



HUMAN IMMUNODEFICIENCY VIRUS KNOWLEDGE, STATUS AWARENESS, AND ASSOCIATED FACTORS AMONG YOUNG PEOPLE IN IBADAN, NIGERIA

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Abstract:

Introduction: Worldwide, young people account for the highest proportion of new Human Immunodeficiency Virus (HIV) infections, yet the uptake of testing and status awareness among this cohort is suboptimal. The lifestyles of students on university campuses put them at risk of contracting HIV, and the spread of HIV among the reproductive age is a major health concern in Nigeria. **Aim of the study:** The study aims to assess knowledge of HIV/ Acquired Immune Deficiency Syndrome (AIDS), HIV status awareness, and associated factors among undergraduates of selected tertiary institutions in Ibadan. **Methodology:** The study adopted a descriptive cross-sectional research design in which three hundred and fifty-six (356) students were randomly selected for the study. A self-administered questionnaire was used for data collection among undergraduates of selected tertiary institutions in Ibadan. Data were analyzed using SPSS, including frequency, percentage, and chi-square test, at a 0.05 significance level. **Results:** This study showed that 78% of the participants have good knowledge of HIV/AIDS, only 42.7% of them were aware of their HIV status, and 74.7 % of them have never been tested. This study revealed that 82% of the participants perceived themselves to be at low risk for HIV, resulting in reduced motivation to seek HIV testing. There was a significant association between the age and gender of the respondents and HIV status awareness ($p=0.000$; $p=0.010$). There was also a significant association between their knowledge of HIV/AIDS and their status awareness ($p=0.003$). **Conclusion:** Many young people know

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about HIV/AIDS, however, the majority of them have never been tested. Hence, only a few are aware of their status. Therefore, there should be collaborative efforts between healthcare providers, educators, and policymakers to create supportive environments to improve access to HIV testing services.

Keywords: HIV/AIDS, knowledge, status, awareness, young people, Nigeria

1. Introduction

Human Immunodeficiency Virus (HIV) transmission is still a significant global public health issue, having claimed 40.4 million lives so far, with some countries reporting increasing trends in new infections when previously on the decline. It was estimated that 39.0 million people were living with HIV at the end of 2022, two-thirds of whom are in the WHO African Region¹. HIV-related causes claimed the lives of 630,000 individuals in 2022, while 1.3 million new cases were reported. HIV infection has become a manageable chronic health condition, enabling people to have healthy lives².

Globally, about 30% of new HIV infections in 2019 were among young people, with an estimated 3.4 million young people aged 15~24 years³. Individuals of all age groups and genders are susceptible to HIV infection but the prevalence is high among students because of their risk-taking behaviors such as unsafe sexual practices, sharing of needles and syringes with friends, and negligence towards preventive measures⁴.

The level of HIV testing uptake and status awareness among young people in Nigeria is low compared to countries like Kenya, Zambia, and South Africa. It is estimated that only 38% of people living with HIV (PLWHIV) are aware of their status in Nigeria, which has harmful consequences for new infections, treatment outcomes, and cost of care⁵.

Globally, 85% of all people living with HIV knew their HIV status while about 5.9 million did not know that they were living with HIV in 2021¹. Knowledge has been highlighted as a critical factor influencing the use of services using health behavioral theories, like the Health Belief Model. Thus, knowledge of HIV is associated with increased odds of uptake of HIV testing and status awareness. This research work among undergraduates seeks to understand their knowledge of HIV, assess their perception of HIV, awareness of their status and associated factors.

2. Literature Review

2.1 Prevalence of HIV

According to UNAIDS, 2023⁶, about 39 million people across the globe live with HIV/AIDS in 2022. Of these, 37.5 million were adults (15 years or older), and 1.5 million were children (0-14 years). 53% of all people living with HIV were women and girls. In West and Central Africa, 4.8 million (4.2 million - 5.5 million) people live with HIV in year 2022 and 120 000 AIDs related deaths were recorded (UNAIDS, 2023). 39 million

[33.1 million–45.7 million] people globally were living with HIV in 2022. 630 000 [480 000–880 000] people died from AIDS-related illnesses in 2022. 29.8 million people were accessing antiretroviral therapy in 2022. 85.6 million [64.8 million–113.0 million] people have become infected with HIV, and 40.4 million [32.9 million–51.3 million] people have died from AIDS-related illnesses since the start of the epidemic.

