



## The Effect of Health Education Through Course Review Horay on Knowledge and Attitude of Personal Hygiene in The Prevention of Vaginal Discharge in Adolescent Girls

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Received : March 5, 2024  
Revised : March 28, 2024  
Accepted : April 15, 2024  
Published: April 22, 2024

### ABSTRACT

**Background:** The lack of personal hygiene knowledge and attitudes in the prevention of leukorrhea in adolescent girls is caused by a lack of health promotion. This study aims to identify the effect of health education using video and course review horay methods in adolescent girls' personal hygiene knowledge and attitudes in the prevention of leukorrhea. **Methods:** This research used a quasi-experimental method with a control group pre-post test design. Samples were determined using a purposive sampling technique involving 32 adolescent girls. The independent variables were health education, video and course review horay methods. The dependent variables were knowledge and attitude. The instruments used were questionnaires, SAP, videos, and course review horay. Data were analyzed using paired sample T-test and an independent sample T-test. **Results:** The paired sample T-test of knowledge showed p-values of <0.001 and 0.835 for the treatment and control groups respectively. The paired sample T-test of attitudes obtained p-values of <0.001 and 0.111 for the treatment and control groups respectively. The p-value of <0.05 indicated that the video and the course review horay methods improved personal hygiene in the prevention of leukorrhea. The results of the independent sample T-test showed p-values of <0.001. The p-value of <0.05 indicated that there were differences in the mean level of personal hygiene in the prevention of leukorrhea between the treatment and control groups. **Conclusion:** Health workers, especially community nurses can use the video and course review horay methods in providing health education for the prevention of leukorrhea in adolescent girls post.

Keyword: Attitude, course review horay, health education, knowledge, leukorrhea, personal hygiene, video

## INTRODUCTION

Adolescence is a transition period from childhood to adulthood. During this period many changes occur such as hormonal, physical, psychological and social. Problems with reproductive organs are still commonly found in adolescents due to lack of information about reproductive health education (Rakhmilla et al., 2016). Personal hygiene is a self-care activity carried out independently to maintain physical and psychological health. Physical and psychological fatigue conditions such as stress can affect the increase in estrogen hormones which can trigger vaginal discharge. Increased energy expenditure suppresses the secretion of the hormone estrogen which causes a decrease in glycogen levels used by *Lactobacillus* *doderlein* for metabolism, the rest of this metabolism is lactic acid which is used to maintain vaginal acidity, if little lactic acid is produced, then bacteria, fungi and parasites easily develop (Marhaeni, 2016). Overcoming the prevention of vaginal discharge by cleaning vaginal hygiene, regularly changing underwear, avoiding antiseptic liquids for the vagina, not using tight underwear and regularly seeing a doctor. Based on the results of a preliminary study conducted on December 15, 2023 to 11 adolescent girls living in Yosowilangun Manyar Gresik Village by interview, all 11 adolescent girls interviewed experienced vaginal discharge. From the results of interviews adolescents lack knowledge of behavior and attitudes about personal hygiene 9 out of 11 adolescent girls, the results of interviews with the village secretary are known that adolescents lack knowledge of behavior and attitudes about personal hygiene supported by the lack of health promotion in Yosowilangun Manyar Gresik Village and have never done learning with video methods and course review horay in Yosowilangun Manyar Gresik Village.

Indonesia is a tropical area so that the body becomes more easily moist and sweaty. As a result, bacteria easily develop and cause odor in folded areas such as the armpits and folds of genital organs in women (Dwiwardini et al., 2020). In Indonesia, the percentage of women

who have experienced vaginal discharge is around 75% of the 118 million women who experience vaginal discharge at least once, while women in Europe who experience vaginal discharge are only 25%. This is due to Indonesia's humid climate and Europe's dry climate so that it is not easily infected with fungi that cause vaginal discharge. In East Java, adolescents who experience vaginal discharge are 75% (Sulistiyowati; Amalia, 2016). According to the World Health Organization (WHO), 5% of adolescents in the world contract STDs with symptoms of vaginal discharge every year and 75% of women worldwide experience candidiasis or vaginal discharge once in their lifetime and 45% will experience two or more times (Nikmah & Widiasih, 2018). In Indonesia 52% of adolescents who have bad behavior in preventing vaginal discharge, 10% who often use excessive feminine cleaning products, 17.59% of adolescents do not dry the external genitalia after defecation or urination, 25.76% of adolescents often use tight underwear, 8.2% of adolescents wear pants that are not made of cotton and 2.5% often wear shared underwear.

