



## Research Article

# Youth Awareness of Aids in Rajshahi, Bangladesh: A Survey Study

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**Received:** 05 September, 2025

**Accepted:** 29 September, 2025

**Published:** 30 September, 2025

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## Abstract

**Background:** HIV and AIDS are still public health challenges worldwide. In Bangladesh, it is related to a lack of awareness, social stigma, and transmission risks remain prevalent. Understanding the level of AIDS awareness among young people is crucial for developing effective public health interventions and education strategies. This study aimed to evaluate AIDS awareness among the youth in Ward No. 26 of Rajshahi City Corporation, Bangladesh.

**Objectives:** The objective of this study was to assess the level of knowledge, attitudes, and awareness regarding HIV/AIDS among youth aged 16-20 years in Ward No. 26 of Rajshahi City Corporation.

**Materials and methods:** A descriptive cross-sectional study design was employed. The study involved a sample of 33 youths aged 16-20 years, who were surveyed using a structured questionnaire. Data were collected through face-to-face interviews, focusing on demographic information, knowledge of AIDS transmission, symptoms, prevention methods, treatment options, and attitudes toward people living with HIV/AIDS.

**Results:** The study found that 60.60% heard about AIDS from television, and 45.45% identified that sexual intercourse is the primary transmission way. However, 60.60% were unsure about the AIDS symptoms appearing, and 54.54% were uncertain about the survival with treatment. About 66.66% of respondents believed that awareness and education could eliminate AIDS. Regarding prevention, 39.39% of respondents highlighted mass awareness as key, and 21.21% emphasized promoting safe sex practices. Also, 75.75% of respondents believed there was no effective treatment for AIDS, although 63.63% supported allopathic treatment.

**Conclusion:** The investigator shows that youth in Ward No. 26 know about AIDS, but still have many gaps and misconceptions about transmission and treatment of this virus. This highlights the need for stronger education and awareness programs. Future studies with larger samples are needed to guide better HIV/AIDS interventions in Bangladesh.

## Introduction

Human Immunodeficiency Virus (HIV) and Acquired Immunodeficiency Syndrome (AIDS) are significant public health concerns worldwide, including in Bangladesh [1]. HIV attacks the immune system, weakening the body's ability to fight infections [2]. In untreated patients, it can progress to AIDS, the final and most severe stage of HIV infection. Du, et al. [3] stated that Bangladesh has made considerable progress in HIV prevention and treatment, but the country still faces challenges due to factors like stigma, discrimination, and limited awareness in certain communities. Efforts continue to reduce the spread of HIV, provide care and support for those living with the virus, and raise awareness about prevention methods, particularly among vulnerable populations [4].

Masenga et al. [5] noted that HIV is a virus that attacks the immune system, specifically targeting CD4 cells (T cells), which are crucial for defending the body against infections. It is mainly transmitted through contact with contaminated bodily fluids, such as semen, blood, breast milk, and vaginal fluids, most commonly via sharing needles, unprotected sex, or from mother to child during childbirth or breastfeeding. While HIV can be managed with antiretroviral therapy, there is currently no cure [6]. Antiretroviral therapy (ART) helps lower the viral load, improve the immune system, and prevent the transmission of the virus, allowing people with HIV to live long and healthy lives [7]. AIDS is the final, most severe stage of HIV infection, where the immune system becomes severely damaged, leaving the body vulnerable to opportunistic infections and cancers [8]. Although there is no cure for AIDS, early diagnosis and consistent treatment can prevent its progression and help maintain good health. In Bangladesh, HIV and AIDS are a significant risk to young people due to limited awareness, stigma, and lack of access to education and healthcare [9].

HIV prevalence is low in comparison to other regions, but young people who engage in unprotected sex, those who inject drugs, or those involved in sex work are more vulnerable [10]. Chautrakarn, et al. [11] noted that social stigma and misconceptions about HIV often discourage young people from seeking testing, treatment, and prevention services. Efforts to raise awareness, promote HIV education in schools, and provide access to preventive measures like condoms and pre-exposure prophylaxis (PrEP) are ongoing. Early diagnosis and ART can prevent HIV from progressing to AIDS, enabling young people to live healthy lives with proper care and support. The research problem related to HIV and AIDS among young people in Bangladesh stems from a lack of awareness, social stigma, and limited access to prevention, testing, and treatment services. Despite awareness efforts, many young people remain uninformed about HIV transmission and prevention. The stigma surrounding HIV discourages individuals from seeking testing or treatment, especially in conservative communities. Vulnerable groups, such as adolescents engaging in unprotected sex or drug use, are at higher risk, yet there is a lack of targeted health education, outreach programs, and accessible healthcare for this demographic. Addressing these challenges is crucial for reducing HIV transmission, improving early diagnosis,

and providing effective care for at-risk or HIV-positive youth. The research aims to assess HIV/AIDS awareness among young people in Rajshahi, Bangladesh, by examining their knowledge of transmission methods, prevention strategies, and understanding of the disease. The study also identifies factors influencing awareness and attitudes, including social, educational, and cultural influences. The research seeks to evaluate the effectiveness of current educational programs and media campaigns in promoting preventive behaviors among young people in Rajshahi.

## Materials and methods

### Study Area

The study was conducted in Ward No. 26 of Rajshahi City Corporation, Bangladesh, which covers an area of 95.56 square kilometers. It is located between 24°20' and 24°24' north latitudes and 88°32' and 88°40' east longitudes. The total population of Rajshahi City Corporation was 388811, with 208525 males and 180286 females.

