



## The Influence of Health Education on Female Knowledge about Vulva Hygiene

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### ARTICLE INFO

#### Article history:

Received 21 January 2023

Accepted 1 April 2023

Published 10 June 2023

#### Keyword:

Health education

Knowledge

Vulva hygiene

### ABSTRACT

**Introduction:** Girls in Junior High Schools had not received health education about vulvar hygiene, so it had an impact on reproduction health, including vaginal discharge. The results of the preliminary survey of 6 students, there had been complaints of itching, and smelling in the vulva organ and did not know how to clean it. **Purpose:** To find out the effect of health education on young women in junior high schools on the knowledge about vulval hygiene. **Methods:** The study used a quasi-experimental design and applied a one group pretest posttest design. The research was conducted from June to November 2018. The number of samples was 34 students of grades VII and VIII of Junior High School in East Tanjab Regency, Jambi, Indonesia. This study used proportional random sampling technique. **Results:** The average knowledge of students in the first measurement was 22.18 with an SD of 2,959, and the average knowledge of students in the second measurement was 29.71 with an SD of 2,612. Bivariate analysis showed that there was a significant effect between health education on knowledge of young girls about Vulva hygiene with p-value = 0.000. **Conclusion:** From the analysis mentioned above, it can be concluded that there was a significant influence between health education on female students' knowledge about vulva hygiene

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### Kata kunci:

Pendidikan kesehatan

Pengetahuan

Kebersihan vulva

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DOI: 10.30604/jika.v8i2.1804

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### ABSTRAK

**Pendahuluan:** Anak perempuan di SMP belum mendapatkan pendidikan kesehatan tentang vulva hygiene sehingga berdampak pada kesehatan reproduksi termasuk keputihan. Hasil survey pendahuluan 6 orang siswi pernah mengalami keluhan gatal, dan berbau pada organ vulva dan tidak mengetahui cara membersihkannya. **Tujuan:** Untuk mengetahui pengaruh pendidikan kesehatan pada remaja putri SMP terhadap pengetahuan tentang vulva hygiene. **Metode:** Penelitian ini menggunakan desain quasi-experimental dan menerapkan one group pretest posttest design. Penelitian dilaksanakan pada bulan Juni hingga November 2018. Jumlah sampel adalah 34 siswa kelas VII dan VIII SMP Negeri di Kabupaten Tanjab Timur, Jambi, Indonesia. Penelitian ini menggunakan teknik proporsional random sampling. **Hasil:** Rata-rata pengetahuan siswa pada pengukuran pertama sebesar 22,18 dengan SD sebesar 2.959, dan rata-rata pengetahuan siswa pada pengukuran kedua sebesar 29,71 dengan SD sebesar 2.612. Analisis bivariat menunjukkan bahwa ada pengaruh yang signifikan antara pendidikan kesehatan terhadap pengetahuan remaja putri tentang vulva hygiene dengan p-value = 0,000. **Kesimpulan:** Dari hasil analisis di atas dapat disimpulkan bahwa terdapat pengaruh yang signifikan antara pendidikan kesehatan terhadap pengetahuan siswi tentang vulva hygiene.

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## INTRODUCTION

The human reproduction organs require special care since they are easy to irritate. Therefore, having good knowledge of taking care of the organs becomes very important, especially for females of an early age. One of the symptoms in the reproductive organs is vaginal discharge (Adele Pillitteri, 2010). Leucorrhoea frequently happens to teenagers due to a lack of care and attention to the vulva area. Symptoms of vaginal irritations such as itchy and bad smell on the sexual organ indicate that it is necessary for teenagers to keep the cleanliness of the external sexual organs (Bobak, 2010). Those common problems experienced by those young teenagers are caused by poor personal hygiene, especially in the reproduction organs (Cemek et al., 2016).

