

School-Based Interventions to Enhance HIV/AIDS Knowledge and Reduce Stigma Among Adolescents

Dina Ferdiani^{a)}, Meti Kusmiati^{b)}, Meri^{c)}

Teknologi Laboratorium Medik, Fakultas Ilmu Kesehatan, Universitas Bakti Tunas Husada Tasikmalaya

^{a)} Corresponding author: dinaferdiani@universitas-bth.ac.id

^{b)} metikusmiati@universitas-bth.ac.id

^{c)} meri@universitas-bth.ac.id

ABSTRACT

HIV/AIDS continues to pose a serious public health threat, especially among adolescents who face heightened vulnerability due to limited knowledge, pervasive stigma, and inadequate sexual health education. In Indonesia, individuals aged 15–24 represent a substantial portion of new HIV infections. Factors such as misinformation, cultural taboos, and lack of open discussion contribute to low awareness and riskier behaviors in this age group. To address these challenges, an educational intervention was conducted involving secondary school students. The session featured an engaging video, a presentation by a health educator, and post-intervention questionnaire to assess changes in students' knowledge and attitudes toward HIV/AIDS. The approach aimed to encourage dialogue, correct misconceptions, and reduce stigma through interactive learning. The intervention proved effective in fostering awareness and openness. After the session, 83% of students acknowledged the importance of HIV/AIDS education, and 63% indicated a willingness to undergo testing—reflecting reduced stigma. Additionally, 87% expressed interest in participating in future sessions. However, only 33% cited schools as their primary source of information, while 47% relied on social media, and just 20% received information from family or peers. These findings highlight the need to strengthen school-based programs and improve media literacy. Empowering adolescents as peer educators can promote sustained behavioral change and help build a more informed and empathetic generation.

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INTRODUCTION

Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS) remain critical public health issues globally, with significant implications for adolescent health. As reported by the World Health Organization (2021), approximately 1.7 million adolescents worldwide are living with HIV, and many are unaware of their status. This lack of awareness is exacerbated by limited access to information and persistent stigma surrounding HIV/AIDS. In Indonesia, the trend of increasing HIV cases among youth is especially concerning. According to the Ministry of Health of the Republic of Indonesia (2022), a significant portion of new HIV infections occurs among individuals aged 15 to 24. This group often lacks adequate knowledge about the disease and its prevention, leading to risky behaviors that increase their vulnerability to infection.

Adolescence is a developmental phase characterized by exploration and identity formation. This period often involves experimentation with behaviors, including sexual activity and substance use, which may place adolescents at heightened risk for HIV (National Institute of Health, 2020). Thus, comprehensive and age-appropriate education is vital to equip adolescents with the knowledge and skills necessary to make informed decisions. Schools play a strategic role in health promotion due to their structured environment and access to a large number of young people. School-based interventions offer a platform to deliver consistent, factual, and age-appropriate information on HIV/AIDS (Ferris & Stein, 2019). These programs also help to normalize discussions about sexual health and reduce misinformation.

Beyond providing knowledge, school-based interventions have the potential to challenge and transform societal attitudes. One of the major barriers to effective HIV prevention and treatment is stigma and discrimination toward people living with HIV/AIDS (PLWHA). Peltzer and Pengpid (2018) emphasize that stigma not only hinders testing and treatment but also perpetuates silence and fear, especially among adolescents. Reducing stigma is essential for encouraging open dialogue and fostering supportive environments. When young people feel safe and supported, they are more likely to seek information, undergo testing, and adopt preventive behaviors. Programs that address both cognitive and affective aspects of HIV education are more effective in achieving these outcomes (Fauziyah & Handayani, 2023).

Digital technology and media also play a growing role in adolescent health education. However, reliance on social media as a primary information source can be problematic due to the potential spread of misinformation (Prasetyo, 2022). This underscores the importance of integrating formal education on HIV/AIDS within the school curriculum to ensure that accurate and comprehensive information is disseminated. These findings indicate a critical need for structured educational interventions tailored to the local context and cultural sensitivities. Community engagement through educational programs provides an effective response to these challenges. Such programs can be designed to include interactive elements—such as discussions, multimedia presentations, and quizzes—that enhance engagement and retention of knowledge (Rosdiana et al., 2023). This study presents a school-based intervention designed to enhance HIV/AIDS knowledge and reduce stigma among high school students. The intervention combined educational materials with participatory learning approaches to promote understanding and foster inclusive attitudes.

