Knowledge and Perception about Sexual Abstinence on HIV/AIDS Prevention among Undergraduates of a Tertiary Institution in South West Nigeria

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ABSTRACT

Background: *The world is far behind in preventing new HIV infections. Nigeria has the second largest HIV epidemic in the world and one of the highest rates of new infection in sub-Saharan Africa. Nigeria recorded 20,500 HIV/AIDS-related deaths, 48,000 new infections in the first two quarters of 2020 in which an astronomical increase to 100,000 is estimated. Factors attributed to the increasing HIV vulnerability among youths include lack of knowledge and appropriate sexual reproductive health services.*
Methods: *It is expedient to determine the perception about sexual abstinence and knowledge of HIV/AIDS prevention amongst the undergraduates. Quantitative research design and multistage sampling technique were used to select 257 respondents. Self-structured and validated questionnaire was used to collect the data while SPSS version 21 aided data analysis.*
Results: *The result showed a very high percentage of good perception of sexual abstinence (96.9%) and very high-level HIV/AIDS knowledge (98.8%). Hypothesis testing showed that there was a significant difference between the perception of respondents about sexual abstinence and their abstinence behaviours (0.001). Some of the undergraduates practice risky sexual behaviours and the factors indicated to influence their behaviours were sex education, exposure in school, media; internet, television or literatures, peer pressure; sexual communication with friends, religious beliefs and value, drugs and/ or alcohol. Others included their perception of susceptibility to HIV/AIDS, family members' supports, cultural norm and value, as well as the sexual communication with both parents.*
Conclusion: *There is the need for effective sexual health and HIV/AIDS awareness programme. Moreover, young women or females are more vulnerable to early sex debut and HIV/AIDS infection, therefore, efforts should be intensified on educating young females on the medical dangers of early sex debut and the practice of risky sex.*
Keywords: Sex Education, Abstinence, HIV/AIDS, Infections, Risky behaviour

INTRODUCTION

Many factors that increase HIV vulnerability among young people include a lack of knowledge and appropriate sexual reproductive health services. Reports from a 2017 National Health Survey showed that only 29% of women and 27.9% of men between the ages of 15 to 24 could correctly identify ways of preventing sexual transmission of HIV, and reject major myths around transmission.[1]

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Early sexual debut is common in Nigeria, with 15% of girls and 4% of boys having sex before they are 15 years old. A 2017 survey found that 41.2% of women between the ages of 15 and 24 had had a sexual partner ten or more years older than them in the last 12 months. This increases HIV risk among this group as often the virus is passed from older men to younger women.[1] Negative provider attitudes towards young people and their sexual activities, limited access to youth-friendly services, low awareness of HIV and fear of stigma as being are identified among key challenges preventing young people from taking up sexual health services.[2]

Nigeria has the second largest HIV epidemic in the world and one of the highest rates of new infection in sub-Saharan Africa.[3] Nigeria records 20,500 HIV/AIDS-related death, 48,000 new infections in the first two quarters of 2020 in which an astronomical increase to 100,000 is estimated.[4] Millions of lives and new infections have been saved by the scale-up of antiretroviral therapy. However, 690,000 people died of AIDS-related illnesses last year and 12.6 million of the 38 million people living with HIV were not accessing the life-saving treatment.[5]

The risk of acquiring HIV is 30 times higher for sex workers and 26 times higher among gay men and other men who have sex with men.[5] Unprotected heterosexual sex accounts for 80% of new HIV infections in Nigeria, with the majority of remaining HIV infections occurring in key affected populations such as sex workers.[2] One of the major success stories in changes is risk of sexual behavior and the resultant reduction of incidence of HIV in the African continent was Uganda, and their success has not been credited to use of condoms, but sexual abstinence.[6] This view is aligned with practices in many African communities, where tradition promotes the avoidance of premarital sex and childbearing by young people. As a way of encouraging and enforcing sexual abstinence, some South African communities practice virginity testing, to promote sexual abstinence among female adolescents, to prevent unwanted pregnancies and the spread of HIV/AIDS.[6] The acceptance of abstinence as a prevention method for pregnancy and STIs for adolescents depends on their perception of the concept, and since there are differences in young people's understanding of abstinence, there is a need to explore this perception among young people, hence this study. A 'life-cycle' approach to HIV prevention can help respond to the changing challenges people face at different ages.[7] In the midst of these struggles there is yet a lack of consensus on the success of abstinence-promoting programs in reducing risky sexual behaviors among young people.[8]