Nigeria has the fourth-largest burden of HIV globally, with an estimated 1.9 million people living with HIV. In Nigeria, it is a mixed epidemic, with a relatively low HIV prevalence of 1.4% among the adult general population but higher estimated prevalence among key populations: 15.5% among female sex workers, 25% among men who have sex with men, and 10.9% among people who inject drugs⁷. The current national prevalence of HIV in Nigeria is 1.4%⁸. The HIV prevalence of adolescents in Nigeria is estimated to be 3.5%, the highest among countries in West and Central Africa⁹. AIDS is currently the number one cause of death among adolescents in Africa and the second leading cause of adolescent deaths worldwide, with sub-Saharan Africa having the highest number of deaths.

2.2 Level of HIV Status Awareness

Low HIV status awareness among university students is a major challenge to HIV prevention and care efforts. Undergraduates who are unaware of their HIV status are more likely to transmit HIV to and to develop other serious AIDS-related illnesses. The prevalence of HIV status awareness among students and young persons is a topic of great importance in the field of public health. According to a study conducted in Lagos, only 47.5% of young people aged 18-35 years had ever been tested for HIV, and only 38.5% knew their HIV status¹⁰. Another study conducted in Benue State found that only 32.4% of young people aged 15-24 years had ever been tested for HIV, and only 22.6% knew their HIV status¹¹. Despite the increase in awareness of HIV screening and testing, students and young persons remain unaware of their status⁴. According to existing literatures, the lack of knowledge about HIV transmission and prevention, age, gender, residence, HIV-related belief, fear of stigma and discrimination, and poor access to testing services are barriers to HIV status awareness among young persons¹². Other studies have highlighted the role of social norms, peer pressure, and gender inequality in shaping students' attitudes towards HIV testing and prevention.

3. Materials and Methods

3.1 Study Design

The research design adopted a cross-sectional knowledge of HIV, HIV status awareness, and associated factors among undergraduates at selected tertiary institutions in Ibadan.

3.2 Study Setting

The study was carried out in two tertiary institutions in Ibadan: the University of Ibadan and the Polytechnic, Ibadan. Both environments offer a narrowly focused lens through which the prevalence of HIV status awareness can be examined.

3.3 Study Population

The study population comprises randomly selected undergraduate students at the University of Ibadan and the Polytechnic of Ibadan. They were from three randomly selected faculties at the University of Ibadan and three faculties at the Polytechnic of Ibadan.

3.4 Sample Size Calculation

Table 1: Sample Size for Each Selected Department

S/N	Institutions	Faculties / Department	Population
1	University of Ibadan	Faculty of Technology / Industrial and Production Engineering	240
		Faculty of Arts / Communication and Language Arts	235
		Faculty of Science / Computer Science	230
2	Polytechnic of Ibadan	Faculty of Technology / Civil Engineering	365
		Faculty of Arts / Arts and Design	198
		Faculty of Science / Computer Science	342
	Total		1610

The sample size for this study was determined using (Yamane) sample size formula. A multistage sampling technique was used:

- **Stage 1:** Three Faculties were randomly selected from the sixteen faculties at the University of Ibadan and three faculties from the Polytechnic of Ibadan.
- **Stage 2:** Out of the three total randomly selected faculties, one department was selected from each of them.
- **Stage 3:** Questionnaires will be administered consecutively based on the availability of respondents from the selected departments.

3.5 Instrument for Data Collection

A self-administered questionnaire was used to obtain data for this study. The questionnaire was developed by modifying structured questions during the literature review. It has four sections:

- **Section A:** consists of questions used to elicit demographic features. Sections are 8 in total: age, sex, marital status, institution of study, faculty of study, ethnicity, level of study, religion and ethnicity.
- **Section B:** consists of questions used to assess the level of knowledge of participants regarding HIV/AIDS, with 10 questions with true, false, and I don't know as options.

