

## Knowledge of HIV/AIDS prevention among youth aged 18 to 24 years attending Kyabadaaza Health Centre III. A cross-sectional study.

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### Abstract

**Background:** Human Immunodeficiency Virus and Acquired Immunodeficiency Syndrome (HIV/AIDS) remain critical public health crises. This study aims at assessing the knowledge of youth aged 18 to 24 years towards HIV/AIDS prevention at Kyabadaaza Health Centre in Butambala District.

**Methodology:** A descriptive cross-sectional study design to collect quantitative data. A convenience sampling method was used to select 50 participants, and the questionnaire method was used to collect data, which was then analysed with Microsoft Excel. Results were then presented in the form of tables and figures.

**Findings:** Majority of the respondents, 25(50%) were aged 18-20 years, 10(20%) were aged 23-24 years, 30(60%) were female, while 20(40%) were male. Most of them 15(30%) had tertiary level 15(30%) while 5(10%) had none. Majority of respondents were single, 35(70%) while 2(4%) were widowed. Knowledge level towards HIV/AIDS prevention showed that the majority, 30(60%), of respondents agreed that they had heard about HIV/AIDS; however, 20(40%) said that witchcraft was the main mode of HIV transmission. Most, 35(70%), agreed that consistent and correct use of condoms could prevent HIV infection; 35(70%) of the respondents agreed that they know where to get HIV testing services near them.

**Conclusion:** The youths had mediocre HIV prevention knowledge. Misconceptions about HIV transmission persisted among some respondents despite the fact that the majority had heard about HIV/AIDS.

**Recommendation:** Health workers should also intensify outreach programs and health talks to ensure accurate information reaches more young people. Health workers should also intensify outreach programs and health talks to ensure accurate information reaches more young people.

**Key words:** Knowledge of HIV/AIDS prevention, youth, Kyabadaaza health centre III, Butambala district, Central Uganda.

**Submitted:** August 12, 2026 **Accepted:** September 20, 2026 **Published:** October 01, 2026

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### Background

HIV/AIDS is an immune-system-attacking viral infection with no proven complete cure; it can be effectively managed using antiretroviral therapy (ART), which reduces viral load and improves quality of life. Prevention strategies include condom use, HIV testing and counseling, pre-exposure prophylaxis (PrEP), voluntary medical male circumcision, and health education (WHO 2023).

Worldwide, an estimated 39 million people live with HIV (2022), and approximately 1.3 million new infections occur annually, with young people accounting for a significant proportion of these cases (Danforth et al., 2017).

Africa harbors about 67% of all people living with HIV, with approximately 2.5 million adolescents and young people living with HIV in sub-Saharan Africa (Kapola et al., n.d.).

In East Africa, HIV prevalence among youth ranges between 2.1% and 4.5%, driven by loopholes in negative attitudes towards condom use, HIV prevention knowledge, stigma, and risky sexual behaviors (Hsu et al., 2025).

In Uganda, according to a study, the prevalence is estimated at 3.7% among young people aged 15-24 years (Betunga et al., 2026). Anecdotal evidence in Butambala District shows that there are persistent risky sexual behaviors, suggesting gaps in HIV prevention among young people attending

Kyabadaaza Health Center III. Push factors include limited sex education, peer influence, and inadequate youth-friendly services (Butambala District Health Office, 2023). This study focused on assessing youth aged 18 to 24 years regarding HIV/AIDS prevention at Kyabadaaza Health Centre in Butambala District.

### Methodology

#### Study design

The study employed a descriptive cross-sectional study design to collect quantitative data on knowledge towards HIV prevention among youth aged 18-24 years.

#### Study setting

Kyabadaaza Health Centre III, located in Butambala District, Central Uganda, provides a range of primary healthcare services in line with Uganda's Health Centre III package. The facility offers outpatient care for common illnesses, short-term inpatient services, and maternal and child health services including antenatal care, safe deliveries, and postnatal care. It also provides preventive services such as immunizations, health education, and family planning, as well as basic laboratory diagnostics and HIV testing and counselling. These services ensure that the community has access to essential healthcare within the district.

### Study population

The study population consisted of youth aged 18–24 years attending Kyabadaaza Health Centre III during the study period. This group includes both males and females from the district seeking health services such as outpatient care, family planning, and HIV testing. Focusing on this population helped assess the knowledge regarding HIV prevention among young people who actively use the health Centre

### Sample size determination

The sample size was determined using the Kish and Leslie (1965) formula:

$$n = (Z^2 * p * q) / d^2$$

Where;

n=Estimated minimum sample size

z= standard normal deviation set at 1.96 for a 95% confidence level.

p= proportion of the characteristic in the sample where the prevalence is not known p=0.5 q=1-p

d= marginal error ranging from 0.01 to 0.2

$$n = 1.96 * 1.96 * 0.138 * 0.963 / (0.05)^2$$

$$n = 50$$

~50 respondents

### Sampling procedure

The study used convenience sampling, where all youth aged 18-24 years attending Kyabadaaza Health Centre III will be listed, and 50 participants who were available, eligible, and had fully consented shall be involved, giving each youth an equal chance of inclusion.

