



The influence of providing health education on adolescent knowledge about HIV/AIDS in the Benteng Karang Health Center work area

Bertha Ruth Helwend^{a,b} | Harianti Fajar^b ✉

^aBenteng Karang Health Center, Ambon, Indonesia.

^bDepartment of Nursing, High School Of Health Science Pasapua, Ambon, Indonesia.

Abstract

Background: Human Immunodeficiency Virus (HIV) and Acquired Immunodeficiency Syndrome (AIDS) remain significant global health problems, especially among adolescents. The low knowledge and awareness of adolescents about HIV/AIDS contributes to the increase in infection rates. Health education plays an important role in improving adolescents' understanding of this disease. This study aims to analyze the effect of health education on increasing adolescent knowledge about HIV/AIDS in the working area of the Benteng Karang Health Center. **Methods:** This study uses a pre-experimental design with a one-group pretest-posttest approach. A total of 30 teenagers from the Tunas Gospel Message, Sunday School (SM-TPI) of the Benteng Karang Congregation were selected as respondents through a total sampling technique. Health education is provided in the form of counseling, and data is collected using pre-test and post-test questionnaires. Data analysis was carried out with the Wilcoxon test to measure changes in knowledge levels before and after the intervention. **Results:** Before counseling, 30% of adolescents had good knowledge, 40% enough, and 30% less. After counseling, the number of adolescents with good knowledge increased to 53.3%, 29.2% moderately, and 18.8% less. Statistical analysis showed an increase in the median knowledge score from 6 (IQR 5-7) to 9 (IQR 8-10) with the Wilcoxon test resulting in values of $Z = -4.57$ and $p = 0.000$ ($p < 0.05$), which showed a significant increase in knowledge level. **Conclusion:** Health education has been proven to be effective in increasing adolescents' knowledge about HIV/AIDS. These results emphasize the importance of continuous education programs to increase adolescents' awareness of HIV/AIDS prevention and control. Therefore, educational interventions through counseling methods need to be applied more widely to maximize their positive impact on society.

Keywords: HIV/AIDS, health education, adolescent knowledge, counseling, educational interventions.

1. Introduction

Human Immunodeficiency Virus (HIV) and Acquired Immunodeficiency Syndrome (AIDS) remain significant global health problems, especially among adolescents. Adolescents are a vulnerable group to HIV/AIDS due to lack of knowledge, social influence, and low awareness of risky behaviors (UNAIDS, 2021). Health education plays an important role in increasing adolescents' awareness and understanding of HIV/AIDS so that they can adopt healthier and more responsible behaviors (World Health Organization [WHO], 2022).

Based on data from the Ministry of Health of the Republic of Indonesia (2023), the prevalence of HIV/AIDS cases in adolescents has shown a significant increase in recent years. The main factors that contribute to the high infection rate among adolescents are the lack of education about HIV/AIDS, lack of access to health services, and stigma and discrimination against infected individuals (Ministry of Health of the Republic of Indonesia, 2023). Previous studies have also shown that health education provided through various methods, such as lectures, group discussions, and digital media, can increase adolescents' knowledge about HIV/AIDS and reduce risky behaviors (Setiawan et al., 2020).

Puskesmas as a primary health service facility has a strategic role in improving public health literacy, including in efforts to prevent HIV/AIDS through education to adolescent groups. In the working area of the Benteng Karang Health Center, education about HIV/AIDS needs to be improved considering that there are still teenagers who have a low understanding of how to transmit and prevent this disease. Intervention in the form of health education can be an effective step in improving their understanding (Suryani et al., 2021).

This study aims to analyze the effect of health education on increasing adolescent knowledge about HIV/AIDS in the working area of the Benteng Karang Health Center. The results of this study are expected to be the basis for designing more effective educational programs to prevent the spread of HIV/AIDS among adolescents.

2. Materials and Methods

This study uses a pre-experimental design with a one-group pretest-posttest approach, which aims to measure changes in adolescents' knowledge before and after being given health education about HIV/AIDS. This research was conducted at the Eben Haezer Church of Benteng Karang on February 3, 2025. The population in this study is all teenagers who are members of the Tunas Gospel Messaging Sunday School (SM-TPI) Benteng Karang Congregation. The total sampling technique was used in the selection of the sample, with the number of respondents as many as 30 adolescents participating in counseling activities.

