



Relationship Between Knowledge of Vaginal Discharge and Preventive Behaviors Among Adolescent Girls

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ARTICLE INFO

Article Type:
Research

Article History:
Received: 10 November 2025
Accepted: 29 December 2025
Published: 29 December 2025

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ORIGINAL ARTICLE

ABSTRACT

One of the common health problems experienced by adolescent girls is vaginal discharge (leukorrhea). Approximately 60–75% of women worldwide have experienced vaginal discharge, and the prevalence among adolescents in Indonesia remains relatively high. This study aimed to examine the relationship between knowledge of vaginal discharge and preventive behaviors among adolescent girls. This study employed an analytical observational design with a cross-sectional approach. The study population consisted of all ninth-grade female students at SMP Negeri 6 Bandar Lampung, totaling 31 students. A total sampling technique was applied, in which the entire population was included as the study sample. Data were collected using a structured questionnaire. The collected data were analyzed using univariate analysis to describe the characteristics of the variables and bivariate analysis to determine the association between knowledge level and preventive behavior using the Chi-square (χ^2) test, with a significance level of $\alpha = 0.05$. The inclusion criteria were ninth-grade female students at SMP Negeri 6 Bandar Lampung who were willing to participate and present during data collection. The exclusion criteria included students who did not complete the questionnaire fully or were absent at the time of the study. The results showed a significant association between the level of knowledge about vaginal discharge and preventive attitudes among adolescent girls, with a p-value of 0.002. Adolescents with low knowledge levels demonstrated suboptimal preventive attitudes, accounting for 22.6%. These findings indicate that knowledge plays a crucial role in shaping preventive attitudes toward vaginal discharge among adolescent girls at SMP Negeri 6 Bandar Lampung. Based on these results, efforts to improve reproductive health knowledge among adolescent girls through continuous and structured health education are strongly recommended. Schools are expected to play an active role in providing reproductive health education through classroom learning activities, health counseling, and school health programs (UKS) in collaboration with healthcare professionals.

Keywords: Knowledge, Attitude, Vaginal Discharge.

ABSTRAK

Salah satu masalah yang sering terjadi pada remaja putri adalah keputihan (leukorea). Sekitar 60–75% perempuan di dunia pernah mengalami keputihan, dan angka kejadian pada remaja di Indonesia cukup tinggi. Tujuan dari penelitian ini yaitu untuk mengetahui hubungan pengetahuan tentang keputihan dengan perilaku pencegahannya pada remaja putri. Penelitian ini memakai pendekatan observasional analitik dengan rancangan cross-sectional. Populasi pada penelitian ini terdiri dari seluruh siswi kelas IX SMP Negeri 6 Bandar Lampung yaitu sejumlah 31 siswi. Adapun sampel dari penelitian ini yaitu menggunakan total populasi. Pengumpulan data dilakukan menggunakan kuesioner terstruktur. Data yang telah terkumpul dianalisis secara univariat dan bivariat dilakukan untuk mengetahui hubungan antara tingkat pengetahuan dan perilaku pencegahan menggunakan uji Chi-square (χ^2) dengan tingkat kemaknaan sebesar $\alpha = 0,05$. Kriteria inklusi dalam penelitian ini meliputi siswi kelas IX SMP Negeri 6 Bandar Lampung yang bersedia menjadi responden dan hadir pada saat pengumpulan data. Adapun kriteria eksklusi adalah siswi yang tidak mengisi kuesioner secara lengkap atau tidak hadir saat penelitian dilaksanakan. Hasil penelitian ditemukan terdapat hubungan antara tingkat pengetahuan remaja putri tentang keputihan dengan sikap pencegahannya yaitu dengan p value 0,002. Remaja dengan pengetahuan yang kurang menunjukkan sikap pencegahan yang kurang optimal sebesar (22,6%). Temuan ini menegaskan bahwa pengetahuan merupakan faktor penting yang berperan

dalam membentuk sikap pencegahan terhadap keputihan pada remaja putri di SMP Negeri 6 Bandar Lampung. Berdasarkan hasil penelitian tersebut, diperlukan upaya peningkatan pengetahuan kesehatan reproduksi pada remaja putri melalui edukasi yang berkesinambungan. Sekolah diharapkan dapat berperan aktif dalam memberikan pendidikan kesehatan reproduksi melalui kegiatan pembelajaran, penyuluhan, maupun program UKS bekerja sama dengan tenaga kesehatan.

Kata Kunci: Pengetahuan, Sikap, Keputihan.

INTRODUCTION

Adolescent reproductive health is a critical public health issue that requires serious attention, as it significantly influences the quality of future generations. Adolescence is characterized by substantial physical, psychological, and social changes, including hormonal fluctuations that affect the reproductive system (WHO, 2021). One of the most common reproductive health problems experienced by adolescent girls is vaginal discharge (leukorrhea), which can be classified as either physiological (normal) or pathological (abnormal) (Suminar et al., 2022; Jana, 2024; Saadah et al., 2024).

