

vaginal discharge, and 14.3% experiencing pathological vaginal discharge. As for vulva hygiene, it was in the good category of 60%, sufficient 34.3% and lacking 5.7%. A preliminary study, of 15 female students, 10 of them stated that they still experienced vaginal discharge. **Objective:** To determine the difference in the provision of herbal medicine from the Zingiberaceae family on the incidence of vaginal discharge in female adolescents at the Habiburrohman Islamic Boarding School. **Method:** The study used a quantitative approach with a pre- and post-test design and implemented a quasi-experimental design. The population of all female students at the Habiburrohman Islamic Boarding School was 52, using a purposive sampling technique, the number of samples was 31 respondents who were included in the research criteria. The data collection instrument was through a questionnaire sheet on vaginal discharge events. Data processing was editing, coding, scoring, tabulating and Wilcoxon statistical tests. **Results:** There is a difference in the provision of zingiberaceae family herbal medicine on the incidence of vaginal discharge in adolescent girls at the Habiburrohman Islamic Boarding School and the results of the Wilcoxon. tatistical test obtained a p value $<.000$ smaller than α 0.05 or ($p < \alpha$). **Conclusion:** The provision of zingiberaceae family herbal medicine can differentiate the incidence of vaginal discharge in adolescent girls at the Habiburrohman Islamic Boarding School. **Suggestion:** It is expected to increase the knowledge of educators and parents about the benefits of Zingiberaceae family herbal medicine as a non-pharmacological remedy for vaginal discharge in adolescent girls, maintaining reproductive hygiene, becoming a reference for readers and further research.

Introduction

The term "adolescence" (from the Latin "adolescere"), meaning "growing," is not only related to physical maturity but also encompasses social and psychological maturity. According to the WHO, adolescence is defined as being between 12 and 24 years old. The age range of adolescence itself is usually between 10 and 19 years, which is the period of maturation of the human reproductive organs. Adolescence is often referred to as the transitional stage from childhood to adulthood (Maysaroh, Siti, and Mariza, Ana, 2021). The most obvious changes

that occur are physical changes during puberty.

These changes can give rise to several health problems (Ilmassalma et al., 2021). Because Indonesia is located in a tropical region, the body tends to be more humid and sweats easily. This condition allows bacteria to easily multiply. These bacteria can cause unpleasant odors, especially in the armpit and genital areas of women (Nor et al., 2021). In the genital area, it is usually called vaginal discharge (Fluor Albus), vaginal discharge is when the vagina releases excess fluid and is one of the characteristics of vaginitis (Adenia, 2022).



According to WHO data, in 2018, approximately 75% of women worldwide experienced vaginal discharge at least once in their lives, and 45% of them experienced it twice or more. In Europe, vaginal discharge occurs in approximately 25% of women. Meanwhile, in Indonesia, there are approximately 43.3 million adolescents aged 15 to 24. Of these, these adolescents generally practice healthy behaviors. As many as 83% of the 23 million adolescent girls who have had sexual intercourse are in the 15-24 age group. This increases the risk of contracting STDs and is one of the causes of vaginal discharge. Vaginal discharge is the second most common reproductive health disorder after menstrual disorders and can occur in adolescence (Maysaroh, Siti, and Mariza, Ana, 2021). The population of East Java Province is reported to be 19,502,156. Of this total, 27.60% of girls, particularly those aged 10 to 14, experience vaginal discharge (Masruroh, 2023). In Mayang District, a sub-district in Jember Regency, 35 samples were taken at the Nurul Ulum Islamic boarding school. Of these, 85.7% experienced physiological vaginal discharge, while 14.3% experienced pathological vaginal discharge. Furthermore, regarding vulvar hygiene, 60% were categorized as good, 34.3% as adequate, and 5.7% as poor (Tyas et al., 2022). Based on the results of a preliminary study conducted by researchers on 15 female students, 10 reported still experiencing vaginal discharge. Globally, approximately 85% of