### Study unit and sampling

The study unit consisted of all youth in Ward No. 26 of Rajshahi City Corporation, Bangladesh. A total of 33 youths were selected from a population of 151 using random sampling.

### Questionnaire

A structured, pre-designed questionnaire was used for data collection. The questionnaire included a combination of multiple-choice and Likert scale questions, grouped into sections addressing:

### Demographic information

Questions included the respondent's age, marital status, educational background, and occupation. These details were collected to understand how these factors might influence knowledge and attitudes toward AIDS.

### Knowledge about AIDS

This section assessed respondents' awareness of AIDS transmission methods, symptoms, prevention, and treatment. It also explored where respondents learned about AIDS and their understanding of key facts (e.g., incubation period, risky behaviors).

### Attitudes toward AIDS

Respondents were asked about their perceptions of individuals living with AIDS, whether they believed AIDS could be eradicated, and the effectiveness of preventive methods like condoms, vaccination, and education.

### Perception of treatment

This section focused on respondents' attitudes toward treatment options for AIDS, such as antiretroviral therapy and alternative medicine, and their views on the accessibility of treatment in their area.

## Survey tools

The questionnaire was printed and distributed to the youth in Ward No. 26 of Rajshahi City Corporation, Bangladesh. Surveyors used standardized instructions to ensure consistency and clarity when administering the survey.

## Study design and participants

**Design:** A descriptive cross-sectional study design was employed to assess the knowledge and attitudes of the youth in the area. The data were collected over a specified period, with no follow-up interventions.

**Participants:** The study focused on the youth of Ward No. 26, which consists of young individuals from diverse backgrounds. A total of 33 youth participants were selected through convenience sampling from the community. The participants' ages ranged from 16 to 20 years. While the sample was small, it was selected to provide insight into the perceptions of young individuals living in this specific ward.

**Demographics:** The study aimed to include a balanced demographic distribution, accounting for variables such as educational level, occupation (e.g., students, employed), and marital status to see how these factors may influence knowledge and attitudes about AIDS.

## Data collection and procedure

**Data collection:** Primary data collection method from primary and secondary data sources. The primary data were collected from young people, and the secondary data were collected from secondary books, journals, periodicals, research reports, and newspapers.

**Procedure recruitment:** Participants were invited to participate through local outreach within Ward No. 26, including notices posted at community centers and youth gathering spots. All potential participants were informed about the nature of the study and the voluntary nature of participation. The data collection process involved distributing the questionnaire to the selected respondents in a face-to-face setting.

**Survey administration:** Each participant received a copy of the questionnaire, along with instructions on how to complete it. The survey was administered in a quiet, controlled setting, ensuring that respondents had enough time to answer all questions thoughtfully. Clarifications were provided if needed.

**Completion time:** The questionnaire was designed to be completed within 20–30 minutes, and participants were encouraged to answer each question truthfully. Assistance was available for any participant who had difficulty understanding the questions.

## Data analysis

After the completion of data collection, all questionnaires were carefully reviewed, coded, and entered into Microsoft Excel 2019 for initial screening and error checking. Manual

data entry was employed to minimize errors and ensure accuracy. Following verification, the dataset was exported into the Statistical Package for the Social Sciences (SPSS) version 21 for detailed statistical analysis.

Descriptive statistics were used to summarize the socio-demographic characteristics of respondents, including age, education, and occupation. Frequencies and percentages were calculated to present distributions of responses for continuous variables. To examine patterns in knowledge, attitudes, and perceptions regarding AIDS among the youth in Ward No. 26, cross-tabulations were conducted between demographic variables and awareness-related indicators. Results were presented in tables for clarity, allowing for a comprehensive understanding of the patterns, relationships, and determinants of AIDS awareness among youth in Rajshahi, Bangladesh.

## Ethical considerations

Before participation, all youth were given a detailed explanation of the study's objectives and procedures. Written informed consent was obtained from each participant to ensure their understanding and voluntary participation. To maintain confidentiality, all personal identifiers were removed from the data. The respondent information was stored securely, and only aggregate data was used in the analysis.

## Limitations

The sample size of 33 respondents is small, which may limit the ability to generalize the findings to the larger young population of Rajshahi. Using convenience sampling may cause selection bias, as the youth who were most accessible or willing to participate may not represent the broader youth population of Rajshahi. The data were based on self-reported responses; the results may be affected by social desirability bias, where respondents may provide answers they believe are socially acceptable rather than their true beliefs.

## Results and discussion

### Distribution of respondents by age and marital status

Table 1 presents the distribution of respondents based on their age and marital status. Among the respondents aged 16, 36.36% are married, and 36.36% are unmarried. For those aged 17, 18.18% are married and 18.18% are unmarried. Among the 18-year-olds, 6.06% are married, and 6.06% are unmarried. At age 19, 6.06% are married, and 9.09% are unmarried. For respondents aged 20, 24.24% are married. The total number

**Table 1:** Distribution of respondents by age and marital status.

Age (Year)	Marriage status		Total
	Married	Unmarried	
16	-	12(36.36%)	12(36.36%)
17	-	6(18.18%)	6(18.18%)
18	-	2(6.06%)	2(6.06%)
19	2(6.06%)	3(9.09%)	5(15.15%)
20	8(24.24)	-	8(24.24%)
Total	10(30.30)	23(69.69%)	33(100%)

Distribution of Respondents by Educational Qualification and Occupation

of respondents is 33, with 30.30% married and 69.69% unmarried. Hasan, et al. [12] observed that women aged 25–49 years had more knowledge about HIV/AIDS, whereas younger married women exhibited a more significant decline in their awareness of HIV/AIDS in Bangladesh.

