



Knowledge, Attitude, and Practice about Vaginal Discharge on School-Age Girls in Jatinangor Senior High School

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Abstract

Vaginal discharge, commonly known as leucorrhea, is a physiological condition which happens in female reproductive periods. More than 75% women have experience leucorrhea during their lifetime and 45% of them have recurrent condition. Nowadays, a much greater number of young people suffer from leucorrhea which hinders their ability to grow and develop to their full potential. Many people are still ignorant and unaware of prevent leucorrhea which threatens their health not only for recent time but also for the future. A descriptive cross-sectional design was used with cluster sampling of 164 school-age girls taken from government school of Jatinangor on June 2013. The data of knowledge about leucorrhea on school-age girls, their attitude and practice regarding the prevention of leucorrhea were collected by using questionnaires which have been tested and validated. Based on the questionnaire, the results show that school-age girl's knowledge about leucorrhoea is low. The attitudes and practice regarding the prevention issue and the management about leucorrhoea are good. The conclusion in this study is that respondents lack knowledge about leucorrhea while they have a good attitude and do good practices regarding the prevention of leucorrhea diseases. Based on the results in this study, health workers are recommended to educate school-age girls about features, physiological and pathological causes, prevention, and management of leucorrhea.

Subject Areas

Epidemiology, Public Health

Keywords

Leucorrhea, Attitude, Knowledge, Implementation, School-Age Girls

1. Introduction

Leucorrhoea is influenced by hormonal levels and does not induced infection automatically. Leucorrhoea is one of the major burdens of diseases in developing countries, including infections caused by any combination of physiologic and pathologic factors [1]. Various communities based studies in developing countries have revealed the morbidity and general ill health has been endured silently by women due to poor awareness. The problem of leucorrhoea has been studied in various backgrounds in Indonesia, which focus not only on the medical/clinical aspect, but also on women's perceptions [2]. The vast folk vocabulary and the perceived severity of the disease make it difficult for a researcher to measure the exact levels of leucorrhea prevalence [3]. Most of the women perceive it to be a normal phenomenon in their life while a few of them consider it as a non-curable illness. The normality of the disease is often influenced socio cultural.

Adolescent (10 - 19 years old) is the most important period in reproductive health because the maturity of human reproductive organ happens in this period [4]. Mumbai study, concerned in reproductive health problems, was recorded the 9 school-age girls' issues in India. The highest percentage issues belong to leucorrhea (25.4%) [5]. The prevalence of leucorrhoea was rare to reports. Approximately, 75% women experience leucorrhea in their lives [3]. In Scandinavia, the record shows that the incidence of candidiasis was 30% cases for the last of five years. Whereas, in north of America more than eight million new cases of leucorrhea happen by years. All over the world, there are 170 billion new cases over the year caused by *Trichomonas Vaginalis* and there are 4 million cases of *Chlamidia Trachomatis* infection [3]. The disease of genital tract infection begins from cervix or urethra. Most of this infection will cause defect (sequelle) primary effect of *Chlamidia Trachomatis* on ascending infection from genital tract which are colonizations on the deepest membrane mucous of uterus and tuba fallopia [2]. The first symptom of pelvis inflammatory will be appeared as an insignificant symptom. One of the most common symptoms is abnormal leucorrhea with the percentage around 55% - 75%. The consequence of the pelvis inflammatory is dysfunctionality of tuba fallopia which causes infertility, ectopic pregnancy, and chronic pelvic inflammatory [3].

The information about reproductive health is a part of the important strategy to prevent reproductive health problem among teenager, especially in developing country such as Indonesia [1]. Nowadays, a much greater number of young people suffer from leucorrhoea which hinder their ability to grow and develop to their full potential. Many people still engage ignorance and unaware to prevent leucorrhea which threats their health not only for recent time but also for the future [6]. This condition is caused by the lack of knowledge of school-age girls about leucorrhea. The information about leucorrhea such as prevention, management, and the maintenance of reproductive organs is important to be given. The problem is that the health worker cannot always participate and receive an appropriate education in every reproductive health program in school. In 2007, Indonesian Ministry of Health said that the lack of health information among the students is caused by the passiveness of the students to seek some information about it and also caused by the low interaction between students and health workers [1].

