Fitriwati, 2021). Previous research also demonstrated a relationship between peer support and personal hygiene during menstruation (Nisa, 2020).

Poor personal hygiene behavior during menstruation was influenced by the low level of support provided by peers. This was due to the lack of communication between respondents and their peers regarding menstrual information, experiences during menstruation, and mutual advice and reminders to always maintain personal hygiene, especially during menstruation. The researcher assumes that the lack of peer support was caused by adolescent girls still considering menstruation, particularly regarding personal hygiene behavior, as a taboo subject and individualistic behavior that does not need to be known by others nor sought after.

Conclusion

The results of this study showed that factors related to personal hygiene behavior during menstruation among adolescent girls were knowledge ($p\text{-value} = 0.002$), parental support ($p\text{-value} = 0.002$), and peer support ($p\text{-value} = 0.004$). Variables that had no relationship with personal hygiene behavior during menstruation among adolescent girls at Tobu State Junior High School were attitude ($p\text{-value} = 0.932$), availability of supporting facilities ($p\text{-value} = 0.557$). Adolescent girls are expected to improve their personal hygiene behavior during menstruation by seeking information about reproductive health, especially regarding the importance of personal hygiene during menstruation.

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