A previous study on predictors of primary and secondary sexual abstinence among never-married youths in urban poor Accra, in Ghana showed that being female, sexual communication with only fathers, sexual communication with only friends and slum residence were negatively associated with primary sexual abstinence.[9] Contrarily, being in school, attaching importance to religion, residing in a household that received social support and sexual communication with both parents were positively associated with primary abstinence. Research in sub-Saharan Africa shows that adolescents and youths in urban poor settings have an increased risk of initiating sexual intercourse early, having multiple sexual partners, experiencing unintended pregnancies and contracting sexually

transmitted infections.[9] Barriers to sexual abstinence include peer pressure, myths and wrong perceptions about sex, influence of drugs and alcohol and the influence of television. Based on how it is delivered, school-based sex education was viewed as both an enabler and barrier to sexual abstinence.[6] This study assessed the knowledge and perception of undergraduates on sexual abstinence in the prevention of HIV/AIDS.

METHODS

A descriptive survey was adopted to assess the knowledge, perception about sexual abstinence and knowledge of HIV/AIDS prevention amongst undergraduates of a private University in south west Nigeria.

Research Settings

The research was carried out in a University in Southwestern Nigeria, It is a Federal Government-Licensed, non-profit private university. The campus houses eight undergraduate colleges, a post graduate school, conference halls, a teaching hospital for medical and health sciences students as well as other auxiliary services. The undergraduates comprised male and female students from various cultural and religious backgrounds within and outside Nigeria.

Sample Size

The sample size of 234 was determined from a total 569 students in the three selected departments using Taro Yamane's formula. A 10% attrition was added to get 257. Thus, 257 copies of the questionnaire were administered to respondents during this study.

Sampling Technique

A multistage sampling technique was used to select 257 undergraduates attending in the University, in Nigeria.

First stage: A college was randomly selected out of the 8 colleges of the university that is the College of Medicine and Health Sciences

Second stage; Three departments were also randomly selected out of the 11 departments of the College of Medicine and Health Sciences in the University which are Department of Nursing Sciences, Department of Medical Laboratory Science, and Department of Public Health. The total number of students across the three departments was 569.

Third stage: Three levels were selected across the three departments selected in stage two. The calculated 257 samples were selected from 300level, 400level, and 500level of each selected department. Department of Nursing Sciences consisted of 254 students among the selected levels, department of Medical Laboratory Science consisted of 188 students and department of Public Health consisted of 25 students. The samples were distributed proportionally among the three departments.

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Proportion distribution across the department selected;

Nursing Science; $\frac{254}{467}\ x\ 257$ = 138.7 ~ 139samples

Medical Laboratory Science; $\frac{188}{467}\ x\ 257$ = 102.8 ~ 103samples

Public Health; $\frac{25}{467}\ x\ 257$ = 15.4 ~ 15samples

Instrument for Data Collection

The instrument for data collection was questionnaire which consisted of four sections: Section A consisted the socio-demographic data of the respondents, while Section B assessed respondents' knowledge level of HIV/AIDS prevention. Section C was designed to determine the perception of respondents about sexual abstinence and section D was made to determine the sexual abstinence behaviours and the factors influencing abstinence among the respondents.

The face and the content validities of the instruments were ensured by the researchers. Items in the questionnaire were closely examined by other colleagues who are experts to ensure they can measure the intended variables accurately. The researcher ensured reliability of the instruments by conducting a pre-test study and the data was analyzed with Cronbach alpha coefficient value of 0.75 which was considered as reliable. Necessary corrections were made before the questionnaire were finally administered.

Data Collection

Data were collected through administered questionnaires. Informed consent was sought and each participant was enlightened about the purpose of the study and the guideline for completing the questionnaire. The completed questionnaire was collected and collated.

Data Analysis

All the questionnaires administered were returned; thus bringing the response rate to 100%. The data were collected, cleaned and analyzed using descriptive statistics via SPSS version 21 and presented in tables and figures through frequency, charts and percentages which were interpreted and conclusions were drawn as appropriate. Hypotheses were tested using Pearson's Chi square at 0.05 level of significance.