The distribution of respondents is based on their educational qualifications and occupation (Table 2). Among those with education up to 1–5th grade, 18.18% are involved in labor, agriculture, and jobs, with 6.06% working in jobs, 3.03% as students, and 3.03% in agriculture. In the SSC category, 21.21% of respondents are employed in jobs. A significant portion, 60.60%, of those with HSC qualifications are employed in jobs. One student and one laborer are illiterate. The total number of respondents is 33, with 87.87% employed. Ngadaya, et al. [13] stated that youth with lower levels of formal education are more likely to work in labor or agriculture, which may result in lower awareness of HIV/AIDS.

Table 3 presents respondents' sources of hearing about AIDS. A majority, 60.60%, have heard about AIDS through television. Smaller groups learned about it through books and newspapers, each accounting for 6.06%. Additionally, 15.15% reported seeing signage on the side of the road, and 9.09% mentioned other sources. Only 3.03% of respondents have not heard of AIDS. The total number of respondents is 33. Similar results were reported by Gupta, et al. [14], and the findings were that 85% of respondents gathered information about HIV/AIDS from television. It served as the primary source of knowledge of HIV/AIDS in Bangladesh.

Table 4 shows respondents' views on how long it takes for AIDS symptoms to appear after infection. A majority, 60.60%, are unsure about the timing. Among those with an opinion, 15.15% believe symptoms appear after more than 10 years, while 12.12% think symptoms show up between 6 and 10 years. A smaller proportion, 9.09%, think symptoms appear within 6 months to a year, and only 3.03% believe symptoms show up within 3 to 6 months. The total number of respondents is 33. Similar results were noted by Hasan, et al. [12], and the results 70% of respondents were unsure about the appearance of AIDS symptoms. There was a significant lack of knowledge of HIV/AIDS.

Table 5 presents respondents' views on how AIDS is transmitted. A majority, 45.45%, believe that sexual intercourse is the primary mode of transmission. Smaller percentages of respondents think AIDS is transmitted through hugging affected people (6.06%), using shared needles (3.03%), or from a pregnant mother to her child (15.15%). Some respondents mention transmission through blood (9.09%), mothers' milk (3.03%), or other unspecified modes (12.12%). A few are unsure about the transmission modes (6.06%). The total number of respondents is 33. Reza, et al. [15] noted that 96.20% of respondents agreed HIV was transmitted through sexual intercourse. This study also reported that 56.25% of respondents identified sexual intercourse as the primary cause of HIV/AIDS.

**Table 2:** Distribution based on educational qualification and occupation.

Educational Qualification	Occupation				Total
	Job	Student	Labor	Agriculture	
1-5 <sup>th</sup>	-	2(6.06%)	2(6.06%)	2(6.06%)	6(18.18%)
5 <sup>th</sup> -8 <sup>th</sup>	-	-	-	-	-
9 <sup>th</sup> -10 <sup>th</sup>	-	-	-	-	-
SSC	-	7(21.21%)	-	-	7(21.21%)
HSC	-	20(60.60%)	-	-	20(60.60%)
Illiterate	-	-	-	-	-
Total	-	29(87.87%)	2(6.06%)	2(6.06%)	33(100%)

Distribution of Respondents' Opinions on Hearing the Name of AIDS

**Table 3:** Distribution based on the opinion of the respondents regarding hearing or not hearing the name of AIDS.

Types of opinion		Population	Percentage rate
Yes	Television	20	60.60
	Read Book	2	6.06
	Newspaper	2	6.06
	Signage on the side of the road	5	15.15
	Others	3	9.09
No		1	3.03
Total		33	100

Distribution of Respondents' Opinions on the Time of Appearance of AIDS Symptoms After Infection.

**Table 4:** Distribution based on respondents' opinion of how long after infection AIDS symptoms appear.

Distribution of symptoms of AIDS	Population	Percentage rate
3-6 months	1	3.03
6-1 year	3	9.09
1-2 years	-	-
2-4 years	-	-
4-6 years	-	-
6-10 years	4	12.12%
Above 10 years	5	15.15%
Others	-	-
Don't know	20	60.60
Total	33	100

Distribution of Respondents' Opinions on the Mode of Transmission of AIDS.

**Table 5:** Distribution based on the opinion of the respondents regarding the mode of transmission of AIDS.

Mode of transmission	Population	Percentage rate
Sexual intercourse	15	45.45
Hug the affected people	2	6.06
Through needle/series	1	3.03
From the pregnant mother to the child	5	15.15
Through the blood	3	9.09
Sleeping in the same bed	-	-
Through mothers' milk	1	3.03
Using other people's clothes	-	-
Eating with infected people	-	-
If the affected person uses the toilet	-	-
Shake hand	-	-
Others	4	12.12
Don't know	2	6.06
Total	33	100

Distribution of Respondents' Opinions on Identifying Persons with AIDS.



Table 6 presents respondents' views on how to identify persons with AIDS. A majority, 60.60%, believe that AIDS can be identified through a special blood test. A smaller portion, 12.12%, thinks stool or urine tests can be used for identification. Only 3.03% suggest that appearance can be used to identify someone with AIDS, while 24.24% have other opinions. The total number of respondents is 33. Boadu, et al. [16] noted that the blood and serum tests were more accurate in identifying AIDS. Another study reported that the laboratory diagnostic was most suitable for AIDS [17].

