
Overview of The Level of Knowledge of Adolescent Girls About The Habit of Wearing Underwear in Relation to Reproductive Health at Muhajirin Cikupa Junior High School

Ismy Nur Isnaini¹, Fische Awalina^{2*}, Sudrajat³

¹Undergraduate Student in Nursing Science, Cendekia Abditama University, Tangerang

^{2*}Department of Undergraduate Nursing Science, Cendekia Abditama University, Tangerang

³Department of Undergraduate Nursing Science, Cendekia Abditama University, Tangerang

*Correspondence Author, Email: fischalin@gmail.com

ABSTRACT

Young women are an age group that undergoes physical changes and reproductive organ maturation. One of the important aspects of maintaining reproductive health is the habit of wearing underwear. The use of underwear that is too tight, does not absorb sweat, or is rarely changed can increase the risk of vaginal discharge, irritation, and infection. However, there are still many teenagers who have limited understanding of this matter. *Objective:* This study aims to find out the level of knowledge of adolescent girls regarding the habit of using underwear in reproductive health at Muhajirin Cikupa Junior High School.

This study used quantitative with a descriptive design. The sample was taken by random sampling of 104 adolescent girls aged 12–15 years at Muhajirin Cikupa Junior High School. The instrument was in the form of a closed questionnaire with 21 statements that included the hygiene of the reproductive organs, the selection and use of underwear, the habit of changing underwear, and the impact of improper use. The data were analyzed univariately and presented in frequency distributions.

Most of the respondents were 13 years old (39.4%) and in grade VII (35.6%). As many as 85.6% of respondents had a good level of knowledge, 14.4% were adequate, and nothing was lacking. High knowledge can be seen in the hygiene aspect of the reproductive organs and the habit of changing underwear, although there are still misunderstandings related to the use of cleaning soaps containing alcohol and fragrances for the reproductive organs. *Conclusion:* The majority of young women have good knowledge, but further education is still needed so that this knowledge can be applied consistently in their daily habits.

Keywords: Knowledge, Young Women, Underwear, Reproductive Health

INTRODUCTION

Adolescents are a group of people who are experiencing an important transition period from childhood to adulthood, marked by physical, psychological, and intellectual development, including the maturation of the reproductive organs (Miranti & Astutik, 2023). The definition of adolescence varies according to different institutions; the World Health Organization (WHO) defines adolescents as individuals aged 10-19 years, while Indonesian Minister of Health Regulation No. 25 of 2014 categorizes adolescents as those aged

10-18 years. The National Population and Family Planning Agency (BKKBN) expands this age range to 10-24 years old, provided that the individual is unmarried (Yanna Wari Harahap & Suryati, 2021).

Reproductive health in adolescents is an important aspect that needs serious attention because this period is crucial in forming habits that have a long-term impact on health (Injelita & Anggraeni, 2023). According to the WHO (2024), reproductive health is defined as a state of physical, mental, and social well-being, not merely the absence of disease in the reproductive system. However, various

reproductive health problems are still commonly found, especially among adolescent girls. Based on Riskesdas (2018), around 43.3% of adolescent girls in Indonesia have poor reproductive organ hygiene habits, and data from the Central Statistics Agency and the National Development Planning Agency (2022) show that around 65.82 million Indonesian adolescents are at risk of engaging in unhealthy behaviors related to reproductive health.

The hot and humid climate in Indonesia exacerbates the risk of reproductive health disorders because these conditions support the growth of bacteria and fungi, especially in covered areas of the body such as the reproductive organs (Hairil Akbar, 2020). Therefore, maintaining hygiene, including choosing the right underwear, is an important preventive measure. The use of cotton underwear that absorbs sweat and changing it at least twice a day is highly recommended (Indonesian Ministry of Health, 2018).

The choice and habit of wearing underwear are major factors that affect reproductive health. Underwear that is too tight or made of synthetic materials can cause skin irritation and increase the risk of infection (Sari, 2021). Research by Shinta Dwi Nurwidiansyah and Erwin Nur Rif'ah (2020) shows that most respondents prefer lace and nylon materials over cotton, which is more comfortable and healthier. This condition reflects a lack of awareness of the health aspects of underwear selection. In addition, underwear hygiene during menstruation is also a concern. Research by Hako et al. (2022) found that 58.6% of adolescent girls do not maintain good underwear hygiene during menstruation, despite the fact that sanitary pad usage tends to be good (87.5%). This low level of knowledge about underwear hygiene is one of the causes of the high risk of reproductive health disorders (Ariantini & Purnamasari, 2024).

