




Analysis of Behavioral Predispositive Factors of Adolescent Women Towards Vaginal Discharge Phenomenon: A Case Study of Senior High School 1 Karang, Trenggalek Regency

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Abstract. Adolescence as a period of transition from childhood to adulthood is closely related to physical, hormonal, and psychological changes. Adolescence or puberty in girls is marked by menstruation, so it is important for adolescents to maintain and care for their reproductive health, especially the external genitalia. This study aims to determine the influence of predisposing behavioral factors such as knowledge, attitudes, and perceptions of the behavior of adolescent girls in dealing with the phenomenon of vaginal discharge. This research is a non-experimental study with a cross-sectional design that examines 90 female adolescent respondents at Senior High School 1 Karang. The predisposing behavioral factors experienced by young women in Senior High School 1 Karang towards the prevention and treatment of pathological vaginal discharge are 1) knowledge, 2) perception, and 3) attitude.

Keywords: teenage girl · teen vaginal discharge · behavior

1 Introduction

Adolescents as the largest population in the world, almost half are in Asia and a quarter of them are in Southeast Asia [1]. Adolescents are the nation's development milestones that have a major influence on their every action/decision [2]. In Murni (2019), the age limit for adolescents according to the World Health Organization (WHO) is the age period of 10–19 years, according to the United Nations (UN), namely at the age of 15–24 years, the Ministry of Health of the Republic of Indonesia and the National Family Planning Coordinating Board (BKKBN) that is at the age of 10–19 years [1].

Adolescence is a period of transition from childhood to adulthood which is closely related to various physical and psychological changes [3]. Adolescence is characterized by several characteristics such as starting to grow hair in the armpits and around the genitals, widening hip circumference, and menstruation when the hormonal components and the reproductive system have matured [4, 5]. Menstruation is usually experienced by

young women with a normal menstrual cycle lasting every 22–35 days with a menstrual period of 2–7 days. The first menstruation experienced by young women is known as menarche [1]. In general, the first menstruation in adolescent girls occurs at the age of 11 years, but does not rule out the possibility of occurring before or after the age of 11 years [6]. Therefore, knowledge about menstruation is needed by young women to help young women adapt to changes in puberty [7].

The lack of information related to reproductive health experienced by adolescents has resulted in the emergence of various problems related to reproductive organs and systems [3]. In addition, the lack of knowledge and attitudes in the care of external genital organs is one of the causes of vaginal discharge [8]. In line with the previous statement, the lack of information and knowledge about reproductive health triggers the assumption of many young women that vaginal discharge is a natural thing experienced by women [9] so that they are vulnerable to neglecting reproductive health and getting reproductive system diseases [10]. If abnormal vaginal discharge (pathological vaginal discharge) continues without being followed up, it can lead to infection up to the uterus and ovaries. Abnormal vaginal discharge is usually not clear white but yellow, gray, even green to foul and fishy [4]. Based on the Semarang DKK report in August 2016, there were 52 female adolescents experiencing reproductive organ infections, more than the number of male adolescents [9].

Physiological discharge is the process of releasing fluoride/leukorrhea/white fluid from the female area accompanied by changes in smell and color [11]. This event is also accompanied by itching, genital edema, dysuria, and lower abdominal pain or lower back pain [2]. Vaginal discharge is not a disease, but a symptom of disease [11]. Symptoms of vaginal discharge experienced by young women aged 15–24 years are around 31.8%. Therefore, adolescents are more at risk of experiencing vaginal discharge [8]. Vaginal discharge is caused by infectious and non-infectious factors [3]. In addition, in Abrori et al. (2017) states that the causes of vaginal discharge include infections (bacteria, fungi, viruses, parasites), hormonal imbalances, stress, and signs of reproductive organ disease [4]. Bad habits after urinating and defecating cause microorganisms to contaminate the external genitalia [2, 9, 12]. Microorganisms thrive in the vaginal area, because the vagina is closed, moist, folded, not sterile, and very close to the urethra and anus [1]. In addition, Indonesia as a tropical country has the potential for 90% of its female population to experience vaginal discharge because this condition makes it easy for fungi to grow [8]. This is supported by an article from Pradnyandari et al. (2019) which states that about 50% of women in Indonesia experience vaginal discharge [3] and the incidence of vaginal discharge increases continuously every year up to 70% [13]. In previous research stated that in 2018, 75% of women in the world experienced vaginal discharge at least once and 45% experienced it twice or more during their lifetime [1, 9, 10].

