



Factors Associated with the Occurrence of Vaginal Discharge in Female Students

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ABSTRACT

Introduction: A teenager begins to experience psychological changes and developments such as changes in mindset and emotional stability. Teenager is prone to complaints of Vaginal charge. Vaginal charge inurement from the vaginal and it is not blood discharge nor menstrual blood, vaginal charge becomes a Leucorrhoea when the discharge becomes smelly and local itching. The cause of vaginal discharge can be normally influenced by hormones. There are factors influence the incidence of vaginal discharge in adolescents, including knowledge, media information, personal hygiene, viruses, bacteria and parasites and others.

Methods: This study uses quantitative research methods with a cross sectional approach with female respondents at SMAN 7 Cirebon City. The population in this study were all female students at SMAN 7 Cirebon City. The sampling technique used total sampling. It is including female students in SMAN 7 Cirebon City with a total of 587 people.

Result: The majority of the characteristics of students' knowledge about the occurrence of vaginal discharge with good knowledge were 262 respondents (93.2%), media information on the incidence of vaginal discharge through electronic media were 492 respondents (96.7%) and personal hygiene on the incidence of vaginal discharge by not doing personal hygiene were 394 respondents (98.7%).

Discussion: There is a significant relationship between knowledge (p-0.031, information media (p-0.003), and personal hygiene (p-0.000) on the incidence of vaginal discharge in female students of SMAN 7 Cirebon City with p<0.05.

Keyword: *Female Students, Leucorrhoea, Vaginal Discharge.*

INTRODUCTION

Reproductive health according to the World Health Organization (WHO) is a state of complete health, including physical, mental and social aspects and not merely the absence of disease or disorder in all related matters with the

reproductive system, its functions and the reproductive process itself. Women have a reproductive system that sensitive to a disease, even the disease state is more related to function and reproduction ability¹.

Adolescence is a transition from childhood to adulthood, this term denotes the period from puberty to maturity, usually starting at age 14 in boys and age 12 in girls. The limit for adolescents in this case is the age of 10-19 years according to the World Health Organization classification².

Adolescence is a very important period in the development of the human life cycle after passing childhood to adulthood, where there is psychological exploration to find self-identity. During adolescence, many problems arise, one of which is reproductive health problems³.

According to WHO, reproductive health is a state of complete health, including physical, mental and social aspects and not merely the absence of disease or disturbance in all matters relating to the reproductive system, its functions and the reproductive process itself⁴.

Reproductive health issues are considered taboo subjects and this makes it difficult for adolescent girls to get quality education and information on reproductive health and makes them vulnerable subjects in terms of reproductive health and gynecological problems such as unwanted pregnancy, cervical cancer, sexually transmitted infections (STIs), infections reproductive tract and other reproductive health problems⁵.

Vaginal discharge (VD) is common during puberty and may be physiological however it might also be the result of infection and other conditions⁶. Vaginal discharge is one of the female reproductive health problems. It is the second most common problem after abnormal uterine bleeding⁷.

More than 50% of women around the world have experienced the vaginal discharge. One in ten women will present with vaginal discharge in the course of a year. Vaginal discharge doesn't really need to be treated, but most women don't know about vaginal discharge and its

causes, so, that if it is not handled properly, it will cause infertility and early symptom of uterine cancer. In Indonesia, 75% of women have experienced vaginal discharge at least once in their life, 45% of them can experience vaginal discharge twice or more^{4,7}.

Vaginal discharge is an occurrence that often infect women and happened at any age. While the definition of vaginal discharge itself is discharge other than blood from the vaginal canal more than usual, either smelly or not accompanied by local itching, can occur normally (physiologic) or abnormal (pathological)⁸.

The cause of vaginal discharge in adolescent girls is usually physiological, namely because of excessive vaginal secretions caused by excess estrogen levels that increase during such as puberty or during ovulation or the menstrual cycle⁵.

Pathological vaginal discharge is the most common symptom of reproductive tract infections and its incidence is high among adolescents particularly in developing countries⁵.

Symptoms of vaginal discharge are experienced by teenage girls at the age of 15-24 years, which is around 31.8%. The Indonesian Ministry of Health stated that the incidence of vaginal discharge is mostly experienced by young women in their productive age, the incidence of vaginal discharge in Indonesia is higher than in other countries. According to data from the South Kalimantan Health Office in 2018, it shows that there are 18,641 young women aged 15-24 years who are at risk of experiencing vaginal discharge⁹.

Factors that can affect the occurrence of vaginal discharge in adolescent girls are usually caused by fungi, bacteria, viruses and parasites. Bacterial vaginosis is the most common cause of infective vaginal discharge, with a prevalence of 9% in UK general practice⁶. It causes profuse and fishy

smelling discharge without itch or soreness^{10,11}.

Other factors can cause vaginal discharge in adolescents such as supporting factors, physiological, and pathological factors. Factors supporting the occurrence of vaginal discharge in adolescents are anemia, low nutrition, fatigue and obesity. Physiological factors of vaginal discharge which are more influenced by factors normal hormonal conditions such as during ovulation, before and after menstruation, sexual stimulation, and emotions¹.