Table 7 summarizes respondents' views on the life expectancy of an individual with treated AIDS. A small proportion, 15.15%, believe that a person can live for a long time with treatment, while 12.12% think the person could live for 10 years. Only 6.06% estimate a survival time of 5 years, and 3.03% think it would be 1 year. Some respondents believe a person can live for 2 years (9.09%), and 54.54% are uncertain about the survival time. The total number of respondents is 33. Marcus, et al. [18] noted that a maximum percentage of respondents were uncertain about the life expectancy of an individual with treated AIDS.

Table 8 presents respondents' views on the conditions under which the AIDS virus exists in the human body. A majority, 30.30% believe the virus exists in a dormant state, while 24.24% think it is outwardly expressed. A significant portion, 45.45% is unsure about the condition of the virus. The total number of respondents is 33. Ma, et al. [19] stated that the results showed a lack of clarity regarding the condition of the AIDS virus in the human body.

Table 9 summarizes respondents' opinions on the duration of AIDS symptoms. A small proportion, 18.18%, believe the symptoms last for 10 years, while 12.12% estimate a duration of 3 to 6 months. Only 6.06% think the symptoms last between 6 months and 1 year. The majority, 63.63%, are unsure about the duration. The total number of respondents is 33. Alhasawi, et al. [20] reported that there were HIV/AIDS symptoms, and there was a huge gap in rural people.

Table 10 presents respondents' views on including articles about AIDS in textbooks. A majority, 45.45%, believe that there

**Table 6:** Distribution based on respondents' opinions regarding the identification of persons with AIDS.

Identification	Population	Percentage rate
Through a special blood test	20	60.60
X-ray test	-	-
ECG test	-	-
Stool/urine test	4	12.12
By Appearance	1	3.03
Others	8	24.24
Don't know	-	-
Total	33	100

Distribution of Respondents' Opinions on How Long an Affected Person Can Live if Treated for AIDS.

**Table 7:** Distribution based on respondents' opinion of how long an affected person can live if treated with AIDS.

Time to live	Population	Percentage rate
1 year	1	3.03
2 years	3	9.09
3 years	-	-
5 years	2	6.06
6 years	-	-
Long live	5	15.15
Don't know	18	54.54
10 years	4	12.12
Total	33	100

Distribution of Respondents' Opinions About the Conditions Under Which the AIDS Virus Lives in the Human Body.

**Table 8:** Distribution of respondents' opinions about the conditions under which the AIDS virus lives in the human body.

Type of AIDS present	Population	Percentage rate
Dormant state	10	30.30
Outwardly expressed	8	24.24
Don't know	15	45.45
Total	33	100

Distribution of Respondents' Opinions Regarding AIDS Symptoms and Duration.

**Table 9:** Distribution of respondents' opinions regarding AIDS symptoms and relationships.

Duration of symptoms of AIDS	Population	Percentage rate
3-6 months	4	12.12
6-1 year	2	6.06
1-2 years	-	-
2-4 years	-	-
6-10 years	-	-
10 years	6	18.18
Don't know	21	63.63
Total	33	100

Distribution of Respondents' Opinions on Placing Articles on AIDS in Textbooks.

**Table 10:** Distribution of respondents' opinions on placing articles on AIDS in the textbook.

Answer type		Population	Percentage rate
There is	Yes	15	45.45
	No	1	3.03
No		14	42.42
Others		3	9.09
Total		33	100

Distribution of Respondents' Opinions on Adding an Essay About AIDS to Textbooks.

should be articles on AIDS in textbooks, while 3.03% disagree. Additionally, 42.42% of respondents feel that there are no articles on AIDS in textbooks, and 9.09% have other opinions. The total number of respondents is 33. A cross-sectional study by Sarma and Oliveras [21] found that all teachers supported the inclusion of AIDS-related content in textbooks, reflecting a strong desire for improved education on the topic.

Table 11 presents respondents' opinions on including an essay about AIDS in textbooks. A majority, 36.36%, support adding the essay to the SSC textbooks, while 30.30% favor inclusion in the 9th to 10th-grade textbooks. Among the respondents, 15.15% suggest including it in the 5th to 8th-grade textbooks, and 6.06% recommend adding it to HSC textbooks. Additionally, 12.12% have other suggestions. The total number of respondents is 33. Srivastava, et al. [22] stated that this indicates a strong desire to integrate AIDS awareness into the educational curriculum at key stages of youth development. This study also noted that the variety of suggestions underscores the importance of addressing AIDS education across different grade levels to reach a broader audience.

Table 12 presents respondents' views on AIDS treatment options. A small proportion, 9.09%, supports allopathic treatment, while 3.03% favors homeopathic methods. Other treatments are mentioned by 6.06% of respondents. A majority, 75.75%, believe there is no treatment for AIDS, and 6.06% are uncertain. The total number of respondents is 33. Dijkstra, et al. [23] noted that the majority of respondents did not believe in treatments for AIDS, and most participants had limited knowledge of the HIV cure.

Table 13 presents respondents' views on the information teachers have provided about AIDS. A majority, 30.30%, learned about the causes and symptoms of AIDS, while 27.27% were taught that AIDS is a disease. Additionally, 21.21% were informed that AIDS is a deadly disease. Some respondents (9.09%) learned about the types of AIDS prevention, and 3.03% received other information. A small group, 9.09%, reported not receiving any information. The total number of respondents is 33. Mishra and Guleri [24] noted that the majority of respondents lacked complete knowledge about the root cause of HIV/AIDS and had misconceptions about the mode of transmission.

