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Determinants of vulva hygiene practices and their association with abnormal vaginal discharge among adolescent girls

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Abstract

Background: Vaginal discharge is one of the common reproductive health problems experienced by adolescent girls and may be influenced by poor vulva hygiene practices. Several factors are presumed to be related to vulva hygiene practices and vaginal discharge, including knowledge, attitude, action, facilities, exposure to reproductive health information, family support, peer support, and teacher support. This study aimed to identify the determinants of vulva hygiene practices related to vaginal discharge among adolescent girls at Madrasah Aliyah Negeri 2 Kota Jambi.

Purpose: To identify the determinants of vulva hygiene practices and examine their association with the incidence of abnormal vaginal discharge among adolescent girls.

Method: A quantitative study using an analytical observational approach with a cross-sectional design was conducted in April 2026. The study population comprised all 253 eleventh-grade female students at MAN 2 Kota Jambi, with a sample size of 156 respondents selected via Proportional Random Sampling based on inclusion criteria. Primary data were gathered online via Google Form questionnaires and analyzed using univariate and bivariate statistical tests (Chi-Square, $\alpha = 0.05$).

Results: Univariate analysis showed that 58.3% of respondents experienced abnormal vaginal discharge. Most respondents possessed good knowledge (80.8%), positive attitudes (60.3%), good vulva hygiene practices (50.6%), adequate facilities (58.3%), high exposure to reproductive health information (63.5%), family support (56.4%), peer support (58.3%), and teacher support (64.7%). Bivariate analysis revealed that factors significantly associated with vulva hygiene practices were the availability of sanitation facilities ($p=0.021$), family support ($p=0.015$), peer support ($p=0.000$), and teacher support ($p=0.039$), while knowledge ($p=0.743$), attitude ($p=0.844$), and exposure to reproductive health information ($p=0.774$) showed no significant association. Furthermore, a significant correlation was found between vulva hygiene practices and the incidence of vaginal discharge ($p=0.004$; $PR=1.697$; $95\% CI=1.169-2.462$), indicating that adolescents with poor vulva hygiene practices have a 1.697 times higher risk of experiencing abnormal vaginal discharge.

Conclusion: Vulva hygiene practices among adolescent girls are significantly influenced by enabling factors (facilities) and reinforcing factors (family, peer, and teacher support). Inadequate vulva hygiene practices are proven to significantly increase the risk of abnormal vaginal discharge. Reproductive health promotion programs in schools are recommended to optimize sanitation facilities and strengthen social support networks to encourage proper hygiene habits.

Keywords: Adolescent Girls; Reproductive Health; Vaginal Discharge; Vulva Hygiene, Social Support.

INTRODUCTION

Reproductive health is a state of physical, mental, and social well-being, free from disease or disorders that disrupt the functions and processes of the reproductive system. Reproductive health encompasses all aspects of the system, its functions, and its processes. Adolescence is a crucial period for women regarding reproductive health (Kana, Sholihin, Pitaloka, Zuhkrina, Qurniyawati, Sembiring, & Noor, 2024).

According to the World Health Organization (WHO), adolescents are individuals between the ages of 10 and 19 who are undergoing the transition to adulthood, including sexual maturity, the psychological transition from childhood to adulthood, and physical, biological, and psychological changes. This period begins with a rapid growth spurt known as puberty. During this rapid growth spurt, there are visible physical changes, such as increases in height and weight, known as growth spurts, and sexual maturity, caused by hormonal changes (Ministry of Health of the Republic of Indonesia, 2022).

Vaginal discharge is a common condition experienced by women, starting in adolescence, through the reproductive years, and through menopause. Therefore, personal hygiene, especially vulvar hygiene, is essential. Personal hygiene is one solution to minimize the risk of disease transmission (Oktafia, Pendawa, Maihanda, Khoiriyah, Septiani, & Asparian, 2021).