However, vaginal discharge can also be influenced by other factors such as low knowledge about vaginal discharge, lack of information obtained about vaginal discharge, stress, excessive activity, poor personal hygiene, etc¹¹. The cause of excessive vaginal secretions by excess estrogen levels that increase during such as puberty or during ovulation or the menstrual cycle⁵.

To prevent the occurrence of vaginal discharge in adolescents, they should maintain personal hygiene starting from cleaning the external genitalia, avoiding excessive stress, avoiding wearing tight underwear because it will inhibit blood circulation, doing activities that are appropriate and not excessive, etc⁴.

The specific purpose of the study was to determine the factors that influence the incidence of vaginal discharge in adolescents so that the results of the research are expected to be taken into consideration in providing appropriate care for adolescents in reducing the problems of young women, especially at SMAN 7 Cirebon City and as a suggestion in order to improve government programs to prevent the occurrence of vaginal discharge which turn into Leuchorrhoea to adolescent girls in the city of Cirebon so as to develop a high quality of youth generation. This research is in line with

the research strategy plan of the college, STIKes Muhammadiyah Cirebon.

METHODS

This research was conducted in May until October 2022. The variables used were independent variables (incidence of vaginal discharge) and dependent variables on factors affecting vaginal discharge (knowledge, information media and personal hygiene). The method used is analytical with a cross sectional approach. The population in this study were female students of SMAN 7 Cirebon City. The sampling technique used was total sampling which is including all female students of SMAN 7 Cirebon City with a total of 621 people with inclusion and exclusion criteria. So that, a sample of 587 people was obtained. This study used data questionnaires. Before becoming a research questionnaire, validity and reliability tests were carried out first. The data analysis technique in this study used the Chi square formula with a computer program, the decision-making in this study were:

- If the p-value ≤ 0.05 Ho is rejected, which means that there is a significant relationship between the independent variable and the dependent variable.
- If the p-value ≥ 0.05 Ho is accepted, which means that there is no significant relationship between the independent and dependent variables.

RESULT

Table 1. The Relationship Between Each Factor with Vaginal Discharge at SMAN 7 Cirebon City

No	Risk Factors	Vaginal Discharge Occurrence				Total		Value P - Value
		Yes		No		n	%	
		n	%	n	%	n	%	
1.	Knowledge							0.031
	Good	262	93.2	19	5.8	281	100	
	Sufficient	183	97.9	4	2.1	187	100	
2.	Lack	116	97.5	3	2.5	119	100	0.003
	Information Media							
3.	Print	69	88.5	9	11.5	78	100	0.000
	Electronic	492	96.7	17	3.3	509	100	
	Personal Hygiene							
	Do	394	98.7	5	1.3	399	100	0.000
	Do not	167	88.8	21	11.2	188	100	

Based on the table above, most of female students experienced vaginal discharge with good knowledge were 262 people (93.2%). The results of the bivariate analysis using the chi-square statistical test with a computer program obtained a $p\text{-value} = 0.031 \leq 0.05$ so that the results H_0 is rejected, it means that there is a relationship between knowledge and the incidence of vaginal discharge in SMAN 7 Cirebon City in 2022. This study was in line with the results of research conducted by Ayuningtyas (2011) which showed that there was a significant relationship between the knowledge of adolescent girls and the incidence of vaginal discharge¹².

Based on the table 2, the majority of adolescents who experience vaginal discharge obtained information from electronic media as many as 492 people (96.7%). The results of the bivariate analysis using the chi-square statistical test with a computer program obtained a $p\text{-value} = 0.003 \leq 0.05$ so that the results of H_0 are rejected, meaning that there is a relationship between information media and the incidence of female vaginal discharge at SMAN 7 Cirebon City in 2022.

Based on the table 3, the majority of adolescents who experience vaginal discharge due to not doing personal hygiene well are 394 people (98.7%). chi-square statistical test with a computer program obtained a $p\text{-value} = 0.000 \leq 0.05$ so that the results H_0 is rejected, it means that there is a relationship between personal hygiene and the incidence of vaginal discharge in female students at SMAN 7 Cirebon City in 2022.

DISCUSSION

Vaginal discharge is a problem that is often experienced by women of all ages. Every women can get vaginal discharge. According to the World Health Organization (WHO), 75% of women in the world will definitely experience vaginal discharge at least once in their

lifetime, and as many as 45% will experience vaginal discharge two or more times. In Indonesia, about 90% of women have the potential to experience vaginal discharge because Indonesia has a tropical climate, which causes the reproductive organs to become moist and wet so that fungi are easy to grow and develop¹.

Teenagers range from 10 to 19 years of age. It is estimated that 1.2 billion people or 1 in 6 of the world's population are adolescents aged 10 to 19 years. Teenagers make up 20% of the world's population⁵.

Many respondents do not know well about the abnormal vaginal discharge is vaginal discharge with itching, pain, odor, yellow color and irritation in the genital area which is a sign of malignant infection in female reproduction. This is appropriate when referring to various theories and research conducted by Menthari, Wantania & Wagey which states that the incidence of vaginal discharge often occurs due to lack of knowledge about good and correct reproductive health¹³.