women have experienced vaginal discharge at least once in their lives, and 45% of them have experienced vaginal discharge more than once (Maysaroh, Siti, and Mariza, Ana, 2021). Vaginal discharge occurs when vaginal hygiene and pH levels are not maintained. Vaginal discharge is a reproductive health issue and should not be taken lightly. Vaginal discharge can even potentially lead to infertility and cancer. Therefore, early prevention is necessary to avoid infection. This infection can be caused by several factors, such as improper genital care in adolescents, washing the vagina with stagnant water, using unsuitable soaps, wearing tight, non-absorbent jeans, infrequently washing underwear, not changing sanitary pads during menstruation, and choosing to use pantyliners because they are reluctant to change wet underwear can all trigger pathological vaginal discharge (Nor, et al., 2021). Due to a lack of knowledge among adolescents about how to prevent vaginal discharge infections, they are more likely to contract risky vaginal discharge (Hamida, Indah, 2023). Lack of attention to hygiene and adolescents' limited knowledge about how to prevent and maintain reproductive hygiene can be contributing factors to vaginal discharge. Furthermore, poor personal hygiene can lead to the rapid growth of germs, parasites, and viruses in the female genital area. The use of pantyliners can increase the number of Eubacterium bacteria and reduce the Lactobacillus population, which is the normal



flora in the vagina, thus increasing the risk of vaginal discharge (Safitri, et al., 2024). Several factors influence health behavior, namely behavioral factors (behavior causes) and three non-behavior factors (non-behavior causes). These three factors that influence health behavior include predisposing factors, enabling factors, and reinforcing factors (Payon, Hearty Efifania Ose, 2024). Vaginal discharge has a greater impact on health if ignored, such as Trichomonas disease or trichomoniasis. Furthermore, other impacts of vaginal discharge that are not promptly treated properly include infertility, pelvic inflammatory disease, and cervical cancer (Ilmassalma, et al., 2021). Vaginal discharge can cause discomfort and reduce self-confidence in sufferers. If pathological vaginal discharge persists, it carries the risk of genital infections, such as candidal vaginitis and cervicitis. If left untreated for a long period of time, this condition can disrupt the function of a woman's reproductive organs and lead to infertility. Physiological vaginal discharge is generally triggered by hormonal factors, such as those leading up to ovulation, the pre- and postmenstrual phases, sexual stimulation, and psychological factors. Pathological vaginal discharge, on the other hand, can be caused by bacterial, viral, or fungal infections, fatigue, or the use of contraceptives. The main causes of vaginal discharge in adolescents are generally related to a lack of knowledge and poor personal hygiene habits.

Examples include improper urination habits, lack of awareness of handwashing, inappropriate use of vaginal soap, underwear that is too tight, and infrequent menstrual pad changes. These factors trigger vaginal discharge in adolescents. Furthermore, adolescents' level of knowledge significantly influences their attitudes toward maintaining reproductive health (Destariyani et al., 2023). Vaginal discharge is often experienced by female students at Islamic boarding schools, where their personal hygiene practices are still lacking, such as rarely changing clothes throughout the day, frequently sharing underwear, and sharing towels. These habits facilitate the transmission of diseases, one of which contributes to vaginal discharge (Dwiwardini et al., 2019). Efforts to prevent vaginal discharge include maintaining intimate hygiene, such as using cleansers that do not alter the vaginal pH balance. Furthermore, it is best to avoid using powder in the vaginal area. Stress can also play a role because it can cause blood vessel constriction due to increased adrenaline levels (Payon, Hearty Efifania Ose, 2024). Previous research conducted by (Mastina, M and Rahmah R, 2020) found that several factors cause vaginal discharge, one of which is vulvar hygiene techniques. This is in line with research (Elliana, Dewi and M, Sri, 2020) that there is a relationship between knowledge of personal hygiene and behavior in preventing vaginal discharge. Prevention is not only done externally, for example by consuming herbal

medicine from the Zingiberaceae family which aims to reduce cases of vaginal discharge in adolescent girls. Therefore, the authors want to conduct research on the provision of herbal medicine from the Zingiberaceae family to reduce cases of vaginal discharge in adolescent girls at the Habiburrohman Islamic Boarding School.

