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Knowledge difference between before and after gonorrhea counseling through audiovisual media on the faculty of medicine students, Tarumanagara University batch 2021

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ABSTRACT

Gonorrhea is a sexually transmitted infection caused by gram-negative cocci bacteria, namely Neisseria gonorrhea. It is the second common cause of bacterial sexually transmitted infections in the world. This infection can affect both men and women, especially in adolescents and young adults. However, the clinical symptoms caused by gonorrhea in men and women are different. In women, gonorrhea often occurs without symptoms. A good level of knowledge can help to reduce the risk of gonorrhea case, one way to help increase knowledge is to conduct counseling. The purpose of this study is to evaluate whether counseling using audiovisual media can improve knowledge about gonorrhea in the students of the Faculty of Medicine, University of Tarumanagara. This study is quasi experimental one group pre-test and post-test design with quantitative data measurement methods. Sampling was done by the simple random sampling technique in collecting samples. The study was conducted in December 2021 - May 2022 on 103 respondents. Data collection used questionnaires and analyzed using Wilcoxon test. The results revealed that 1 respondent (1%) had a good knowledge level, 37 respondents (35,9%) had a sufficient knowledge level, and 65 respondents (63,1%) had a low knowledge level before counseling. Meanwhile, after counseling as many as 95 respondents (92,2%) had a good knowledge level, 8 respondents (7,8%) had a sufficient knowledge level, and no one respondent (0%) had a low knowledge level. In this study, there is a significant difference between the knowledge of gonorrhea before and after counseling using audiovisual media (p <0,0001).

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INTRODUCTION

Sexually transmitted infections (STIs), also known as sexually transmitted diseases, are diseases whose transmission involves sexual intercourse and can be appeared by clinical symptoms or no symptoms.[1] Gonorrhea is one of the STIs caused by bacteria named *Neisseria gonorrhoeae*. Its bacteria infects exposed mucosa, such as the urogenital tract, rectum, pharynx, and conjunctiva after transmission.[2] If not detected or treated properly, gonorrhea infection can cause serious complications, one of which is infertility.[3] *N. gonorrhoeae* is the second most common cause of bacterial STIs in the world.[4] In 2016, an estimated 87 million new gonococcal infections occurred between the ages of 15-49.[2] Similar with other STIs, the highest level of prevalence gonorrhea occurs in adolescents and young adults.[3] They are only 25% of the overall sexually active population but represent nearly 50% of new cases of STIs.[5]

According to the WHO, a teenager is someone between the ages of 10 and 19. Adolescents become the most vulnerable to the STIs spreading due to several things, including the biological factors of adolescents who ease the infection. The behavior of adolescents who tend to be brave in doing something, lack of knowledge about the risks and consequences of STIs and obstacles in health access are the main factors of them.[6]

The importance of increasing knowledge about STIs is a strategic steps for WHO to overcome its disease because many of them are still unaware that they have a risk of STI infection. Unfortunately, they do not have adequate knowledge about STIs, especially people in developing countries. Obtaining adequate knowledge about the symptoms and prevention of STIs is essential to reduce the sexual transmission risk and the prevalence of STIs.[7]

Some researchers revealed that knowledge is related to STIs. According to research conducted by Saenong and Sari[8] in 2020, someone with good STIs knowledge affected the behavior toward good STIs by 22 times greater than those without its knowledge. In addition, research conducted by Suci et al.[9] knowledge has a meaningful correlation with the STIs case.

Based on research conducted by Loho et al.[10] In 2021, the adolescents in High School of Yayasan Pendidikan Kristen Diaspora Kotaraja Jayapura, health promotion had a significant effect on adolescents' knowledge about STIs. Before having health promotion results, as many as 4,4% data were obtained by the respondents who have good knowledge and 64,4% respondents have less knowledge. Meanwhile, after having the health promotion, the proportion of respondents with good knowledge increased to 37,8%. There were 44,4% of respondents had insufficient knowledge, and 17,8% of respondents had less knowledge.[10]

Therefore, to increase knowledge, a health promotion and education need to be carried out. One method of health education is counseling. Through the counseling, it is expected to improve the knowledge and understanding of the community, especially adolescents related to the gonorrhea.[11]

Based on the statements above, the researcher is interested in conducting research on the difference in knowledge before and after being given counseling about gonorrhea through audiovisual media on students of the Faculty of Medicine, Tarumanagara University Batch 2021.

RESEARCH METHOD

This study used a quasi-experimental research design OF *one* group pre-test and post-test through quantitative data measurement methods. The sample in this study was the students of the Faculty of Medicine, Tarumanagara University Batch 2021 with a total of 103 respondents selected by simple random sampling. The independent variable in this study was the counseling of gonorrhea through audiovisual media, while the dependent variable was the knowledge of medical students related to gonorrhea. The instrument used in this study was the form of video for counseling and questionnaires to measure the knowledge level of respondents. Data that had been obtained were analyzed using *Wilcoxon* test.