There are two different types of vaginal discharge: normal (physiological) vaginal discharge, which occurs during a woman's reproductive cycle and is clear, odorless, and does not itch or sting. Abnormal (pathological) vaginal discharge, which occurs when there is a large amount of discharge that is white like spoiled milk or greenish-yellow, itchy, stinging, and has a fishy odor (Ministry of Health of the Republic of Indonesia, 2022). Vaginal discharge is caused by viruses, bacteria, and germs; stress, hormonal factors, and improper vulvar care. As a result, women are also more susceptible to fungal and bacterial infections, which cause abnormal vaginal discharge. Vaginal discharge can be triggered by various factors, including unhygienic behavior such as using unclean water for washing, underwear that does not absorb sweat well, and the use of pantyliners (Sukmawati, Anisa, & Handayani, 2024).

WHO data shows that 75% of women experience vaginal discharge at least once in their lifetime, with

the highest rate occurring in the young reproductive age group. Furthermore, approximately 45% of women in Indonesia experience vaginal discharge more than once a year. Approximately 90% of Indonesian women experience vaginal discharge, which is caused by the tropical climate. In tropical areas, fungi thrive, increasing the risk of vaginal discharge in women. The incidence of vaginal discharge continues to increase annually, reaching 70% (Widiarti, Arifin, Lestaris, Al Hakim, & Toemon, 2023).

Based on data from the 2018 Basic Health Research, 63.2% of adolescent girls aged 15-19 have experienced reproductive health problems, with vaginal discharge being the primary complaint. Furthermore, a national survey conducted by the Indonesian Pediatrician Association in 2022 found that 52.8% of adolescent girls in urban areas and 48.3% in rural areas reported experiencing abnormal vaginal discharge in the past 12 months (Salsabila & Munah, 2025).

Data from the Jambi City Central Statistics Agency (BPS) in 2022 indicates a significant number of adolescent girls, 24,078 in the 15-19 age group. This age group is in mid-to-late adolescence, and they are vulnerable to various reproductive health issues, including vaginal discharge. This large number of adolescent girls illustrates the critical need for education and good reproductive health practices (Jambi City Central Statistics Agency, 2023).

In this study, the variables examined include predisposing factors (such as adolescent girls' behaviors and attitudes toward vulvar hygiene), enabling factors (such as school sanitation facilities and exposure to reproductive health information), and reinforcing factors (such as family support, peer support, and teacher support), which will be analyzed to understand their relationship with the incidence of vaginal discharge. Factors influencing vulvar hygiene behavior in adolescent girls generally consist of knowledge, attitudes, and practices regarding reproductive organ care.

Knowledge is the result of a person's learning process, influencing their thinking and determining their behavior. Adolescents with good knowledge of reproductive health tend to be better able to maintain genital hygiene and prevent vaginal discharge. Attitude also plays a crucial role in determining a person's willingness to engage in health-promoting

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behaviors. Adolescent girls with positive attitudes toward the importance of maintaining feminine hygiene will be more consistent in practicing proper vulvar hygiene. Furthermore, concrete practices or behaviors related to maintaining genital hygiene, such as proper washing, wearing clean, absorbent underwear, and changing sanitary napkins during menstruation, are direct factors associated with the incidence of vaginal discharge.

This study utilizes Lawrence Green's "Precede-Proceed" theory, developed by Lawrence Green (2020), to gain a better understanding of the behavioral determinants that influence vulvar hygiene care and the incidence of vaginal discharge. This theory divides behavioral determinants into predisposing factors (knowledge, attitudes, and practices), enabling factors (sanitation facilities and exposure to information), and reinforcing factors (family support, peer support, and teacher support) (Assiraj, 2021).

RESEARCH METHOD

This study employed a quantitative analytical observational design with a cross-sectional approach to identify the determinants of vulva hygiene practices and their association with abnormal vaginal discharge among adolescent girls. The cross-sectional design allows the assessment of relationships between independent and dependent variables at a single point in time without any intervention by the researchers.