A person who has good personal hygiene knowledge and attitudes will have the right behavior, meaning that this behavior will be able to maintain the quality or condition of personal hygiene, if personal hygiene of the vaginal area is not correct, it can cause susceptibility to bacterial, viral and fungal infections, therefore it can maintain the cleanliness of the vaginal area from the direction of the vagina to the anus, avoid tight underwear, do not use excessive antiseptic liquids, use clean running water and clean toiletries (Nikmah & Widiasih, 2018). If vaginal discharge is not handled properly, one of the very dangerous impacts is that it will cause cervical cancer. The number of new patients with cervical cancer according to the number of new patients with cervical cancer in East Java in 2012 amounted to 2,940 and increased in 2013 by 3,917 people. Meanwhile, according to (Gresik, 2019) Gresik Region has a positive IVA of 11.60% of CBE clinical examinations in 2019.

The existence of a personal hygiene relationship with the incidence of vaginal discharge is supported by research by (Komala et al., 2020) that there is a personal hygiene relationship with the incidence of flour albus in adolescent girls in class X & XI at SMAN 1 Lembar West Lombok NTB obtained a value of  $0.000 < \alpha = 0.05$ . Methods with cooperative learning models such as course review horay are testing adolescents' understanding in answering questions and understanding concepts well with group discussions. The application of course review horay can improve learning outcomes supported by research conducted by Siti, E., Isnaini, & Utami (2018) that the course review horay method can improve learning achievement and confidence of children taught using course review horay better than students taught using conventional learning. The effect of course review horay can also increase knowledge about health education supported by research conducted by (Aids et al., 2016) that course review horay can increase adolescents' knowledge and attitudes about HIV/AIDS. Many media can be used in the health education process, one example is audio-visual media which is media that presents information or messages in an audio-visual manner. Audio visuals make a major contribution in changing people's behavior in the aspects of information and persuasion. This can be achieved because the five senses that channel the most knowledge to the brain are the eyes  $\leq 75\% - 87\%$ , while  $13\% - 25\%$  of knowledge is obtained or channeled through other senses. The effect of increasing after being given knowledge through audio visual is supported by research (Susanti, 2019) there is a significant difference between knowledge before and after being given health about personal hygiene during menstruation with audio visual media at MTS Al-Manar Semarang Regency  $p\text{-value } 0.000 < \alpha = 0.05$ .

Health education can improve knowledge and attitudes of personal hygiene in the prevention of vaginal discharge in adolescent girls through the course review horay learning method and videos can improve cognitive, affective, and psychomotor aspects which attract and encourage adolescents to get into the material that has been delivered. So that the atmosphere is not tense, the enthusiasm for learning increases, not bored and active because the learning atmosphere is fun. Information about personal hygiene knowledge and attitudes in preventing vaginal discharge in adolescents can be obtained from education with video viewing and the course review horay method, these interventions are expected to increase adolescents' knowledge and personal hygiene attitudes in preventing vaginal discharge.

## **METHODS**

This type of research is quantitative research using a quasy-experimental research design with a control group pre-post design. The population of this study were all adolescent girls aged 16-18 years in Yosowilangun Manyar Gresik Village, totaling 35 adolescent girls. The sample was taken with purposive sampling technique and obtained as many as 32 young women. The sample was divided into 2 groups, namely the treatment group of 16 adolescent girls and the control group of 16 adolescent girls. Pretest was conducted on both groups. Then the course review horay intervention was carried out in the treatment group, while the control group was not carried out. Furthermore, post test was conducted on both groups. The research was conducted in Yosowilangun Manyar Gresik Village in January 2024. The instruments used in this study were SAP Health Education Video Method and Course Review Horay, knowledge questionnaire and attitude questionnaire. Data analysis in this study used paired sample T tes

## RESULT

Table 1. Demographic Data of Respondents (n=16)

Characteristic	Category	Treatment Group		Control Group	
		n	%	n	%
Age	16 years old	6	37,5	8	50
	17 years old	7	43,75	5	31,25
	18 years old	3	18,75	3	18,75
	Total	16	100	16	100
Education	Elementary school	2	12,5	2	12,5
	Junior high school	3	18,75	3	18,75
	Senior high school	11	68,75	11	68,75
	Not educated	0	0	0	0
	Total	16	100	16	100
Having Vaginal Discharge	Yes	16	100	16	100
	No	0	100	0	100
	Total	16	100	16	100
Information of Personal Hygiene	Yes	16	100	16	100
	No	0	100	0	100
	Total	16	100	16	100
Information Resources	Friend	3	18,75	2	12,5
	Health services	0	0	3	18,75
	Parents	4	25	7	43,75
	Internet	9	56,25	4	25
	Have no information	0	0	0	0
	Total	16	100	16	100