2. Methods

A cross-sectional study was conducted in Jatinangor, using a two-stage cluster sampling, randomly selecting 2 out of 10 government school of Jatinangor on June 2013. School girls were eligible to participate in this study if they lived in Jatinangor, they are categorized as girls in reproductive periods based on WHO criteria (15 - 19 years old), and willing to be research subject. This study took a secondary data from Jatinangor Cohort team, Faculty of Medicine, Padjadjaran University. Data were collected by questionnaires which have been tested and validated. Content validation of three type question was done. The invalid questions was excluded. The question about knowledge of leucorrhea was reliable (Cronbach's alpha = 0.813). Unfortunately, the attitude and practice question is not reliable with Cronbach alpha -0.209 and 0.076.

The data collection instrument was divided into three parts. First, the questionnaire about leucorrhoea knowledge were consist of 18 questions which include definition, types, causes, complications and prevention of leucorrhoea. Second, the questionnaire of leucorrhoea attitude were consist of 6 questions include the attitude of prevention leucorrhoea, such as caring the genital organs and the self-managed of leucorrhoea. Third, the questionnaire of leucorrhoea practice were consist of 7 questions include action or activity of school age girls in maintaining cleanliness of the genital organs, clean lifestyle management with respect to prevention and treatment efforts of leucorrhoea.

Three answer choices (true, false, and don't know) was provided for each questions. The three point were given for correct answer and two point for wrong answer and one point for "don't know" answers. Total score was obtained by calculate the point from each question. Analysis of the knowledge, attitude and practice were collected from questionnaire describe by statistical descriptive. The sample size was calculated using the formula for categorical descriptive design with a value of proportion using previous research data, the value of precision specified by the researchers of 0.1. The category of variable were determined by using the mean of total score based on the calculation in the statistical software. Respondents were grouped into two categories based on baseline score mean of the respondent's answers to these questions.

This study was approved by Ethical Clearance Committee.

3. Results

The data from 185 of school-age girls was taken, 21 of them were excluded due to incomplete data. The characteristic of age shows the respondent age range is 15 - 17 years old. The results of this study are 86 respondents (69.9%) are 16 years old, 33 respondents (26.8%) are 17 years old, and 4 respondents (3.3%) are 15 years old. The results from the data show that most of the respondent parent's work as trader (62.7%), and labor (17.8%). The other parents work as government worker (3.6%), housewife (3.1%), farmer (3.6%), police (1.2%), Badan Usaha Milik Negara worker (2.4%), soldier (1.2%), security (1.3%), and retiree (3.1%).

After calculating the baseline score mean, the result show score category for high

knowledge respondent is ≥ 35.21 and low knowledge respondent is < 35.21 . Score category for good attitude is ≥ 25.88 and bad attitude is < 25.88 . Score category for good practice is ≥ 22.90 and bad practice is < 22.90 . The cut off value set based on the average value of the total data. The result category of each variable shows in **Figure 1**. **Figure 1** knowledge variable below shows the results of the 164 respondent surveys. 84 of school-age girls (50.9%) had low knowledge about leucorrhoea and 81 of school-age girls (49.1%) had high knowledge about leucorrhoea. Attitude variable shows the results of 164 respondents. There are 96 of school-age girls (58.2%) have a good attitude about prevention and management of leucorrhoea and 69 of school-age girls (41.8%) have a bad attitude. Practice variable shows the results of 164 respondents. 92 of school-age girls (56.1%) have good practice about prevention and management of leucorrhoea and 73 of school-age girls (44.2%) have bad practice.

