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EFFORTD TO IMPROVE KNOWLEDGE IN PREVENTION OF SEXUALLY TRANSMITTED INFECTIONS (STIs) IN ADOLESCENTS

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ABSTRACT

Sexually Transmitted Infections (STIs) remain a significant global health challenge among adolescents. Promotive and preventive efforts by providing health education are expected to reduce the spread of STIs among adolescents. Improving the knowledge of class XII students at a vocational school in Sidoarjo regarding sexually transmitted infections. he method of increasing knowledge in preventing STIs in adolescents was carried out by providing health education through PowerPoint med[illegible]d leaflets to 42 students in grade XII at a vocational school in Sidoarjo City. All participants were given pre-test and post-test questionnaires to evaluate the effectiveness of health education on knowledge.Health counseling was conducte[illegible]n January 24, 2025. The majority of participants were female students aged 16-18 years. The results of the Wilcoxon Signed Rank Test showed a significant value (p <0.001), which indicates that hea[illegible] counseling has a significant effect on increasing adolescent knowledge about STIs. Health education has proven to be effective in increasing and equalizing the level of knowledge of adolescents regarding STIs, where the educational intervention provided is able to change the understanding of participants in a better and more equitable direction.

Keywords: Sexuallay Transmitted Infections, Adolescents, Knowledge

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INTRODUCTION

Sexually Transmitted Infections (STIs) remain a significant global health challenge among adolescents. Data from the World Health Organization (WHO) shows that more than 1 million curable STIs occur each day in individuals aged 15–49 years, with the majority of cases being asymptomatic, increasing the risk of further transmission (WHO, 2024).

Based on research from the 2017 Indonesian Demographic and Health Survey (SDKI), around 6.6% of Indonesian adolescents were reported to have had premarital sex. Factors contributing to this behavior include peer influence, risky dating behavior, and access to the internet. Adolescents who are influenced by peers and have risky dating behavior are more likely to engage in premarital sex than those who are not influenced by these factors (Apriantini, 2024). Data from the East Java Health Office shows an increase in the number of STI sufferers from 1,454 cases in 2014 to 2,329 cases in 2015 (East Java Provincial Health Office, 2015). Although this data covers all age groups, adolescents are a group that is vulnerable to STIs.

A study in Jombang found that only 37.9% of adolescents correctly understood the signs and symptoms of STIs (Utami, 2018). The lack of knowledge about STIs among adolescents is also reflected in a study conducted in the United Arab Emirates, which showed that university students had low knowledge scores about STIs, with many having misconceptions about prevention and transmission methods (Alshemeili et al., 2023). Factors such as age, marital status, and educational background influence this level of knowledge. This condition is exacerbated by cultural and social norms that consider sexual topics as taboo, thus limiting open discussion and access to accurate information for adolescents (Munawaroh, 2024).

This lack of knowledge has an impact on increasing risky sexual behavior among adolescents, including unprotected sex and multiple partners (Widyaningrum and Muhlisin, 2024). Therefore, comprehensive and sustainable interventions are needed, one of which is by providing sexual health education in schools as a promotive and preventive effort to reduce the spread of STIs and improve adolescent sexual health globally. The purpose of this health education activity is to increase the knowledge of grade XII students at a vocational school in Sidoarjo regarding Sexually Transmitted Infections, so that participants can avoid behaviors that have the potential to cause Sexually Transmitted Infections.

OBJECTIVES

General Purpose

After conducting counseling on the prevention of sexually transmitted infections, it is hoped that students of vocational school in Sidoarjo can understand the dangers of sexually transmitted infections among adolescents.

Special Purpose

After conducting counseling on the prevention of sexually transmitted diseases, students are expected to be able to:

1. Provide knowledge about the causes, spread, and impacts of Sexually Transmitted Infections.
2. Increase efforts to prevent and eradicate Sexually Transmitted Infections.
3. Increase detection and rapid response to handling Sexually Transmitted Infections in adolescents.
4. Increase healthy living behavior in adolescents

PLAN OF ACTION

Strategy Plan

Strategies in preparing this health counseling include:

1. Coordinating with policy makers at SMK PGRI 1 Porong
2. Determining the implementation time contract with the targets at SMK PGRI 1 Porong
3. Carrying out counseling activities at SMK PGRI 1 Porong

Implementation

Counseling is carried out after the permit to carry out community servic issued by Research and Society Kerta Scholar Health Service Institute Sidoarjo Polytechnic with the number: 024/SPPD/D/I/2025.

Implementation in strategic planning includes:

1. Contacting the principal to ask for permission to conduct counseling on the prevention of infectious diseases in adolescents
2. Preparing a place and equipment for socialization
3. Carrying out counseling activities on the prevention of infectious diseases in adolescents

Setting

This counseling activity was carried out at a vocational school in Sidoarjo on January 24, 2025.

Target

The target of this outreach activity is class XII students at a vocational school in Sidoarjo.

RESULTS AND DISCUSSION

Result

This health education activity on the dangers of Sexually Transmitted Infections (STIs) involved 42 participants who were grade XII teenagers from a vocational school in Sidoarjo. Based on gender distribution, the majority of respondents were female, which was 33 people (79%), while male respondents were 9 people (21%). This shows higher participation from female teenagers in this education activity. In terms of age, respondents consisted of three age groups. As many as 8 respondents (20%) were 16 years old, while the largest age group was 17 and 18 years old, each with 17 people (40%). This age distribution shows that the education activity reached teenagers at the end of high school, namely the age group that is psychologically in the exploration and formation stage of self-identity, including in terms of understanding reproductive and sexual health (Table 1).