Table 1 shows that in the age category, the highest category in the treatment group was 17 years old, namely 7 (43.75%) respondents, some were 16 years old and 18 years old, while the highest category in the control group was 16 years old, namely 8 (50%), some were 17 years old and 18 years old. In the education category that the treatment group and control group are the same, namely most of them have a high school education as many as 11 adolescent girls (68.75%) and a small percentage of elementary school education as many as 2 adolescent girls (12.5%). In the category of adolescents experiencing vaginal discharge, it can be seen that all respondents in both the treatment group and the control group experienced vaginal discharge as many as 32 adolescent girls. Then in the personal hygiene category, it was found that all respondents in both the treatment group and the control group knew personal hygiene information as many as 32 adolescent girls. In the treatment group category, most of them got personal hygiene

information from the internet / social networks as many as 9 adolescent girls (56.25%) and a small part of the source of information came from friends / neighbors as many as 3 adolescent girls (18.75%), in the control group most of the sources of information came from parents as many as 7 adolescent girls (43.75%) and a small part came from friends / neighbors as many as 2 (12.5%).

Table 2 Effect of knowledge about personal hygiene in the prevention of vaginal discharge after being given health education

Category	Treatment		Control	
	Pre-Test	Post-Test	Pre-Test	Post-Test
Min	10	13	10	10
Max	14	19	14	15
Mean	11,88	16,63	11,69	11,69
St.Deviation	1,204	1,852	1,352	1,408
Analysis Data (paired sample T test)	P=<,001		P=0,835	
Independent sample T test	P=<,001			

Based on table 2, it explains that the minimum value of pretest knowledge in the treatment group and control group is the same, namely 10, while the posttest knowledge in the treatment group has a minimum value of 13 and in the control group is 10. The maximum value of pretest knowledge in the treatment and control groups is 14, while the maximum value of posttest knowledge in the treatment group is 19 and in the control group is 15. The mean value in the pretest knowledge of the treatment group is 11.88 and the control group is 11.63, while in the posttest knowledge of the treatment group the mean is 16.69 and the control group is 11.69. The standard deviation in the pretest of the treatment group was 1.204 and the control group was 1.352, while the posttest standard deviation in the treatment group was 1.852 and the control group was 1.408. The results of the independent T test statistical test obtained a significance value of  $p = <.001 (0.05)$  which means that there is a difference in the average post-test knowledge between the treatment group and the control group.

Table 3 Effect of attitude about personal hygiene in the prevention of vaginal discharge after being given health education

Category	Treatment		Control	
	Pre-Test	Post-Test	Pre-Test	Post-Test
Min	27	40	23	23
Max	33	48	30	31
Mean	29,94	44,19	27,81	28,19
St.Deviation	1,731	2,373	1,870	2,073
Analysis	P=<.001		P=0,111	

Data (paired sample T test)

Based on table 3, it explains that the minimum pretest value of attitude in the treatment group was 27 and the control group was 23, while the posttest attitude in the treatment group had a minimum value of 40 and in the control group was 23. The maximum pretest value of attitude in the treatment group was 33 and the control group was 30, while the maximum posttest value of attitude in the treatment group was 48 and in the control group was 31. The mean value in the pretest of the treatment group was 29.94 and the control group was 27.81, while in the posttest of the treatment group the mean

was 44.19 and the control group was 28.19. The standard deviation in the pretest of the treatment group was 1.731 and the control group was 1.870, while the posttest standard deviation in the treatment group was 2.373 and the control group was 2.073. The results of the independent T test statistical test obtained a significance value of  $p = <.001 (0.05)$  which means that there is a difference in the average post-test attitude between the treatment group and the control group.

## DISCUSSION

### The Effect of Health Education Through Course Review Horay Method on Knowledge in Adolescent Girls About Personal Hygiene in the Prevention of Vaginal Discharge

Based on table 2, it can be explained that personal hygiene knowledge in the prevention of vaginal discharge in the treatment group after being given health education with the video method and course review horay obtained an average value of 16.69 with a standard deviation of 1.852, this value increased significantly from before being given health education with an average value of 11.88, while in the control group obtained an average value of 11.69 with a standard deviation of 1.408, this value increased insignificantly from before with an average value of 11.63 because only health education was given with video.