Questions about the knowledge of leucorrhoea involve understanding, type/category, physiological and pathological causes of leucorrhoea, impact, and how to prevent leucorrhoea. The questions summarized in **Table 1**.

Table 1. Questions about the knowledge of Leucorrhea.

No	Type of question	Number and Content of question	Result		
			True	False	Not know
			%	%	%
1	Definition of Leucorrhoea	(1) Definition of leucorrhoea	92.7	6.1	1.2
		(3) Physiological feature of leucorrhoea	69.5	4.9	25.6
		(7) Pathological feature of leucorrhoea	71.3	1.8	26.8
2	Type of Leucorrhoea	(2) Categorized into physiological and pathological	53.0	7.9	39.0
3	Physiological Causes	(4) Activity	55.5	9.1	35.4
		(5) Stress	36.6	18.3	45.1
		(9) Tiredness	19.5	40.9	39.6
		(6) Pregnant women	25.6	8.5	65.9
4	Pathological Causes	(10) Infection	53.0	10.4	36.6
		(11) Impact of cervix cancer	29.3	4.3	66.5
		(12) Excessive antiseptic use	28.7	23.8	47.6
5	Leucorrhoea Myth Causes	(17) Consumes antibiotic	6.7	20.1	73.2
		(8) Transmitted through toilet seat	39.0	11.0	50.0
6	Leucorrhoea impact	(15) Pelvic Inflammatory	11.6	10.4	78.0
		(16) Cancer Cervix	32.9	4.3	62.8
		(18) Leucorrhoea is first symptom of cancer cervix	21.3	16.5	62.2
7	Prevention of Leucorrhoea	(13) Underwear pants	13.4	39.0	47.6

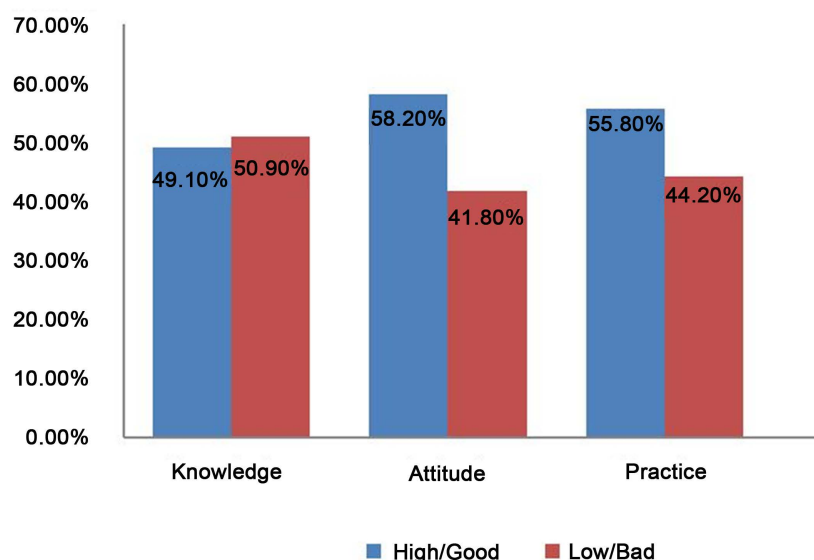


Figure 1. Level of knowledge, attitude, and practice about leucorrhoea on school-age girls in Jatinangor government school.

Generally, almost all students know the definition of leucorrhoea (92.7%). They can classify leucorrhoea into physiological and pathological category. However, students are still not aware of physiological causes of leucorrhoea, such as leucorrhoea caused by stress, tiredness, and leucorrhoea in pregnant women. Most of the students know that infection is the most common pathological causes of leucorrhoea. Other causes such as excessive use of antiseptics, antibiotics, and tumor on the cervix are still unfamiliar for them. In majority, most of the students still not knowing that the use of the toilet seat will not transmit leucorrhoea.

Questions about attitude regarding the prevention and management of leucorrhoea categorized as positive and negative attitudes. The questions summarized in **Table 2**.