Table 14 summarizes the sources from which respondents gained their knowledge about AIDS. Friends are identified as the primary source by 45.45% of participants. Elder brothers are mentioned by 18.18%, and elder sisters by 12.12%. Neighbors account for 15.15% as a source of information. A smaller proportion, 9.09% indicates they have not received any information. The total number of respondents is 33. Siddique, et al. [25] reported that 75–84% of participants obtained AIDS information from relatives and friends. This suggests that peer and familial networks are key sources of knowledge, underscoring the need to formalize and strengthen educational efforts to ensure accurate and reliable information reaches youth.

Table 15 provides respondents' views on how to approach next of kin with AIDS. A majority, 69.69%, suggest arranging for their treatment, while 18.18% recommend treating them well. A smaller proportion, 12.12%, indicates a negative response. The total number of respondents is 33. The majority (69.69%) suggest arranging for treatment as the best approach for supporting next of kin with AIDS, while 18.18% emphasize

**Table 11:** Distribution of respondents' opinions on adding an essay to a textbook about AIDS.

Answer type	Class	Population	Percentage rate
Yes	5 <sup>th</sup> to 8 <sup>th</sup>	5	15.15
	9 <sup>th</sup> to 10 <sup>th</sup>	10	30.30
	SSC	12	36.36
	HSC	2	6.06
No		-	-
Others		4	12.12
Total		33	100

Distribution of Respondents' Opinions on AIDS Treatment.

**Table 12:** Distribution of respondents' opinions regarding AIDS treatment

Answer type	Treatments	Population	Percentage rate
Yes	Allopathic	3	9.09
	Homeopathic	1	3.03
	Kaviraj	-	-
	Others	2	6.06
No		25	75.75
Don't know		2	6.06
Total		33	100

Distribution of Respondents' Views on What Teachers Have Taught Them About AIDS.

**Table 13:** Distribution based on respondents' views on what teachers have taught them about AIDS.

Answer type	Opinion	Population	Percentage rate
Yes	AIDS is a disease	9	27.27
	AIDS is a deadly disease	7	21.21
	AIDS is not a contagious disease	-	-
	AIDS causes and symptoms	10	30.30
	Types of AIDS Preservation	3	9.09
No		3	9.09
Others		1	3.03
Total		33	100

Distribution of Respondents' Sources of Information About AIDS.

**Table 14:** Distribution of respondents' disclosure of thoughts about AIDS, from which society disclosed them.

Answer type	Opinion	Population	Percentage rate
Yes	Elder brother	6	18.18
	Elder sister	4	12.12
	Father/uncle	-	-
	Mother/aunt	-	-
	Friends	15	45.45
	Neighbor	5	15.15
No		3	9.09
Total		33	100

Distribution of Respondents' Opinions on Dealing with Next of Kin Having AIDS.

**Table 15:** Distribution of respondents' opinions on dealing with next of kin about AIDS

Answer type	Population	Percentage rate
Treat him well	6	18.18
Arrange for his treatments	23	69.69
No	4	12.12
Total	33	100

Distribution of Respondents' Opinions on the Possibility of Making the Country AIDS-Free.

treating them well. These findings suggest the need for efforts to reduce stigma and promote compassionate care for individuals living with AIDS. Knight and Schatz, [26] reported

that the majority of respondents in this study highlighted the kin and well-treatment of AIDS, which was improving health conditions.

Table 16 illustrates respondents' views on whether it is possible to make the country AIDS-free. A majority, 66.66%, believe it can be achieved through awareness and warnings. Safe sex is suggested by 15.15%, while 6.06% emphasize the use of sterile needles or syringes. Religious precepts are noted by 3.03%. A small proportion, 9.09%, are uncertain about the possibility. The total number of respondents is 33. Moghli, et al. [27] noted that 62.0% of respondents thought that awareness and warnings were reduced AIDS-free in the rural area. This study also emphasized the need for comprehensive awareness campaigns that address various prevention methods to reduce HIV transmission.

Table 17 highlights respondents' understanding of AIDS. A majority, 60.60%, describe it as a sexually transmitted disease, while 21.21% consider it a type of disease. A smaller proportion, 6.06%, view it as a combination of multiple diseases, and 12.12% are unsure about the concept. The total number of respondents is 33. Nubed and Akoachere, [28] reported that 62.10% of respondents identified sexually transmitted diseases in the human body. This study highlights the need for further clarification and education on the specific characteristics of AIDS to enhance awareness and prevention.

Table 18 presents respondents' opinions on how society treats individuals with AIDS. A majority, 57.57%, believe society harbors hatred toward them, while 30.30% think they receive support. Only 3.03% indicate that society accepts them, and 6.06% say they are ostracized. An additional 3.03% are uncertain. The total number of respondents is 33. Knight and Schatz, [26] reported that the majority of respondents in this study highlight the societal and individual advantages of treatment as prevention in resource-poor settings.

Table 19 outlines respondents' views on the symptoms of AIDS. A decrease in body weight is identified by 27.27% of respondents, while 36.36% note a reduction in immunity. Swollen body glands are mentioned by 15.15%, and 9.09% point to skin discoloration. Chronic cough or shortness of breath and diarrhea are each cited by 3.03%, as is occasional fever. Some respondents identify multiple symptoms. The total number of participants is 33. Swinkels, [29] noted that the most commonly identified AIDS symptom among respondents is a reduction in immunity and body weight.