At Muhajirin Cikupa Junior High School, initial observations showed that most adolescent girls aged 12-15 still had limited understanding of reproductive hygiene and health. Many of them chose tight and synthetic underwear and rarely changed it after sweating, especially in the summer or after activities (Injelita & Anggraeni, 2023). These habits have the potential to increase the risk of irritation, fungal infections, and other reproductive disorders. Given the important role of knowledge in shaping healthy behavior, this study aims to describe the level of knowledge among adolescent girls regarding underwear usage habits and their impact on reproductive health at SMP Muhajirin Cikupa. This study is expected to provide a scientific basis for the development of more effective reproductive health education programs for adolescents.

MATERIALS AND METHOD

This study used a quantitative descriptive approach to determine the level of knowledge among adolescent girls regarding the use of underwear in relation to reproductive health. The study was conducted in April–May 2025 at Muhajirin Cikupa Junior High School, Tangerang Regency. The population consisted of 140 female students aged 12–15 years, with 104 respondents selected through random sampling using the Slovin formula (5% error rate) and proportional sampling by grade level. The inclusion criteria were female students aged 12–15 years who were willing to be respondents, while the exclusion criteria included female students outside the age range or those who were unable to complete the questionnaire.

The instrument was a closed questionnaire containing 21 Guttman scale statements (true/false) covering aspects of reproductive organ hygiene, selection and use of underwear, frequency of replacement, and the impact of inappropriate use. The Pearson Product Moment validity test showed that all items

were valid (calculated $r >$ table r), and the Cronbach's Alpha reliability test obtained a value of 0.848, indicating that the instrument was reliable.

Data collection was conducted by

distributing questionnaires after obtaining informed consent. The data were analyzed univariately and then presented descriptively in the form of frequency distribution tables.

RESULTS

1. Respondent characteristics

Respondent characteristics were

reviewed based on age and grade. The following table presents the frequency distribution:

Table 1. Distribution of Respondents Based on Age and Grade at Muhajirin Cikupa Junior High School 2025 (n=104)

Characteristics	Frequency	Percentage
Age		
12 Years	3	2.9
13 years	41	39.4
14 years	25	24.0
15 years	35	33.7
Grade		
7th grade	37	35.6
VII Junior High School	36	34.6
9th grade	31	29.8

Based on the characteristics of the respondents, the majority were 13 years old, totaling 41 people (39.4%). In terms of The respondents were divided proportionally with 37 students (35.6%) from grade VII, 36 students (34.6%) from grade VIII, and 31

students (29.8%) from grade IX. This sample distribution was adjusted to the proportion of the population in each grade so that it would be representative and the research results could reflect the level of knowledge of adolescent girls across all grade levels.

2. Level of Knowledge of Adolescent Girls

Level knowledge of are categorized into three levels: good (76–100%), fair (56–75%), and poor

(<55%). The distribution results can be seen in the following table:

Table 2. Respondents' Level of Knowledge About Underwear Use at Muhajirin Cikupa Junior High School 2025 (n=104)

Level of Knowledge of Adolescent Girls about Underwear Usage Habits on Reproductive Health Reproductive	Frequency (f)	Percentage (%)
Good	89	85.6
Fair	15	14.4
Insufficient	0	0

The majority of adolescent girls in this study, namely 89 respondents (85.6%), had a good level of knowledge about underwear habits and reproductive health.

DISCUSSION

Respondent Characteristics

The results showed that the majority of respondents were 13 years old (39.4%), 15 years old (33.7%), and 14 years old (24%). Most respondents were in the mid-adolescent age range, namely 12–15 years old, which is characterized by increased estrogen production during puberty. Estrogen affects physiological changes such as breast development, menstruation, and changes in the skin and genital area, so the importance of awareness of maintaining reproductive hygiene increases at this stage.

Research by Dara Anissa Putri & Ida Nur Imamah (2024) states that estrogen plays a significant role in the emergence of secondary sexual characteristics and increases sensitivity to genital hygiene. This is also reinforced by Miranti & Astutik (2023), who argue that adolescents in puberty begin to show a high level of concern about bodily changes and the importance of maintaining personal hygiene.