- **Section C:** consists of questions used to assess HIV status awareness among undergraduates.
- **Section D:** consists of questions used to identify factors that influence HIV status awareness among undergraduates, such as fear of stigmatization, perceived psychological burden, with 9 questions with yes and no as options.

3.6 Ethical Consideration

Ethical approval was obtained from the UI/UCH ethical committee before the commencement of the research. Informed consent was signed by all participants with the assurance of anonymity and confidentiality of all information provided by the respondents. All ethical principles were ensured and maintained all throughout the research study.

3.7 Method of Analysis

Data collected was analyzed using Statistical Package for Social Sciences (SPSS) version 25. Descriptive statistics such as percentages, mean, and standard deviation were used to summarize and present the results. Chi-square was used to investigate the relationship between: religion and willingness to undergo HPV screening and vaccination, course of study and perceived benefits of HPV screening and vaccination, and perceived benefits and uptake of HPV screening and vaccination, while a regression analysis was used to test for any significant prediction between ethnicity and willingness to undergo screening and vaccination at 0.05 level of significance.

4. Results and Discussions

Table 2 shows that the majority of the participants (50.8%) were between 16 and 20 years old, followed by those aged 21 to 25 years (31.2%). In terms of gender, there was a relatively even distribution, with 47.5% of the participants being male and 52.5% being female. The marital status of the participants revealed that an overwhelming majority (82.0%) were single, while 14.3% were engaged, in courtship or dating. The data was collected from two tertiary institutions in Ibadan, with 43.5% of the participants from the University of Ibadan and 56.5% from the Polytechnic of Ibadan. Regarding the faculties of study, the participants were distributed across Arts (27.0%), Science (35.7%), and Technology (37.6%). The level of study varied, with participants ranging from 100 level (9.0%) to 500 level (8.4%) in the university, as well as ND 1 (12.6%), ND 2 (7.3%), HND 1 (16.9%), and HND 2 (19.7%) in the polytechnic. In terms of religion, 57.3% of the participants were Christians, while 42.7% were Muslims. The ethnic distribution showed that the majority of the participants are Yoruba (61.2%).

Table 2: Socio Demographic Data of the Respondents

Variables	Frequency (n=356)	Percentages (%)
Age as at Last Birthday		
Below 16 years	6	1.7
16 – 20 years	181	50.8
21 – 25 years	111	31.2
26 – 30 years	48	13.5
31 – 35 years	6	1.7
36 years and above	4	1.1
Sex		
Male	169	47.5
Female	187	52.5
Marital Status		
Single	292	82.0
Married	13	3.7
Engaged/Courtship/Dating	51	14.3
Institution of Study		
University of Ibadan	155	43.5
Polytechnic of Ibadan	201	56.5
Faculty of Study		
Arts	96	27.0
Science	127	35.7
Technology	134	37.6
Level of Study		
100	32	9.0
200	33	9.3
300	19	5.3
400	41	11.5
500	30	8.4
ND 1	45	12.6
ND 2	26	7.3
HND 1	60	16.9
HND 2	70	19.7
Religion		
Islam	152	42.7
Christianity	204	57.3
Ethnicity		
Hausa	57	16.0
Igbo	81	22.8
Yoruba	218	61.2

Table 3 shows that a high percentage of students correctly identified that HIV stands for Human Immunodeficiency Virus (95.8%). Similarly, there was a strong recognition that HIV can be transmitted through activities such as unprotected sexual intercourse (96.3%), blood transfusion (93.5%), and sharing razor blades (93.3%). However, there were notable misconceptions among some students regarding transmission routes. For instance, a significant proportion believed that HIV could be transmitted through activities like sharing glassware (12.1%), sharing toilet seats (23.0%), and mosquito bites (20.8%), which

is inaccurate. When it comes to misconceptions about preventive methods, a considerable number of students were unaware that correct condom use during sex is an effective preventive measure (88.2%), and there was a lack of understanding regarding the lifelong nature of anti-retroviral therapy (ART), with 14.1% believing it is not necessary to take ART throughout the patient's life. Moreover, there were misunderstandings regarding the difference between HIV and AIDS, with 14.3% believing there is no difference between them and a smaller percentage (8.7%) erroneously thinking that AIDS is curable. On a positive note, a large majority correctly understood that HIV is a virus that can develop into AIDS (95.8%), that it attacks and destroys the immune system (93.8%), and that abstinence from sex is a good preventive measure (91.0%).