### Selection criteria

Youth aged 18-24 years attending Kyabadaaza Health Center III who consent to participate, are Ugandan, and know how to read and write.

### Dependent variable

Level of HIV prevention among youth aged 18-24 years attending Kyabadaaza Health Centre III,

reflecting how effectively they engage in behaviors that reduce the risk of HIV infection

### Independent variables

Knowledge of HIV prevention

### Research instruments tools

A semi-structured questionnaire was used. This method is convenient for collecting data from a large number of respondents within a short period.

### Data collection method

Data was collected using questionnaires structured to assess socio-demographic characteristics, knowledge, attitudes, and practices towards HIV prevention.

### Data management and analysis

Collected data were checked for completeness and stored securely. Data were analyzed using Microsoft Excel.

### Data presentation

Data were presented in tables, graphs, and charts according to the study objectives.

### Quality control

A study was conducted to test the clarity and comprehension of the questionnaire among a small sample of youth in a nearby health center. The questionnaire was reviewed and approved by the research supervisor to ensure content validity. It was pre-tested, and adjustments were made to ensure consistency and reliability in data collection.

### Ethical considerations

Approval was obtained from the Mild May Institute of Sciences Research Committee, and permission was sought from Kyabadaaza Health Center III management. Respondents were informed about the purpose of the study, and confidentiality will be maintained.

## Results

### Demographic data of respondents

**Table 1 shows demographic data of respondents, n=50.**

| Characteristic         | Frequency (F) | Percentage (%) |
|------------------------|---------------|----------------|
| <b>AGE</b>             |               |                |
| 18–20 years            | 25            | 50             |
| 21–22years             | 15            | 30             |
| 23–24 years            | 10            | 20             |
| <b>SEX</b>             |               |                |
| Male                   | 20            | 40             |
| Female                 | 30            | 60             |
| <b>EDUCATION LEVEL</b> |               |                |
| Primary                | 10            | 20             |
| Secondary              | 20            | 40             |
| Tertiary               | 15            | 30             |
| None                   | 5             | 10             |
| <b>MARITAL STATUS</b>  |               |                |
| Single                 | 35            | 70             |
| Married                | 10            | 30             |
| Divorced               | 3             | 6              |
| Widowed                | 2             | 4              |
| <b>RELIGION</b>        |               |                |
| Christian              | 30            | 60             |
| Muslim                 | 15            | 30             |
| Traditional            | 3             | 6              |
| Other                  | 2             | 4              |
| Total                  | 50            | 100            |

Table 1: The majority of the respondents, 25(50%), were aged 18-20 years, while 10 (20%) were aged 23-24 years. The majority of the respondents, 30(60%), were female. Most had tertiary level (15 (30%) while 5(10%) had none; the majority of respondents were single. 35(70%) while the least number of respondents 2(4%) were widowed. The majority of the participants, 30(60%), were Christian, while 2 (4%) of the respondents were from other denominations.

### The level of knowledge about HIV prevention among youth aged 18-24 years attending Kyabadaaza Health Centre III, Butambala District.

**Figure 1: Shows distribution of respondents according to whether they had ever heard about HIV/AIDS, n=50.**

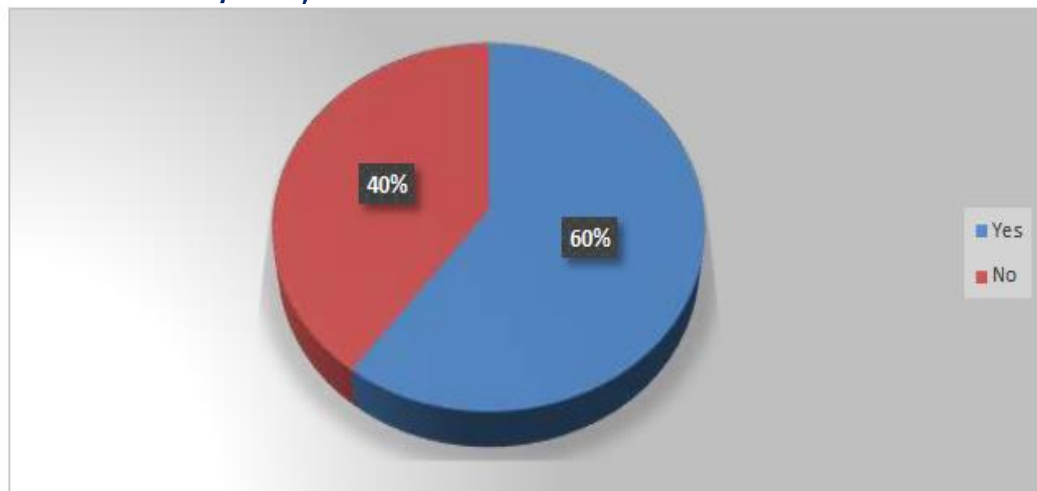


Figure 1 shows that the majority of the respondents, 30(60%), had ever heard about HIV/AIDS, while (2040%) had never heard about HIV/AIDS.