The study was conducted at Madrasah Aliyah Negeri (MAN) 2 Jambi City, Indonesia, in April 2026. The study population consisted of all eleventh-grade female students enrolled during the 2025/2026 academic year, totaling 253 students. The inclusion criteria were female students of grade XI who had experienced menarche, were willing to participate in the study, and provided informed consent. Students who did not complete the questionnaire or were absent during data collection were excluded from the study.

The sample size was determined using the Slovin formula with an additional 10% allowance for potential non-response, resulting in a total sample of 156 respondents. Participants were selected using

proportional random sampling to ensure that each class was represented proportionally according to the number of female students.

Data were collected using a structured self-administered questionnaire developed based on Lawrence Green's PRECEDE-PROCEED model and relevant literature on adolescent reproductive health and vulva hygiene practices. The questionnaire consisted of items assessing socio-demographic characteristics, knowledge, attitudes, vulva hygiene practices, sanitation facilities, exposure to reproductive health information, family support, peer support, teacher support, and the incidence of abnormal vaginal discharge. Data collection was conducted online using Google Forms after participants received an explanation regarding the study objectives and procedures.

Prior to data collection, the questionnaire underwent validity and reliability testing. All questionnaire items met the validity criteria, and the instrument demonstrated acceptable internal consistency reliability (Cronbach's $\alpha \geq 0.70$). The validity and reliability tests were conducted among respondents with characteristics similar to those of the study population.

Data analysis was performed using Statistical Package for the Social Sciences (SPSS) version XX. Univariate analysis was conducted to describe the distribution of respondents' characteristics and study variables using frequencies, percentages, means, and standard deviations. Bivariate analysis was performed using the Chi-square test to determine the association between independent variables and vulva hygiene practices, as well as between vulva hygiene practices and abnormal vaginal discharge. Prevalence Ratios (PR) with 95% Confidence Intervals (95% CI) were calculated to estimate the magnitude of associations. Statistical significance was determined at a p-value of < 0.05 .

This study received ethical approval from the Ethics Committee of Universitas Jambi with approval number B-238/Ma.05.06.002.1/PP.00.6/06/2026. Participation in this study was voluntary, and informed consent was obtained from all respondents before data collection. Confidentiality and anonymity of participants were strictly maintained throughout the study.

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RESEARCH RESULTS

Table Characteristics of Respondents (N=156)

Variable	Results	P-value	PR (95% CI)
Age (Mean±SD) (Years) (Range)	(16.44 ± 0.55) (15-18)		
15	2/1.3		
16	82/52.6		
17	70/44.9		
18	1/0.6		
Vaginal Discharge (n/%)			
		0,004	1.697 (1.169-2.462)
Normal	65/41.7		
Abnormal	91/58.3		
Knowledge (n/%)		0,743	0.933 (0.613-1.421)
Good	126/80.8		
Poor	30/19.2		
Attitude (n/%)		0,844	0.968 (0.698-1.342)
Positive	94/60.3		
Negative	61/39.7		
Action (n/%)			
Good	79/50.6		
Poor	77/49.4		
Facility (n/%)		0,021	0.673 (0.472-0.960)
Good	91/58.3		
Poor	65/41.7		
Exposure to Reproductive Health Information (n/%)		0,774	1.049 (0.757-1.454)
High	99/63.5		
Low	57/36.5		
Family Support (n/%)		0,015	0.660 (0.465-0.937)
Yes	88/56.4		
No	68/43.6		
Peer Support (n/%)		0,000	3.287 (2.271-4.758)

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Yes	91/58.3		
No	65/41.7		
Teacher Support (n/%)			
		0.689 (0.471-1.006)	
		0,039	
Yes	101/64.7		
No	55/35.3		