Method

This study used a quantitative method with a pre- and post-test design using a quasi-experimental design. This study was conducted at the Habiburrohman Islamic Boarding School from June 1 to 7, 2025. The study population included all 52 female students at the Habiburrohman Islamic Boarding School. The sampling technique used was purposive sampling with a total sample of 31 respondents who were present when the data collection was carried out, including those who met the research criteria, namely not menstruating, not sick and were at the research location. The dependent variable in the study was the incidence of vaginal discharge in adolescent girls at the Habiburrohman Islamic Boarding School.

The instrument in this study was data collection through a questionnaire on the incidence of vaginal discharge.

This study has received ethical approval under license number 1084/KEPK/UDS/V/2025. During the research process, researchers conducted structured

observations with respondents by distributing questionnaires regarding vaginal discharge. After data collection, researchers processed the data through editing, coding, scoring, tabulating, and Wilcoxon statistical tests using SPSS. Statistical analysis applied included univariate analysis to identify respondent characteristics and bivariate analysis to determine whether there were differences before and after herbal medicine administration. Research decisions were based on the results of the research hypothesis of whether or not there were differences.

Results

General Data

Respondent Characteristics Age

Table 1. Characteristics of Female Adolescent Respondents by Age at Habiburrohman Islamic Boarding School in 2025

Age	Frequency	Percentage (%)
13 Th	4	12,9
14 Th	5	16,1
15 Th	3	9,7
16 Th	8	25,8
17 Th	8	25,8
18 Th	3	9,7
TOTAL	31	100,0

Source: Primary Data Processing Results

Based on table 1, it can be seen that almost half of the respondents were aged 16 and 17 years, as many as 8 female students with each percentage (25.8%).

Table 2. Characteristics of Female Adolescent Respondents Based on Age of Menarche at Habiburrohman Islamic Boarding School in 2025

Age	Frequency	Percentage (%)
11 Th	2	6,5
12 Th	17	54,8
13 Th	9	29,0
14 Th	2	6,5
15 Th	1	3,2
TOTAL	31	100,0

Source: Primary Data Processing Results

Based on Table 2, it can be seen that more than half of the respondents experienced menarche by age 12, namely 17 female students (54.8%).

Table 3. Respondent Characteristics Based on Knowledge of Treatment to Reduce Vaginal Discharge at Habiburrohman Islamic Boarding school in 2025

Category	Frequency	Percentage (%)
Understand	19	61,3
Don't Understand	12	38,7
TOTAL	31	100,0

Source: Primary Data Processing Results

Based on Table 3, it can be seen that more than half of the respondents (19 female students, 61.3%) understood the knowledge of how to reduce vaginal discharge. Almost half of the respondents (12 female students, 38.7%) did not understand.

Table 4. Respondent Characteristics Based on the Benefits of Drinking Herbal Medicine at the Habiburrohman Islamic Boarding School in 2025

Category	Frequency	Percentage (%)
Understand	11	35,5
Don't Understand	20	64,5
TOTAL	31	100,0

Source: Primary Data Processing Results

Based on Table 4, it can be seen that more than half of the respondents (20 female students with a percentage of 64.5%) did not understand the benefits of drinking herbal medicine. And almost half of the respondents (11 female students with a percentage of 35.5%) understood.

Table 5. Incidence of Vaginal Discharge in Adolescent Girls Before Zingiberaceae Herbal Medicine Administration at the Habiburrohman Islamic Boarding School in 2025

No	Category	Frequency	Percentage (%)
1	Never	0	0
2	Sometimes	10	32,3
3	Often	20	64,5
4	Always	1	3,2
Total		31	100,0

Source: Primary Data Processing Results

Based on table 5, it can be seen that more than half of the respondents are in the Frequent category with a range of values obtained of 17-24 for 20 female students with a percentage of (64.5%).

Table 6. Incidence of Vaginal Discharge in Adolescent Girls After Being Given Zingiberaceae Family Herbal Medicine at Habiburrohman Islamic Boarding School in 2025

No	Category	Frequency	Percentage (%)
1	Never	0	0
2	Sometimes	22	71,0
3	Often	9	29,0
4	Always	0	0
Total		31	100,0

Source: Primary Data Processing Results

Based on table 6, more than half of the respondents fall into the Sometimes category with a range of scores obtained of 9-16, amounting to 22 female students with a percentage of (71.0%).