Reproductive health problems, especially vaginal discharge in adolescent girls, can be minimized by applying personal hygiene [2]. One of them is by maintaining and maintaining vulvar hygiene [9]. Good care is a determining factor for maintaining reproductive health. Behavioral factors for caring for reproductive organs affect a person's health status [3]. This behavior can be determined by the knowledge, attitudes, and beliefs of the community or the individual himself as a predisposing factor [14]. Based on the explanation of the problem, the researchers conducted a study to analyze the behavioral

determinants of adolescent girls towards the phenomenon of vaginal discharge at Senior High School 1 Karangany, Trenggalek Regency.

2 Method

This study used a non-experimental research method with a cross sectional research design. Then the data is interpreted descriptively analytic. This research is located at Senior High School 1 Karangany, Trenggalek District, East Java. The total subjects in the study amounted to 625 with a sample of 90 young women who were measured using the Slovin formula. The data analysis used is univariate and bivariate analysis.

3 Results

Trenggalek Regency is one of the regencies in East Java province. Based on information from the Trenggalek Regency Education Office, Senior High School 1 Karangany is one of the favorite schools located in the middle of the city, precisely on Jalan Raya Trenggalek - Ponorogo No Km 03, with 625 male and female students. The research was conducted in class X, XI and XII class of 2020/2021 in all vocational schools, namely Science and Social Sciences.

3.1 Univariate Analysis

Distribution of respondents based on the incidence of vaginal discharge in Senior High School 1 Karangany from 90 respondents aged 12–15 years (classified as young adolescents) as many as 29 people (32.22%) and full adolescents (16–19 years) as many as 61 people (67.78%). At Senior High School 1 Karangany, 90 students who experienced menarche were between the ages of 9–15 years, 84.44% experienced menstruation at the age of < 13 years (Table 1).

The distribution of the incidence of physiological vaginal discharge (normal) almost all students in Senior High School 1 Karangany have experienced it. In Senior High School 1 Karangany, 79 students (87.78%) had experienced this physiological vaginal discharge and only 11 (12.22%) had never experienced it. As for the distribution of the incidence of pathological vaginal discharge in Senior High School 1 Karangany, of the 90 students who had experienced pathological vaginal discharge, 23 (25.56%) and 67 (74.44%) never experienced it. For more details, the distribution can be seen in the Table 2.

3.2 Bivariate Analysis

From the results of the Table 3 analysis of the relationship between knowledge and behavior to prevent and treat pathological vaginal discharge in Senior High School 1 Karangany, it shows that there are 20 students (27.0%) who are highly knowledgeable about vaginal discharge and have poor behavior in preventing and handling pathological vaginal discharge, while among female students have low knowledge about vaginal discharge, there are 11 people (68.8%) who have poor behavior in preventing and handling

Table 1. Distribution of students by age group

Variable	Frequency (n)	Percentage (%)
Age		
Young adolescents (12–15 years old)	29	32.22
Full adolescents (16–19 years old)	61	67.78
First menstruation (years old)		
9	1	1.11
10	3	3.33
11	18	20.00
12	38	42.22
13	16	17.78
14	12	13.33
15	2	2.22

Table 2. Distribution of students based on the incidence of vaginal discharge

Variable	Frequency (n)	Percentage (%)
Physiological vaginal discharge		
Yes	79	87.78
No	11	12.22
Pathological vaginal discharge		
Yes	23	25.56
No	67	74.44

pathological vaginal discharge. And the results of the statistical test obtained a P value = 0.003, it can be concluded that there is a difference in the proportion of the formation of prevention and treatment of pathological vaginal discharge behavior in students with low knowledge and students with high knowledge. Or in other words, there is a very significant relationship between knowledge and behavior to prevent and treat pathological vaginal discharge. From the results of the analysis also obtained an OR = 5.94, which means that here students who have high knowledge have 5.94 times the opportunity to behave well towards the prevention and treatment of pathological vaginal discharge compared to students who have low knowledge of vaginal discharge.