**Table 2 shows the distribution of respondents according to the main mode of HIV transmission, n=50**

| Variable                       | Frequency (f) | Percentage (%) |
|--------------------------------|---------------|----------------|
| Unprotected sexual intercourse | 15            | 30             |
| Mosquito bites                 | 10            | 20             |
| Sharing food                   | 5             | 10             |
| Witchcraft                     | 20            | 40             |
| TOTAL                          | 50            | 100            |

Table 2 reveals that most of the respondents, 20(40%), said that witchcraft was the main mode of HIV transmission, while less than half, 5(10%), said that sharing food was the main mode of HIV transmission.

**Figure 2: Distribution of respondents according to whether consistent and correct use of condoms could prevent HIV infection, n=50 respondents.**

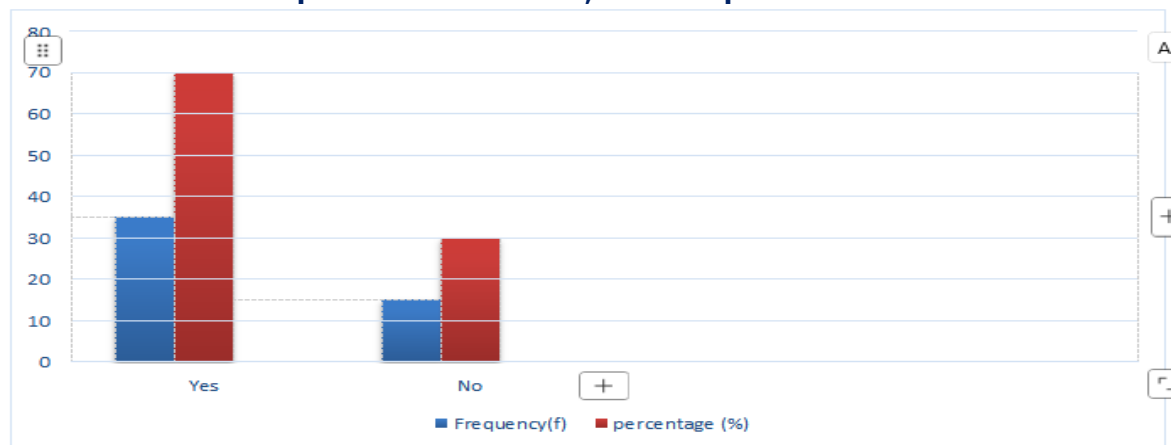


Figure 2 shows that the majority of the respondents, 35(70%), agreed that consistent and correct use of condoms could prevent HIV infection, and 15(30%) disagreed that consistent and correct use of condoms could prevent HIV infection.

**Figure 3: Distribution of respondents according to where to get HIV testing services near you, n=50 respondents**

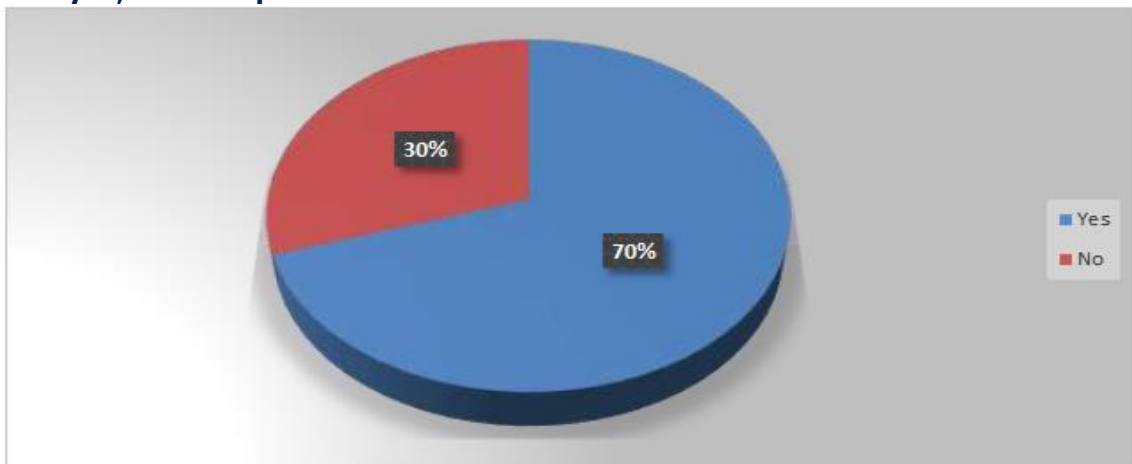


Figure 3 shows that 35(70%) of the respondents agreed that they know where to get HIV testing services near them, and 15(30%) agreed that they know where to get HIV testing services.