Table 7. Cross-tabulation of differences in the incidence of vaginal discharge after administering Zingiberaceae family herbal medicine to female adolescents at the Habiburrohman Islamic Boarding School in 2025.

NO	Vaginal Discharge	Pres Test		Post Test	
		F	%	F	%
1	Never	0	0	0	0
2	Sometimes	10	32,3	22	71,0Ad
3	Often	20	64,5	9	29,0Isl
4	Always	1	3,2	0	0 Ba
TOTAL		31	100,0	31	100,0n
Wilcoxon Test		Z Score = -			
		4.908 ^b			
		Asymp. Sig = <,000			

Source: SPSS Primary Data Processing

Table 7 shows that during the pre-test, more than half of the respondents fell into the "Often" category, with scores ranging from 17 to 24 (64.5%), while during the post-test, more than half of the respondents fell into the "Sometimes" category, with scores ranging from 9 to 16 (71.0%).

The p-value obtained is listed in Asymp. Sig. (2-tailed), with the p-value being less than 0.000, meaning it is smaller than α of 0.05. Since the p-value is $<0.000 <0.05$, the null hypothesis (H0) is rejected and the alternative hypothesis (H1) is accepted. Therefore, it can be concluded that administering herbal medicine from the Zingiberaceae family significantly impacts the incidence of vaginal discharge in adolescent girls at the Habiburrohman Islamic Boarding School.

Discussion

Vaginal Discharge Incidence Before Zingiberaceae Herbal Medicine in Adolescent Girls at Habiburrohman Islamic Boarding School.

on research conducted by researchers adolescent girls at Habiburrohman Islamic Boarding School using a questionnaire of vaginal discharge incidence, results from 31 respondents before the intervention were obtained. Most respondents fell into the "Frequent" category, with a score of 17-24 (20 female students), representing 64.5%. The girls at Habiburrohman Islamic Boarding School were 13-18 years old, with the majority of

respondents aged 16 and 17. The age of menarche ranged from 11-15 years old, with the majority of respondents reaching menarche at 12 years old (54.8%). A total of 38.7% of respondents lacked knowledge regarding how to reduce vaginal discharge, and 64.5% were unaware of the benefits of consuming Zingiberaceae herbal medicine. According to research (Citrawati, 2019), an individual's level of knowledge about a particular topic can vary. Factors such as information sources, education, socio-cultural and economic background, the surrounding environment, personal experience, and age also influence this level of knowledge. Most information received will enrich a person's knowledge, and as knowledge increases, awareness grows, encouraging individuals to behave in accordance with what they know. Adolescents who understand vaginal discharge generally have good knowledge and can take appropriate preventive measures. Conversely, adolescents who lack knowledge about vaginal discharge usually demonstrate less effective preventive behavior. This lack of knowledge can be caused by a lack of understanding or incomplete information. Judging from the variables of understanding, attitude, peer influence, parental (mother's) contribution, and level of exposure to information, the results showed that of the 49 respondents with good knowledge, the majority (42 people) (85.7%) demonstrated good vaginal discharge prevention behavior. Of the 27

respondents with sufficient knowledge, 17 people (63%) demonstrated good vaginal discharge prevention behavior. Meanwhile, of the 16 respondents with insufficient knowledge, the majority also demonstrated preventive behavior. The results of the Chi-square test provide a p-value of 0.028, where Asymp. Sig. <0.05, which indicates the influence of age factors on the occurrence of vaginal discharge in women of childbearing age (WUS) (Wardani, 2022).