Ethical Consideration

The researchers obtained a letter of approval to conduct the study from the Research and Ethics Committee of the institution. The researchers' respondents were given adequate information about the study. Confidentiality, consent and anonymity were strictly followed. Anonymity was emphasized by not recording the informants' names on the questionnaires. Respondents were under no coercion and allowed to withdraw from the study at any point in time, without fear of coercion whatsoever.

RESULTS

Socio-demographic profile of respondents

Results showed that (50.2%) of the respondents were within 18-20years, (44.4%) were 21-23 years of age while (5.4%) were 24 years and above. All 257 (100.0%) of the respondents were females. Also, (79.8%) were Christians while (45.1%) were Yoruba. Majority (96.6%) were unmarried.

Table 1: Socio-demographic Characteristics of Respondents

Socio-demographic Characteristics	Frequency	Percent
Age Group		
18–20 years	129	50.2
21–23 years	114	44.4
24 years and above	14	5.4
Religion		
Christians	205	79.8
Muslims	52	20.2
Ethnicity		
Yoruba	116	45.1
Others	141	54.9
Marital Status		
Unmarried	247	96.1
Married	9	3.9

Table 2 showed the frequency distribution of respondent's knowledge of HIV/AIDS, majority (92.2%) were aware while 57.2% heard about it from school. Also, 72.7% had right understanding of the cause of HIV/AIDS.

Table 2: Respondents' Knowledge of HIV/AIDS Prevention (n=257)

Variables and Responses	Frequency	Percent
Awareness of HIV/AIDS		
Aware	237	92.2
Not Aware	20	7.8
Source of awareness		
Mass media	45	17.5
School	147	57.2
Friends and Family	29	11.3
Religious institutions	8	3.1

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AIDS enlightenment campaign team	11	4.3
Internet	17	6.6
Right understanding of HIV/AIDS		
HIV/AIDS cause	178	72.7
HIV/AIDS early asymptomatic nature	245	96.5
Self-vulnerability to HIV/AIDS	81	35.2
Transmission of HIV/AIDS		
Not through kissing	187	72.8
Sharing of needles and sharp instruments	252	98.1
Having unprotected sexual intercourse with an infected person	246	95.7
Not through eating with an infected person	242	94.2
Blood and blood products of an infected person	252	98.1
HIV/AIDS prevention		
The use of condom	236	91.8
Not through the use of drugs	191	74.3
Total sexual abstinence	219	85.2
Not to stop eating with an infected person	236	91.8
Not sharing needle or equipment	245	95.3
Not through using of insecticide	251	97.7
Proper screening of blood and blood product before use	254	98.8
Not to stop playing or talking or touching an infected person	239	93.0
Not through immunization	219	85.2

Table 3 showed that majority (77.4%) of the respondents strongly agreed that sexual abstinence is the decision not to have sexual intercourse while 70.8% strongly agreed that abstinence from sex is one of the effective ways to prevent sexually transmitted diseases.

Table 3: Respondents' perception about sexual abstinence

Variables	**SA**	**A**	**U**	**D**	**SD**
Sexual abstinence is the decision not to have sexual intercourse	199 (77.4)	53 (20.6)	5 (1.9)	0 (0.0)	0 (0.0)
Abstaining include not having sexual intercourse through oral penetration and anal penetration	149 (58.0)	71 (27.6)	18 (7.0)	14 (5.4)	5 (1.9)
Abstinence from sex is one of the effective ways to prevent sexual transmitted diseases	182 (70.8)	58 (22.6)	5 (1.9)	6 (2.3)	6 (2.3)
Abstinence include not having sexual intercourse through the vaginal also	144 (56.0)	73 (28.4)	17 (6.6)	12 (4.7)	11 (4.3)
Sexual abstinence help to focus on other things in life that are more important e.g education and career	115 (44.7)	66 (25.7)	28 (10.9)	23 (8.9)	25 (9.7)

Abstinence can be a way to avoid unwanted pregnancy	186 (72.4)	66 (25.7)	5 (1.9)	0 (0.0)	0 (0.0)
Sexual abstinence promoting programs are effective in reducing the risk that arise with unsafe sex	124 (48.2)	91 (35.4)	33 (12.8)	9 (3.5)	0 (0.0)
Sexual abstinence is not the best option for young people that are sexually active	40 (15.6)	65 (25.3)	59 (23.0)	60 (23.3)	33 (12.8)
Sexual abstinence helps to provide healthy lifestyle	131 (51.0)	76 (29.6)	26 (10.1)	22 (8.6)	2 (0.8)

SA=Strongly Agree, A= Agree, U=Undecided, D=Disagree, Strongly Disagree

Table 4 showed that 63.8% of the respondents never had sexual intercourse before, 36.2% had had while 50.5% of the those that had had sexual intercourse indicated engaging in it many times. Majority 68.8% of them used condom during sexual intercourse while 28.0% said they do not.