Table 3: Knowledge of HIV/AIDS (n=356)

Variables	True F (%)	False F (%)	I don't know F (%)	Mean $\pm$ SD
HIV stands for Human Immunodeficiency Virus	341 (95.8)	11 (3.1)	4 (1.1)	0.958 $\pm$ 0.198
HIV can be transmitted via:				
Sharing glassware with someone	43 (12.1)	258 (72.5)	55 (15.5)	0.963 $\pm$ 0.187
Having unprotected sexual intercourse	343 (96.3)	9 (2.5)	4 (1.1)	0.23 $\pm$ 0.422
Sharing toilet seats with an infected person	82 (23.0)	222 (62.4)	52 (14.6)	0.208 $\pm$ 0.406
Mosquito bite	74 (20.8)	223 (62.6)	59 (16.6)	0.935 $\pm$ 0.247
Blood transfusion	333 (93.5)	4 (1.1)	19 (5.3)	0.775 $\pm$ 0.418
Semen	276 (77.5)	21 (5.9)	59 (16.6)	0.775 $\pm$ 0.417
Vaginal fluids & rectal fluids	276 (77.5)	25 (7.0)	55 (15.5)	0.348 $\pm$ 0.476
Saliva, urine, sweat	124 (34.8)	164 (46.1)	68 (19.1)	0.73 $\pm$ 0.443
Breastfeeding	260 (73.0)	44 (12.4)	52 (14.6)	0.216 $\pm$ 0.412
Hugging and kissing with an infected person	77 (21.6)	216 (60.7)	63 (17.7)	0.933 $\pm$ 0.249
Sharing razor blades	332 (93.3)	8 (2.2)	16 (4.5)	0.129 $\pm$ 0.335
Sharing towel	46 (12.9)	239 (67.1)	71 (19.9)	0.351 $\pm$ 0.477
Mouth-to-mouth resuscitation	125 (35.1)	155 (43.5)	76 (21.3)	0.143 $\pm$ 0.35
There is no difference between HIV and AIDS	51 (14.3)	289 (81.2)	16 (4.5)	0.958 $\pm$ 0.198
HIV is a virus that replicates in the body and can develop to AIDS	341 (95.8)	4 (1.1)	11 (3.1)	0.938 $\pm$ 0.239

HIV attacks and destroys the immune system	334 (93.8)	10 (2.8)	12 (3.4)	0.91 ± 0.285
Abstinence from sex is a very good preventive method of HIV transmission	324 (91.0)	25 (7.0)	7 (2.0)	0.882 ± 0.322
Correct use of a condom during sex is a very good preventive method of HIV transmission	314 (88.2)	23 (6.5)	19 (5.3)	0.087 ± 0.282
AIDS is curable	31 (8.7)	286 (80.3)	39 (11.0)	0.826 ± 0.38
ART (anti-retroviral therapy) should be taken throughout the life of the patient	294 (82.6)	12 (3.4)	50 (14.1)	0.958 ± 0.198
Overall Mean ± SD	0.589 ± 0.345			