The results of the paired sample T test statistical test in the treatment group obtained a value of  $p = <0.001 (p <0.05)$  so that there were significant changes before and after the video method and course review horay on knowledge about personal hygiene in preventing vaginal discharge in adolescent girls. The results of the paired sample T test statistical test in the control group obtained a value of  $p = 0.835 (p => 0.05)$  so that there was no significant change before and after being given a health education intervention without the course review horay method on knowledge about personal hygiene in preventing vaginal discharge in adolescent girls.



The results of the independent sample T test statistical test for the two groups obtained a value of  $p = <0.001$  ( $p = <0.05$ ) so that there was a significant difference in knowledge between the treatment group and the control group. According to the researcher's assumption, health education can increase personal hygiene knowledge in preventing vaginal discharge in adolescent girls through the course review horay and video learning methods because it can improve cognitive, affective, and psychomotor aspects which attract and encourage adolescents to enter into the material that has been delivered. According to (Susanti, 2019) an important step in health education is to make information tailored to the target including media selection, intensity and duration of information delivery. The delivery of information is influenced by the methods and media used in delivering information so that it can have a significant effect on knowledge. According to (Aids et al., 2016) that the application of health education methods with a form of cooperative learning model course review horay at the same time plus a fun and active learning atmosphere. Therefore, while playing with the shouting of the word horay for groups that answer correctly or have a high score can increase student motivation to learn the material and foster learning motivation and memory will last longer on the material that has been delivered. Holding repetition, the memory power that exists in humans such as observing, responding, remembering, thinking and so on will develop to be more perfect. This research is in line with research conducted by (Siti, E., Isnaini, & Utami, 2018) showing the results of statistical tests with a value of  $p = 0.000$  ( $p = <0.05$ ) with the conclusion that there is a significant effect before and after being given health education with the course review horay method on knowledge about adolescent HIV/AIDS at SMK Darus Sholihin Puger Jember Regency.

### **The Effect of Health Education Through Course Review Horay Method on Attitudes in Adolescent Girls About Personal Hygiene in the Prevention of Vaginal Discharge**

Based on table 3, it can be explained that the attitude of personal hygiene in the prevention of vaginal discharge in the treatment group after being given health education with the video method and course review horay obtained an average value of 44.19 with a standard deviation of 2.373, this value increased significantly from before being given health education with an average value of 29.94, while in the control group the average value was 28.19 with a standard deviation of 2.073, this value increased insignificantly from before with an average value of 27.81 because only health education was given with video.

The results of the paired sample T test statistical test in the treatment group obtained a value of  $p = <0.001$  ( $p <0.05$ ) so that there were significant changes before and after the video method and course review horay on attitudes about personal hygiene in preventing vaginal discharge in adolescent girls. The results of the paired sample T test statistical test in the control group obtained a value of  $p = 0.111$  ( $p => 0.05$ ) so that there was no significant change before and after being given a health education intervention without the course review horay method on attitudes about personal hygiene in preventing vaginal discharge in adolescent girls.

The results of the independent sample T test statistical test for the two groups obtained a value of  $p = <0.001$  ( $p = <0.05$ ) so that there was a significant difference in the attitude of the treatment group and the control group. According to the researcher's assumption, the respondents had a positive attitude due to the increased knowledge of adolescents after being given the course review horay video method. According to research (Dwiwardini et al., 2020) shows that health education with the course review horay method can increase positive attitudes. According to (Mashitah, Wida, M., & Ispriantari, 2017) that health education with the course review horay method can affect a person's attitude. This is in line with research conducted by (Riya, 2020) showing a value of  $p = 0.000$  ( $p = <0.05$ ) with the conclusion that health education with the course review horay method and video media can improve

knowledge, attitudes and personal hygiene practices in school-age children.

## CONCLUSION

Providing health education through video and course review horay methods is proven to improve the knowledge and attitude of personal hygiene of adolescent girls who experience vaginal discharge.

## ADVICE

Future researchers are expected to approach fellow respondents before the course review horay game is played so that respondents are not embarrassed when the game takes place and it is hoped that this research can be developed further, further research efforts need to be made to see the effectiveness of other cooperative learning health education methods, so as to expand nursing interventions in health promotion that can improve personal hygiene behavior.

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