## Discussion

### The level of knowledge about HIV prevention among youth aged 18-24 years attending Kyabadaaza Health Centre III, Butambala District.

Findings revealed that the majority, 30(60%), had ever heard about HIV/AIDS, while the minority, 20(40%),

had never heard about HIV/AIDS. The majority finding is most probably because of increased awareness about HIV through the media, outreaches, families, and friends, to mention but a few. However, the minority respondents are a key threat to the prevention of HIV programs in the region.

This striking juxtaposition between general awareness (60%) and deep-seated structural misinformation (40% blaming witchcraft) validates the global review by Fraim and Nalan (2012), which established that while basic awareness of HIV is widespread among

young people, comprehensive and scientifically accurate knowledge remains severely inadequate, particularly within developing settings. The fact that nearly half the respondents attribute HIV transmission to supernatural causes highlights the persistence of cultural myths noted by Nwachinemere et al. (2025) in sub-Saharan Africa, where socio-cultural barriers and restricted access to accurate information stagnate community literacy.

Furthermore, the respondents' demographic characteristic distribution guides the knowledge level of the participants, with findings showing the knowledge gaps varying with respondents' characteristics. The majority, 25(50%), were aged 18-20 years, which represents a young population with limited knowledge about HIV/AIDS. Additionally, 5(10%) had never acquired any formal education, which represents the importance of education to the world of knowledge as regards HIV prevention.

### Limitations

The study used self-reported data; the results were vulnerable to social desirability and recall bias, especially when it came to delicate topics like social behavior and HIV testing.

### Conclusion

According to the study's findings, youth who attended Kyabadaaza Health Centre III between ages 18 and 24 had a fair understanding of HIV prevention. Misconceptions about HIV transmission persisted, with some respondents believing that witchcraft and mosquito bites were major modes of transmission, despite the fact that most respondents had heard of HIV/AIDS and understood the significance of condom use in preventing HIV infection. This implies that there are still knowledge gaps among youth despite awareness.

### Recommendation

Health workers should also intensify outreach programs and health talks to ensure accurate information reaches more young people.

Community leaders should sensitize the public on the Importance of HIV/AIDS prevention among youths.

### Implications for health professional practice

Health professionals should encourage safer sex practices, support routine HIV testing, and boost youth involvement in HIV education initiatives. In order to enhance young people's knowledge regarding HIV, health professionals should offer youth-friendly HIV prevention services and community outreach initiatives

### Acknowledgement

I thank the Almighty God for giving me good health, ability, and protection throughout this course.

I also thank my supervisor, Mr. Mbidde Ronald, for his guidance and support towards this research project. God should bless you.

I extend my gratitude to the staff who have been there for me at all times and, in a special way, Mr. Okwany Jimmy.

I further thank my mother for the great support, especially financial support, during the whole course, and the Almighty God should bless them.

I thank my classmates from the 2023 intake at Mildmay Institute of Health Sciences for their care, knowledge, and encouragement throughout the course.

### List of abbreviations

**AIDS:** Acquired Immune Deficiency Syndrome

**ART :** Antiretroviral Therapy

**HC :** Health Centre

**HIV :** Human Immunodeficiency Virus

**IRC :** Institute Research Committee

**MoH :** Ministry of Health

**STIs :** Sexually Transmitted Infections

**UNAIDS:** Joint United Nations Programme on HIV/AIDS

**WHO:** World Health Organization

### Source of funding

The study was not funded.

### Conflict of interest

No conflict of interest declared.

### Author contributions

**PN:** Conceptualization, Methodology, Investigation, Writing—original draft.

**HN:** Data curation, Formal analysis, Visualization.

**FS:** Formal analysis, Visualization.

**IPN:** Writing review and editing

**JFN:** Supervision, Validation.

**All authors:** Approved the final version of the manuscript and agreed to be accountable for the work.

### Data availability

Data are available upon request.

### Informed consent

Written informed consent was obtained from all participants prior to their inclusion in the study. Participants were informed about the purpose of the study, procedures involved, potential risks and benefits, and their right to withdraw at any time without penalty.

### Author biography

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