By involving students directly in the learning process, the program encouraged critical thinking and personal reflection. It also emphasized the role of adolescents as agents of change within their communities, empowering them to share knowledge and advocate for healthier practices among their peers (Nurmila et al., 2023). The overarching goal of this initiative was not only to improve awareness but also to contribute to long-term behavioral change and social transformation. As educational institutions and public health advocates continue to address HIV prevention, school-based interventions remain a

cornerstone in the effort to build a well-informed and compassionate generation. Therefore, this study aimed to evaluate the effectiveness of a school-based educational intervention in increasing HIV/AIDS knowledge, reducing stigma, and promoting openness to testing among high school students.

PROBLEM AND SOLUTION

The implementation of school-based HIV/AIDS education presents both opportunities and challenges. A key issue is the limited baseline knowledge among adolescents, many of whom harbor misconceptions about HIV transmission and prevention. These misunderstandings are often rooted in societal myths and a lack of accurate information. Furthermore, persistent stigma and discrimination against people living with HIV/AIDS (PLWHA) remain deeply ingrained in many communities, creating fear and silence that inhibit open discussions. Some educators and schools may also be reluctant to address HIV-related topics due to cultural taboos or a lack of training in delivering sensitive content. In addition, the growing influence of unregulated digital media can lead students to absorb misinformation, which undermines formal education efforts. Parental resistance, driven by fears that such education promotes risky behavior, adds another layer of complexity, potentially limiting the reach and effectiveness of these interventions.

To address these challenges, a multi-faceted approach is essential. Integrating comprehensive, age-appropriate HIV education into school curricula ensures that students receive consistent and reliable information. Interactive teaching strategies—such as videos, discussions, and role-playing—can enhance student engagement and retention. Educators and school staff should be equipped with adequate training to deliver this material with confidence and cultural sensitivity. Collaborating with healthcare professionals and NGOs can enrich the program by adding expert insights and personal testimonies that humanize the issue and reduce stigma. Parental involvement should be fostered through outreach and informational materials that clarify the purpose and benefits of HIV education. Finally, leveraging trusted digital platforms and promoting media literacy among students can counter misinformation and reinforce key messages. These strategies collectively support the broader goal of strengthening HIV/AIDS knowledge while fostering a more inclusive and stigma-free environment in schools and beyond.

METHOD

The implementation of the community service was carried out using an interactive educational approach. The activity began with a preliminary survey and coordination with the school principal to obtain approval and ensure the school's readiness. This was followed by planning and logistical preparation, including the procurement of educational materials and permissions. The main intervention consisted of an on-site educational session, which included an opening ceremony, a short educational video on HIV/AIDS, and a presentation by a health educator. Students then participated in a questionnaire to assess their knowledge and awareness after the session. To increase engagement, door prizes were distributed at the end of the session. The final phase involved evaluation through data analysis of the questionnaire responses to assess the impact of the intervention. This structured method ensured that the program was both informative and engaging, aiming to increase students' understanding and reduce stigma associated with HIV/AIDS.

RESULT AND DISCUSSION



FIGURE 1. Student participation in HIV/AIDS education sessions and questionnaire completion

The educational intervention conducted among 50 high school students yielded encouraging results, highlighting both the effectiveness of the approach and areas that require further development. One of the key findings was that 83% of students acknowledged the importance of HIV/AIDS education in schools. This indicates a strong level of awareness and receptiveness, suggesting that school-based interventions are an effective medium for delivering sensitive health information. Students appeared to value the content and recognized the role of education in preventing HIV transmission and reducing stigma.