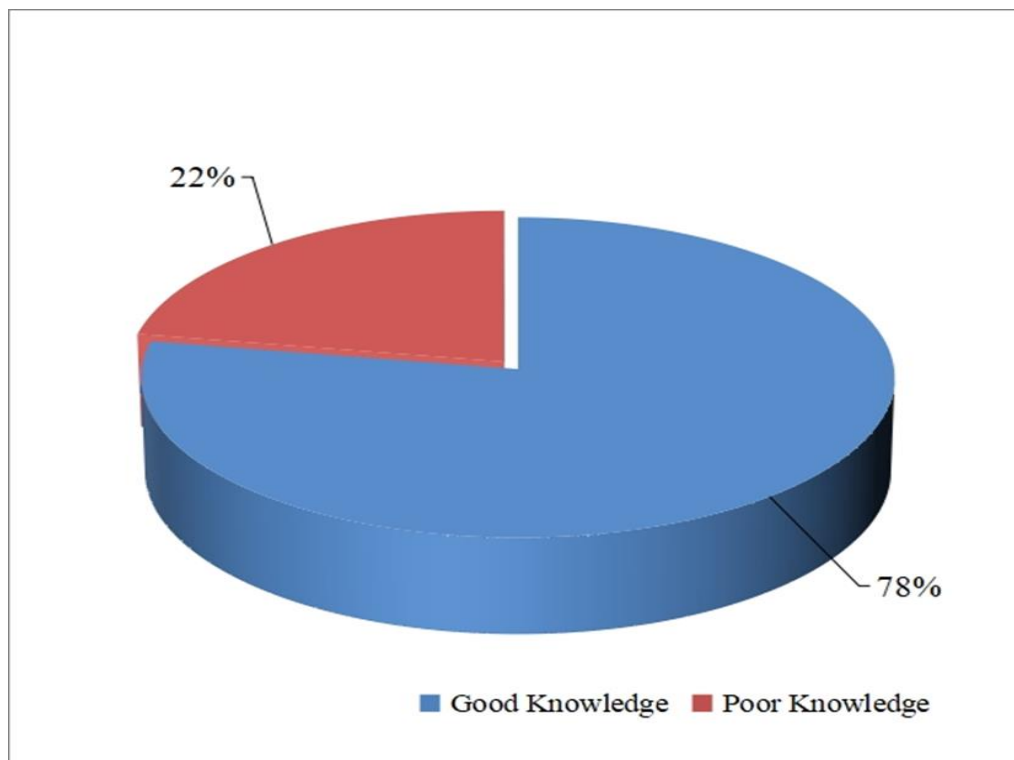


Figure 1: Level of Knowledge of HIV/AIDS

Figure 1 shows that the majority of the respondents (78.0%) had good knowledge of HIV/AIDS, while a smaller percentage (22.0%) had poor knowledge of HIV/AIDS.

Table 3 indicates the data on HIV status awareness among undergraduates. Regarding sexual behavior and HIV testing, 32.0% of students reported having a sexual partner, with the majority (78.9%) having only one partner. Despite this, only 25.3% of students had ever been tested for HIV, and among those who had been tested, 42.7% knew their current HIV status. Among those aware of their status, 43.4% had been tested within the past year. Motivations for testing varied, with routine check-ups (35.5%) and voluntary will (38.8%) being the most common reasons. Interestingly, a small percentage cited their partner's request (1.3%) or sexual activity (9.9%) as motivators. The majority of students who got tested did so at school health services (38.8%) or private laboratories (27.0%). Among students who had not been tested, the majority (94.1%) expressed

willingness to do so, indicating a positive attitude towards testing. However, despite this willingness, a significant portion of students (75.6%) reported that their partners did not know their HIV status. There was strong agreement (90.4%) among students that it is important to get tested for HIV at least once a year, highlighting awareness of the importance of regular testing. When asked about sources of information about HIV/AIDS, education programs (39.9%), social media (31.2%), and school health services (22.8%) were cited as the main sources. Additionally, the vast majority of students (87.4%) expressed their likelihood to recommend HIV testing to others in their institution, indicating a willingness to promote HIV awareness and testing among their peers.

Table 3: HIV Status Awareness among Undergraduates (n=356)

Variables	Frequency (n=356)	Percentage (%)
Do you have a sexual partner?		
Yes	114	32.0
No	242	68.0
If yes, please state the number of partners (n=114)		
1	90	78.9
Greater than 1	24	21.1
Have you ever been tested for HIV?		
Yes	90	25.3
No	266	74.7
Do you know your current HIV status?		
Yes	152	42.7
No	204	57.3
If you answered yes to the above question, when was your last HIV test? (n=152)		
Within the past year	66	43.4
More than 1 year ago	49	32.2
I don't remember	37	24.4
What motivated you to get tested for HIV? (n=152)		
Routine check-up	54	35.5
Voluntary will	59	38.8
Partner's request	2	1.3
Sexual activity	15	9.9
Healthcare professional recommendation	22	14.5
Where did you get tested for HIV? (n=152)		
School Health Service	59	38.8
Private clinic	31	20.4
Private laboratory	41	27.0
Community Outreach	21	13.8
If you answered "no" to the question above, are you willing to get tested for HIV? (n=204)		
Yes	192	94.1
No	12	5.9
Does your partner know their HIV status?		
Yes	87	24.4
No	269	75.6
It is important to get tested at least once in a year.		