One way to anticipate the high number of cases dealing with the infection of female reproductive organs is by socializing the importance of keeping the female organs clean using a special vaginal cleaner. (Morrison & Leclair, 2017) Treatments on the surrounding female reproductive organs including the vagina itself become essential to make teenagers feel comfortable and to prevent the organs from infection like unpleasant smell and itching vaginal secretion and to keep the vaginal pH normal ranging from 3.5 to 4.5. Teenagers can obtain knowledge on reproductive organs by following the education on sexual reproduction organs and learning from health practitioners (Butler et al., 2019). Reproduction health education provides benefits to overcome problems that are often experienced by young adults, namely prevention of infection or vaginal secretion, fertility, puberty embarrassing feelings, and indicated by physical, behavioural, cognitive, biological, and emotional changes (Haley et al., 2019).

Based on research conducted by Kiény (2013), young teenagers need effective and sensitive health education to overcome their reproduction problems (Kiény & Evans, 2013) and according to the SDGs, Joint commitment to improve services for all ages, gender equality, reproduction health services for adolescents, pregnant women, childbirth and postpartum mothers. World Health Organization (WHO) supports the strengthening of health systems by developed countries towards the advanced UHC and SRH (Kiény & Evans, 2013). A research carried out by EL-Menim (2019) found that there is an increase in students' knowledge of the prevention of vulvitis by (60%) and there is a significant effect of health education on increasing students' knowledge of the prevention of vulvitis. There is a statistically significant positive correlation between students' total knowledge (P-value 0.001) (El-menim et al., 2019). In general, the health problem for teenagers that occurs in Indonesia generally and in Jambi particularly is the health of the external reproduction organs especially adolescence aged from 12 to 14 years old who obtained early age menstruation and needs attention in terms of reproductive organs and to prevent the further impact of the problem.

Based on a survey conducted by a counselling teacher and 6 students, the problems that occur to students are vaginal secretion and skin irritation or itch around the vulva area. In addition, researchers also explored the students' knowledge not only about how to keep the cleanliness of genital organs but also the way how they wash their vital organs. Based on these problems, the researchers are interested in conducting the research entitled "The Effect of Health Education on Knowledge of Females about Vulva Hygiene in One Junior High School Jambi".

The background of the research informs the state of the art of the study which consists of an appropriate background, and the prior studies which show the scientific merit or novelties of the research.

## METHODS

This research adopts a quantitative study with a quasi-experimental design with a one-group pretest-posttest design. It was conducted from June to November 2018. The purpose of the research is to find out the knowledge of young females before and after health education about vulva hygiene care in one Junior High School Jambi. The population in this study were all the 7<sup>th</sup> and 8<sup>th</sup> graders of Junior High School in Jambi with a total number of 104 students. The number of samples in this research was 34 students using a proportional random sampling technique. The sample criteria are young females who are active and registered to follow the learning process and are willing to become respondents.

Before the research was conducted, there was an insertion stage and pretest the study surveyed the highest number of female students at junior high schools in Jambi. After obtaining the most student data in one of the junior high schools in Jambi. The research setting was at the swamp area. Furthermore, the researcher conducted interviews with the counseling guidance teacher and 6 students of Grade VII and Grade VIII Junior High School in Jambi who got vaginal secretion problems. The researchers made research permission from the principal. After obtaining permission, the researcher checked 110 active students. The population was 104 respondents with the sample of 34 female students. The procedure was as follows: the 34 students were collected in a room, the researchers asked the respondents to fill in the informed consent form to fulfill the research ethics, the research subjects' privacy, fairness, openness, honesty, and considering the benefits and disadvantages. A questionnaire was used to collect the data. The questionnaire was tried out to find out the validity and reliability of each question. The try out was carried out at a Junior high school which was not far from the research location and the total number of try-out participants was 10 students. The results of the validity and reliability test obtained the value of  $r$  count  $0.735-0.937 > r$  table (0.632), which means that the questionnaire was valid. The alpha value was  $0.982 > r$  table (0.632) which means the questionnaire was reliable. Furthermore, the researchers conducted a pretest by giving a questionnaire to the respondents before participating in health education about vulva hygiene. The researchers gave some explanation about the procedure of filling out the questionnaire. The respondents were given 15 minutes to fill out the questionnaire which consisted of 15 questions and they were required to collect it in due time.