The table above shows that the average age and standard deviation of respondents are (16.44 ± 0.55) with an age range (15-18). Based on the incidence of abnormal vaginal discharge, the majority of respondents have abnormal vaginal discharge, namely 91 respondents (58.3%) with the majority of respondents having good knowledge, namely 126 respondents (80.8%). Based on attitudes, the majority of respondents have a positive attitude, 94 (60.3%) with the majority of respondents having good practices, 79 (50.6%). Based on facilities, the majority of respondents have good facilities, 91 (58.3%) with high exposure information, namely 88 respondents (56.4%), the majority of respondents have support from their parents, 88 respondents (56.4%). Based on peer support, 91 respondents (58.3%) received peer support, while 65 respondents (41.7%) did not receive peer support. Based on teacher support, the majority of respondents received teacher support (101 respondents (64.7%)), while 55 respondents (35.3%) did not receive teacher support.

The statistical test results obtained a p-value of 0.743 ($p > 0.05$), thus concluding that there was no significant relationship between knowledge level and vulva hygiene practices among adolescent girls at Madrasah Aliyah Negeri 2, Jambi City, in 2026. The PR value of 0.933 (95% CI: 0.613–1.421) indicates that respondents with less knowledge had a 0.933 times greater risk of practicing poor vulva hygiene compared to respondents with good knowledge.

The results of the attitude statistical test showed a p-value = 0.844 ($p > 0.05$) so it can be concluded that there is no significant relationship between attitudes and vulva hygiene practices in adolescent girls at State Islamic Senior High School 2, Jambi City in 2026. The PR value = 0.968 (95% CI: 0.691–1.342) indicates that respondents with negative attitudes have a 0.968 times risk of having poor vulva hygiene practices compared to respondents with positive attitudes. The results of the facility statistical test obtained a p-value = 0.021 ($p < 0.05$) so it can be

concluded that there is a significant relationship between sanitation facilities and vulva hygiene practices in adolescent girls at State Islamic Senior High School 2, Jambi City in 2026. The PR value = 0.673 (95% CI: 0.472–0.960) indicates that respondents who have inadequate facilities have a prevalence of vulva hygiene practices that is 0.673 times lower than respondents who have good facilities. The results of the statistical test of exposure to reproductive health information showed a p-value = 0.774 ($p > 0.05$) so it can be concluded that there is no significant relationship between exposure to reproductive health information and vulva hygiene practices in adolescent girls at State Islamic Senior High School 2, Jambi City in 2026. The PR value = 1.049 (95% CI: 0.737–1.454) indicates that respondents with low exposure to reproductive health information have a 1.049 times risk of having poor vulva hygiene practices compared to respondents with high exposure to reproductive health information. The results of the statistical test of family support obtained a p-value = 0.015 ($p < 0.05$) so it can be concluded that there is a significant relationship between family/family support and vulva hygiene practices in adolescent girls at State Islamic Senior High School 2, Jambi City in 2026. The PR value = 0.660 (95% CI: 0.465–0.937) shows that respondents who do not receive family support have a prevalence of vulva hygiene practices that is 0.660 times lower than respondents who receive family support.

The results of the statistical test of peer support showed a p-value = 0.000 ($p < 0.05$) so it can be concluded that there is a significant relationship between peer support and vulva hygiene practices in adolescent girls at State Islamic Senior High School 2, Jambi City in 2026. The PR value = 3.287 (95% CI: 2.271–4.758) shows that respondents who do not receive peer support have a 3.287 times greater risk of having poor vulva hygiene practices than respondents who receive peer support. The results of the statistical test of teacher support obtained a p-

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value = 0.039 ($p < 0.05$) so it can be concluded that there is a significant relationship between teacher support and vulva hygiene practices in adolescent girls at State Islamic Senior High School 2, Jambi City in 2026. The PR value = 0.689 (95% CI: 0.471–1.006) shows that respondents who did not receive teacher support had a prevalence of vulva hygiene practices that was 0.689 times lower than respondents who received teacher support. And the results of the statistical test of vaginal discharge showed a p -value = 0.004 ($p < 0.05$) so it can be concluded that there is a significant relationship between vulva hygiene practices and the incidence of vaginal discharge in adolescent girls at State Islamic Senior High School 2, Jambi City in 2026. The PR value = 1.697 (95% CI: 1.169–2.462) shows that respondents with poor vulva hygiene practices have a 1.697 times greater risk of experiencing abnormal vaginal discharge compared to respondents with good vulva hygiene practices.