Table 4: Respondents' sexual abstinence behaviours

Variables and Responses	Frequency	Percent
Sexual intercourse engagement		
Had engaged in sexual intercourse	93	36.2
Never engaged in sexual intercourse	164	63.8
Total	**257**	**100.0**
Number of sexual intercourses had so far		
Once	3	3.2
Few times	34	36.6
Many times	47	50.5
Declined response	9	9.7
Total	**93**	**100.0**
Age of first sexual intercourse engagement		
13 - 17 years	30	32.2
18 – 21 years	54	58.1
Declined response	9	9.7
Total	**93**	**100.0**
Numbers of sexual of partners		
One	53	57.0
Two	10	10.7
Three and more	24	25.8
Declined response	6	6.5
Total	**93**	**100.0**
Condom use during intercourse		
Used condoms	64	68.8
Did not use condoms	26	28.0
Declined response	3	3.2
Total	**93**	**100.0**

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The figure below showed that 25.6% of those that never engaged in sexual intercourse said they never did because it is not yet time, 19.5% said they never did because of their personal beliefs and decisions.

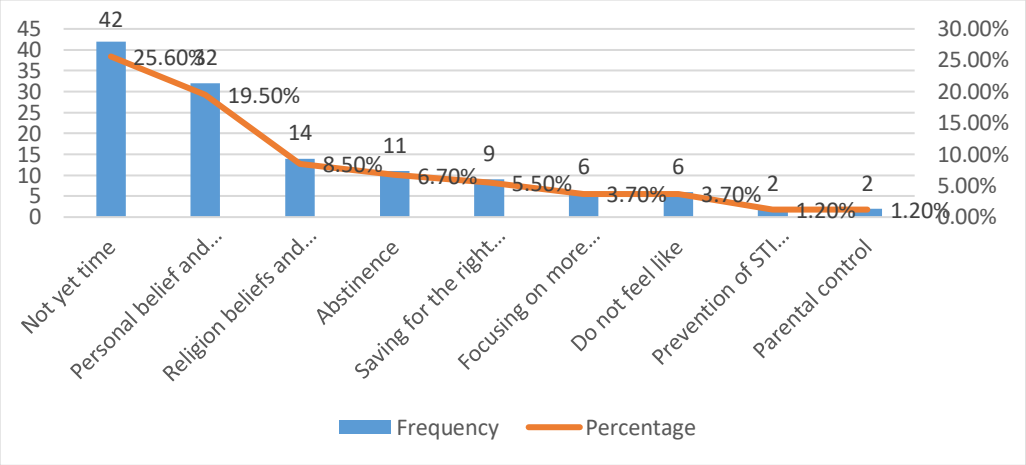

Figure 1: Reasons for not engaging in sexual intercourse among the respondents

Table 5 showed that 26.1% identified sex education as a factor that influenced their sexual behavior while 20.6% identified exposure in school and 19.8% identified media; internet, television or literatures as factors that influence sexual behavior.

Table 5: Factors influencing sexual behaviour among the respondents

Factors identified	Frequency	Percent
Drugs and or Alcohol	35	13.6
Media; internet, television or literatures	51	19.8
Peer pressure; sexual communication with friends	41	16.0
Sexual communication with both parents	22	8.6
Family members' supports	30	11.7
Exposure in school	53	20.6
Religion belief and value	39	15.2
Cultural norm and value	29	11.3
Sex education	67	26.1
Perception of susceptibility to HIV/AIDS	34	13.2
Unwanted pregnancy	1	0.4
Handsome guys	1	0.4

Table 6 shows that there was a significant association between the perception of respondents about sexual abstinence and their abstinence behaviours as p-value = 0.001; that is <0.05).