The distribution of classes in this study was fairly even, with the largest number of respondents coming from grade VII (35.6%), grade VIII (34.6%), and

These results are in line with the research by Senja & Widiastuti (2020), which found that 57.7% of adolescents have good knowledge about reproductive health. This improvement is also reflected in a comparison with the findings of Nuryanita & Malik (2021), which noted that only 48% of adolescents had sufficient knowledge. Thus, it can be assumed that there has been an increase in access to and dissemination of reproductive health information among adolescents, especially in school environments.

Reviewed based on aspects of knowledge, it was found that most

Meanwhile, 15 respondents (14.4%) had a sufficient level of knowledge.

grade IX (29.8%). This shows that exposure to information about reproductive health has reached almost all grade levels. In their study, Pratama & Sari (2021) revealed that differences in educational levels can affect how adolescents receive and understand health information, including practices for maintaining reproductive hygiene. With the appropriate age and educational level, adolescent girls have the potential to be good at absorb information and improve reproductive health literacy. This is one indicator that schools play an important role in shaping adolescents' understanding of personal health.

Level of Knowledge Among Female Adolescents

The results of the study show that most adolescent girls at SMP Muhajirin Cikupa have a good level of knowledge about the habit of wearing underwear to maintain reproductive health, namely 85.6%, while the rest (14.4%) have sufficient knowledge. No respondents with low levels of knowledge were found. These findings indicate that, in general, adolescent girls have a fairly high level of awareness about the importance of maintaining the cleanliness and health of their reproductive organs.

respondents understood the basic principles of maintaining reproductive organ hygiene, such as cleaning from front to back to prevent bacterial contamination from the anus to the vagina. However, there are still misconceptions regarding the use of soap cleanser which contain alcohol and fragrances. Some adolescents believe that these soaps are effective in preventing infections, whereas according to Rosidah (2022), products with these ingredients can cause irritation and disrupt the normal vaginal flora, such as *Lactobacillus*, which is important for maintaining pH balance and protecting

against infections.

In terms of underwear selection, the majority of respondents knew that cotton is more recommended because it absorbs sweat and keeps the genital area dry. However, some teenagers still choose synthetic materials or tight underwear for reasons of comfort or fashion trends. However, according to Nurwidyansyah & Rif'ah (2020), synthetic materials such as nylon increase moisture and are a risk factor for the growth of fungi and bacteria that cause infections.

The habit of changing underwear also shows positive results. Most adolescents know that underwear should be changed at least twice a day, especially after sweating. However, the application of this knowledge is not yet fully consistent, as there are still those who are reluctant to change their underwear if it looks clean. In fact, Injelita & Anggraeni (2023) mention that moisture in underwear can be a medium for the growth of microorganisms that trigger vaginal discharge and urinary tract infections.

Regarding the final aspect, namely understanding the impact of improper underwear use, most respondents were aware of risks such as unpleasant odors, itching, and irritation. However, some still did not understand that irritation could

be caused by friction from tight underwear or materials that do not absorb sweat. Ismi Sulaika et al. (2018) confirm that wearing inappropriate underwear can cause wounds and skin infections in the genital area.

Factors influencing this level of knowledge include age, education, personal experience, and information sources. Good knowledge among respondents can be attributed to school curricula that include reproductive health education, either through science or physical education lessons. Information is also obtained from books, teachers, social media, and parents. Putri & Imamah (2024) stated that access to information from various sources contributes to an

increase in adolescent understanding. In addition, personal experiences such as first menstruation also encourage more active information seeking (Wulandari et al., 2024). A supportive family and school environment also plays an important role. Deswita (2023) states that the involvement of parents and teachers supports the formation of clean and healthy living behaviors in adolescents.

However, as stated by Notoatmodjo (2021), good knowledge does not necessarily guarantee behavioral change. In this context, there is still a gap between knowledge and daily practice, especially in terms of choosing underwear and using cleansing soap. Therefore, educational interventions are needed that not only focus on conveying information but also on strengthening behavior.

CONCLUSION

The majority of adolescent girls in this study were 13 years old (39.4%) and in seventh grade (35.6%), which is the early transition period of adolescence marked by hormonal changes and increased awareness of personal health, including reproductive health. The

The results of the study show that the level of knowledge of adolescent girls regarding the use of underwear in reproductive health is relatively good, with 85.6% of respondents having a good level of knowledge. This good knowledge is reflected in their understanding of four main aspects, namely reproductive organ hygiene, selection and use of underwear, frequency of replacement, and understanding of the effects of improper use of underwear. However, gaps were still found in certain aspects, such as the use of inappropriate cleaning soaps and ignorance of the risks of synthetic or overly tight underwear.