The results of the analysis of the relationship between attitudes and behavior to prevent and treat pathological vaginal discharge in Senior High School 1 Karangany obtained information that there were 25 (33.3%) students who had a positive attitude towards vaginal discharge and had bad behavior towards the prevention and treatment of pathological vaginal discharge, and among students who negative attitude towards

Table 3. The results of the bivariate analysis of predisposing variables to the behavior of preventing and treating pathological vaginal discharge

Variable	Student Healthy Behavior				P-Value	OR with CI 90%
	High		Low			
	n	%	n	%		
Knowledge					0.003	5.940 (1.834–19.253)
High	54	73.0	20	27.0		
Low	5	31.3	11	68.8		
Behavior					0.767	1.333 (0.427–4.165)
Positive	50	66.7	25	33.3		
Negative	9	60.0	6	40.0		
Perception					0.046	0.354 (0.136–0.918)
Right	12	48,0	13	52.0		
False	47	72.3	18	27.7		

vaginal discharge, there were 6 (40.0%) female students who had bad behavior towards the prevention and treatment of pathological vaginal discharge. From the results of statistical tests obtained P value = 0.767, this means that it can be concluded that there is no difference in the proportion of the formation of good behavior to prevent and treat pathological vaginal discharge in students who have a negative attitude with students who have a positive attitude. Or in other words, there is no very significant relationship between attitude and behavior to prevent and treat pathological vaginal discharge. From the results of the analysis, the OR = 1.333 means that students who have a positive attitude about vaginal discharge have 1.333 times the opportunity to behave well towards the prevention and treatment of pathological vaginal discharge compared to students who have a negative attitude about vaginal discharge.

Based on the results of the analysis of the relationship between perception and behavior to prevent and treat pathological vaginal discharge at Senior High School 1 Karangany, it was found that there were 13 students (52.0%) whose perception was correct about vaginal discharge who had poor prevention and treatment of pathological vaginal discharge. And among students who have a wrong perception of vaginal discharge, there are 18 (27.7%) students with poor behavior in preventing and handling pathological vaginal discharge. From the results of statistical tests obtained P value = 0.046, it can be concluded that there is a difference in the proportion of the formation of behavior to prevent and treat pathological vaginal discharge in students who have a wrong perception of vaginal discharge with 39 students who have a correct perception of vaginal discharge. Or in other words, there is a significant relationship between perception and behavior to prevent and treat pathological vaginal discharge. From the results of the analysis, the OR = 0.354 means that here students who have a correct perception of vaginal discharge have 0.354 times the opportunity to behave in prevention and treatment of pathological vaginal discharge better than students who have a wrong perception of vaginal discharge.

4 Discussion

Knowledge is the result of “knowing” from someone as a result of the process of receiving stimuli through their senses towards certain objects (Notoatmodjo, 2003). Knowledge is an important domain in determining a person’s behavior. The better a person’s knowledge, the more likely they are to behave well. According to Arikunto (2006) a person’s knowledge can be known and measured with a qualitative scale, namely the good category if the percentage results are 76–100%, 56–75% is sufficient and less if the value is > 56%.

The level of knowledge about vaginal discharge has an effect on the behavior of preventing and treating pathological vaginal discharge in female students at Senior High School 1 Karangany. In Senior High School 1 Karangany, students with knowledge about vaginal discharge are categorized as high at 82.22%. It turns out that this has an effect on the behavior of preventing and treating pathological vaginal discharge, where the percentage of behavior in the prevention and treatment of good pathological vaginal discharge is also high at 65.56%. This is in accordance with the theory above that the better a person’s level of knowledge, the greater the opportunity to perform good behavior.

From the results of the answers on knowledge about vaginal discharge, an average of 91.11% of students at Senior High School 1 Karangany already know what vaginal discharge is, the types and signs and symptoms of physiological and pathological vaginal discharge, and the causes of vaginal discharge. Basically, most of the students already know what to do if they experience pathological vaginal discharge, which is to immediately have it checked at a health facility, 92.22% gave the correct answer. However, there are still many students who do not understand about the prevention of pathological vaginal discharge.