Based on the results of existing research and theories, the researchers assume that both good and bad knowledge cannot reduce the incidence of vaginal discharge in adolescents. Therefore, it is necessary to increase the right knowledge through the role of parents, teachers and health workers who should have provided the correct understanding to adolescents about health education, especially reproductive health, because during adolescence physical and sexual growth begins to develop rapidly, so adolescents need to understand how to maintain hygiene and reproductive health^{14,15}.

Adolescent's knowledge can be influenced by factors that come from outside and inside the adolescent itself. Knowledge could be influenced by sources of information received by a person such as from the mass media, parents and health workers. Mass media is a tool or source of information that has a

big role in providing information for someone. The more and growing number of mass media at this time, should increase the information received by adolescents, especially regarding reproductive health, one of which is about vaginal discharge^{14,16}.

Along with the times with the advancement of science and technology, it has the benefit of easy access to obtain information from electronic media. Electronic media according to the Big Indonesian Dictionary (KBBI) is a means of mass media that uses modern electronic devices, such as radio, television, and film. According to Alpin's research (2021) the dissemination of information through electronic media is quite effective as a socialization media Electronic media can be a new innovation in activities, especially social media, with the use of electronic media, it means that we can be a little more advanced about information technology. Anisa's research (2022) states that there is a relationship between health promotion and the use of electronic media in the form of videos and slides to increase knowledge and improve healthy behavior¹⁶.

In today's information greatly affects the actions that will be taken by someone. Information is needed by all people, including teenagers. Information can be obtained from various sources such as parents, teachers, health workers, print media and electronic media. The results of the study show that many respondents use electronic media, but do not perform vulva hygiene in the right way and still, it can cause vaginal discharge. Health promotion or health information packaged using electronic media in collaboration with health workers related to counseling or learning videos related to vaginal discharge is a way that is considered more effective and efficient than the use of print media. Nowadays, people use electronic media more, including social media because media access in electronic system is very easy to accept, fast and more

attractive to the public, especially teenagers. If more teenage girls exposed to the right information and sources from health workers regarding vaginal discharge and vulva hygiene, the greater the chance for them to avoid abnormal vaginal discharge^{17,18}.

Vulva hygiene is an action in the treatment of the external female organs. Bad behavior in maintaining the cleanliness of the genital organs such as washing with dirty water, using excessive rinses or using bath soap, using underwear that does not absorb sweat, rarely changing underwear, and not changing sanitary napkins frequently during menstruation will cause vaginal discharge. Adolescent girls with good vulva hygiene are rarely experienced vaginal discharge. Good vulva hygiene not only could prevent vaginal discharge, it can also avoid diseases such as itching, fungal infections, etc¹⁵.

According to WHO, women rarely pay attention to hygiene in the genital organs external. Vaginal infections every year affect women worldwide 10-15% of 100 million women, for example, adolescents who are infected with candida bacteria about 15% and experience whiteness. This incident is because teenagers do not know the problems surrounding organs reproduction¹.

Some things that respondents still do are not drying the genitals if they are wet, using strong antiseptic soap or liquid fragrance to remove odors in the feminine area or vaginal washing liquid which will cause the humidity of the pubic area to be disturbed, and the wrong way of washing the vagina can cause the vaginal infection (Leuchorrhoea)¹⁹⁻²¹.

Based on the results of research and existing theories, inappropriate personal hygiene measures the occurrence of vaginal discharge, because action is something that a person has practiced according to what they know, so that, inappropriate personal hygiene actions have a lot of influence on the occurrence

of vaginal discharge, especially pathological vaginal discharge which will endanger the reproductive health of young women which will affect their reproductive health throughout their life cycle as women²².

CONCLUSION

Based on the results of research that has been carried out at SMAN 7 Cirebon City in 2022 regarding the factors associated with the incidence of vaginal discharge in female students at SMAN 7 Cirebon City, it can be concluded as follows:

1. The majority of the characteristics of female students from 587 respondents who experienced vaginal discharge were 561 respondents (95.5%) and 26 respondents were not (4.5%).
2. The majority of the characteristics of female students' knowledge about the occurrence of vaginal discharge with good knowledge were 262 respondents (93.2%), sufficient knowledge were 183 respondents (97.9%), lack of knowledge were 116 respondents (97.5%). Media information on the incidence of vaginal discharge through printed media were 69 respondents (88.5%), electronic media were 492 respondents (96.7%) and personal hygiene to the incidence of vaginal discharge by performing personal hygiene were 167 respondents (88.8%), who did not do personal hygiene were 394 respondents (98.7%).
3. There is a relationship between knowledge and the incidence of vaginal discharge to female students in SMAN 7 Cirebon City in 2022
4. There is a relationship between information media and the incidence of vaginal discharge to female students in SMAN 7 Cirebon City in 2022.
5. There is a relationship between personal hygiene and the incidence of

vaginal discharge to female students in SMAN 7 Cirebon City in 2022.

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