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Attitude, Sexual Behaviour and Risk Perception to Sexually Transmitted Infections Including HIV/AIDS among Students of University of Abuja, Nigeria

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Authors' contributions

Author ME designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Author AHA managed the literature searches. All authors read and approved the final manuscript.

Original Research Article

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ABSTRACT

Aims: Adolescents and young adults engage in risky sexual behaviors that may expose them to risk of contracting sexual transmitted diseases. The aim of this study is to assess the attitude, sexual practices and risk perception to STIs including HIV/AIDS among students of the University of Abuja by determining their level of utilization of available protective measures and the impact of their risk perception on their sexual behavior.

Study Design: Descriptive cross-sectional study of non medical undergraduate students.

Place and Duration of Study: University of Abuja, Nigeria. Between September, 2012 and February, 2013

Methodology: Stratified random sampling method was used in the administration of a detailed semi structured questionnaire which identified socio-demographic characteristics, knowledge of STIs including HIV/AIDS, sexual practices and risk perception of the students. Data obtained were analysed using descriptive statistics and chi square technique.

Results: A total of 356 out of 405 questionnaires completed (87.7%) were analysed. Mean age at sexual debut was 17.7±3.6years. Students showed average/high level of knowledge

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of STIs (87.4%) and HIV/AIDS (91%). More men (35.1%) used condom at their last sex than women (28%). More men had sexual partners (23.1%) than women (14.3%). 2.3% perceived their risk to be high, 44.7% perceived their risks to be low and 41.6% perceived no risk at all. Of those who perceived low and no risk, only 28.7% and 10.1% use condom regularly and occasionally respectively. The chi square analyses shows that there were no significant relationships between knowledge of HIV/AIDS and condom use ($\chi^2=15.5$); between gender and condom use ($\chi^2=9.49$); and between gender and having multiple sex partners ($\chi^2=9.49$). However there is significant relationship between perception of risk of contracting HIV/AIDS and condom use ($\chi^2=21.02$) at $P=.05$.

Conclusion: the study found a low condom use rate, irrespective of the reported high level when engaging in high risk sex. The sensitization of the students regarding STI including HIV/AIDS should therefore prioritize its goals and objectives more at targeting behaviour change rather than just giving out information alone.

Keywords: Attitude; behaviour; risk perception; Condom use; STIs; HIV/AIDS.

1. INTRODUCTION

The University years are, for many individuals, a time of curiosity and experimentation. It is often one's first taste of freedom and independence, leaving increased opportunity to make personal choices. The majority of students in tertiary institutions are single, young adults who exhibit a lot of youthful exuberance. This, with the liberal nature of campus life predisposes them to high risk sexual behaviour. It is for reasons such as this, that this age group is at an increased risk of becoming infected with STIs and HIV. In addition, peer pressure, lack of life experience, lack of knowledge, early sexual debut, multiple sexual partners, alcohol and drug use add to the risk of contracting these diseases [1,2].

Sexual activity among unmarried adolescents in Nigeria is high and rising [3]. Despite the growing associated problems of premarital sex such as STIs and HIV/AIDS, teenage pregnancy and illegal abortion, majority of sexual intercourse among adolescents are unprotected. Studies across the globe, Africa and Nigeria have recorded increasing incidence of sexually transmitted infections associated with increasing sexual activity among adolescents [4,5,1,6].

Knowledge and attitude towards STIs including HIV/AIDS may help predict sexual behavior in relation to the use of protective measures in engaging in any sexual activity among undergraduate [7]. Many undergraduates, who commence sexual relations, do not take protective measures to avoid infection, thereby exposing themselves to the risk of infection with HIV/AIDS. Reports reveal that protective behavior among young adults in Nigeria is poor. Many young adolescents do not perceive their behavior or that of their sexual partners to be risky, and this lack of risk perception is more challenging when the negative outcomes are not immediately obvious [8].

