

INCREASE IN THE INCIDENCE OF ADOLESCENT VAGINAL DISCHARGE WITH LOW KNOWLEDGE, ATTITUDES AND BEHAVIORS OF VAGINAL HYGIENE

Peningkatan Kejadian Keputihan Remaja dengan Rendahnya Pengetahuan, Sikap dan Perilaku Vaginal Hygiene

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ABSTRAK

Keputihan, juga dikenal secara medis sebagai Fluor Albus, adalah keputihan yang berlebihan dari vagina. Prevalensi remaja perempuan yang mengalami keputihan masih cukup tinggi di Indonesia. Hal ini mungkin karena kurangnya informasi tentang keputihan. Keputihan menyebabkan ketidaknyamanan dan berdampak pada kepercayaan diri pada remaja. Oleh karena itu, pengetahuan remaja tentang keputihan sangat penting untuk mengubah sikap dan perilaku hidup bersih dan sehat. Penelitian ini bertujuan untuk mengetahui hubungan antara pengetahuan, sikap, dan perilaku kebersihan vagina dengan kejadian keputihan. Penelitian ini merupakan studi kuantitatif menggunakan desain penelitian survei analitik cross-sectional. Sampel 115 orang diperoleh dengan menggunakan teknik total sampling. Metode pengambilan sampel total dapat mencerminkan kondisi populasi secara akurat dan menyeluruh. Proses pengumpulan data menggunakan kuesioner dan dianalisis dengan distribusi frekuensi dan uji chi-square. Hal ini menunjukkan bahwa 55,7% responden memiliki pengetahuan yang buruk, 65,2% memiliki sikap yang buruk, dan 64,3% memiliki perilaku yang buruk. Pada uji Chi-Square, ditemukan adanya hubungan antara pengetahuan, sikap, dan perilaku kebersihan vagina dengan kejadian keputihan pada MTs Persis 07 Cempakawarna ($p = <0,001$). Dapat disimpulkan bahwa ada hubungan antara pengetahuan, sikap, dan perilaku kebersihan vagina. Oleh karena itu, disarankan untuk meningkatkan pengetahuan, sikap, dan perilaku kebersihan vagina untuk mencegah terjadinya keputihan.

Kata kunci: keputihan, pengetahuan, perilaku, sikap, vaginal hygiene

ABSTRACT

Vaginal discharge, also known medically as Fluor Albus, is excessive discharge from the vagina. The prevalence of adolescent girls who experience vaginal discharge is still quite high in Indonesia. This may be due to a lack of information about vaginal discharge. Vaginal discharge causes discomfort and has an impact on self-confidence in adolescents. Therefore, the knowledge of adolescents about vaginal discharge is very important to change the attitude and behavior of clean and healthy living. This study aimed to determine the relationship between knowledge, attitude, and vaginal hygiene behavior with the incidence of vaginal discharge. This study was a quantitative study using a cross-sectional analytic survey research design. A sample of 115 people was obtained using the total sampling technique. The total sampling method can reflect the condition of the population accurately and thoroughly. The data collection process used a questionnaire and was analyzed by frequency distribution and chi-square test. It showed that 55.7% of respondents had poor knowledge, 65.2% had poor attitudes, and 64.3% had poor behavior. In the Chi-Square test, it was found that there was a relationship between knowledge, attitude, and vaginal hygiene behavior with the incidence of vaginal discharge at MTs Persis 07 Cempakawarna ($p = <0.001$). It can be concluded that there is a relationship between knowledge, attitude, and vaginal hygiene

behavior. Therefore, it is recommended to increase knowledge, attitudes, and behavior of vaginal hygiene to prevent the occurrence of vaginal discharge.

Keywords: attitude, behavior, knowledge, vaginal hygiene, vaginal discharge

INTRODUCTION

Excessive vaginal discharge is known as vaginal discharge or Fluor Albus in medical terms. Because the vagina contains many beneficial bacteria, it produces fluids to keep the discharge moist, cleanse it internally, and maintain its acidity.¹ Physiological vaginal discharge is often clear or milky white, odorless, thin or slightly thick, not excessive in quantity, depending on the cycle, appears around ovulation, pregnancy, or before menstruation, there is no itching, pain, or irritation. While pathological vaginal discharge is often yellow, green, gray, or accompanied by blood, smells unpleasant, fishy, or rotten, thick, lumpy like cheese, or foamy, excessive in quantity, itching, pain when urinating, pain during sexual intercourse, irritation, redness.²