Another factor that can trigger physiological vaginal discharge is the period around menarche or when menstruation first occurs, which is influenced by the hormone estrogen (Hastuty, 2023). According to research (Kas, 2023) Respondents who complained of vaginal discharge in adolescent girls with menarche age ≥ 12 years were found in 73 people (48.7%), while in adolescent girls with menarche age <12 years were found in 48 people (71.6%). Furthermore, the results of the Chi-Square test showed a p-value of 0.021 ($p < 0.05$), so it can be concluded that there is a significant relationship between the age of menarche and complaints of vaginal discharge. According to researchers, the information respondents receive about preventing vaginal discharge also influences the incidence of vaginal discharge itself. As people get older, they gain more knowledge. Preventive behaviors for vaginal discharge include knowledge, attitudes, and actions taken to improve health, maintain personal hygiene,

strengthen self-confidence, and prevent disease, thereby maintaining healthy reproductive organs and achieving physical and mental well-being. Vaginal discharge can be caused by various factors, such as a woman's lack of knowledge and attitude regarding vaginal hygiene, the habit of rarely changing sanitary napkins during menstruation, not changing underwear frequently or wearing wet underwear, wearing pants that are too tight, an unhealthy lifestyle, excessive physical activity, severe stress, and the use of inappropriate feminine hygiene products. All of these factors can disrupt the normal vaginal flora and increase the likelihood of excessive vaginal discharge and hormonal imbalance (Nurmaliza et al., 2023).

Therefore, researchers believe that age can influence knowledge about vaginal discharge and how to prevent or reduce its occurrence. Vaginal discharge causes discomfort and a lack of self-confidence. Poor vaginal hygiene can worsen vaginal discharge. This can lead to odor, itching, and other symptoms. If left untreated, vaginal discharge can lead to infection. Sometimes women feel embarrassed to discuss reproductive issues, even with other women. Therefore, support is needed for young women, whether from their mothers or even Islamic boarding school counselors. Teenagers can also learn from reading the media or listening to the experiences of others. Consuming herbal medicine (jamu) not only increases knowledge but can also reduce the

incidence of vaginal discharge. Consuming this herbal medicine not only reduces the incidence of vaginal discharge but also offers numerous benefits, particularly turmeric, which contains antibacterial, anti-inflammatory, and antioxidant properties. Ginger also contains antioxidant and anti-inflammatory compounds. Furthermore, galangal (galangal) also has numerous benefits due to its antitumor, antioxidant, and anti-inflammatory properties. There is a need to pay attention to maintaining the cleanliness of the feminine area in order to improve the level of health, especially the feminine area, to increase the feeling of comfort and confidence in young women, so that it is hoped that they will be more concerned about the cleanliness of their feminine area, because they are prospective mothers.

Vaginal Discharge Incidence After Zingiberaceae Herbal Medicine in Adolescent Girls at Habiburrohman Islamic Boarding School

Based on research conducted by researchers on adolescent girls at Habiburrohman Islamic Boarding School, using a questionnaire on vaginal discharge incidence, 31 respondents reported that after the intervention, the majority of respondents fell into the "Sometimes" category, with scores ranging from 9 to 16 (22 female students, representing 71.0%). This result indicates a decrease in vaginal discharge incidence among adolescent girls compared to before the intervention. This is due to the increased knowledge gained by respondents about preventing vaginal discharge by

consuming this herbal medicine (64.5%). Furthermore, consuming herbal medicine, particularly those containing turmeric, contains curcumin, which has antibacterial, anti-inflammatory, and antioxidant properties. Ginger can boost immunity and balance hormones. Galangal (galangal) has anti-inflammatory, antibacterial, and supportive benefits for maintaining female reproductive health. According to research (Tahir, 2024), a decoction of a mixture of turmeric and tamarind is highly recommended as a first step before consuming the concoction. The respondent previously experienced vaginal discharge characterized by a thick, abundant, odorless discharge, and itching. After consuming this herbal concoction, the respondent no longer experienced vaginal discharge. Therefore, an herbal concoction made from a mixture of turmeric and tamarind is recommended for women experiencing vaginal discharge. A person's knowledge is influenced by personal experience and external factors, both physical, non-physical, and socio-cultural. These experiences are then understood, believed, and motivate a person, forming an intention to act, which is ultimately manifested in behavior. According to research (Wahyuningsih, 2022), researchers stated that the greater a woman's knowledge about fluor albus, the more effective the preventative measures taken by the respondent to avoid fluor albus. Good knowledge is influenced by various factors such as information, education, experience, socio-