The instrument used in this study is a questionnaire, which consists of questions about basic knowledge of HIV/AIDS, how to transmit, prevent, and stigma people with HIV/AIDS. This questionnaire was given in two stages, namely pre-test before counseling and post-test after counseling, to measure the level of change in participants' knowledge. The data obtained from the pre-test and post-test were then analyzed using the Wilcoxon test, to find out if there was a significant difference in the level of adolescent knowledge before and after counseling.

3. Results

3.1 Frequency Distribution of Knowledge Level about HIV/AIDS Before Counseling

Table 1 Frequency Distribution of Knowledge Level about HIV/AIDS Before Counseling

Knowledge	Frequency (f)	Presented (%)
Good	9	30
Enough	12	40
Less	9	30
Total	30	100

Based on Table 1, before counseling, adolescents' knowledge about HIV/AIDS varies. A total of 9 adolescents (30%) had good knowledge, 12 adolescents (40%) had a sufficient level of knowledge, and 9 adolescents (30%) had a low level of knowledge.

This distribution shows that before being given interventions in the form of health counseling, most adolescents still have a sufficient or insufficient level of knowledge about HIV/AIDS. This indicates the need for further education to improve their understanding of the disease, especially in the aspects of prevention and control.

3.2 Frequency Distribution of Knowledge Levels about HIV/AIDS After Counseling

Table 2 Frequency Distribution of Knowledge Levels about HIV/AIDS After Counseling

Knowledge	Frequency (f)	Presented (%)
Good	19	53,3
Enough	7	29,2
Less	4	18,8
Total	30	100

Based on Table 2, it can be seen that the majority of respondents have a good level of knowledge about HIV/AIDS, namely 19 adolescents (53.3%). Meanwhile, 7 adolescents (29.2%) had a sufficient level of knowledge, and 4 adolescents (18.8%) had a low level of knowledge.

This distribution shows that most adolescents have a good understanding of HIV/AIDS after being given health education. However, there are still a small number of adolescents who have a low level of knowledge, so further educational efforts are needed to increase their awareness and understanding of HIV/AIDS.

3.3 Comparison of Adolescent Knowledge about HIV/AIDS before and after Counseling

Table 3 Comparison of Adolescent Knowledge about HIV/AIDS before and after Counseling

Variable	N	Median (IQR) Pre-test	Median (IQR) Post-test	Z Score	p-value
Knowledge about HIV/AIDS	30	6 (5-7)	9 (8-10)	-4.57	0.000*

*Wilcoxon test

Based on Table 3, there was an increase in the median adolescent knowledge score about HIV/AIDS before and after counseling. Before counseling, the median adolescent knowledge score was 6 (IQR 5-7), while after counseling it increased to 9 (IQR 8-10). The results of statistical analysis using the Wilcoxon test showed a value of $Z = -4.57$ with $p\text{-value} = 0.000$ ($p < 0.05$), which means that the increase in knowledge is significant.

These results show that the provision of health education about HIV/AIDS is effective in increasing adolescents' understanding of this disease, including aspects of transmission, prevention, and stigma against people with HIV/AIDS. Thus, interventions in the form of counseling can be used as an educational strategy that is useful in increasing adolescents' awareness and understanding of HIV/AIDS.

4. Discussion

The results of this study show that before counseling, the level of adolescent knowledge about HIV/AIDS still varies, with most adolescents in the category of adequate and inadequate. This is in line with previous research that shows that lack of access to health information, especially among adolescents, can affect their level of understanding of infectious diseases such as HIV/AIDS (Putri et al., 2021). Lack of knowledge about HIV/AIDS can have an impact on low awareness of the importance of preventing and reducing stigma against people with HIV/AIDS (Rahman & Sari, 2020).

After being given counseling, the results of the study showed a significant increase in the level of adolescent knowledge. The majority of respondents had better knowledge about HIV/AIDS after receiving health education. This shows that health counseling methods, especially those that use audiovisual media and interactive approaches, can increase adolescents' understanding of a health issue (Saputra et al., 2022). These findings are also supported by research that states that lecture-based health education with the help of visual media is more effective in improving adolescent understanding than conventional methods (Lestari et al., 2019).