The purpose of the health education stage was to explore the students' knowledge about vulva hygiene so that they were able to explain the concept of vulva hygiene, its purpose, and ways of how to maintain feminine hygiene. After completing the health education, the students were allowed to ask questions. In addition, the researchers provided the opportunity for students to review the meaning of vulva hygiene as well as its purpose and ways of how to maintain feminine hygiene. Then, there was a ten-minute-recess. At the posttest stage, the researchers gave back the questionnaire to the respondent and fill it out for 15 minutes. To assess the respondents' knowledge after being

given health education about vulva hygiene. The data analysis was displayed by using univariate and bivariate using dependent T-test. For the significance of the results of statistical calculations, a 95% confidence interval was used. If the p-value was less than 0.05 (<0.05), it means that there was a significant effect on the research results.(Notoatmodjo, 2014).

**RESULTS AND DISCUSSION**

The age characteristics of the respondents. The age of respondents who were 12 years old was 29.4%, 13 years old was 35.3%, and 14 years was 35.3%.

**Table 1. The age characteristics of respondents (=34)**

No	Age Category (Years)	n	%
1	12	10	29,4
2	13	12	35,3
3	14	12	35,3
<b>Total</b>		<b>34</b>	<b>100%</b>

The average results of the respondents' knowledge before health education was 22, 18, standard deviation of 2.959, the lowest frequency answer was 17 and the highest frequency answer was 27 with a CI value of 21.14-23.21. Meanwhile, the average respondent's knowledge after being given health education was: 29.71 standard deviation of 2.612, the lowest frequency answer was 24 and the highest frequency answer was 34 with a CI value of 28.79-30.62.

**Table 2. The distribution of respondents based on the prior and appropriate knowledge about the Vulva Hygiene education (=34)**

	Mean	SD	Minimum-Maksimum	95% CI
1. Knowledge Education Before Health	22,18	2,959	17-27	21,14-23,21
2. Knowledge Education After Health	29,71	2,612	24-34	28,79-30,62

**Table 3. The Effect of Health Education on Knowledge of Young Women Before and After Education on Vulva Hygiene (=34)**

Variabel	Mean	SD	Min-Max	P-Value	n
Before Health Education	22,18	2,959	17-27	0,001	34
After Health Education	29,71	2,612	24-34		
Selisih	7,53	0,347			

It was known that the mean difference between the first and second measurements was 7.53 with a standard deviation of 0.347. The results of statistical tests obtained a P-Value of 0.000 (P-value <0.05). Therefore, it can be concluded that there was a significant effect of health education on young adults' knowledge about vulva hygiene.

**DISCUSSION**

The average age of junior high school students is 12-14 years. Young adulthood when experiencing menstruation requires special attention and care for the internal and external reproductive organs. There needs to be an introduction to education.

Based on table 2. The mean score of the respondents' knowledge about reproduction organs namely vulva hygiene before getting health education was 22.18, while the level of knowledge after education was 29.71. Based on these results there was an increase in knowledge after being given health education about vulva hygiene. Vulva hygiene was an action to improve the cleanliness of the outer female organs (vulva) which was carried out to maintain health and prevent infection (Bobak, 2010). The appliance could be affected by mold or fleas which caused itch or discomfort when the appliance did not get good treatment. The health problem which often occurred in young adults or teenagers is vaginal secretion. Vulva treatment whose aim was to prevent cervical cancer prevention (Adele Pillitteri, 2010). According to research conducted by Madsen et al. (2008), cervical

cancer can occur from cervical neoplasia and poor genital hygiene (Madsen et al., 2008). Increasing knowledge of young adults about vulva hygiene can be done by giving health education.

Health education about vulva hygiene increased students' knowledge and it might lead to a good attitude to improve health status. The results of the study done by Psaki (2019) showed that reproduction education delivered to students had a positive effect on sexual and reproductive health in several circumstances. The knowledge that students gained would contribute to the improvement of both individual and family health. Education leads to better health outcomes which was essential to achieve global development goals (Psaki et al., 2019).