Physiological leukorrhea is generally odorless and does not cause discomfort, whereas pathological leukorrhea is often accompanied by itching, unpleasant odor, pain, and changes in discharge color, indicating possible fungal, bacterial, or parasitic infections (Trilisnawati et al., 2021; Noviyanti, & Hanifah, 2023). Globally, studies indicate that approximately 60–75% of women experience leukorrhea at least once in their lifetime, with a notably high prevalence among adolescents in Indonesia (Suniarti, 2024; Sulistiyanti et al., 2024). Local research conducted in East Java reported that more than 70% of adolescent girls experienced leukorrhea at least once annually (Lestari, 2024), highlighting the magnitude of this issue at the community level.

Low levels of knowledge regarding reproductive health and inadequate personal hygiene behaviors have been identified as major contributing factors to the high incidence of leukorrhea among adolescents (Utami et al., 2024). Many adolescent girls lack understanding of the distinction between normal and abnormal vaginal discharge and are unfamiliar with preventive measures such as maintaining genital hygiene, regularly changing underwear, and using breathable clothing materials (Siallagan et al., 2024). Unhealthy practices, including prolonged use of tight clothing, failure to dry the genital area after urination, and the use of inappropriate pH cleansing products, further increase the risk of infection (Pondaang & Christy, 2025).

Several studies have demonstrated a positive relationship between knowledge and preventive behaviors related to leukorrhea. Research by Putri et al. (2023) and Aprianti et al. (2025) showed improvements in knowledge and attitudes among adolescent girls following health education interventions using leaflet-based media. Similarly, Utami et al. (2024) reported that digital leaflet-based education significantly enhanced preventive behaviors related to leukorrhea among adolescents, suggesting that educational interventions can be effective when appropriately designed.

Despite these findings, inadequate knowledge and suboptimal preventive behaviors remain prevalent among adolescent girls. A study by Eduwan (2022) in Bengkulu revealed that the majority of adolescents had low levels of knowledge regarding leukorrhea, with only a small proportion demonstrating good preventive practices. This indicates that existing health information dissemination strategies have not been fully effective in reaching adolescent populations, particularly within school settings.

Factors such as limited reproductive health education in schools, cultural taboos surrounding discussions of intimate health issues, and insufficient family involvement in providing health education contribute to persistent knowledge gaps among adolescents (Myat et al., 2024; Warini, 2025). Although previous studies have examined knowledge or preventive behaviors separately, empirical evidence that systematically analyzes the relationship between knowledge levels and leukorrhea prevention behaviors among junior high school students remains limited, particularly in Bandar Lampung. This represents an important research gap, as early adolescence is a critical period for establishing lifelong reproductive health behaviors. Therefore, this study offers novelty by focusing on junior high school female students and examining the association between knowledge of leukorrhea and preventive behaviors in a school-based context.

Accordingly, the objective of this study is to analyze the relationship between the level of knowledge about leukorrhea and leukorrhea prevention behaviors among adolescent girls at SMP Negeri 6 Bandar Lampung.

RESEARCH METHODS

This study employed an analytical observational approach with a cross-sectional design, aiming to examine the relationship between the level of knowledge regarding vaginal discharge and preventive behaviors among adolescent girls. This design allows the simultaneous measurement of knowledge and preventive behavior variables at a single point in time, thereby describing the association between variables without providing any intervention to the respondents.

The study population consisted of all ninth-grade female students at SMP Negeri 6 Bandar Lampung, totaling 31 students. A total sampling technique was applied, whereby all members of the population who met the inclusion and exclusion criteria were recruited as respondents. The inclusion criteria included ninth-grade female students who had experienced menstruation, were willing to participate in the study, and provided written informed consent after receiving an explanation of the study objectives and procedures. The exclusion criteria comprised students who were absent during data collection, did not complete the questionnaire in full, or had not yet experienced menstruation.

Data were collected using a structured questionnaire consisting of two sections: a knowledge questionnaire and a vaginal discharge prevention behavior questionnaire. Knowledge regarding vaginal discharge was assessed using a 20-item multiple-choice questionnaire covering the definition of vaginal discharge, types, causes, signs and symptoms, and preventive measures. Each correct response was scored as one, and incorrect responses were scored as zero. The total score was then converted into a percentage and categorized into low, moderate, and high knowledge levels. Preventive behavior was measured using a Likert-scale questionnaire containing both positive and negative statements related to reproductive hygiene and personal care practices. The obtained scores were subsequently categorized into good and poor preventive behaviors.

Prior to data collection, the research instruments underwent expert validation to ensure content appropriateness in accordance with the study objectives, and reliability testing was conducted to confirm measurement consistency. The collected data were analyzed using univariate analysis to describe the distribution of respondent characteristics, knowledge levels, and preventive behaviors in the form of frequencies and percentages. Bivariate analysis was performed to examine the association between knowledge level and preventive behavior regarding vaginal discharge using the Chi-square test, with a significance level set at $\alpha = 0.05$.