According to research on reproductive health, almost 75% of women experience vaginal discharge at least once in their lives, and most people will experience it two or more times by the age of 25.³ This figure is much higher than the incidence of vaginal discharge in women in Europe, which is only around 25%. According to WHO (2012), the prevalence rate in 2009 was 20%-40% of vaginal discharge caused by bacteria and 25%-50% caused by candidiasis.⁴

According to data from the Indonesian Adolescent Reproductive Health Survey (SKRRI), vaginal discharge is a common reproductive health issue among young women in Indonesia. The 2017 SKRRI survey showed that 31.8% of young women aged 15–24 had experienced vaginal discharge. This data indicates that more than a third of adolescents experience reproductive health issues. Furthermore, a report from the National Population and Family Planning Board (BKKBN), which references SKRRI data from 2016 to 2018, shows an increasing trend in the prevalence of vaginal

discharge among adolescents. In 2016, approximately 50% of adolescent girls experienced vaginal discharge, which increased to 60% in 2017 and reached 70% in 2018.⁵

The statistical data in the West Java province area, based on the total population, reached 11,358,740 people, and adult women of childbearing age aged 15-49 years who experienced vaginal discharge was 27.60%.⁶ People who experience vaginal discharge often complain of discomfort. Vaginal discharge can make someone feel less confident. Long-term, pathological vaginal discharge can lead to complications from various genital infections, including cervicitis and vaginal candidiasis, which can alter the function of a woman's reproductive organs and lead to infertility.⁷

To prevent reproductive health problems such as vaginal discharge, maintaining genital hygiene is crucial. Maintaining the cleanliness of the external female genitals, particularly the vulva, is known as vulva hygiene and is one way to maintain reproductive health.⁸ This helps prevent infection and maintain the cleanliness and health of the female reproductive organs. The uterus, cervix, and other internal genital organs are at serious risk over time if the vagina, the outermost reproductive organ, becomes contaminated with bacteria or other harmful microbes.^{2,9,10}

Young women believe that vaginal discharge is normal. Their attitudes and behaviors toward clean and healthy living are influenced by their understanding of vaginal discharge. Knowledge of reproductive organ function is crucial for preventing reproductive system problems.¹¹

Young women may engage in inappropriate behavior due to a lack of knowledge, which can lead to vaginal discharge. Because reproductive health issues are a major lifelong concern,

vaginal hygiene education is essential¹² According to Puspawarna's research, there is a significant correlation between the level of knowledge, attitudes and behavior with the incidence of fluor albus in female adolescents at SMP 1 Bali.¹³This is related to Wahyuni's research with 110 respondents, where 89 female adolescents experienced physiological fluor albus and 21 experienced pathological fluor albus.¹⁴Sukanto's study found a link between knowledge, attitudes, and behavior regarding vaginal hygiene and the frequency of vaginal discharge. Due to limited knowledge and understanding, these factors lead adolescents to adopt risky attitudes and behaviors.¹⁵ This statement is supported by research on female students at MAN 3 Agam, which concluded that there is a significant relationship between knowledge about fluoride and the incidence of vaginal discharge. Furthermore, attitudes and behaviors related to vaginal hygiene also showed a significant association with the incidence of vaginal discharge. Therefore, it can be concluded that knowledge, attitudes, and behavior regarding vaginal hygiene significantly influence the incidence of vaginal discharge¹⁶

Vaginal discharge in teenagers is caused by poor attitudes towards genital hygiene, teenagers often think that vaginal discharge is a common problem.⁸A good attitude in adolescents can reduce the incidence of vaginal discharge because adolescents know how to keep their genitals clean.¹⁷Based on this background, this study aims to identify the level of knowledge, attitudes, and behavior related to vaginal hygiene and its relationship to the incidence of vaginal discharge in female adolescents at MTs Persis 07 Cempakawarna Tasikmalaya.

METHODS

This study used a quantitative design with a cross-sectional approach. The population studied was 115 adolescent girls. The sampling technique applied

was total sampling with all members of the population, namely 115 individuals. The study was conducted at MTs Persis 07 Cempakawarna, Tasikmalaya City, in March 2025. Approval for this study was granted by the Health Research Ethics Committee of the Tasikmalaya Ministry of Health Polytechnic, No. DP.04.03/F.XXVI.20/KEPK/265/2025.

The instruments used were 4 questionnaires related to knowledge, attitudes, behavior, and vaginal discharge. The instruments were tested for validity and reliability using a sample of 30 respondents from MTs Persis Al-Muhajirin, Tasikmalaya City. The instrument was declared valid if the correlation value was > 0.3 . The knowledge instrument was 0.3061, attitude 0.3061, and behavior 0.3061, so that 30 instruments were declared valid. And the questionnaire instrument was declared reliable if the Cronbach alpha value was > 0.60 . The instrument for the knowledge variable was 0.861, attitude 0.731, and behavior 0.869, so that the instrument was declared reliable. The research procedure involved giving questionnaires directly to female students in grades VII, VIII, and IX for 1 week, accompanied by researchers. In collecting data, respondents were previously informed to obtain agreement or approval (informed consent). Data were analyzed using the Chi-square test run through computer software.