In addition, statistical analysis using the Wilcoxon test showed a significant increase in the median adolescent knowledge score about HIV/AIDS after counseling ($p < 0.05$). These results reinforce the findings from previous studies that show that the provision of educational interventions has a significant impact on improving understanding of HIV/AIDS in adolescent age groups (Kusuma & Widodo, 2021). Structured and repeated health education is very important to strengthen understanding and form a positive attitude in HIV/AIDS prevention efforts (Yuliana et al., 2020).

Thus, it can be concluded that health education about HIV/AIDS plays an important role in increasing adolescent knowledge and can be an effective strategy in efforts to prevent and reduce stigma against people with HIV/AIDS. Therefore, similar health education programs need to be carried out on an ongoing basis to ensure increased public awareness and understanding, especially among adolescents.

5. Conclusions

The results of this study show that before counseling, the level of adolescent knowledge about HIV/AIDS still varies, with most of them in the category of sufficient and insufficient. However, after being given counseling, there was a significant increase in their level of understanding, as shown by the median increase in knowledge scores and significant statistical test results ($p < 0.05$).

These findings indicate that health counseling is an effective method in increasing adolescents' awareness and understanding of HIV/AIDS, including aspects of transmission, prevention, and stigma reduction for sufferers. Therefore, educational interventions like these need to be implemented on an ongoing basis to ensure increased awareness and broader understanding among adolescents.

In addition, more innovative and sustainable education strategies, such as the use of interactive media or school-based programs, are needed to ensure that information about HIV/AIDS can be conveyed more effectively and have a long-term impact.

Conflict of Interest

There is no conflict of interest

References

- Kementerian Kesehatan Republik Indonesia. (2023). *Laporan Situasi HIV/AIDS di Indonesia Tahun 2023*. Jakarta: Kemenkes RI.
- Kusuma, A. & Widodo, R. (2021). Efektivitas Pendidikan Kesehatan dalam Meningkatkan Pengetahuan Remaja tentang HIV/AIDS. *Jurnal Kesehatan Masyarakat*, 10(2), 112-120.
- Lestari, D., et al. (2019). Pengaruh Media Audiovisual terhadap Peningkatan Pengetahuan Kesehatan Remaja. *Jurnal Pendidikan Kesehatan*, 8(1), 45-53.
- Putri, A. P., et al. (2021). Faktor yang Mempengaruhi Tingkat Pengetahuan Remaja tentang HIV/AIDS. *Jurnal Ilmu Kesehatan Masyarakat*, 9(3), 221-230.
- Rahman, H. & Sari, N. (2020). Hubungan Pengetahuan dengan Sikap terhadap Stigma ODHA pada Remaja. *Jurnal Kesehatan*

- Remaja*, 7(2), 78-85.
- Saputra, M. F., et al. (2022). Peran Penyuluhan Kesehatan dalam Meningkatkan Pemahaman tentang HIV/AIDS pada Remaja. *Jurnal Kedokteran dan Kesehatan*, 15(1), 89-97.
- Setiawan, R., Nugroho, P., & Lestari, W. (2020). "Efektivitas Pendidikan Kesehatan terhadap Pengetahuan dan Sikap Remaja tentang HIV/AIDS." *Jurnal Kesehatan Masyarakat Indonesia*, 15(2), 112-119.
- Suryani, N., Wijayanti, L., & Ramadhani, R. (2021). "Dampak Pendidikan Kesehatan terhadap Perubahan Pengetahuan dan Perilaku Remaja dalam Pencegahan HIV/AIDS." *Jurnal Pendidikan Kesehatan*, 9(1), 45-53.
- UNAIDS. (2021). *Global HIV & AIDS Statistics — Fact Sheet 2021*. Geneva: UNAIDS.
- World Health Organization. (2022). *HIV/AIDS: Prevention and Education Strategies for Youth*. Geneva: WHO.
- Yuliana, S., et al. (2020). Strategi Edukasi HIV/AIDS bagi Remaja melalui Program Intervensi Berbasis Sekolah. *Jurnal Kesehatan Publik*, 12(2), 134-142.