RESULTS AND DISCUSSION

Characteristics of Respondents

In this study, it can be seen that 103 respondents spread in the age range of 17 to 19 years, where the majority aged 18 years as many as 75 respondents (72.8%). Meanwhile, the smallest number spreading was 17 years old with 9 respondents (8,7%). In addition, as many as 24 respondents (23,3%) were men and as many as 79 respondents (76,7%) were women. (Table 1)

Table 1. Characteristics of the Research Sample

Variables	Frequency	%	Mean ± Standard Deviation	Median (min-max)
Age				
17	9	8,7%		
18	75	72,8%	18,10 ± 0,5	18 (17-19)
19	19	18,4%		
Gender				
Men	24	23,3%		
Women	79	76,7%		

Distribution of Values and Knowledge Levels before Gonorrhea Counseling

Before counseling by audiovisual media played through share screen on zoom meeting, the respondent filled the link on google forms which contain pre-test questionnaire given through the chat zoom column. The results of the values obtained ranged from 16 to 76 with the largest value distribution of 48 as many as 17 respondents (16,5%). The lowest value obtained that 16 as many as 1 respondent (1%) and the highest value is 76 as many as 1 respondent (1%). Besides, the value mean amounted to 50,25 and the median value of 48 with a standard deviation of 12,6.

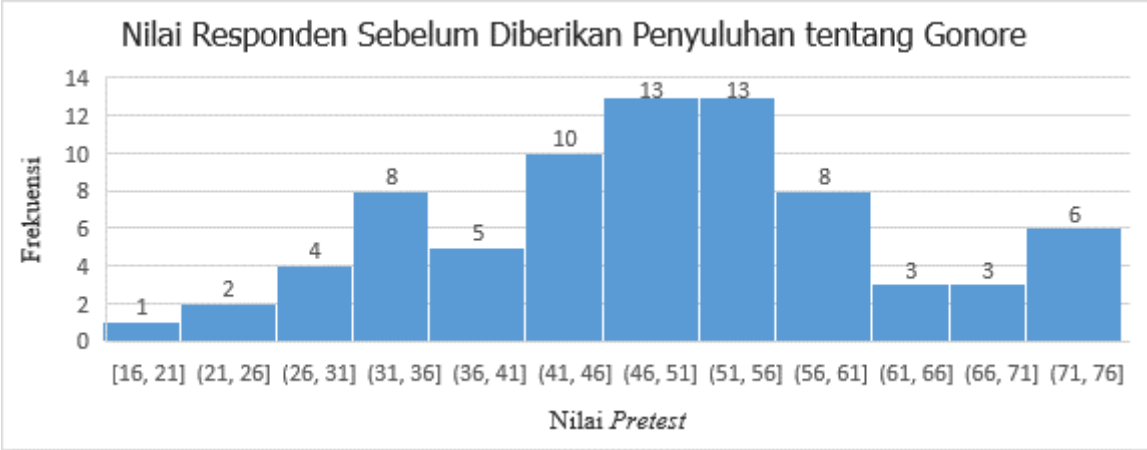

Figure 1. Diagram of the Respondent Values Distribution Before Given Gonorrhea Counseling

Table 2. The Knowledge Level of Respondents Before Given Gonorrhea Counseling

Prior Knowledge	Frequency	%
>75	1	1%
56 - 75	37	35,9%
≤55	65	63,1%

Distribution of Values and Knowledge Level after Gonorrhea Counseling

Respondents filled out the link from google Forms which contains post-test questionnaires after being given gonorrhea counseling through audiovisual media. The results were obtained that range from 64 to 100 have the largest values distribution, namely 88 as many as 29 respondents (28,2%).

The lowest value was 64 as many as 2 respondents (1,9%) and the highest value was 100 as many as 2 respondents (1.9%), and obtained the value mean amounted to 86.25 and the median value of 88.