Risky sexual behaviour include having multiple sexual partners, frequently changing partners, engaging obvious risky partners (such as commercial sex workers), not using any protective measure, especially not using condoms and early sex initiation among others [4,2,8]. Perhaps, for these reasons, increasing numbers of Nigerian adolescents are being infected with HIV and other STIs.

Many studies have confirmed that undergraduates in different parts of Nigeria have high level of awareness about STIs and HIV/AIDS [7,9,10]. However, the impact of these knowledge in motivating healthy sexual behavior remains uncertain. Studies of the influence of STIs including HIV/ AIDS awareness and risk perception on condom use have reported mixed results. While some literatures suggest that individuals' knowledge of STIs including HIV/AIDS transmission have positive impact on peoples risk perception and hence the adoption of safer sexual practices [6], others report that there is no association between them [5,3,1].

It is pertinent to invigorate activities targeted at curtailing the menace of poor knowledge, attitudes and behaviour to sexual issues among undergraduates, who represent the cesspool and repository of the future productive human resources. This study therefore, assessed the attitude and sexual behaviors of students of the University of Abuja concerning sexually transmitted infections (STIs) including HIV/AIDS; by assessing their sexual practices and attitudes about STIs including HIV/AIDS, determining their level of utilization of available protective measures and by the determination of the impact of their risk perception of STI including HIV/AIDS on their sexual behavior.

2. MATERIAL AND METHODS

2.1 Study Area

The study was carried out in the University of Abuja, located in Gwagwalada town, Federal Capital Territory (FCT) of Nigeria. Gwagwalada is one of the six Area Councils of the Federal Capital Territory located about 40kilometers away from the Federal Capital City, Abuja. Its location between latitude 8°55'N and 9°00'N and longitude 7°00'E and 7°00'E makes it to be centrally located within the FCT. Gwagwalada Area Council is bounded by Kuje Area Council to the East, Abaji Area Council to the West Kwali Area Council to the South and Abuja Municipal Area Council to the North East and Suleja Local Government of Niger State to the North [11]. The University of Abuja, located in Gwagwalada, is the major and largest tertiary educational institution in the Federal Capital Territory.

2.2 Study Population

As at the time of this study, the University had a population of Sixteen Thousand Two Hundred students in the ten faculties that exist in the school. The population for the study consisted of students of eight faculties of the University of Abuja.

2.3 Study Design and Period

This was a descriptive cross sectional study carried out on the non medical undergraduate students of the University of Abuja, Nigeria, for a period of six months.

2.4 Sample Size Determination

The minimum sample size was determined using the formula for single proportion:

$$n = \frac{Z^2 (P) (1 - P)}{E^2}$$

Based on the estimated awareness level of 80% [12], 95% confidence level (Z-score value: 1.96) and 5% precision level, the estimated minimum sample size was approximately 245 ($Z = 1.96$; $P = 0.8$; $E = 0.05$). However, 405 students were sampled giving a sampling fraction of 0.025 to allow for non-response [12,13].

2.5 Sampling Technique and Procedure

The sampling technique adopted was stratified random sampling method. Eight Faculties of the University of Abuja were randomly selected. These were: Faculties of Agriculture (1,850), Arts (2,550), Education (1,600), Management Sciences (3,650), Natural Science (1,490), Social Sciences (2,840), Law (1,280) and Veterinary Medicine (920). Samples were taken from each faculty as follows: Agriculture (46), Arts (64), Education (40), Management Sciences (91), Natural Sciences (37), Social Sciences (71), Law (32) and Veterinary Medicine (23). A total of 405 questionnaires were then administered in all the faculties. Random sampling was used to select departments and levels for administration of data instrument. The following departments were utilized: Agricultural Economics, English, History, Theatre Arts, Environmental Science Education, Social Studies, Public Administration, Accounting, Physics, Biological Sciences, Sociology, Political Science, Public and International Law and Veterinary Medicine. Medical students were excluded from the study because by virtue of their training, they have more knowledge of the subject matter and also to avoid any bias that could arise from such knowledge. Simple random sampling method was used to select participants.