Yes	322	90.4
No	34	9.5
What are the main sources of information about HIV/AIDS for young people in your institution?		
Education programs	142	39.9
School health services	81	22.8
Social media	111	31.2
Family/friends	22	5.1
I am likely to recommend HIV testing to young persons in my institution.		
Yes	311	87.4
No	32	9.0
I don't know	13	3.7

Table 4 illustrates the factors associated with HIV status awareness among undergraduate students. Fear appears to play a significant role in students' decisions regarding HIV testing, with a substantial proportion citing fear of a positive result (45.8%) and fear of stigmatization (50.3%) as factors influencing their awareness of HIV status. These fears may contribute to psychological burden (52.5%) and concerns about confidentiality (46.9%) regarding HIV testing. Attitudes of healthcare professionals also play a crucial role, with a majority of students (57.6%) indicating that positive attitudes from healthcare providers positively influence their HIV status awareness. Conversely, lack of access to testing facilities (43.0%), self-testing kits (61.8%), and affordability of testing services (43.5%) were cited as barriers to awareness. Moreover, a striking finding is that a significant percentage of students (82.0%) perceive themselves to be at low risk for HIV, which may lead to complacency and a reduced motivation to seek HIV testing.

Table 4: Factors Associated with HIV Status Awareness among Undergraduates (n=356)

Variables	Yes F (%)	No F (%)
Fear of positive result	163 (45.8)	193 (54.2)
Attitude of healthcare professionals	205 (57.6)	151 (42.4)
Fear of stigmatization	179 (50.3)	177 (49.7)
Perceived psychological burden	187 (52.5)	169 (47.4)
Threats to confidentiality	167 (46.9)	189 (53.1)
Lack of access to HIV testing facilities	153 (43.0)	203 (57.0)
Lack of access to self-testing kits	220 (61.8)	136 (38.2)
Lack of affordability of testing services	155 (43.5)	201 (56.5)
Perceived low risk for HIV	292 (82.0)	64 (18.0)

As shown in Table 5, fear of a positive HIV test result emerged as a significant predictor, with a coefficient of -0.92 and an odds ratio of 0.40, indicating that students who reported higher levels of fear regarding a positive result were less likely to be aware of their HIV status. Similarly, fear of stigmatization exhibited a significant negative association, as reflected by a coefficient of -1.20 and an odds ratio of 0.30. Conversely, a positive attitude towards healthcare professionals showed a significant positive association (coefficient = 0.75, odds ratio = 2.12), implying that students who perceived healthcare providers

positively were more likely to be aware of their HIV status. The analysis also revealed that threats to confidentiality (coefficient = -0.85, odds ratio = 0.43) and lack of access to HIV testing facilities (coefficient = 0.60, odds ratio = 1.82) were statistically significant predictors, albeit with smaller effect sizes compared to fear-related factors and healthcare attitudes. Perceived low risk for HIV, lack of access to self-testing kits, and lack of affordability of testing services did not demonstrate statistically significant associations with HIV status awareness among students in this study.

Table 5: Logistic Regression Output on the Factors
Associated with HIV Status Awareness among Undergraduates

Variable	Coefficient	Odds Ratio	p-value
Fear of positive result	-0.92	0.40	0.012
Attitude of healthcare professionals	0.75	2.12	0.032
Fear of stigmatization	-1.20	0.30	0.005
Perceived psychological burden	-0.50	0.61	0.125
Threats to confidentiality	-0.85	0.43	0.021
Lack of access to HIV testing facilities	0.60	1.82	0.078
Lack of access to self-testing kits	-0.35	0.70	0.245
Lack of affordability of testing services	-0.45	0.64	0.175
Perceived low risk for HIV	0.25	1.28	0.512

5. Hypotheses Testing

Hypothesis one (H₀₁): There is no significant association between the age and the gender of the respondent and HIV status awareness among undergraduates of selected tertiary institutions in Ibadan.