Table 6: Association between the perception of respondents about sexual abstinence and their abstinence behaviours

Perception level	**Sexual abstinence behaviours**			**Pearson chi-square (X^2)**	**df**	**p-value**
	Had Sex	Abstained	Total			
Bad	6 (6.5%)	2 (1.2%)	8 (3.1%)	27.325	2	0.001*
Good	84 (90.3%)	116 (70.7%)	200 (77.8%)			
Very good	3 (3.2%)	46 (28.0%)	49 (19.1%)			
Total	93 (100.0%)	164 (100.0%)	257 (100.0%)			

**=Significant relationship (p Value <0.05)*

DISCUSSION

The results presented revealed that many of the undergraduates of the university were in their late teen and early twenties as majority were between the age range of 18-21years, this indicates that most of the undergraduates were sexually active as indicated in the study findings, as majority of them that had had sex began at age 16, 18 and 19 years, therefore they are much more vulnerable to HIV/AIDS if proper prevention are not known to them and done. According to NBS and UNICEF[1] early sexual debut is common in Nigeria, with 15% of girls and 4% of boys having sex before they are 15 years old. All the respondents were females, this is because majority of the target population were females. Nursing students accounted for more than half of the respondents. They, together with Medical Lab Science and Public Health students are majorly females. Women and girls in sub-Saharan Africa continue to be the most affected and accounted for 59% of all new HIV infections in the region in 2019, with 4500 adolescent girls and young women between 15 and 24 years old becoming infected with HIV every week. Young women accounted for 24% of new HIV infections in 2019, despite making up only 10% of the population in sub-Saharan Africa.[5] Majority of the respondents were Christians showing that the area of study is predominated by Christians, Yorubas being the highest ethnic group in the community. Almost all the respondents were single. The practices/traditions in many African communities promote the avoidance of premarital sex and childbearing by young people. As a way of encouraging and enforcing sexual abstinence, some African

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communities including Nigerian communities practice virginity testing, to promote sexual abstinence among female adolescents, to prevent unwanted pregnancies and the spread of HIV/AIDS.[6]

From the testing of hypothesis 1 it was found that there are no significant differences between socio-demographic variables of respondents and their perception about sexual abstinence with p-values > 0.05,

Findings shows that majority, 57.2% of the students had good knowledge of HIV/AIDS prevention. This is similar to a study conducted by Ugwu et al.,[10] a study on knowledge, perception and practice of preventive lifestyle against HIV/AIDS among students of a tertiary educational institution in South Eastern Nigeria which found out that the respondents' knowledge of the routes of transmission and modes of prevention of HIV infection was high, although in contrast to the result of another recent study which showed poor knowledge.[11]

In this present study, almost all respondents 92.2% were aware of HIV/AIDS in which more than half heard about HIV/AIDS from school, and others through mass media, from friends and family, the internet, AIDS enlightenment campaign team, and from religious institutions. Also, 72.7% of the respondents had right understanding of the cause of HIV/AIDS while 96.5% knew the early asymptomatic nature of HIV/AIDS, 35.2% knew self-vulnerability to HIV/AIDS. Majority perfectly knew how HIV/AIDS could be transmitted, through sharing of needles and sharp instruments, having unprotected sexual intercourse with an infected person, and through the blood and blood products of an infected person. These findings are in agreement with a previous study, where most students knew that HIV is transmitted by sharing a needle to inject drugs with HIV positive, sexual intercourse, and having vaginal sex and anal sex without use of condoms.[12] Another previous cross-sectional study conducted among university students reported that about 98.1% of the female students and 96.4% of the male students knew that the virus could be passed on through unprotected sex, about 90.9% knew that a person could have HIV and pass it on to others without showing symptoms.[13]

Majority of the respondents knew how it can be prevented, through the use of condoms, total sexual abstinence, not sharing needle or equipment, and proper screening of blood and blood product before use. There were, however, misconceptions among some of the participants that use of drugs 25.7%, isolation from infected persons 8.2%, use of insecticide 2.3% and immunization 14.8% are preventive measures. Similar misconceptions about HIV/AIDS were reported in a study conducted by Talwar and Rahman.[14] However, these findings are in contrast to the reports from a 2017 National Health Survey which showed that only 29% of women and 27.9% of men between the ages of 15 to 24 could correctly identify ways of preventing sexual transmission of HIV, and reject major myths around transmission.[15]