Table 20 provides an overview of respondents' opinions on effective measures to prevent AIDS. The majority of respondents (48.48%) believe that creating mass awareness is the most effective way to prevent AIDS. Encouraging safe sex was identified by 24.24% of respondents as a key preventive measure. Smaller proportions of respondents emphasized other measures, including encouraging HIV-free blood donation (6.06%), promoting religious observance (9.09%), and advising the use of sterile needles or syringes (6.06%). Notably, no respondents mentioned abstaining from sexual intercourse as a preventive measure, and 6.06% of participants

**Table 16:** Distribution based on respondents' opinion on whether it is possible to make our country AIDS-free.

Answer type	Opinion	Population	Percentage rate
Possible	By warning	22	66.66
	By treatment	-	-
	By avoiding drugs	-	-
	By using sterile needles/syringes	2	6.06
	By safe sex	5	15.15
	By following the religious precepts	1	3.03
	Others	-	-
Not possible		-	-
Don't know		3	9.09
Total		33	100

Distribution of Respondents' Opinions on the Concept of AIDS.

**Table 17:** Distribution based on respondents' opinion on what AIDS is or the concept of AIDS.

Concept of AIDS	Population	Percentage rate
One kind of disease	7	21.21
A sexually transmitted disease	20	60.60
A combination of many diseases	2	6.06
A type of water-borne disease	-	-
Don't know	4	12.12
Others	-	-
Total	33	100

Distribution of Respondents' Opinions on Social Acceptance of People with AIDS.

**Table 18:** Distribution of respondents' opinions on social acceptance of people with AIDS.

Acceptance of AIDS	Population	Percentage rate
Society accepts him/her	1	3.03
Society ostracizes him/her	2	6.06
Society hates him/her	19	57.57
Supports him/her	10	30.30
Don't know	1	3.03
Total	33	100

Distribution of Respondents' Opinions on Symptoms of AIDS.

**Table 19:** Distribution based on respondents' opinions regarding symptoms of AIDS.

Symptoms of AIDS	Population	Percentage rate
Body weight decreases rapidly	9	27.27
Diarrhea occurs	1	3.03
Sometimes there is a fever	2	6.06
Immunity decreases	12	36.36
Chronic fever	-	-
Chronic cough, shortness of breath	1	3.03
The glands of the body become swollen	5	15.15
Aversion to food	-	-
Skin discoloration	3	9.09
Total	33	100

Distribution of Respondents' Opinions on Measures to Prevent AIDS.

were uncertain about the appropriate steps to prevent the disease. These findings highlight the importance of public awareness campaigns and safe sex education in preventing the spread of AIDS among youth in Rajshahi. Encouraging safe sex is also widely recommended. Akankunda, et al. [30] stated that the majority of respondents emphasize the importance of mass awareness campaigns as the most effective way to prevent AIDS.

Table 21 summarizes respondents' opinions on the appropriateness of government and non-governmental organization (Government/NGO) activities. A majority, 66.66%, agree that these activities are appropriate. Among those who disagree, 6.06% cite a lack of publicity, 12.12% mention inadequate programs, 9.09% highlight negligence by workers, and 3.03% point to a lack of good treatment. An additional 3.03% are uncertain. The total number of respondents is 33. Sajadi, et al. [31] emphasized that NGOs play a crucial role in mitigating HIV/AIDS, despite certain shortcomings. Similarly, this study suggests that while current efforts are generally considered appropriate, enhancing outreach and program quality could further improve their effectiveness.

Table 22 highlights the respondents' views on available treatments for AIDS. Among the participants, 63.63% prefer allopathic treatment, while 9.09% suggest homeopathic methods. No respondents indicated support for Kaviraj or other forms of treatment. A total of 18.18% express that there is no treatment, and 9.09% are uncertain. The total number of respondents is 33. Custer, et al. [32] noted that a higher proportion of respondents (74.70%) prefer allopathic medicine treatment for AIDS, while a smaller portion supports homeopathic methods (25.30%).

Table 23 presents the distribution of respondents' opinions regarding measures to prevent AIDS. Among the participants, 39.39% suggest creating mass awareness as a preventive measure. Encouraging safe sex is preferred by 21.21% of respondents, while 9.09% advocate for HIV-free blood donation. A total of 12.12% recommend religious observance, and another 9.09% emphasize the use of live needles or syringes. Abstinence from sexual intercourse is suggested by

**Table 20:** Distribution based on respondents' opinions on what can be done to prevent AIDS.

Prevent AIDS	Population	Percentage rate
Creating mass awareness	16	48.48
Encourage safe sex	8	24.24
Encouraging HIV-free blood donation	2	6.06
Encouraging religious observance	3	9.09
Advise the use of sterile needles/syringes	2	6.06
Abstain from sexual intercourse	-	-
Don't know	2	6.06
All of them	-	-
Total	33	100

Distribution of Respondents' Opinions on the Appropriateness of GO/NGO Activities.

**Table 21:** Distribution based on respondents' opinions about the appropriateness of Government/NGO activities.

Opinion		Population	Percentage rate
Yes		22	66.66
No	Lack of publicity	2	6.06
	Lack of adequate programs	4	12.12
	Negligence of workers	3	9.09
	Lack of good treatment	1	3.03
Others		-	-
Don't know		1	3.03
Total		33	100

Distribution of Respondents' Opinions on AIDS Treatment.

**Table 22:** Distribution of respondents' opinions on AIDS treatment.

Answer type	Treatments	Population	Percentage rate
Yes	Allopathic	21	63.63
	Homeopathic	3	9.09
	Kaviraj	-	-
	Others	-	-
No		6	18.18
Don't know		3	9.09
Total		33	100

Distribution of Respondents' Opinions on Preventing AIDS.