Most of school-age girls have a good attitude in prevent leucorrhoea. Respondents understand appropriate attitude regarding leucorrhoea prevention by avoiding tight pants, keeping the vital organ hygiene and clean, and using flow water to wash genital organ after voiding and defecation. Unfortunately, respondents assume that using anti-septic often will reduce the symptoms of leucorrhoea. In management of leucorrhoea, most of respondents have known to check and get medicine if they have leucorrhoea symptoms.

Questions about the practice of leucorrhoea include the prevention and management of leucorrhoea. The question summarized in **Table 3**.

Table 3 shows the majority of respondents had good practice in prevent leucorrhoea, for example, the respondents know they should change the underwear more than twice per day, avoid tight pants, keep the genital organ clean hygien and clean, and using flow water to wash genital organ. However, some respondents have inappropriate practice such as do not use cotton underwear and wash genital organ from the anus to the vagina.

Table 2. Questions about prevention attitude of Leucorrhea.

No	Type of question	Number and content of question	N (favorable/unfavorable)	%
1	Positive Attitude	(1) Avoiding tight pants	143	87.2
		(2) Keeping clean and hygienic genital organ	148	90.2
		(4) Using flow water wash genital organ after voiding and defecation	84	51.2
		(5) Managing pathological <i>leucorrhoea</i>	144	87.9
2	Negative Attitude	(3) Antiseptic use	42	25.7
		(6) Physiological <i>leucorrhoea</i>	113	68.9

Table 3. Questions about prevention practice of Leucorrhea.

No	Type of question	Number and content of question	N	%
Prevent <i>Leucorrhoea</i>				
1	a. Positive practice	(1) Underwear off ≥ 2 twice per day?	127	77.4
		(2) keeping clean and hygienic genital organ	127	77.5
		(4) using flow water to wash genital organ	112	68.3
		(5) Wearing cotton underwear	76	46.3
	b. Negative practice	(3) Wash genital organ from anus to vagina	68	41.4
		(6) Use tight pants	110	69.1
2	Handling of <i>Leucorrhoea</i>	(7) Managing physiological <i>leucorrhoea</i>	117	70.3

4. Discussion

The age characteristics show the age range of respondent is 15 - 17 years old with the average 16.24 years old (SD: 0.045). Age affect the maturity and strength to think and get informations. Pramesemara's study report that school-age girls in three different educational status (elementary school, junior high school, and senior high school) have a different level of knowledge about leucorrhea. Girls in senior high school have higher knowledge about leucorrhea compare with the girls in elementary school and junior high school [1]. The consequence is the older they are, they have more experiences and more mature soul.

Working parents have inadequacy to educate their childs about reproductive health basic knowledge, attitude and practices because of their limited time. Most of the respondents parents occupations are trader (62.7%) and labor (17.8%) which cause them to work fulltime and have a limit time to interact with their children. The other parents work as government worker (3.6%), housewife (3.1%), farmer (3.6%), police (1.2%), Badan Usaha Milik Negara worker (2.4%), soldier (1.2%), security (1.3%), and retiree (3.1%).

Information source accessed by the school age-girls also contribute to improve the knowledge, attitude, and practice of school-age girls about reproductive health. A good

information will give positive effect towards it. In the contrary, the wrong information might cause them to apply a wrong attitude and practice about reproductive health.

Knowledge is a sensory perception of people about specific object. In 2011, Donatila reported school-age girls in SMAN 4 Semarang were having low knowledge about leucorrhoea [7]. In the contrary, Meliza reported that 131 school-age girls (69.7%) of SMA YLPI Pekanbaru have a good knowledge about leucorrhea. They are familiar with it because they got informations from their parents and their families (52.75%) and some of them got information from electronic media and newspaper (25.23%) [6]. Nowadays, although the information about leucorrhea is abundant and easy to access, it doesn't mean all of the resources is reliable and accurate. In ideal condition, reproductive health education, especially leucorrhea, need to be conduct by parents at home and teacher at school. Unfortunately, in the reality it is rare to find such a condition. Based on the summary book of "Prosiding Kongres Kesehatan Reproduksi Nasional IX Epidemiologi", there are common condition in the society that health reproductive education is taboo to discuss between parents and their child [4]. As a result of that condition, news and electronic media became the most famous resources for many school-age girls to get information about leucorrhea. Along with it, the negative impact will be unavoidable.