The results of the bivariate analysis showed that there was a significant relationship between knowledge and behavior to prevent and treat pathological vaginal discharge. With the results of the same analysis, namely the P value = 0.003, this is very relevant to Lawrence Green’s theory (2005) that knowledge is a factor that facilitates behavior change in a person. And based on the theory of Rogers (1974) says that behavior change because it is based on knowledge will usually be lasting or long lasting. In accordance with the attitude as an adjustment function or benefit, in the behavior of preventing and handling pathological vaginal discharge in Senior High School 1 Karangany there are positive and negative attitudes towards vaginal discharge. Of course, this attitude predisposes to the formation of good and bad behavior to prevent and treat pathological vaginal discharge in the school. From the result data, it can be concluded that there is no conformity with the theory which states that attitude is also a predisposition to do or not to do certain behaviors (Thomas & Znaniecki, 1920).

In accordance with the results of OR = 1.333 which explains that students who have a positive attitude towards vaginal discharge only have a chance of 1.333 times the formation of a good prevention and treatment of pathological vaginal discharge compared to students who have a negative attitude towards vaginal discharge. In addition, from the results of the chi square statistical test, it turned out that there was no significant relationship between attitudes and behavior in preventing and treating pathological vaginal discharge in Senior High School 1 Karangany, with a P value of 0.767 (<0.01). This has

not proven the truth of the theory of Thomas and Znaniecki (1920) that attitude is a factor that makes it easier for someone to do or not to do a health behavior.

Perception is a person's interpretation of experiences about objects, sequences or events, and experiences about objects (Notoatmodjo 2010). Factors from society are sometimes forgotten in determining a person's behavior towards health. One of them is the perception or concept of society about illness. Perceptions of vaginal discharge among female students at Senior High School 1 Karangany also vary between right and wrong perceptions. Where the correct perception is only 27.78%. It turns out that the correct perception of vaginal discharge has an impact on the number of prevention and treatment behaviors for pathological vaginal discharge which is also large, which is 48.0%. The results of the research on the perception variable with the behavior of preventing and treating pathological vaginal discharge, after doing a bivariate analysis, the results obtained in Senior High School 1 Karangany the P value = 0.046, which means that there is a significant relationship between the two variables. This finding is in accordance with the theory from WHO (1984) which asserts that perception is a form of thought or feeling which is one of the determinants in determining a person's behavior. The findings in this study are in agreement with findings from Imania (2011) at SMU Plus Negeri 17 Palembang that there is a significant relationship between perceived threat and healthy behavior towards the prevention of pathological vaginal discharge with a P value of 0.000.

5 Conclusion

The average age of students at Senior High School 1 Karangany is already classified as full-fledged teenagers, which is 67.78% of students, while the age of menarche at the school is < 13 years on average. Almost all students at Senior High School 1 Karangany have experienced physiological or normal vaginal discharge. And as much as 25.56% of students in Senior High School 1 Karangany have experienced pathological vaginal discharge. In addition, based on the results of statistical calculations that have been carried out there is a significant relationship between knowledge and perception with the behavior of preventing and treating pathological vaginal discharge in female students at Senior High School 1 Karangany, but there is no significant relationship between attitudes and behavior in preventing and treating pathological vaginal discharge in female students at Senior High School 1 Karangany. The predisposing behavioral factors experienced by young women in Senior High School 1 Karangany and influence healthy behavior towards the prevention and treatment of pathological vaginal discharge are 1) knowledge, 2) perception, and 3) attitude.

References

1. D. A. Murni, "Perilaku Hygiene Menstruasi pada Remaja Putri di Madrasah Tsanawiyah Pondok Pesantren As-Salam Kecamatan Kampar Utara, Provinsi Riau", *Ensiklopedia J.*, vol. 2, no. 10, pp. 13–20, 2019, [Online]. Available: <http://jurnal.ensiklopediaku.org/ojs-2.4.8-3/index.php/ensiklopedia/article/view/352>.