Table 6: Cross-tabulation of Age and Gender of respondents and HIV Status Awareness

Variables		HIV Status Awareness among Undergraduates of Selected Tertiary Institutions in Ibadan		X ² -value	p-value	Df
		Awareness	No Awareness			
Age of the Respondents	Below 16 years	2	4	0.226 ²	0.000	4
	16 – 20 years	56	125			
	21 – 25 years	34	77			
	26 – 30 years	15	33			
	31 – 35 years	2	4			
	36 years and above	1	3			
Gender of the Respondents	Male	52	117	0.410 ²	0.010	6
	Female	58	129			

Table 6 shows a chi-square test carried out to verify the hypothesis, which shows an X²-value of 0.226², a p-value of 0.000 for the age of the respondents and an X²-value of 0.410² and a p-value of 0.010. The conventional significance level adopted is 0.05, and since the p-value obtained is less than the significance level, hereby the null hypothesis is not

accepted. Hence, there is a significant association between the age and the gender of the respondent and HIV status awareness among undergraduates of selected tertiary institutions in Ibadan.

Hypothesis 2 (H₀₂): There is no significant association between the knowledge of HIV/AIDS and HIV status awareness among undergraduates of the selected tertiary institutions in Ibadan.

Table 7: Cross-tabulation of Knowledge of HIV/AIDS
and HIV status Awareness among young people in Ibadan

Variables		HIV Status Awareness		X ² -value	p-value	Df
		Awareness	No Awareness			
Knowledge of HIV/AIDS	Good knowledge	86	192	0.586 ²	0.003	4
	Poor knowledge	24	54			

Table 7 shows a chi-square test carried out to verify the hypothesis shows x-value of 0.586² and p-value of 0.003. The conventional significance level adopted is 0.05 and since the p-value obtained is less than the significance level, hereby the null hypothesis is not accepted. Hence, there is significant association between the knowledge of HIV/AIDS and the HIV status awareness among undergraduates of selected tertiary institutions in Ibadan.

5. Discussion of Findings

The majority of participants fell within the age range of 16 to 20 years, followed by those aged 21 to 25 years. The gender distribution among participants was relatively even. Research by Mandiwa et al.¹³ emphasizes the importance of gender-sensitive approaches in HIV education and prevention programs, highlighting how gender dynamics can influence knowledge acquisition and health-seeking behaviors. The overwhelming majority of participants were single, while a smaller proportion was engaged, in courtship, or dating. The level of study varied among participants, ranging from 100 level to 500 level in the university, as well as ND 1, ND 2, HND, and HND 2 in the polytechnic. Research by Mandiwa et al.¹³ underscores the significance of targeting interventions towards specific stages of academic development, recognizing the evolving needs and priorities of students as they progress through their studies. The majority of participants identified as Christians, with a significant minority identifying as Muslims. Additionally, the ethnic distribution showed that the majority of participants were Yoruba. Research by Ajayi et al.⁵ emphasizes the role of religious and cultural beliefs in shaping HIV-related attitudes and behaviors, with differences observed across religious and ethnic groups.

Findings from this study delved into the knowledge of HIV/AIDS among undergraduates of selected tertiary institutions in Ibadan. A high percentage of students correctly identified HIV as a Human Immunodeficiency Virus and recognized common transmission routes such as unprotected sexual intercourse, blood transfusion, and sharing razor blades. These findings align with studies by Mandiwa et al.¹³, which emphasize the importance of accurate knowledge about HIV transmission routes for effective prevention efforts. Despite the correct identification of some transmission routes, notable misconceptions existed among students, such as the belief that HIV could be transmitted through sharing glassware, sharing toilet seats, and mosquito bites. Also, a considerable number of students were unaware that correct condom use during sex is an effective preventive measure, and there was a lack of understanding regarding the lifelong nature of anti-retroviral therapy (ART), with very few of them believing it is not necessary to take ART throughout the patient's life. The study by Badru et al.⁹ emphasizes the detrimental effects of misconceptions on HIV prevention efforts and highlights the importance of addressing and dispelling HIV myths and misconceptions about its preventive methods through targeted educational campaigns to promote positive health behaviors among students.