The importance of knowledge of vulva hygiene care would, in turn, helps to promote healthy reproduction and prevents the development of bacteria in the vulva area. Based on the study (Stricker, T. 2003) evaluated the clinical features and findings of bacterial cultures in the vagina with the results of leukocytes in vaginal secretions as an indicator of the growth of pathogenic bacteria having a sensitivity of 83% and a specificity of 59% (Stricker et al., 2003). WHO arranged a framework and made policies to implement reproduction health programs, and sexual health programs which were based on the core principles of autonomy, welfare, and met the protection needs of problems that support reproduction health (WHO, 2015).

Based on Table 3. The effect of health education on knowledge of young adults or teenagers before and after education on vulva hygiene. The findings indicated that there was an effect of health education on their knowledge about

vulva hygiene with a p-value of 0.000. Therefore, it could be concluded that health education had a significant improvement in one's knowledge. The benefit of health education was to increase the teenagers' knowledge so that there was a change for a better health attitude. Basically, health education is an effort to convey health messages to adolescents, or individuals to gain knowledge about better health. This knowledge was ultimately expected to influence views and attitudes. It was hoped that health education could bring about changes in terms of the target's attitude.(Neff et al., 2019). Health education was a process in which it was produced both input and output. In health education, the process led to the achievement of promotional objectives. Health education activities could be carried out using group discussions, role-playing, simulations, lectures, and speeches. Previous research stated that the students' knowledge and practices about women's vulva hygiene obtained a significant increase (Heiba & El-aty, 2020).

The importance of health education can be seen in research conducted by Herbert (2017) comparing the knowledge of students who were given the health education curriculum compared to students who were not given health education about reproductive anatomy. The results indicated that there was a significant increase in the knowledge of the intervention group. More participants correctly identified organs in the pelvic structures, vagina (21.5% vs 51.5%;  $P < 0.001$ ). The conclusion in long-term reproduction health education research provided significant results on the knowledge of young women (Hebert-Beirne et al., 2017).

Health education can be carried out using simulation methods or direct practice and virtually by presenting material according to the respondent's target (14). Based on research done by EL-Menim et al. (2019), there was a very significant difference ( $P \leq 0.001$ ) between the effect of health education on the prevention of vulvitis in students (El-menim et al., 2019).

Showed the increase in the participants' knowledge and personal hygiene practices on women's vulva hygiene (Heiba & El-aty, 2020). Reproductive health counselling by providing health services is a position to provide health services to women increasing knowledge will help those concerned to find solutions (WHO, 2015) Sexual health and reproductive health are closely related to young women. To have better awareness about reproduction health interventions, especially the vulva, we should pay more attention to the work programs which helped women improve their reproductive health (World Health Organization & Human Reproduction Programme, 2017).

Previous research stated on the impact of not doing vulvar hygiene, the most general symptoms among patients were vaginal secretion (44.4%), vulvar erythema (37.8%), and vaginal itch (24.4%). Microorganisms, isolated from vaginal swabs, were detected in 48.9% of patients. Escherichia coli was shown in the urine culture of 3 vulvovaginitis patients (6.70%) (Cemek et al., 2016). It must get earlier treatment so as not to have an impact on other reproduction health by providing health education.

According to researchers, efforts that can be made to increase teenagers' knowledge is to collaborate with local health officials to provide/distribute leaflets to young adults to increase the knowledge of females so that they avoid complaints of vaginal secretion and other diseases.

## CONCLUSIONS AND SUGGESTIONS

Health education has an important role to improve female teenagers' knowledge of vulva hygiene. By having this kind of program, it is hoped that female teenagers in a wider scope have an awareness regarding the importance of keeping the cleanness of the health of reproductive organs.

## ETHICAL CONSIDERATIONS

No funds were received to assist with the preparation of this manuscript.

- No funding was received to undertake this study.
- No funds, grants or other support received.

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