

Differences in knowledge and attitudes between adolescents about HIV/AIDS, and their implications for targeted interventions

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ABSTRACT

This study analyzed the differences in levels of knowledge and attitudes towards HIV/AIDS between adolescent boys and girls and encouraged them towards more targeted interventions. Using a quantitative approach, data was collected through a survey of 300 respondents aged 15-19 years in urban and rural areas. The results show that adolescent girls tend to have a higher level of knowledge about HIV/AIDS transmission and prevention compared to adolescent boys. However, positive attitudes towards people with HIV/AIDS are higher in adolescent boys. Factors such as access to information, parental education, and peer influence play a significant role in shaping knowledge and attitudes. Based on these findings, the intended intervention needs to consider gender differences to improve the effectiveness of HIV/AIDS prevention programs. Programs for adolescent boys can be focused on improving basic knowledge, while programs for adolescent girls require the stress of the importance of empathy and stigma reduction.

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INTRODUCTION

HIV/AIDS remains an urgent global health issue, with millions of people worldwide affected (Piot et al., 2001)(Utomo, 2024). Adolescents aged 15-19 are particularly vulnerable to this epidemic, which is an important demographic group for prevention efforts (Satriawibawa et al., 2018)(Mahardani et al., 2022). According to UNAIDS (2023), adolescents account for a significant proportion of new HIV infections each year, largely due to a lack of knowledge about transmission and prevention methods and a lack of access to health information (Handayani & Oktriyedi, 2024). Addressing these disparities is critical to reducing the prevalence of HIV/AIDS and reducing its impact on public health systems.

Gender plays an important role in shaping adolescents' knowledge and attitudes about HIV/AIDS (Nurwati & Rusyidi, 2019)(Berek & Bubu, 2019)(Yolanda et al., 2019). Adolescent girls often show greater awareness of HIV transmission pathways and preventive measures, which is

associated with their increased exposure to reproductive health education and targeted interventions (Butt et al., 2010). However, despite their higher levels of knowledge, research reveals that women are more likely to have stigmatized attitudes towards people living with HIV/AIDS (ODHA), which is driven by cultural norms and social expectations (Ismail et al., 2022). On the other hand, adolescent boys often show a more inclusive attitude towards ODHA but do not have a comprehensive understanding of HIV/AIDS prevention, which reflects gaps in educational outreach targeting this group (Lestiarini & Sulistyorini, 2020)(Imon, 2022)(Kristiani et al., 2025)(Ismail et al., 2022).

These differences highlight the need for a gender-sensitive approach in designing HIV/AIDS prevention programs. For example, interventions for adolescent boys should prioritize basic knowledge about transmission and prevention practices, while programs for adolescent girls should emphasize the development of empathy and stigma reduction. These targeted strategies can bridge existing gaps and encourage a more holistic approach to HIV/AIDS prevention.

Although there is much literature on HIV/AIDS among adolescents, limited research has explored the relationship between gender differences in knowledge and attitudes and their implications for intervention design. This study seeks to fill this gap by analyzing how knowledge and attitudes towards HIV/AIDS differ between adolescent boys and girls and examining potential gender-specific interventions. By answering this question, this study aims to provide actionable insights for policymakers and healthcare practitioners to improve the effectiveness of HIV/AIDS prevention efforts.

RESEARCH METHOD

This study uses a quantitative approach to analyze the difference in knowledge and attitudes about HIV/AIDS between adolescent boys and girls (Sugiyono, 2015). A cross-sectional study design is used, which involves collecting data at a single point in time to provide an overview of the current situation. Primary data were collected through a structured questionnaire, which included sections on knowledge levels, attitudes towards people living with HIV/AIDS (ODHA), and demographic information. The sampling method applied is stratified random sampling to ensure proportional representation of male and female participants. Data analysis was performed using statistical software, using descriptive statistics to summarize the data and inferential tests, such as independent t-tests or chisquare tests, to identify significant differences between the sexes. Ethical consent is obtained prior to data collection, and informed consent is obtained from all participants to ensure compliance with ethical standards.

RESULTS AND DISCUSSIONS

Table 1. Differences in knowledge about HIV/AIDS in adolescent boys and girls

Gender	Average Score	Standard Deviation	P value
Teenage Boys	65.4	10.3	<0,05
Teenage Girls	72.8	8.7	<0,05

The analysis showed that adolescent girls obtained significantly higher knowledge scores about HIV/AIDS compared to adolescent boys ($p < 0.05$). This suggests that women in general are more informed about transmission, prevention, and treatment options, likely due to targeted educational campaigns that often focus on women's reproductive health.