Continuous, practical education on healthy underwear usage habits is needed, both at school and in the family environment. Further research is recommended using a different design and

broader coverage to obtain a more in-depth and representative understanding of the

factors that influence adolescent reproductive health behavior.

REFERENCES

- Ariantini, N. S., & Purnamasari, A. (2024). Overview of Knowledge and Reproductive Health Behavior Among Vocational School Students in Buleleng Regency. *Indonesian Health Science Journal*, 2(1), 1–9.
- Agency Central Statistics. (2022). Population by Age Group and Gender Sex 2022, from <https://www.bps.go.id/id/statistics-table/3/WVc0MGEyMXBkVFUxY25KeE9HdDZkbTQzWkVkb1p6MDkjMw==/jumlah-penduduk-menurut-kelompok-umur-dan-jenis-kelamin--2022.html?year=2022>
- Dara Anissa Putri, & Ida Nur Imamah. (2024). Overview of Personal Hygiene Behavior During Menstruation Among Adolescent Girls at SMP Negeri 4 Surakarta. *Detector: Journal of Health Science Research Innovation*, 2(3), 291–301. <https://doi.org/10.55606/detector.v2i3.4230>
- Deswita, D. (2023). Factors Affecting Reproductive Health Behavior in Female Seventh Graders at SMPN 03 Rangat Barat. *Health Research Journal*, 14(4), 526–529.
- Hairil Akbar. (2020). Factors Related to Personal Hygiene Among Female Adolescents at SMA Negeri 1 Kotamobagu. *Bina Generasi: Health Journal*, 11(2), 23–28.
- Injelita, J., & Anggraeni, A. D. (2023). The use of cotton underwear with antibacterial methods to treat vaginal discharge in women. *Journal of Nursing Practice and Education*, 4(1), 129–135. <https://doi.org/10.34305/jnpe.v4i1.934>
- Ismi Sulaika, Ike, H., & Puji, D. (2018). The relationship between personal hygiene during menstruation and the occurrence of vulvar pruritus in adolescents (Study at Pondok Pesantren Darul Muttaqin Jombang Junior High School). *Reproductive Health*, vol 1, 8. <http://repo.stikesicme-jbg.ac.id/972/>
- Nuryanita, I., & Malik, R. (2021). Adolescents' Level of Knowledge about Reproductive Health. 98–106.
- Pratama, D., & Sari, Y. P. (2021). Characteristics of Adolescent Development | Jurnal Edukasimu. *Edukasimu.Org*, 1(3), 1–9. <http://edukasimu.org/index.php/edukasimu/article/view/49>
- Rosidah. (2022). The Relationship Between Adolescent Girls' Knowledge of Personal Hygiene and the Incidence of Vaginal Discharge at An-Nur Junior High School in Dukuh Dalem Village, Kuningan, in 2022. *Jurnal Health Journal*, 4, 25–29
- Sari, L. A. (2021). Level of Knowledge Regarding Reproductive Health Among Male Adolescents at SMP Negeri Kota Jambi. *Imelda Scientific Nursing Journal*, 7(1), 35–39. <https://doi.org/10.52943/jikeperawatan.v7i1.484>
- Shinta Dwi Nurwidnyansyah, Erwin Nur Rif'ah, D. R. (2020). Behavior in Maintaining Personal Hygiene of the Reproductive Organs among Female Sex Workers. *Indonesian Journal of Health Promotion*, 15(1), 36. <https://doi.org/10.14710/jpki.15.1.36-41>
- Wulandari, R. T., Mutiara Putri, I., & Herfanda, E. (2024). The Relationship Between Knowledge and Personal Hygiene Behavior During Menstruation Among Adolescent Girls at the Miftahunnajah Islamic Boarding School in Sleman, Yogyakarta. *Jurnal Sehat Mandiri*, 19(1), 36–45
- Yanna Wari Harahap, Suryati, M. (2021). Personal Hygiene Behavior of

Adolescent Girls During
Menstruation at MTS Swadaya
Padangsidimpuan. *Indonesian Health
Scientific Journal*, 6(June), 14–25.