2.6 Questionnaire

The questionnaire was self designed and based on the Adolescent AIDS knowledge scale by Zimet [14] and the request of knowledge about HIV/AIDS prevention for young people by the United Nations General Assembly Special Session [15]. The questionnaire is made up of twenty-seven semi structured questions which were grouped into 4 sections.

Section A: Socio- demographic characteristics of the respondents.

Section B: Knowledge about STIs including HIV/AIDS.

Section C: Sexual Practices and attitudes to STIs including HIV/AIDS

Section D: Prevention and Condom use

2.6.1 Pretesting of questionnaire

Pretesting of the questionnaire was carried out in Nasarawa State University Keffi, Nigeria, this was done in order to identify and correct errors in the questionnaire and also to ascertain the relevance, importance and adequacy of the questionnaires in collecting the required information from respondents. The questions and the answers were in English language. Eligible students were given an explanation about the purpose and objectives of the study before being asked for consent and to fill in the questionnaire. Twenty questionnaires were administered randomly to students of the University. This helped to ensure that the questions in the instrument were in line with the objectives of the study. The pre-testing was carried out by the researcher.

2.7 Data Collection

Students of the University of Abuja were the respondents. To administer the questionnaires, eight research assistants (one from each faculty) were employed. They were adequately trained and mobilized for the exercise. The research assistants were final year students of their respective faculties and they assisted in the administration and retrieval of the questionnaires from their various faculties.

2.8 Data Analysis

Data analysis was done using the SPSS software (version 13). Simple descriptive statistics (Frequency, percentages and mean) as well as chi square (χ^2) technique were adopted for the analysis. Cross tabulation of some of the socio demographic characteristics of the respondents, such as age and gender were made with their sexual behavior.

3. RESULTS AND DISCUSSION

A total of Four Hundred and Five (405) questionnaires were administered and Three Hundred and Sixty Seven (367) questionnaires were retrieved. Out of this number, eleven (11) questionnaires were rejected due to poor filling. The data analysis was therefore carried out with Three Hundred and Fifty Six (87.9%) questionnaires.

The socio demographic characteristics of the students as shown in Table 1 indicate that 44.6% of the respondents are below 30years of age. Among the students that indicated their sex, the males are over two and a half times more than the females. Nine out of every ten of the respondents are single. In terms of the academic year study they are almost evenly distributed.

3.1 Knowledge of STIs and HIV/AIDS

On the knowledge of the respondents about HIV/AIDS, the result reported high level of knowledge (91%) among the respondents. Few (1%) reported not having heard of the infection, while Eight percent (8%) did not respond. While on the knowledge of STIs, 87.4% indicated that they are aware of it, 7.8% are not aware and 4.8% did not respond. The respondents therefore have adequate knowledge of STIs and HIV/AIDS. This result was obtained in a similar study carried out simultaneously with this one on the same students [7]. This result is higher than that obtained in Historically Black Colleges and Universities which reported 82% knowledge of STIs and HIV/AIDS among the students [16]. It is however lower than those from a similar study in Wuhan, China, and in Abeokuta, Nigeria, which reported knowledge level of 99% and 98% respectively [17,9].

Table 1. Socio-Demographic Characteristics of the Student

Characteristics	Frequency	Percentage
Age		
<15	0	0
15 – 19	25	7
20 – 24	99	27.8
25 – 29	35	9.8
30 and above	7	2
No response	190	53.4
Total	356	100
Sex		
Male	251	70.5
Female	98	27.5
No response	7	2
Total	356	100
Religion		
Christianity	279	78.4
Islam	68	19.1
Traditional	4	1.1
No response	5	1.4
Total	356	100
Ethnic group		
Ibo	94	26.4
Hausa	27	7.6
Yoruba	88	24.7
Others	140	39.3
No response	7	2
Total	356	100
Marital Status		
Single	335	94.1
Married	16	4.5
Separated	2	0.6
Divorced	2	0.6
No response	1	0.3
Total	356	100
Year of study		
1 st	92	25.8
2 nd	101	28.4
3 rd	81	22.8
4 th	82	23.0
Total	356	100