cultural and economic conditions, age, and the surrounding environment. In this study, it was found that 30 respondents (41.67%), 27 respondents (37.5%) had sufficient knowledge, while some others had insufficient knowledge (20.83%) had good knowledge regarding the Prevention of Vaginal Discharge (Fluor Albus) in adolescent girls. If the acceptance or adoption of new behavior is based on knowledge, awareness, and a positive attitude, then the behavior tends to be long-lasting. Conversely, without a foundation of knowledge and awareness, the behavior will not last long. Therefore, providing information and education regarding the prevention of fluor albus in adolescent girls is very important. Counseling is one of the effective approaches in the community to convey health messages or information with the aim of changing community behavior by increasing the knowledge and abilities of those targeted. Thus, mothers' knowledge needs to be continuously improved through continuous provision of information and motivation (Sinulingga, 2024). According to researchers, learning new things will increase an individual's knowledge, insight, and experience. Experience gained is also influenced by several factors, such as the environment, and individuals who will change the individual through belief and will manifest it through intentional behavior. Support from parents, especially mothers, regarding vaginal discharge is influential. Young women are close

to their parents, and mothers also share their experiences as teenagers. Vaginal discharge can be reduced through knowledge. Not only maintaining feminine hygiene but also consuming herbal medicine can be an alternative so women don't experience discomfort due to vaginal discharge. Providing herbal medicine interventions as a medium to reduce vaginal discharge is not only theoretically relevant but also effective and practical in reducing the incidence of vaginal discharge in young women. The curcumin content in turmeric can kill and inhibit the growth of *Candida albicans* fungus and bacteria that cause vaginal infections. Ginger is also known to help balance female hormones, which play a role in reproductive health. Galangal (*Kenyondrum*) also has anti-inflammatory and antibacterial properties that support the effects of turmeric and ginger in reducing infections, accelerating tissue recovery, and maintaining cleanliness and health in the feminine area. When these three ingredients are combined, they have an increased effectiveness in controlling the growth of microorganisms that cause vaginal discharge, both fungi and bacteria. They help reduce itching, odor, and excessive mucus caused by vaginal discharge. They also help boost the immune system and maintain the health of women's reproductive organs.

Differences Before and After Administering Zingiberaceae Herbal Medicine on the Incidence of Vaginal Discharge in Adolescent Girls at the Habiburrohman Islamic Boarding School

Based on research conducted on adolescent girls at the Habiburrohman Islamic Boarding School using a questionnaire on vaginal discharge incidence, the results showed that of the 31 respondents before the herbal medicine intervention, 20 female students (64.5%) had vaginal discharge in the "Frequent" category, with a score range of 17-24. However, after the herbal medicine intervention, the majority of respondents were in the "Sometimes" category, with a score range of 9-16. 22 female students (71.0%). One female student experienced a decrease in the frequency of vaginal discharge from "Always" to "Sometimes." Meanwhile, nine female students initially in the "Frequent" category remained in the "Frequent" category. A total of 11 female students experienced a decrease in the frequency of vaginal discharge from "Frequent" to "Sometimes." In addition, 10 female adolescents in the "Sometimes" category maintained that category. This result showed a decrease of almost half of the respondents in the incidence of vaginal discharge after being given herbal medicine from the Zingiberaceae family once a day for 5 days which aims to reduce the incidence of vaginal discharge in female adolescents. The incidence of vaginal discharge may not change even after being given an intervention because the level of knowledge and personal vulva hygiene also affect the incidence of vaginal discharge. The results of the Wilcoxon statistical test showed a significance value or probability smaller than 0.000, where

the p-value is below α (0.05). Because the p-value $<0.000 <0.05$, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_1) is accepted. Thus, it can be concluded that the administration of herbal medicine from the Zingiberaceae family has a significant effect on the incidence of vaginal discharge in female adolescents at the Habiburrohman Islamic Boarding School.