**Table 23:** Distribution of respondents' opinions on what to do to prevent AIDS.

Prevent AIDS	Population	Percentage rate
Creating mass awareness	13	39.39
Encouraging safe sex	7	21.21
Encouraging HIV-free blood donation	3	9.09
Encouraging religious observance	4	12.12
Recommend the use of live needles/syringes	3	9.09
Abstain from sexual intercourse	1	3.03
Don't know	2	6.06
All of them	-	-
Total	33	100

3.03% of respondents, and 6.06% remain uncertain. The total number of respondents is 33. Karim, et al. [33] reported that mass awareness, safe sex, and HIV-free blood donation are the key preventive measures for AIDS. These findings underscore the importance of diverse prevention strategies and the need for broader education to address various aspects of AIDS prevention.

## Conclusion

This study revealed a moderate level of awareness about AIDS/HIV among youth in Rajshahi, Bangladesh. It was a significant understanding of the modes of transmission of AIDS/HIV, particularly through sexual contact and needle use. However, there are substantial gaps in knowledge about symptoms, treatment options, and long-term effects of the virus. Although mass awareness campaigns have been identified as the most effective preventive measure. There is a clear need for more comprehensive and accessible educational programs. Addressing these gaps through targeted interventions and nurturing a supportive environment for those affected by HIV/AIDS. This is crucial to improving overall understanding and combating the stigma surrounding the disease.

## References

1. Bhowmik A, Hasan M, Saha M, Saha G. Trends, challenges, and socioeconomic impacts of HIV in Bangladesh: A data-driven analysis (2000–2024). *Sexes*. 2025;6(3):34. Available from: <https://doi.org/10.3390/sexes6030034>.
2. Balasubramaniam M, Pandhare J, Dash C. Immune control of HIV. *J Life Sci (Westlake Village)*. 2019;1(1):4. Available from: <https://pmc.ncbi.nlm.nih.gov/articles/PMC6714987>.
3. Du S, Niu H, Jiang F, Gong L, Zheng S, Cui Q, et al. Challenges of integrating HIV prevention and treatment in China's border mountain regions: A grounded theory study. *BMC Infect Dis*. 2025;25:687. Available from: <https://doi.org/10.1186/s12879-025-11087-y>.