Table 2. Attitudes towards people with HIV/AIDS (ODHA)

Gender	Attitude	Attitude	Attitude
	Positive (%)	Neutral (%)	Negative (%)
Teenage Boys	58	30	12
Teenage Girls	45	35	20

Attitudes towards ODHA show a significant gender gap. Adolescent boys show more positive attitudes (58%) compared to adolescent girls (45%), which shows a higher percentage of neutral and negative attitudes. Cultural and societal influences can contribute to these differences, which emphasizes the need for tailored interventions.

Table 3. Access to HIV/AIDS information by sex

Gender	High Access (%)	Medium Access (%)	Low Access (%)
Teenage Boys	40	35	25
Teenage Girls	55	30	15

Access to HIV/AIDS information also varies by gender. Adolescent girls report higher levels of access (55% with high access) compared to boys (40%). This is in line with the finding that health campaigns targeting women are more common, but it also highlights the gap in reaching adolescent boys effectively.

Discussion

The results underscore significant gender differences in knowledge, attitudes, and access to information about HIV/AIDS among adolescents. Adolescent girls, despite being more knowledgeable about HIV/AIDS, show higher levels of stigma against people living with HIV/AIDS (ODHA). In contrast, adolescent boys, despite having relatively less knowledge, show a more inclusive and supportive attitude towards ODHA. This is in line with previous research that has highlighted how gender plays a role in shaping knowledge and attitudes towards HIV/AIDS (Astuti, 2017; Parmawati et al., 2020). For example, research by Hazarika (2010) found that although women in their studies had more knowledge about HIV transmission, they also had a tendency to have greater stigmatizing attitudes, especially regarding sexual behavior (Hazarika, 2010). On the other hand, adolescent boys, despite being less informed about the virus, often have a more progressive attitude, which can be attributed to the socialization process and peer influence (Harrison et al., 2011).

These findings suggest that educational programs need to consider the gender nature of knowledge and attitudes about HIV/AIDS to effectively address the gap between adolescent boys and women.

Implications for Targeted Intervention

Educational Campaigns: Programs aimed at adolescent boys should prioritize basic knowledge about HIV/AIDS transmission and prevention. This can be achieved through interactive workshops, peer education programs, and the integration of HIV/AIDS topics into the school curriculum (Kirby & Laris, 2009). Previous research has emphasized the importance of making HIV education more accessible and attractive to men, particularly through digital platforms and community outreach (Agbemenu & Schlenk, 2011).

Empathy Training: Interventions for young women should be focused on reducing stigma and developing empathy for ODHA. One effective approach can involve role-playing scenarios and exposure to positive stories about ODHA to challenge existing stereotypes (Diedricks, 2022). A similar intervention in a study by Jacobi et al. (2020) showed promising results in reducing HIV-related stigma and increasing empathy in female participants through storytelling and peer-led discussions (Jacobi et al., 2020).

Inclusive Access to Information: Ensuring equitable access to HIV/AIDS information for all genders is essential. This can be achieved by using community-based programs and digital platforms to address the gender gap in access to information. A study by Gondim et al. (2015) found that adolescents, especially boys, often have difficulty accessing information through traditional health education resources (Gondim et al., 2015). Mobile health apps and online platforms can play a critical role in bridging this gap and offering personalized HIV prevention strategies (Crowley et al., 2024).

These findings highlight the importance of adopting a gender-sensitive approach in HIV/AIDS prevention strategies. Tailoring interventions to address the specific needs of adolescent boys and girls can help reduce identified knowledge gaps, reduce stigma, and foster a more inclusive and empathetic understanding of HIV/AIDS. Additionally, addressing these gender differences is critical to the long-term success of HIV prevention efforts, as it ensures that both sexes are equally equipped to make informed decisions and protect their health (Rahmanian et al., 2014).

CONCLUSION

In conclusion, this study highlights significant gender differences in adolescents' knowledge, attitudes, and access to information about HIV/AIDS. Adolescent girls show greater knowledge but higher stigma against ODHA, while adolescent boys, although less informed, show a more inclusive attitude. These findings underscore the need for gender-sensitive HIV/AIDS prevention strategies that address this gap. Targeted interventions, such as educational campaigns for adolescent boys, empathy training for women, and equitable access to information, are critical in reducing stigma and raising awareness. By tailoring programs to the specific needs of each gender, we can promote a more inclusive and effective approach to HIV prevention among adolescents.

More effective intervention strategies can be designed with a balanced gender-based approach. HIV/AIDS education for male adolescents can focus on increasing understanding of transmission and prevention, using interactive methods such as group discussions and educational games. Meanwhile, for adolescent girls, programs can emphasize strengthening empathy and reducing stigma through inspirational stories, positive role models, and inclusive communication skills training. Community-based approaches and parental involvement can also ensure that both groups get the right information without reinforcing gender bias.

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