Findings from this study delved into the level of HIV status awareness among undergraduates of selected tertiary institutions in Ibadan. A significant portion of students reported having a sexual partner, with the majority having only one partner. However, despite this, only a few of the students had ever been tested for HIV. Among those tested, almost half of them knew their current HIV status, with almost half of them having been tested within the past year. These findings suggest a gap between sexual activity and HIV testing uptake among students. Research by Ajayi et al.⁵ underscores the importance of regular HIV testing, particularly among sexually active individuals, to facilitate early detection and timely access to treatment. Motivations for HIV testing varied among students, with routine check-ups and voluntary will being the most common reasons. Interestingly, a small percentage cited their partner's request or sexual activity as motivators. These findings align with studies by Badru et al.⁹, which emphasize the multifaceted nature of motivations for HIV testing, including personal health concerns, relationship dynamics, and external influences. The majority of students who got tested did so at school health services or private laboratories. Research by Ajayi et al.⁵ emphasizes the importance of providing accessible and student-friendly testing services within educational settings to promote uptake and reduce barriers. Despite a significant portion of students expressing willingness to get tested, a considerable number reported that their partners did not know their HIV status. Additionally, the vast majority of students expressed their likelihood to recommend HIV testing to others in their institution, indicating a willingness to promote HIV awareness and testing among their peers. Research by Badru et al.⁹ emphasizes the role of peer education and social networks in disseminating accurate information and promoting positive health behaviours.

From this study, fear of a positive result and fear of stigmatization emerged as significant factors influencing students' awareness of HIV status. These fears may contribute to psychological burden and concerns about confidentiality regarding HIV testing. Attitudes of healthcare professionals emerged as a crucial factor influencing students' HIV status awareness, with a majority indicating that positive attitudes from healthcare providers positively influence their willingness to undergo HIV testing. Studies by Johnson et al.¹⁴ emphasize the role of healthcare provider attitudes and communication in shaping patient experiences and healthcare-seeking behaviours. Lack of access to testing facilities, self-testing kits, and affordability of testing services were cited as barriers to HIV status awareness among students. These barriers reflect structural challenges that hinder access to testing and contribute to disparities in testing uptake. A study conducted in a private sector among sexually active youths in Nigeria on the enablers and barriers to effective HIV self-testing underscores the importance of addressing barriers to HIV testing, including including stigma and discrimination, lack of awareness, limited access to testing kits, privacy concerns, cultural beliefs, and inadequate support systems¹⁵. A striking finding is that a significant percentage of students perceive themselves to be at low risk for HIV, which may lead to complacency and reduced motivation to seek HIV testing. This perception of low risk is concerning as it may contribute to delayed testing and missed opportunities for early detection and treatment. This is in congruent with the study of Adeniji et. al¹⁶ where adolescents and young adults perceived their risk of contracting HIV as very low which could be attributed to the impact of other variables that are either directly or indirectly related to their sexual conduct. Hence, it is essential to comprehend how HIV self-risk is perceived and evaluated in order to create interventions that effectively reduce transmission rates and enhance health outcomes for this susceptible population.

5.1 Recommendations

Based on the findings regarding the knowledge of HIV, HIV status awareness, and associated factors among undergraduates of selected tertiary institutions in Ibadan, it was recommended that healthcare providers, educators, policymakers, and community stakeholders should collaborate to develop comprehensive HIV prevention and care strategies.

6. Conclusion

The investigation into the knowledge of HIV, HIV status awareness, and associated factors among undergraduates of selected tertiary institutions in Ibadan reveals a mixed picture, with pockets of strong awareness and understanding alongside notable gaps and barriers that warrant attention.

Overall, the study underscores the importance of targeted educational interventions to address misconceptions, fears, and barriers surrounding HIV testing.

Conflict of Interest Statement

The authors declare no conflicts of interest.

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