DISCUSSION

In theory, knowledge is an important foundation for developing health behaviors, but knowledge is not always sufficient to trigger changes in behavior. This condition is often referred to as the knowledge-behavior gap, which occurs when someone knows what is right but does not necessarily act on it. In adolescents, good knowledge can stop at the cognitive level without becoming part of daily habits, especially if attitudes, motivation, and social support are not yet strong (Mastina & Rahmah, 2020). The results of this study align with other studies that also found no significant relationship between knowledge and vulvar hygiene behavior in adolescent girls. Researchers explained that adolescents' knowledge tends to be theoretical and not applicable in daily life (Sari, Mariana, Monica, & Rahmah, 2023). Research conducted at the Bahrul Ulum Islamic boarding school also found that knowledge was not associated with the incidence of abnormal vaginal discharge, with a p -value of 1.000. Knowledge is a factor in vaginal discharge caused by a person's lack of knowledge and will influence behavior to prevent vaginal discharge (Puspita, Wathan, & Sari, 2025). In a previous study, the results of a chi-square statistical test of adolescent girls' knowledge regarding vaginal discharge at a confidence level of 0.05 showed a p -value of 0.122. This means that the study found no relationship between adolescent girls' knowledge and the incidence of vaginal discharge in girls at SMP

Negeri 1 Pangkep in 2022 (Salina & Farahdiba, 2022).

This finding contradicts Lawrence Green's theory, which states that knowledge is a predisposing factor influencing the formation of health behaviors. According to this theory, greater knowledge about proper vulvar cleaning practices leads to improved personal hygiene practices, thus reducing the risk of pathological vaginal discharge. This discrepancy may occur because adolescents' knowledge is still cognitive and has not yet been translated into concrete practices. Adolescents may already know to change their sanitary napkins every 3-4 hours, but in practice, they continue to use them all day due to laziness, the hassle, or lack of time during class (Green, 2020). These results are inconsistent with a study conducted at State Vocational High School 2 Padang in 2025, which showed a correlation between knowledge and vaginal discharge ($p=0.001$). This difference can be explained by variations in the quality of knowledge, depth of understanding, sources of information, and whether the information is actually put into practice. In some settings, knowledge may remain merely informative, not yet reaching the level of awareness and habit (Febriyanti, 2025).

These results align with previous research, which showed no significant correlation between attitudes and vaginal discharge, with a p -value of 0.089. This means that although most respondents had a fairly positive attitude toward vulvar hygiene, this was not sufficient to distinguish whether they experienced pathological or physiological vaginal discharge. Furthermore, this study showed that the majority of respondents already had a fairly positive attitude, suggesting a possible homogeneity of attitudes. If most respondents had similar attitudes, it would be difficult to see statistically significant differences in vaginal discharge (Alase, Palit, Popatoon, Ingrit, & Tahapary, 2024).

However, this study is inconsistent with research at SMKS Keluarga Bunda Jambi, which found a significant relationship between attitudes and vulva hygiene behavior with a p value of <0.003 . This study is also inconsistent with other research at MAS Pertiwi, Jambi City, which found a p value of 0.001. Many people have negative attitudes about vaginal discharge because they lack sufficient information. Some people consider vaginal discharge trivial, do not care much, or are unaware of the importance of information about vaginal discharge. This can lead

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them to have a misconception about vaginal discharge. Due to the lack of awareness to seek information about vaginal discharge, their attitudes have not changed in a positive direction. Vaginal discharge is still not well understood by most people, so they do not have the right attitude to deal with it (Sari, 2018).