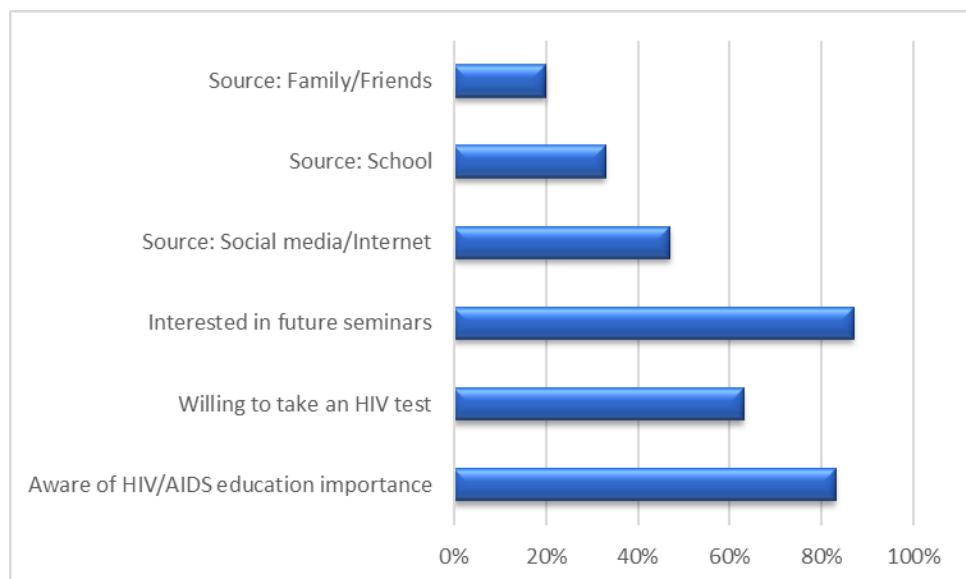


FIGURE 2. Post-activity student responses on HIV/AIDS education

A total of 63% of students reported a willingness to undergo HIV testing if necessary. This figure suggests a promising level of openness among participants, indicating reduced psychological barriers such as fear and stigma. In contrast, 37% of students remained hesitant toward testing, highlighting a need for further education and emotional support. Additionally, 87% of participants expressed interest in attending similar seminars in the future. This high level of engagement suggests that the intervention was perceived as relevant, accessible, and informative. When asked about sources of HIV/AIDS information, 47% of students indicated that they relied primarily on the internet and social media. Only 33% cited school as their main information source, while a mere 20% reported receiving information from family or peers.

These findings suggest that the educational intervention had a meaningful impact on students' awareness and intentions regarding HIV prevention. The fact that nearly two-thirds of participants were

open to HIV testing reflects not only improved knowledge but also a reduction in stigma—a critical step toward normalizing preventive behaviors in youth populations. However, the 37% who remained unwilling to test indicates the persistence of psychological or cultural barriers, possibly linked to concerns about confidentiality, judgment, or misinformation.

The high interest (87%) in future sessions indicates the effectiveness of the intervention's design and delivery. It is evident that adolescents value interactive, youth-friendly formats that engage them directly in health education. This presents a valuable opportunity to scale the program and build a sustainable series of sessions that explore various dimensions of HIV prevention and sexual health. Regarding information sources, the predominance of internet and social media (47%) underscores both an opportunity and a concern. While this reflects digital accessibility, it also raises the risk of exposure to inaccurate or harmful content. These findings support the urgent need for schools and public health institutions to integrate digital health literacy into educational curricula and guide adolescents toward credible, evidence-based resources.

The fact that only 33% of students identified schools as their primary source of HIV information suggests that educational institutions are currently underutilized in this domain. Integrating HIV-related content into formal curricula, supported by educator training, could significantly enhance schools' role as trusted health information channels. Even more concerning is the minimal role of families and peers (only 20%), which reflects ongoing cultural discomfort in discussing sexual and reproductive health. This gap calls for community-based interventions that empower parents and caregivers to engage in open, age-appropriate dialogue with their children.

While the intervention demonstrated promising outcomes in terms of knowledge improvement and willingness to engage in preventive behavior, its long-term success depends on a more comprehensive strategy. This includes strengthening school-based education, promoting critical digital engagement, and fostering family involvement. A holistic and collaborative approach is essential to sustaining HIV/AIDS awareness and reducing stigma among adolescents.

CONCLUSION

The findings of this community service activity indicate that most students have a reasonably good awareness of HIV/AIDS prevention, particularly following the educational intervention conducted at school. However, there remains a portion of students who lack understanding of the importance of HIV testing as a preventive measure, highlighting the need for greater emphasis on early detection. Overall, students demonstrated a positive attitude toward HIV/AIDS education, yet some still expressed hesitation about undergoing testing, likely due to lingering stigma or insufficient knowledge about the benefits and procedures involved. In addition, students' behavior in seeking out information or engaging in discussions about HIV/AIDS remains relatively low, indicating the need for continued efforts to encourage active interaction with reliable sources of information. Given that the internet and social media are the primary sources of information for many students, future educational approach should be strengthened through the use of trusted digital platforms alongside direct outreach and health promotion activities within schools to ensure more widespread and sustainable understanding.

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