4. Kumah E, Boakye DS, Boateng R, Agyei E. Advancing the global fight against HIV/AIDS: Strategies, barriers, and the road to eradication. *Ann Glob Health*. 2023;89(1):83. Available from: <https://doi.org/10.5334/aogh.4277>.
5. Masenga SK, Mweene BC, Luwaya E, Muchaili L, Chona M, Kirabo A. HIV–host cell interactions. *Cells*. 2023;12(10):1351. Available from: <https://doi.org/10.3390/cells12101351>.
6. Kemnic TR, Gulick PG. HIV antiretroviral therapy. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK513308>.
7. World Health Organization. HIV/AIDS. World Health Organization; 2025. Available from: <https://www.who.int/news-room/fact-sheets/detail/hiv-aids>.
8. Helena M, Swinkels JVAA, Nguyen AD, Gulick PG. HIV and AIDS. *Natl Cent Biotechnol Inf*. 2024. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK534860>.
9. Hossain MI, Ahmad I, Mehedi N, Akter R, Cane TPC. Social stigma and vulnerabilities of HIV/AIDS-positive people: Reconsidering social work education and NGOs' role in Bangladesh. *J HIV AIDS Soc Serv*. 2022;21(3–4):167–93. Available from: <https://doi.org/10.1080/15381501.2022.2060399>.
10. Larney S, Mathers BM, Poteat T, Kamarulzaman A, Degenhardt L. Global epidemiology of HIV among women and girls who use or inject drugs: Current knowledge and limitations of existing data. *J Acquir Immune Defic Syndr*. 2015;69(Suppl 2):S100. Available from: <https://doi.org/10.1097/QAI.0000000000000623>.
11. Chautrakarn S, Ong-Artborirak P, Naksen W, Thongprachum A, Wungrath J, Chariyalertsak S, et al. Stigmatizing and discriminatory attitudes toward people living with HIV/AIDS (PLWHA) among the general adult population: The results from the 6th Thai National Health Examination Survey (NHES VI). *J Glob Health*. 2023;13:04006. Available from: <https://doi.org/10.7189/jogh.13.04006>.
12. Hasan MN, Tambuly S, Trisha KF, Haque MA, Baker CMA, Uddin MJ. Knowledge of HIV/AIDS among married women in Bangladesh: Analysis of three consecutive multiple indicator cluster surveys (MICS). *AIDS Res Ther*. 2022;19:68. Available from: <https://doi.org/10.1186/s12981-022-00495-8>.
13. Ngadaya E, Kimaro G, Kahwa A, Mnyambwa NP, Shemaghembe E, Mwenyeheri T, et al. Knowledge, awareness, and use of HIV services among the youth from nomadic and agricultural communities in Tanzania. *Public Health Action*. 2021;11(2):69. Available from: <https://doi.org/10.5588/pha.20.0081>.
14. Gupta P, Anjum F, Bhardwaj P, Srivastav J, Zaidi ZH. Knowledge about HIV/AIDS among secondary school students. *N Am J Med Sci*. 2013;5(2):119. Available from: <https://doi.org/10.4103/1947-2714.107531>.
15. Reza MM, Rana MM, Khan AKM, Sarker MN, Chowdhury S, Uddin MZ, et al. Prevalence of HIV, risk behaviours, and vulnerabilities of female sex partners of the HIV positive people who inject drugs (PWID) in Dhaka city, Bangladesh. *PLoS One*. 2023;18(6):e0286673. Available from: <https://doi.org/10.1371/journal.pone.0286673>.
16. Boadu R, Darko G, Nortey P. Assessing the sensitivity and specificity of the first response HIV-1-2 test kit with whole blood and serum samples: A cross-sectional study. *AIDS Res Ther*. 2016;13:9. Available from: <https://doi.org/10.1186/s12981-016-0092-0>.
17. Fearon M. The laboratory diagnosis of HIV infections. *Can J Infect Dis Med Microbiol*. 2005;16(1):26. Available from: <https://doi.org/10.1155/2005/515063>.
18. Marcus JL, Chao CR, Leyden WA, Xu L, Klein DB, Towner WJ, et al. Narrowing the gap in life expectancy between HIV-infected and HIV-uninfected individuals with access to care. *J Acquir Immune Defic Syndr*. 2016;73(1):39. Available from: <https://doi.org/10.1097/QAI.0000000000001014>.
19. Ma J, Liu J, Wei S, Hou M, Zhao Q, Hau Y. Drug resistance and genetic transmission characteristics of HIV-1 CRF55\_01B in people living with HIV/AIDS (PLWHA) in Henan Province, China. *Retrovirology*. 2025;22:9. Available from: <https://doi.org/10.1186/s12977-025-00665-2>.
20. Alhasawi A, Grover SB, Sadek A, Ashoor I, Alkhabbaz I, Almasri S. Assessing HIV/AIDS knowledge, awareness, and attitudes among senior high school students in Kuwait. *Med Princ Pract*. 2019;28(5):470. Available from: <https://doi.org/10.1159/000500307>.
21. Sarma H, Oliveras E. Implementing HIV/AIDS education: Impact of teachers' training on HIV/AIDS education in Bangladesh. *J Health Popul Nutr*. 2013;31(1):20–7. doi: 10.3329/jhpn.v31i1.14745.
22. Srivastava S, Chauhan S, Patel R, Kumar P. A study of awareness on HIV/AIDS among adolescents: A Longitudinal Study on UDAYA data. *Sci Rep*. 2021;11:22841. Available from: <https://doi.org/10.1038/s41598-021-02090-9>.
23. Dijkstra M, Peay HL, Rokx C, Verbon A, Reiss P, Prins JM, et al. Perceptions of HIV cure and willingness to participate in HIV cure-related trials among people enrolled in the Netherlands cohort study on acute HIV infection. *J Virus Erad*. 2022;8(2):100072. doi: 10.1016/j.jve.2022.100072.
24. Mishra S, Guleri SK. A cross-sectional study was conducted to assess knowledge and awareness regarding HIV/AIDS among attendees of the integrated counselling and testing centre at Sagar, Madhya Pradesh. *Int J Community Med Public Health*. 2019;6(9):3798–803. doi: 10.18203/2394-6040.ijcmph20193973.
25. Siddique AB, Maruf MFI, Sakib MR, Hasan M, Hossain M, Paul DG, et al. Assessment of knowledge, attitudes, and prevention practices regarding HIV/AIDS among urban slum dwellers in Bangladesh: an interview-based study. *BMC Public Health*. 2025;25:775. Available from: <https://doi.org/10.1186/s12889-025-21990-3>.
26. Knight L, Schatz E. Social support for improved ART adherence and retention in care among older people living with HIV in urban South Africa: a complex balance between disclosure and stigma. *Int J Environ Res Public Health*. 2021;19(18):11473. Available from: <https://doi.org/10.3390/ijerph191811473>.
27. Moghli FA, Habeesh SA, Shikha LA. Perception of HIV/AIDS education at the community level in Jordan. *Iran J Public Health*. 2017;46(3):301. Available from: <https://pmc.ncbi.nlm.nih.gov/articles/PMC5395525>.
28. Nubed CK, Kihla AFT. Knowledge, attitudes, and practices regarding HIV/AIDS among senior secondary school students in Fako Division, South West Region, Cameroon. *BMC Public Health*. 2016;16(1):847. doi: 10.1186/s12889-016-3516-9.
29. Swinkels HM, Justiz VAA, Nguyen AD. HIV and AIDS. StatPearls Publishing; 2022. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK534860>.
30. Akankunda S, Najjuma JN, Tayebwa S, Byamugisha B, Ariho S, Bahati R. The role of mass media campaigns in improving adherence to antiretroviral therapy among adolescents living with HIV in Southwestern Uganda. *HIV AIDS (Auckl)*. 2022;14:397. Available from: <https://doi.org/10.2147/HIV.S375789>.
31. Sajadi HS, Ghadirian L, Sayarifard A, Rajabi F, Nazari M, Rostamigoozan N, et al. Improving NGOs' participation in implementing HIV preventive interventions: a case of adolescents with high-risk behaviors in Iran. *BMC Public Health*. 2025;25:520. Available from: <https://doi.org/10.1186/s12889-025-21509-w>.
32. Custer B, Quiner C, Haaland R, Martin A, Stone M, Reik R, et al. HIV antiretroviral therapy and prevention use in US blood donors: a new blood safety concern. *Blood*. 2020;136(11):1351. Available from: <https://doi.org/10.1182/blood.2020006890>.
33. Karim MA, Faruk MO, Rana MS. Factors influencing the awareness of HIV/AIDS among ever-married women in Bangladesh. *Chittagong Univ J Sci*. 2021;43(1):93–112. doi: 10.3329/cuj.s.v43i1.57338.