This study also disagrees with other research that found that attitudes were indeed related to vaginal discharge among female students at Kendari 1 State Senior High School. To determine the extent of the effect, a phi coefficient test was conducted. The results showed a value of 0.419, or approximately 17.56%, indicating a relationship, but the relationship was weak. The responses given by female students significantly determine how effectively they implement vaginal discharge prevention measures. If their responses are inaccurate, they are likely inadequately implementing vaginal discharge prevention measures or cleaning their genitals. This can lead to various problems affecting their femininity (Darlian & Safitri, 2021).

Facilities and infrastructure are an enabling factor. Clean toilets, running water, available soap, and covered trash cans should facilitate adolescents' proper vulvar hygiene practices. The results of this study indicate that the incidence of vaginal discharge is influenced not only by the availability of facilities but also by individual behavior in utilizing these facilities. Furthermore, biological and hormonal factors can also influence the incidence of abnormal vaginal discharge in adolescent girls (Assiraj, 2021).

These findings align with previous research, which emphasized that vulvar hygiene behavior is influenced by health habits supported by an adequate environment (Wijaya, Sintiasari, & Triastuti, 2025). Furthermore, previous research on health education and vulvar hygiene also emphasized that interventions are not sufficient to simply increase knowledge; they also need to be supported by an environment that allows for consistent implementation of healthy behaviors (Pesik, Mautang, & Mamuja, 2024).

These findings differ from other research, which found that more than half of respondents stated that facilities and infrastructure at school and at home were inadequate (approximately 61%). The study found that 47.8% of respondents with inadequate facilities and infrastructure reported poor genital personal hygiene practices. Hypothesis testing

revealed no significant relationship between facilities and infrastructure and genital personal hygiene behavior (p -value = 0.213) (Assiraj, 2021).

The results of this analysis require in-depth analysis, as the availability of clean water, ladles, and adequate sanitary napkin bins at school are vital enabling factors for adolescents in the school environment. Adolescent girls who recognize that their school restrooms are less than clean or lack adequate facilities tend to become more protective and independent. The availability of facilities deemed good by the school does not necessarily guarantee bacteriologically hygienic water (free from fungi and bacteria), which still requires careful individual action. The availability of facilities is not the primary issue, but rather their utilization. If facilities exist but are not used properly, their impact on preventing vaginal discharge will be minimal. This suggests that school programs need not only provide facilities but also ensure adolescents know how to use them and become accustomed to using them.

This research is inconsistent with previous research that found that the sources of information adolescents receive significantly influence how they maintain their reproductive health, particularly regarding preventing vaginal discharge. Adolescents who receive information from schools tend to have a better understanding of how to properly care for their intimate organs, perhaps because the material is delivered directly by teachers or health workers and is guaranteed to be reliable. This is different if they only receive information outside of school, from peers or social media, which may not be accurate or scientific. Inaccurate information can lead to misunderstandings and ultimately errors in daily practices, such as how to clean the feminine area or habits of changing underwear (Lubis, Sugiharti, Musmudiroh, & Setianingsih, 2025).

These results indicate that the information adolescents receive may not be effective in changing behavior if it is not accompanied by a strong understanding, habituation, and support from their surroundings. Another study at EITahfidh Qur'an Junior High School found that while information sources were related to vaginal discharge, knowledge and personal hygiene remained the most dominant. This aligns with your findings that information alone is not sufficient to establish good practices (Lubis et al., 2025). In today's digital age, adolescents are easily exposed to information about reproductive health

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through social media (Instagram, TikTok, YouTube) and the internet. The problem is not simply a lack of information, but a lack of transformation of information into habits. This means that schools and health workers need to package information in a more interactive, applicable, and memorable form.