3.2 Age at Sexual Initiation

Result of this study shows that majority of the respondents who indicated having commenced sexual relationships had their debut at 15-19years age range (Table 2). From Table 2 it can also be deduced that 27.6% of the respondents have had sexual relationships before the age of 30. It was also shown that by the age of 19 years, 18% of the students studied had engaged in sexual relationship. The mean age of initiation of sexual activity as

shown by the result was 17.7 ± 3.6 years. Kabir et al. was of the opinion that the factors responsible for this trend includes changing values due to increasing urbanization, exposure to foreign cultures through rural–urban migration, tourism, mass media, internet, erosion of traditional norms and values, peer influence and lack of parental control [1]. The result of this study is lower than the finding of a study conducted on undergraduates in Ibadan, Nigeria which reported the mean age of initiation of sexual activity as 18.8 years [18]. It is however higher than that obtained from a similar study in Kenya, which reported 16.5years as the mean age of initiation of sexual activity [4].

Table 2. Distribution of Age at Sexual Initiation

Age at sexual initiation (Yrs)	Frequency	Percentage
<10	3	0.8
10 - 14yrs	13	3.7
15 – 19	48	13.5
20 – 24	32	8.9
25 – 29	2	0.6
>30	0	0
Can't remember	65	18.3
Never	117	32.9
No response	76	21.3
Total	356	100

Mean = 17.7 Standard Deviation = ± 3.6

3.3 Knowledge of HIV/AIDS and Condom Use

The knowledge of HIV/AIDS is quite high among the respondents. However only about 30.9% of the respondents used condom regularly (Table 3); this finding is slightly less than the 34.5% obtained in Ibadan, Nigeria [18]. It is however higher than the 23.2% obtained in a similar study in Ghana [19]. This is because over the years, people's knowledge about the use of condom as a preventive measure has continued to increase. About 11% use condom occasionally, when they don't feel safe with their sexual partner; another 11% respondents never used condom partly because they do not perceive themselves to be at risk of getting infected and partly because they trust their partners; while 2% used the condom but discontinued, because they are convinced that their partners are safe. In all, only about 38.5% of the respondents used condom, this percentage is small compared to the percentage that are sexually active. Some of the men who do not use condom regularly reported that they feel embarrassed buying condom in stores; some feel uncomfortable carrying condom with them and some reported that it reduces sexual pleasure. Some of the women reported that they feel uncomfortable telling the men to use condom; and that telling them will make the men feel that they (women) have been engaging in sex with others. This result agrees with that obtained in Kano, Nigeria and Kenya [1,4].The chi square analysis shows that there was no significant relationship between the knowledge of HIV/AIDS and the use of condom during sex ($P=.05$, $\chi^2_{tab}=15.5$, $\chi^2_{cal} = 3.83$).

Table 3. Distribution of Students based on Knowledge of HIV/AIDS and Condom Use

		Knowledge of HIV/AIDS (Frequency and %)					
		Condom use					
		Regularly	Occasionally	Used stopped	Never Used	No response	Total
Yes	324 (91)	102(28.7)	35 (9.8)	7(2)	33 (9.3)	146(41)	323(90.7)
No	4 (1)	1 (0.28)	0(0)	0 (0)	1(0.28)	2(0.56)	4(1.1)
No response	28 (8)	7(1.97)	4(1.12)	0(0)	5(1.4)	13(3.65)	29(8.2)
Total	356(100)	110 (30.9)	39 (11.0)	7 (2)	39(11.0)	161(45.2)	356 (100)

3.4 Gender and Condom Use

The result in Table 4 shows that more men use condom at their last sex than women. In all, only about 32.6% (Table 4) of the respondents used condom at the time of their last sex, this percentage is small considering the study population. The low percentage of people using condoms, suggests that students may have unrealistic ideals about their ability to develop disease and the perception that bad things only happen to other people. With ideals such as this, the practice of safe sex is not viewed as a necessity and, therefore, not practiced consistently. This is in agreement with a study conducted in Malaysia, which also reported that condom use was low [2]. The 32.6% value which was obtained from this study is however in disagreement with the 54% obtained in a similar study in Namibia [20]. The chi square result did not show any significant statistical relationship between gender and condom use ($P=.05$, $\chi^2_{\text{tab}}=9.49$, $\chi^2_{\text{cal}} = 8.77$).