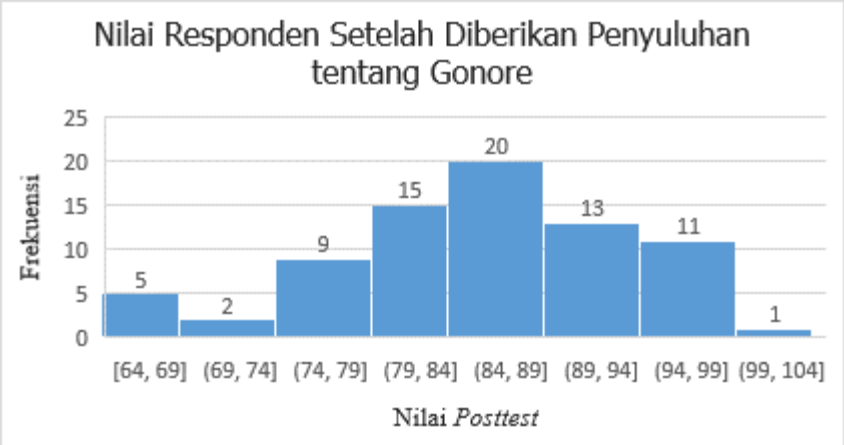

Figure 2. Diagram of Respondent Values Distribution after Gonorrhea Counseling

Table 3. Knowledge Level of Respondents after Gonorrhea Counseling

Knowledge After	Frequency	%
>75	95	92,2%
56 - 75	8	7,8%
≤55	0	0%

Knowledge Differences Before and After Gonorrhea Counseling

Bivariate analysis was performed using *Wilcoxon* test because the normality test obtained, the data were not distributed normally. There were 103 respondents with better knowledge results, and no respondents with fixed knowledge and lower knowledge. Knowledge before counseling obtained mean value amounted to 50,25 with a minimum value of 16 and a maximum of 76, while the mean value after being given counseling of 86,25 with a minimum value of 64 and a maximum of 100. Test results showed an increase in the mean value of knowledge after counseling is 36 with a standard deviation of 10,098. Bivariate analysis results with the *Wilcoxon* test obtained that *p* value amounted to <0,0001, which means there is a difference in knowledge about gonorrhea in students before and after counseling because the *p* value setting means when *p* <0,05.

Table 3. Knowledge Differences Before and After Gonorrhea Counseling

Knowledge	*Mean difference*	Standard Deviation	Minimum Value	Maximum Value	*p-value*
Before	36	10,098	16	76	<0,0001
After			64	100	

Research Findings

Based on the results obtained that there are differences in the level of knowledge about gonorrhea in students before and after counseling using audiovisual media with the value *p* meaning (*p* <0,0001). The results revealed that the average of knowledge level about gonorrhea before counseling in the category of less knowledge as many as 65 respondents (63,1%), sufficient knowledge category as many as 37 respondents (35,9%), and only 1 respondent (1%) with good knowledge. After counseling, the knowledge levels categorized as good increased to 95 respondents (92,2%), sufficient knowledge category as many as 8 respondents (7,8%), and there is no less

knowledge category. The results indicate that counseling using audiovisual media is effective in increasing respondents' knowledge about gonorrhea.

Before the counseling, the most data obtained are in the category of less knowledge as many as 65 respondents (63,1%) with an average value of 50,25. It can occur if there is still limited and less precise information obtained by respondents about gonorrhea. After counseling using audiovisual media, the data showed the most knowledge level in the category of good knowledge as many as 96 respondents (92,2%) and the average value increased to 86,25. The results of this study indicate that counseling using audiovisual media is effective to increase knowledge about gonorrhea.

Research on gonorrhea is still not widely conducted, especially about the difference in the knowledge level about gonorrhea before and after counseling through audiovisual media. This result are comparable to the research conducted by Wulandari et al.[12] in the Bachelor Nursing Student at Special Region of Yogyakarta in 2017 about the description of knowledge related to STIs with a total of 167 respondents. The results of the study were obtained that the knowledge level of students about gonorrhea without intervention is still mostly in the less knowledge category, as many as 59,88% of the total respondents. This is in accordance with the pre-test results obtained by the researcher. It might be because of the similarity in respondents who are students.[12] In the study, the respondents were not given intervention, while researcher provided intervention to the respondents and then conducted a post-test.

According to the results of research conducted by Loho et al.[10] regarding the influence of health promotion about STIs on the knowledge of adolescents in SMA YPK Diaspora Kotaraja Jayapura in 2020 with 45 respondents, there was an increase in the knowledge level of adolescents about STIs, where the level with good categories on pre-test with a total of 2 respondents (4,4%) and sufficient category as many as 14 respondents (31,1%), then increased to 17 respondents (37,8%) with good category and 20 respondents (44,4%) with sufficient category on post-test. This indicated a significant difference in the knowledge level with p-value by 0,000.[10] The results of this study is in accordance with the results that researchers conducted. It might be due to the similarity of the respondents' characteristics, namely at the age of adolescence and extension methods using audiovisual media.

These results are also in line with research conducted by Feratama and Nugraheny[13]. In 2020, the subject of adolescent research in SMA 1 Gamping Sleman Special Region of Yogyakarta on 77 respondents regarding the use of counseling with audiovisual media to improve adolescent knowledge about STIs. The results obtained that p-value by 0,000, there was a significant difference between the value of knowledge before and after the intervention. The average knowledge before the intervention was 44,13 and there was an increase after the intervention in the knowledge of respondents to 84,18.[13] In this study, it also showed a difference in the effectiveness of the media used, namely *leaflet* as a control group and video as an experimental group, while the researchers did not use the control group.

CONCLUSION

The knowledge level of gonorrhea before counseling using audiovisual media obtained 1 respondent (1%) and had a good knowledge level, 37 respondents (35,9%) had sufficient knowledge, and 65 respondents (63,1%) had less knowledge. Meanwhile, after counseling using audiovisual media, the knowledge level of gonorrhea was obtained 95 respondents (92,2%) had good knowledge, 8 respondents (7,8%) had sufficient knowledge, and 0 respondents (0%) had less knowledge. There is a significant difference between the knowledge of gonorrhea before and after counseling using audiovisual media (p <0,0001).

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