The implementation of this study adhered to ethical research principles. Approval was obtained from the school authorities prior to data collection. All respondents received a clear explanation of the study objectives, benefits, and procedures, and confidentiality of their identities and data was assured. Participation was voluntary, and respondents were informed of their right to refuse or withdraw from the study at any time without any consequences. Written informed consent was obtained prior to questionnaire completion, and all collected data were used solely for research purposes.

RESULTS

Table 1. Frequency Distribution of Vaginal Discharge Occurrence, Knowledge Level, and Preventive Attitudes among Ninth-Grade Female Students at SMP Negeri 6 Bandar Lampung.

Variable	f	%
Vaginal discharge		
No	13	41
Yes	18	59
Knowledge		
Poor	10	32
Moderate	13	42

Good	8	26
Attitude		
Poor	22	71
Good	9	29

Based on Table 1, the results indicate that the majority of ninth-grade female students at SMP Negeri 6 Bandar Lampung experienced vaginal discharge (59%). Most respondents had a moderate level of knowledge (42%), and a large proportion demonstrated poor preventive behaviors toward vaginal discharge (71%).

Table 2. Association Between Knowledge Level and Vaginal Discharge Preventive Behaviors among Ninth-Grade Female Students at SMP Negeri 6 Bandar Lampung.

Knowledge	Attitude				Total		X ²	df	p
	Poor		Good		f	%			
	f	%	f	%					
Poor	7	22.6	3	9.7	10	32.3	12.59	2	0.002
Moderate	2	6.5	11	35.5	13	41.9			
Good	0	0	8	25.8	8	25.8			

Based on Table 2, most adolescent girls with low knowledge levels demonstrated poor preventive attitudes toward vaginal discharge (22.6%), whereas those with a moderate level of knowledge showed good preventive attitudes (35.5%). The statistical analysis revealed a *p*-value of 0.002, indicating a significant association between knowledge level and preventive attitudes toward vaginal discharge among ninth-grade female students at SMP Negeri 6 Bandar Lampung.

DISCUSSION

The statistical analysis revealed a *p*-value of 0.002 ($\alpha = 0.05$), indicating a significant association between the level of knowledge about vaginal discharge and preventive attitudes among ninth-grade female students at SMP Negeri 6 Bandar Lampung. This finding is supported by the data distribution, which showed that in this study, the majority of students with a high level of knowledge demonstrated good preventive attitudes (25.8%), whereas students with low knowledge levels were more likely to exhibit poor preventive attitudes (22.6%). This pattern suggests that increased knowledge tends to be accompanied by more proactive attitudes toward maintaining reproductive hygiene and adopting preventive behaviors against vaginal discharge (Destariyani, Dewi, & Wahyuni, 2023).

Nevertheless, the study also found that a small proportion of students with a moderate level of knowledge still demonstrated poor preventive attitudes (6.5%). This result indicates that adequate knowledge does not necessarily translate into optimal preventive attitudes or behaviors. Such conditions may be influenced by other factors, including daily habits, peer influence, limited access to hygiene facilities at school, or insufficient reinforcement from family members and teachers. These findings are consistent with previous studies reporting that health behavior change requires more than knowledge improvement alone; it also depends on environmental support and sustained reinforcement (Yuniati, & Nasution, 2025).

From a clinical and developmental perspective, vaginal discharge in adolescents aged 14–15 years may be either physiological or pathological. Hormonal changes during puberty often lead to an increase in normal vaginal secretions; however, this condition is frequently misinterpreted as pathological vaginal discharge caused by bacterial or fungal infections or sexually transmitted infections. In the context of this study, the high proportion of students reporting experiences of vaginal discharge does not necessarily indicate the presence of health problems, but rather highlights the importance of adolescents' ability to distinguish between normal and abnormal vaginal discharge. Insufficient knowledge may result in inappropriate preventive attitudes, such as excessive use of pantyliners or incorrect hygiene practices (Suniarti, 2024).

Overall, the findings of this study are consistent with existing literature indicating that inadequate knowledge is closely associated with suboptimal preventive attitudes and behaviors. Structured, contextual, and continuous health education interventions implemented through

schools or primary healthcare centers are therefore recommended as key strategies to improve preventive attitudes toward vaginal discharge among adolescents. In the context of Bandar Lampung, where the tropical climate supports the growth of microorganisms, strengthening education on daily hygiene practices becomes particularly relevant and essential.

CONCLUSION

This study concludes that there is a significant association between the level of knowledge about vaginal discharge and preventive attitudes among ninth-grade female students at SMP Negeri 6 Bandar Lampung. Adolescent girls with better understanding of vaginal discharge tend to demonstrate more positive attitudes and more appropriate preventive behaviors in maintaining their reproductive health.

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