This study aligns with the results of previous research (Tahir, 2024), which found that on the first day, respondents experienced vaginal discharge with a large amount of mucus, white like tofu, odorless, and accompanied by itching. However, on the tenth day, after regularly consuming turmeric and tamarind herbal medicine, the vaginal discharge disappeared. Based on the analysis and discussion in this study, it can be concluded that administering turmeric and tamarind drink for 7 consecutive days is effective in treating vaginal discharge in adolescents aged 14-16 years and can be an alternative solution to overcome physiological vaginal discharge. According to researchers, consumption of herbal medicine affects the incidence of vaginal discharge. Especially turmeric and tamarind herbal medicine contains curcumin, which functions as an antibacterial, anti-inflammatory, and antioxidant, thus helping the body avoid various diseases, including cancer (Abdy, 2019). Not only turmeric, ginger also has beauty benefits such as body care, overcoming smelly feet, and can also

treat vaginal discharge. Ginger also contains antioxidants and anti-inflammatory properties (Jauhary, 2020). Galangal (Kenyon drum) is also rich in benefits, such as treating diarrhea and migraines, increasing energy, and boosting immunity (Izazi, 2020). This is because galangal is known to exhibit comprehensive bioactivity, including antitumor, antioxidant, and anti-inflammatory properties. Madurese people use galangal and ginger to help warm the body, especially during postpartum (Azizah, 2023). Consuming this herbal medicine not only reduces vaginal discharge but also refreshes the body, especially during menstruation, helps treat internal heat and mouth ulcers, and boosts immunity, thus preventing various diseases. Furthermore, it also helps treat kidney disorders and dysentery, improves bone and joint health, and treats acne and its scars (Abdy, 2019).

According to researchers, age can influence knowledge levels, and interventions such as taking herbal medicine can reduce the incidence of vaginal discharge, which is often experienced by adolescent girls. Age at menarche also influences this incidence, where adolescents who experience menarche before the age of 12 tend to have higher complaints of vaginal discharge than those who experience menarche after the age of 12. The study results showed that the number of adolescents who were in the "always" category before the intervention decreased to "sometimes." This is because adolescent girls are aware of the benefits of herbal medicine

from the Zingiberaceae family as an alternative to reduce the incidence of vaginal discharge. Although there are still adolescent girls in the "always" category, their numbers are minimal. The differences in the incidence of vaginal discharge experienced by each adolescent are due to the level of knowledge and the age of menarche. However, if vaginal discharge in adolescent girls worsens, it is necessary to pay more attention to genital hygiene, which can reduce external vaginal discharge, and to take herbal medicine, which can reduce vaginal discharge internally. Don't wait until it is severe to treat it. Thus, young women can drink herbal medicine from the Zingiberaceae family if they experience discomfort in the genital area due to vaginal discharge and still maintain the cleanliness of their genitals.

The researchers concluded that:

1. The incidence of vaginal discharge before being given Zingiberaceae herbal medicine among adolescent girls at the Habiburrohman Islamic Boarding School was more than half (64.5%).
2. The incidence of vaginal discharge after being given Zingiberaceae herbal medicine among adolescent girls at the Habiburrohman Islamic Boarding School was more than half (71.0%).
3. There was a difference before and after the administration of Zingiberaceae herbal medicine in the incidence of vaginal discharge among adolescent girls at the

Habiburrohman Islamic Boarding School.

4. The recommendations for this study are as follows:

1. For Educators and Prospective Educators

To increase knowledge about administering Zingiberaceae herbal medicine so that it can be used to reduce vaginal discharge in adolescent girls through non-pharmacological treatment.

2. For Parents

To understand the importance of maintaining reproductive hygiene regarding vaginal discharge and to serve as a warning if there is pathological vaginal discharge so that it can be addressed quickly.

3. For Readers

This information will broaden your knowledge and serve as a reference. This herbal medicine can be used as an alternative, especially in research on the administration of Zingiberaceae herbal medicines for vaginal discharge in adolescent girls.

Ethics Approval and Consent to Participate

This research has received ethical approval with number 1084/KEPK/UDS/V/2025.

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