RESULT

Table 1 shows that the majority of study participants were in the 14-year-old age group, with 44 participants, or approximately 38%. The 13-year-old age group was the second largest, with 35 participants (30%), followed by the 15-year-old age group with 25 participants (22%), and the 12-year-old age group with the smallest number, with 11 participants (10%). Most of the respondents have a level of knowledge regarding vaginal hygiene, 64 respondents (55.7%) have a poor level of knowledge, most of the vaginal hygiene attitudes, 75 respondents (65.2%) have a

poor attitude, most of the vaginal hygiene behavior has poor behavior, 74 respondents (64.3%) and the occurrence of vaginal discharge from 115

respondents, most of the respondents, namely 71 people, experienced vaginal discharge (61.7%).

Table 1. Frequency Distribution of Age, Knowledge, Attitude, Behavior, and Incidence of Vaginal Discharge of Respondents

Category	n	%
Age		
12 years old	11	10.0
13 years old	35	30.0
14 years	44	38.0
15 years	25	22.0
Knowledge		
Good	51	44.3
Not good	64	55.7
Attitude		
Good	40	34.8
Not good	75	65.2
Behavior		
Good	41	35.7
Not good	74	64.3
Vaginal Discharge Incident		
Vaginal discharge	71	61.7
No vaginal discharge	44	38.3

Source: Primary Data 2025

Table 2. Relationship between Knowledge, Attitude, and Vaginal Hygiene Behavior with Vaginal Discharge Incident

Vaginal Discharge Incident							
Knowledge	Vaginal discharge				Total		<i>p</i>
	Vaginal discharge		No vaginal discharge		n	%	
	n	%	n	%			
Knowledge							
Good	10	14.1	41	93.2	51	44.3	0.001
Not good	61	85.9	3	6.8	64	55.7	
Amount	71	100	44	100	115	100	
Attitude							
Good	16	22.5	24	54.5	40	34.8	0.001
Not good	55	77.5	20	45.5	75	65.2	
Amount	71	100	44	100	115		
Behavior							
Good	16	22.5	25	56.8	41	35.7	0.001
Not good	55	77.5	19	43.2	74	64.3	
Amount	71	100	44	100	115	100	

Source: Primary Data (2025)

Based on the results of the study, Table 2 shows that 41 respondents had good knowledge of vaginal hygiene related to the occurrence of vaginal discharge, while 61 respondents had poor knowledge of vaginal hygiene related to the occurrence of vaginal discharge. The results of the Continuity Correction test in the table obtained a p-value of 0.001 ($p < 0.05$), so it can be stated that H_a is accepted.

For attitudes, it shows that 24 respondents who did not experience vaginal discharge had good vaginal hygiene attitudes, while 55 respondents with poor vaginal hygiene attitudes experienced vaginal discharge. The results of the Continuity Correction test in the table obtained a p-value of 0.001 ($p < 0.05$), so it can be stated that H_a is accepted.

Behavioral data showed that 25 respondents who did not experience vaginal discharge had good vaginal hygiene practices, while 55 respondents with poor vaginal hygiene practices experienced vaginal discharge. Based on the results of the Continuity Correction test in the table, the p-value was <0.001 ($p < 0.05$), so the alternative hypothesis (H_a) was accepted.

DISCUSSION

The results of the study showed that the majority of respondents experienced physiological vaginal discharge. This condition is caused by their lack of knowledge about vaginal discharge, so that respondents do not understand the symptoms that appear, such as white or yellowish discharge. Physiological vaginal discharge is often clear or milky white, odorless, thin or slightly thick, and the amount is not excessive, depending on the cycle time appears around ovulation, pregnancy, or before menstruation. There is no itching, pain, or irritation. While pathological vaginal discharge is often yellow, green, gray, or accompanied by blood, smells unpleasant, fishy, or rotten, thick, lumpy like cheese, or foamy, the amount excessive, itchy, painful urination, painful intercourse, irritation, and redness. One of the factors causing vaginal discharge is personal hygiene or vaginal cleanliness.²

This aligns with Mokoagow's research, which found that the majority of respondents experienced vaginal discharge due to a lack of knowledge. The symptoms of genital problems experienced by women, such as abnormal vaginal discharge, were not understood by the respondents.¹⁸