Perception of undergraduates about sexual abstinence

More than 75% of participants had good perception about sexual abstinence; 19.1% had very good perception, 3.1% had bad perception. Majority agreed that sexual abstinence is the decision not to have sexual intercourse, and that abstaining include not having sexual intercourse through oral penetration and anal penetration. Almost all agreed that abstinence from sex is one of the effective ways to prevent sexual transmitted diseases, that it is a way to avoid unwanted pregnancy and helps to provide healthy lifestyle. More than half agreed that sexual abstinence helps to focus on other things in life that are more important e.g. education and career, whereas, 18.6% disagreed. A mammoth also agreed that sexual abstinence promoting programs are effective in reducing the risks that arise from unsafe sex. There was controversial perception/acceptance on whether sexual abstinence is or not the best option for young people that are sexually active among the participants, as less than half 40.9% accepted it to be the best option for young people, 36.1% disagreed, and 23.0% were undecided. This same conflict occurred among some studies as the former opined that not having sex is the best way to prevent getting or transmitting HIV, the latter posited that there are many health benefits from pleasurable and safe sexual experiences, free of coercion, discrimination, and violence.[8, 16, 17] That instead of clamouring abstinence from sex, we should ensure that all people, young and old, can enjoy the benefits of positive approaches to sexual health, including sexual relationships safely and consensually by looking in to other effective, although not perfect options like comprehensive sexuality education, challenging harmful social norms, the empowerment of young people, and access to condoms and other contraceptives.

The factors that were identified by the undergraduates for their sexual behaviors were sex education, exposure in school, media; internet, television or literatures, peer pressure; sexual communication with friends, religious belief and value, drugs and or alcohol, their perception of susceptibility to HIV/AIDS, family members' supports, cultural norm and value, sexual communication with both parent (Table 4.8). These factors are similar to the ones reported in other recent studies. [6, 9] The participants that practiced total abstinence in this present study gave their several reasons for doing so as shown above. Some said that because it is not yet time, because of their personal beliefs and decisions, because of religious beliefs and values, saving it for the right person, focusing on more important things, do not feel like, to prevent STI and pregnancy, and because of parental control.

Also, out of the participants that perceived that their self-vulnerability to HIV/AIDS is low, 33.0% had had sexual intercourse before and all did more than once, close to half of them did so with multiple partners, and 34.5% did not make use of condoms during intercourse. These are all converse for those that perceived their self-vulnerability to HIV/AIDS is high as 81.2% make use of condom during intercourse. This was similarly

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noted by Ugwu et al.,[10] This means the young people practice abstinence and safer sex when they perceived high self-vulnerability to HIV/AIDS.

C**ONCLUSION**

As identified from the study result, a very high number of the undergraduates had good perception of sexual abstinence and very high level of HIV/AIDS knowledge. Despite those, some of the undergraduates practice risky sexual behaviours and the factors indicated to influence their behaviours were sex education, exposure in school, media; internet, television or literatures, peer pressure; sexual communication with friends, religion belief and value, drugs and or alcohol, their perception of susceptibility to HIV/AIDS, family members' supports, cultural norm and value, sexual communication with both parents.

Recommendations

Based on the results of the findings in this study, the following recommendations were made:

1. The government should provide resources and motivate Public Health Nurses, Nurse Midwives, Community Health Officers and Village Health Volunteers to effectively carry out sexual health and HIV/AIDS awareness programs.
2. Sexual and reproductive health services should be made available, accessible and affordable to the youth by the government.
3. Government should provide human and financial resources towards improving reproductive health services which will not only improve the health and wellbeing of members of the community, but will also reduce the prevalence of sexual transmitted infections e.g. HIV/AIDS.
4. Counselling should be done in religious institutions to propagate the knowledge of HIV/AIDS and encourage sexual abstinence and the practice of safe sex.
5. Young women or females are the major victims of HIV/AIDS; therefore, nurses should focus more on educating young females on the medical dangers of early sex debut and the practice of risky sex.
6. Health workers should be more welcoming and avoid judgmental attitudes towards young adults who seek their services.
7. The young adults should abstain from premarital sex and pass the knowledge of the danger of unsafe or risky sex practices to their colleagues or peers.

Competing interests

The authors declared that they have no competing interests.

Authors' contributions

RIF and OO both conceived the research idea and designed the research. OO collected data. Both authors undertook data analysis while RIF drafted the manuscript. All the authors approved the manuscript.

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