Table 1. Demographic Data of Participants in Health Education on the Dangers of STIs (n=42)

Variabel	N	%
Gender		
Male	9	21
Female	33	79
Total	**42**	**100**
Age		
16 years old	8	20

Variabel	N	%
17 years old	17	40
18 years old	17	40
Total	**42**	**100**

Based on the data in table 2, it can be seen that there was an increase in the knowledge level category after the counseling. Before the counseling (pre-test), 52% of respondents were in the good knowledge category, 31% in the sufficient category, and 17% in the poor category. After being given counseling (post-test), the percentage of respondents with good knowledge increased to 74%, while the sufficient category decreased to 26%, and there were no more respondents in the poor category (0%). This increase indicates a shift in the distribution of knowledge towards a better direction after the counseling intervention.

The results of statistical analysis using the Wilcoxon Signed Rank Test showed a significant difference between the pre-test and post-test scores ($p < 0.001$), indicating that health education had a significant effect on increasing adolescent knowledge about STIs. The mean value of the level of knowledge also increased, from 2.36 in the pre-test to 2.71 in the post-test, with a standard deviation decreasing from 0.759 to 0.457. This indicates that in addition to increasing the average score, variations in knowledge between respondents also became more homogeneous after the education was given. Thus, these results can prove that health education can significantly increase the level of adolescent knowledge about sexually transmitted infections.

Table 2. Results of Pre-test, Post-test, and Wilcoxon Signed Rank Test of STI Knowledge Level in Adolescents (n=42)

Description	Pre-test	Post-test	P value
STIs Knowledge Level			
Good	52%	74%	
Enough	31%	26%	
Not Good	17%	0%	
Wilcoxon Signed Rank Test Results			<0.001*
Min	1	1	
Max	3	2	
Mean	2.36	2.71	
Std Deviation	0.759	0.457	

Figure 1. Health Counseling Activities

Figure 2. Documentation of Health Counseling Activities

Discussion

Sexually Transmitted Infections are still a serious health problem among Indonesian adolescents, with the highest prevalence in this age group due to risky sexual behavior (Vatrisya, Febliyanti and Anggraini, 2024). From the results of counseling activities regarding the dangers of STIs, data was obtained that there were 48% of participants who did not have good knowledge about STIs which ultimately affected STI prevention behavior. After counseling, the percentage of good knowledge increased to 74%, sufficient decreased to 26%, and there were no more respondents with poor knowledge. Statistical analysis using the Wilcoxon Signed Rank Test showed a significant difference between the pre-test and post-test scores ($p < 0.001$).

This finding is in line with previous studies that confirm that health education interventions are effective in improving and equalizing adolescent knowledge about STIs. A study conducted by (Ezelote et al., 2024) showed that peer health education significantly increased students' knowledge about HIV/AIDS with an increase from 27% to 81% in the intervention group, while the control group showed no significant change. This study also showed that peer health education can equalize the level of knowledge among participants with different initial knowledge backgrounds.

The use of appropriate counseling methods can also help to equalize the level of understanding among participants. The use of presentation media such as PowerPoint in health counseling has also proven effective in increasing adolescent knowledge about STIs. According to research by (Dano-Hinosolango, 2015), the use of presentation aids such as PowerPoint can improve understanding and retention of information among students, especially when presented visually and interactively. This supports the effectiveness of counseling using PowerPoint in delivering health materials to adolescents.

The higher participation of adolescent girls (79%) compared to boys (21%) in this outreach activity reflects the tendency that adolescent girls are more responsive to sexual health education programs. This is consistent with CDC findings that quality sexual health education helps students develop the skills and knowledge to avoid or reduce sexual behaviors that increase the risk of STIs, HIV, and pregnancy (CDC, 2024).

The age distribution of respondents who were mostly 17 and 18 years old (40% each) shows that this counseling reaches adolescents at the end of high school, namely the age group who are psychologically in the exploration and formation stage of self-identity, including in terms of understanding reproductive and sexual health. According to the CDC, quality sexual health education helps students develop the skills and knowledge to avoid or reduce sexual behaviors that increase the risk of STIs, HIV, and pregnancy (CDC, 2024).

The significant increase in knowledge after counseling also shows that the counseling method used is effective in delivering relevant and easily understood information to adolescents. The decrease in the standard deviation of the knowledge score from 0.759 to 0.457 shows that the variation in knowledge between respondents became more homogeneous after counseling, indicating that the counseling succeeded in equalizing the level of understanding among participants.

Overall, the results of this study confirm the importance of health education as an effective strategy in improving and

equalizing adolescent knowledge about STIs. The implementation of structured and sustainable education programs in the school environment can be a significant preventive step in reducing the prevalence of STIs among adolescents. Therefore, it is recommended that schools and related agencies continue to support and develop comprehensive sexual health education programs that are appropriate to the needs of adolescents.

CONCLUSION

Health education has proven effective in improving and equalizing adolescents' knowledge levels regarding sexually transmitted infections. The educational interventions provided were able to change participants' understanding towards a better and more even direction, indicating that the material presented was well received by adolescents. The use of presentation media such as PowerPoint also supports the effectiveness of delivering information visually and interactively.

It is recommended that sexual health education programs be implemented in a structured and sustainable manner in schools. The use of interactive educational methods, training for educators, and cross-sector support are needed to expand the reach and effectiveness of this education program in preventing STIs among adolescents.

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