Factors that contribute to vaginal discharge include hormones, physical exhaustion, and personal hygiene. Maintaining personal hygiene and health is crucial, especially when it comes to the genitals. Failure to do so can lead to vaginal discharge.¹⁹ Vaginal discharge can be caused by personal habits such as wearing tight underwear, cleaning the

genitals incorrectly and not changing sanitary napkins during menstruation.²⁰

This study found that the majority of respondents had low levels of knowledge. This was due to a lack of knowledge about how to maintain vaginal hygiene and a lack of appropriate information about it. This finding aligns with Wahyuni's research, which revealed that many women lack knowledge of the proper way to clean their vaginal area. Furthermore, the high incidence of vaginal discharge in adolescent girls is influenced by a lack of knowledge and a lack of concern for feminine hygiene.¹³

However, 51 respondents still had good knowledge. The results showed that some correct answers included washing hands before touching the genitals, using absorbent sanitary pads, changing underwear more than once a day, and drying the genitals after urinating or defecating.

Although this study did not discuss factors influencing knowledge, several theories suggest that knowledge can be influenced by factors such as education, age, information or mass media, social culture, economic conditions, and the surrounding environment. Based on this description, the researchers assume that the high level of knowledge is due to a lack of clear and detailed information about vaginal hygiene, both through learning and rational means. Consequently, they are not interested in learning more about preventing vaginal discharge.

The research results revealed that the majority of respondents had less than positive attitudes. This indicates a lack of awareness of the importance of maintaining vaginal hygiene, which contributes to young women experiencing vaginal discharge. This can be due to both personal and environmental influences.

These findings align with Destariyani's research, which states that a person's knowledge and experience significantly influence their attitude toward taking action. Insufficient knowledge can lead to

inaccurate perceptions or understanding, resulting in attitudes that do not support vaginal hygiene. Furthermore, a person's perspective is influenced by those around them, especially their friends, so adolescents may choose to adopt the behavior of their friends.¹¹

Some factors that influence attitudes include personal experiences, the influence of important people, culture, media, school environment, and religious institutions.²¹ However, there was a positive attitude from respondents; they agreed to shave their pubic hair monthly, use absorbent materials, and use unscented pantyliners.²¹ Based on this description, researchers assume that a person's attitude in maintaining vaginal hygiene can be influenced by a lack of awareness of the importance of vaginal hygiene as well as factors originating from the environment and the individual themselves.

The research results revealed that the majority of respondents exhibited negative behavior. This condition is thought to be caused by inappropriate habits, which are related to knowledge and attitudes. This aligns with Chika's research, which states that human experiences and interactions with the environment, which emerge as knowledge, attitudes, and behaviors, are the sources of those behaviors. The way a person responds to internal and external stimuli is known as their behavior.²

Researchers believe that poor behavior, whether in terms of personal hygiene, sexual habits, or lifestyle, significantly influences the occurrence of vaginal discharge. Respondents who exhibit negative behaviors, such as a reluctance to wash their bodies, have a higher risk of experiencing vaginal discharge. Based on the research results, it was found that 41 respondents had good knowledge of vaginal hygiene, while 61 respondents had poor knowledge of vaginal hygiene with vaginal discharge. Based on the results of the Chi-square test in the table, the p-

value obtained was <0.001 ($p < 0.05$), so the alternative hypothesis (H_a) can be accepted.

The research results showed that many respondents were unaware of vaginal hygiene. This was due to a lack of knowledge about reproductive health issues that can cause vaginal discharge.

Factors such as a lack of understanding about feminine hygiene, a lack of reproductive health education, and a lack of awareness of emerging symptoms can exacerbate the condition and prolong the infection. Therefore, increasing knowledge through better health education can be a crucial step in preventing vaginal discharge and improving overall reproductive health.²²

The findings of this study are also consistent with the results of a study conducted by Sukanto et al., which showed a significant relationship between knowledge of vaginal hygiene and the occurrence of vaginal discharge with a p-value of 0.015.²² In the research by Pasaribu et al., it was shown that the p-value was found to be 0.000.²³ Both studies align with the findings of this study, which found that knowledge significantly correlates with the incidence of vaginal discharge. The development of unhealthy behaviors can be influenced by a lack of awareness about vaginal discharge and its treatment. A person's risk of contracting a disease increases as a result of poor health behaviors.

The results showed that based on the distribution of attitudes toward vaginal hygiene, 16 respondents with positive attitudes experienced vaginal discharge, while 55 respondents with negative attitudes experienced vaginal discharge. The Chi-square test showed a p-value of <0.001 ($p < 0.05$), thus the alternative hypothesis (H_a) was accepted.