2. A. Nurvidary, Y. Renny, and D. Rohmatika, “Hubungan Pengetahuan tentang Persoanal Hygiene terhadap Kejadian Keputihan pada Siswi Kelas X di MAN 1 Surakarta”, 2021.
3. I. A. C. Pradnyandari, I. G. N. H. W. Surya, and M. B. D. Aryana, “Gambaran pengetahuan, sikap, dan perilaku tentang vaginal hygiene terhadap kejadian keputihan patologis pada siswi kelas 1 di SMA Negeri 1 Denpasar periode Juli 2018”, *Intisari Sains Medis*, vol. 10, no. 1, pp. 88–94, 2019, doi: <https://doi.org/10.15562/ism.v10i1.357>.
4. Abrori, A. D. Hernawan, and Ermulyadi, “Analysis of some metal ions using silica gel modified with acid orange 7 as a sorbent”, *Unnes J. Public Heal.*, vol. 6, no. 1, pp. 24–34, 2017.
5. K. C. Pythagoras, “Personal Hygiene Remaja Putri Ketika Menstruasi Female”, *J. Promkes Indones. J. Heal. Promot. Heal. Educ.*, vol. 5, no. 1, pp. 13–26, 2017, doi: https://doi.org/10.1007/978-3-319-93701-4_44.
6. R. Haryono, *Siap menghadapi menstruasi & menopause*. Yogyakarta: Gosyen Publishing, 2016.
7. I. Suryani, “Faktor-faktor Yang Mempengaruhi Perilaku Remaja Putri Tentang Personal Hgiene Pada Saat Menstruasi Di SMP Negeri 12 Kota Pekanbaru”, *J. Midwifery Sci.*, vol. 3, no. 2, pp. 68–79, 2019, [Online]. Available: L Suryani - JOMIS (Journal of Midwifery Science), 2019 - jurnal.univrab.ac.id.
8. N. Azizah and I. Widiawati, “Karakteristik Remaja Putri Dengan Kejadian Keputihan Di SMK Muhammadiyah Kudus”, *J. Ilmu Keperawatan dan Kebidanan*, vol. 6, no. 1, pp. 57–78, 2015.
9. F. Humairoh, S. B. Musthofa, and L. Widagdo, “Faktor-Faktor Yang Mempengaruhi Perilaku Vulva Hygiene Pada Remaja Putri Panti Asuhan Di Kecamatan Tembalang, Kota Semarang”, *J. Kesehat. Masy.*, vol. 6, no. 1, pp. 745–752, 2018.
10. J. Eduwan, “Gambaran Pengetahuan Tentang Keputihan Pada Remaja Putri Kota Bengkulu”, *J. Vokasi Keperawatan*, vol. 5, no. 1, pp. 71–77, 2022.
11. H. A. Nur, “Hubungan Persepsi, Sikap, dan Perilaku Remaja Putri Tentang Personal Hygiene Genitalia dengan Kejadian Fluor Albus (Keputihan)”, *J. Profesi Keperawatan*, vol. 5, no. 1, pp. 1–13, 2018.
12. J. Sitompul, “Hubungan Tingkat Pengetahuan Remaja Putri Tentang Keputihan Dengan Perilaku Pencegahan Keputihan Di Sma Negeri 3 Simalungun Tahun 2012”, *J. Ilm. Sist.*, vol. 1, no. 2, pp. 87–92, 2017.
13. F. Melina and N. M. Ringringringulu, “Gambaran Tingkat Pengetahuan Remaja Putri Tentang Keputihan di Sekolah Tinggi Ilmu Kesehatan Yogyakarta Fitria Melina 1, Nensi Maria Ringringringulu 2”, *J. Kesehat. SAMODRA ILMU*, vol. 12, no. 2, pp. 175–186, 2021.
14. Ruslan, “Pengaruh pengetahuan, sikap, persepsi terhadap perilaku pencarian pengobatan penderita kusta pada fasilitas kesehatan di Kabupaten Bima”, *Univ. Padjajaran*, pp. 1–14, 2012, [Online]. Available: https://pustaka.unpad.ac.id/wp-content/uploads/2013/12/Pustaka_Unpad_PENGARUH_-PENGETAHUAN_-SIKAP_-PERSEPSI.pdf.

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