Teachers play a crucial role in providing reproductive health education through learning activities and health counseling at school. Teacher support can increase adolescents' understanding of the importance of maintaining reproductive hygiene. The role of teachers remains crucial, but needs to shift from simply providing information to facilitating practices and reinforcing a healthy culture in schools. If teachers only provide guidance without ongoing support, their impact on the incidence of vaginal discharge will be limited (Pesik et al., 2024).

Teachers in religious schools, such as Madrasah Aliyah (Islamic Senior High School), play a dual role, serving as both academic educators and moral/jurisprudential guides for women (such as on *thaharah* or purification). This significant relationship indicates that the presence of teachers in schools influences female students' attention to personal hygiene. However, the high percentage of inadequate practices among teachers deemed supportive indicates that the support provided by teachers thus far likely only addresses the cognitive-theological aspect (e.g., reminding them of the obligation to perform a ritual bath or general purification in religious subjects), but has not yet addressed practical-clinical medical guidance on the correct method of wiping intimate areas from front to back (anterior to posterior), prohibiting the use of tight pants, or managing humidity in school restrooms. Integration of the Islamic jurisprudence (*fiqh*) and reproductive health aspects of school teacher guidance is necessary.

This research aligns with previous research that found a correlation between vulva hygiene practices and vaginal discharge among eleventh-grade adolescent girls at Banyuwangi Senior High School X, with a *p*-value of <0.05 . Therefore, H_0 is rejected and H_a is accepted. Proper vulva hygiene practices significantly impact vaginal discharge. If adolescent girls understand how to properly practice vulva hygiene, they will avoid vaginal discharge, while if they do not, vaginal discharge will occur. The importance of knowledge about vulva hygiene practices significantly impacts the incidence of

abnormal vaginal discharge. Therefore, all adolescent girls should pay more attention to their reproductive health by increasing their knowledge of proper vulva hygiene practices (Ahmadi, Oktaviana, & Prayitno, 2023).

These findings align closely with previous research, which found that poor vulvar hygiene can facilitate external bacterial infections entering the vagina and causing vaginal discharge, with a significant association between vulvar hygiene and the incidence of vaginal discharge (Maharani, Sari, & Utami, 2021). These findings are further supported by research by Salsabila (2025), which found a significant association between vulvar hygiene behavior and the incidence of vaginal discharge (Maharani, Sari, & Utami, 2021). This is also supported by previous research demonstrating a link between personal hygiene and the incidence of vaginal discharge in adolescents. Therefore, good vulvar hygiene practices are an important way to prevent abnormal vaginal discharge in adolescent girls (Utami, Ermawati, & Sary, 2026). This study also aligns with other studies that have found a significant association between vulvar hygiene behavior and the incidence of vaginal discharge in female students. From the data collected, 50 female students, or approximately 44.6%, had experienced vaginal discharge. Of the 50 female students, 13 had poor vulva care habits. The chi-square test showed a *p*-value of 0.001, which is less than 0.05. This indicates a significant relationship between vulva hygiene practices and the incidence of vaginal discharge. Adolescents need assistance from health professionals, such as nurses, to prevent abnormal vaginal discharge. Nurses working in reproductive health or school-based nurses play a crucial role in providing health education, conducting screenings, and helping adolescent girls maintain healthy behaviors, particularly in vulva care (Yuliarti & Wahyudi, 2021).

Respondents who practiced good practices tended to be more protected from abnormal vaginal discharge, while those who practiced poorly increased the risk. This means that the key issue is not simply knowledge, but whether that knowledge has been transformed into good habits. This is crucial because in school health programs, the most effective intervention is hands-on training, not just lectures. If proper practices are instilled early, the incidence of vaginal discharge can be reduced, even if adolescent hormonal factors persist.

CONCLUSION

The results of this study indicate that support from the surrounding environment and the availability of adequate facilities play an important role in forming

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good vulva hygiene practices, so it is hoped that this can be an effort to prevent vaginal discharge in adolescent girls. School-based reproductive health programs should emphasize strengthening social support systems and improving sanitation facilities to promote proper vulva hygiene practices among adolescent girls.

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