The lack of knowledge about health information is affected by various factors. In 2007, Indonesian Ministry of Health said that the lack of health information among the students is caused by the passiveness of the students to seek some information about it and also caused by the low interaction between students and health workers. Additionally, knowledge of the respondent was also influenced by the age and educational status of the respondents. Another factor comes from respondents parents occupation. Mention in the paragraph above, parents occupation as a trader caused an inadequacy of parents to spare times to teach their child about the knowledge, attitude, and practice about reproductive health because they have limited time as a fulltime worker. These factor might be one of the reasons behind the lack of knowledge of the schoolage girls respondents about leucorrhea. The main information source about leucorrhea is respondents parent (52.75%), but the information given by them might be limited, therefore it is the limitation of this study. The researcher did not ask deeply about the source of information related to knowledge about leucorrhea.

Attitude is a personal respond toward a stimulus or a specific object which is involved personal opinion or emotion (happy-unhappy, agree-disagree, good-bad, etc.) Bem works on the Self Perception Theory said that people positive or negative attitude about something depends on their maturity [8]. People would act like previous attitudes is the main goal. Factors influencing attitudes are personal experiences, external effects, culture, media, educational institutions, and emotional issues. In result, it is expected that respondents would implement good attitude regarding prevention of leucorrhoea and self-managed attitude. Previous study on Meyni in SMAN 9 Manado reveals that the students already had good attitude in order to prevent the disease [9]. In contrast to Pramesemara's study, the result of KISARA clinic study in 2009 reports that

school-age girls had bad attitude [1]. Good attitude could be produced as a positive effect from their culture. The influence of important people in the students life could be affecting their attitude regarding prevention of leucorrhoea and self-managed attitude. Adolescence stage is a transitional period between immaturity of childhood and the maturity of adulthood. It is an important period for children to find their identity. In this period, students will follow their role model attitude or people whose important for them (for example, their mother).

Practice is consious or unconscious respond on a stimulus or an action that can be observed and had spesific frequency, duration, and purpose. Factor influencing practice categorized as internal and external factors. Internal factors consist of education, motivation, and perception. Meanwhile, external factors consist of information, social, culture, and environment. Good practice might be resulted from traditional habits. A mother's habit at home can influence their child health practice. In the previous study in SMA Negeri Subang, conducted by Amanda, most of the students had good practice because their mother also had a good health practice [10]. Reversely to Amanda's study, Deissy's study shows that most of school-age girls in SMA Pineleng had bad practice [11]. The example of a mother good practice regarding prevention of leucorrhea are changing underwear more than twice a day or always keep hygien and clean the genital organ. The results of this study shows that respondents had good practice in keeping the cleanliness of the genital organ and also had a good life-style to prevent leucorrhea.

Incomplete and unstructured data are the limitation of this study. This condition happens because the information drawn from the population is consider as a taboo topic for the teenager, so its a bit difficult for the researcher to get an approval easily.

5. Conclusion

The conclusion in this study is that respondents lack knowledge about leucorrhea while they already have a good attitude and do good practices regarding the prevention of leucorrhea diseases. Based on the results, health workers are recommended to educate school-age girls about leucorrhea and the detail informations about it. Teacher and parents are expected to be the one that gives information about leucorrhoea to their students and their children. Therefore, the education program about leucorrhea should be given not only to the school-age girls, but also to the teacher and parents as the main source information about leucorrhoea. Further studies to investigate effective education method in promoting knowledge, attitude, and practice of leucorrhoea are needed.

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