These poor habits are likely caused by suboptimal personal hygiene and an unhealthy lifestyle, while general health can increase the risk of abnormal vaginal discharge. Neglect, lack of discipline, or a lack of awareness of maintaining intimate health can create an

environment conducive to the growth of infection-causing microorganisms. Therefore, it is crucial to educate the public, especially women, about the importance of good hygiene practices. A healthy lifestyle and regular health check-ups are also crucial factors to consider.¹⁵

This is in line with Sukamto's research, which showed a relationship between attitudes towards vaginal discharge with a p-value of 0.006.¹⁵ A study by Destariyani et al. showed a p-value of 0.016. The results indicate that poor personal hygiene, lifestyle, and general health can increase the likelihood of abnormal vaginal discharge. Neglect, lack of discipline, or lack of awareness about maintaining intimate health can create an environment conducive to the spread of infection-causing bacteria. Therefore, educating the public, especially women, about the importance of maintaining personal hygiene, adopting a healthy lifestyle, and undergoing regular health checks is crucial.¹¹

However, a person's knowledge and experience greatly influence their attitude toward the practice. Lack of knowledge can lead to misperceptions or misconceptions, which can lead to attitudes that are not conducive to vaginal hygiene.¹⁷ In addition, an individual's views are greatly influenced by their social environment, especially their peers, so that teenagers tend to imitate the behavior of their friends.

The findings of this study align with those of Nengsih et al., which showed a significant relationship between attitudes toward vaginal hygiene and the incidence of vaginal discharge, with a p-value of 0.0005 and an odds ratio (OR) of 22. These three studies support the findings of this study, which state that knowledge plays a significant role in the incidence of vaginal discharge. Perspective is an individual's choice in performing an action, as well as the conditions that enable that behavior to occur. Attitude is an important concept in the social

psychological aspect that describes a person's tendency to act or perceive.¹⁵

This study found that vaginal hygiene practices affected vaginal discharge levels: 16 respondents experienced vaginal discharge with good vaginal hygiene practices, and 55 respondents experienced vaginal discharge with poor vaginal hygiene practices. The Chi-square test results in the table obtained a p-value <0.05, so H_a can be stated as accepted. Therefore, unhygienic behavior, sexual habits, and lifestyle significantly influence vaginal discharge. The likelihood of vaginal discharge is very high due to negative respondent behavior, namely reluctance to clean their bodies. Bacteria or fungi can enter the vaginal area if someone does not maintain good body hygiene. This can occur if someone does not change underwear at least three times a day or wears unwashed cotton underwear. To dry the vagina, you often use other people's towels and do not wash your hands before touching them.

The results of this study indicate a significant relationship between behavior and the incidence of vaginal discharge, with a p-value < 0.001. This finding is consistent with research conducted by Nengsih et al., which also found a significant relationship between behavior and the incidence of vaginal discharge ($p = 0.005$). The odds ratio value of 9.474 indicates that individuals at risk of vaginal discharge are approximately 9.474 times more likely to experience higher levels of vaginal discharge compared to individuals with good behavior.¹⁶ The results of this study also align with Sukamto's research: there was a significant correlation between vaginal hygiene behavior and the amount of vaginal discharge (0.000, OR = 2,085.11). Both studies support the findings of this study, which show that knowledge is significantly associated with the frequency of vaginal discharge.¹⁵ Behavior is an unhealthy action or habit in maintaining the cleanliness of the external genitalia, such as wearing tight

underwear made of nylon. The genital area is often damp and unclean, so vaginal discharge occurs.

CONCLUSION

Based on research findings related to knowledge, attitudes, and behavior regarding vaginal hygiene in adolescent girls, there is a significant relationship between knowledge, attitudes, and behavior with the occurrence of vaginal discharge, indicated by a p-value of 0.001 ($p < 0.05$). A total of 85.9% of respondents with poor knowledge experienced vaginal discharge, while only 14.1% of respondents with good knowledge experienced it. Furthermore, 77.5% of respondents with poor attitudes experienced vaginal discharge, compared to 22.5% of respondents with good attitudes. Regarding behavior, 77.5% of respondents with poor attitudes experienced vaginal discharge, while 22.5% with good attitudes experienced the same condition.

Families are the closest group to adolescents and are expected to provide information, appreciation, and emotional support in dealing with vaginal discharge. This will enable them to develop knowledge, adopt a positive attitude, and change their behaviors. Adolescent girls can also educate themselves about vaginal discharge, maintain intimate hygiene, change underwear regularly, pay attention to menstrual hygiene, avoid risky habits, and maintain a healthy lifestyle.

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