Table 4. Distribution of Respondents based on Gender and Condom Use

Condom use at last sex	Gender (Frequency and %)			Total
	Male	Female	No response	
Yes	88 (35.1)	28 (28.6)	1(14.3)	117 (32.9)
No	62 (24.7)	19 (19.4)	4(57.1)	85 (23.9)
No response	101 (40.2)	51(52.0)	2(28.6)	154(43.3)
Total	251(100)	98(100)	7(100)	356 (100)

3.5 Gender and Multiple Sex Partners

The result of this study shows that the practice of having multiple sex partners among the respondents was independent of gender ($P=.05$, $\chi^2_{\text{tab}}=9.49$, $\chi^2_{\text{cal}} = 4.01$). Results in Table 5 shows that more men (23.1%) had multiple sex partners than women (14.3%). The reasons for such sexual behaviour include misconception, ignorance, poverty, repudiation, shame, guilt, and silence as a result of association of the infection with sinful sexual acts. Social networks and norms influence individuals by disapproving high-risk behaviors and approving safe alternatives [12]. The result obtained from this study is in agreement with a similar study in Bahir Dar City, Northwest Ethiopia which reported that the men were more than four times likely to have multiple sexual partners than females [21].

Table 5. Distribution of Respondents based on Gender and multiple sex partners

	Multiple sex partners (Frequency and %)			Total
	Gender			
	Male	Female	No response	
Yes	58 (23.1)	14 (14.3)	2 (28.6)	74 (20.8)
No	171 (68.1)	76 (77.6)	4(57.1)	251(70.5)
No response	22(8.8)	8(8.2)	1(14.3)	31 (8.7)
Total	251 (100)	98 (100)	7 (100)	356 (100)

3.6 Risk Perception and Condom Use rate

On the perception of risk of contracting STIs and HIV/AIDS, and rate of use of condom among the respondents, the results showed that only eight (2.3%) reported their risk to be high compared to those reporting low risk (n=159, 44.7%), and no risk at all (n=148, 41.6%). Among those reporting high risk, only 3 (0.84%), and 2 (0.56%), use condom regularly and occasionally respectively. Among those perceiving their risk of contracting HIV/AIDS as low, 16.9% used condom regularly, and 5.6% use it occasionally. Of the number reporting no risk at all, 11.8% use condom regularly while 4.49% use it occasionally. Also, of those who used condom and stopped for whatever reasons, 1.4% reported low risk perception and 0.28% reported no risk at all. On the whole, 11.8% perceives their risk of contracting STIs and HIV as low or no risk at all and this same percentage either uses condom occasionally or stopped using it. These ones do not believe that they are personally susceptible to HIV. This is in tandem with the result obtained in a similar study in Kampala, Uganda [22] and Kano, Nigeria [1]. Overall, 30.9% used condom regularly. The result of this study showed that there was an association between the perception of risk of contracting HIV/AIDS and the use of condom during sex ($P=.05$, $\chi^2_{\text{tab}}=21.02$, $\chi^2_{\text{cal}} = 23.49$). The implication is an improved use of protective measure when engaging in high risk sexual behavior.

4. CONCLUSION

The above study examined the attitude and sexual behaviour of undergraduates in Abuja University. Generally it was found that knowledge about STI including HIV/AIDS was high. However, despite this apparent high awareness level about the different parameters studied, students still engage in high risk sexual behavior though with a noted high use of protective measures, such as the condom. The result also showed that there were no significant relationships between the knowledge of HIV/AIDS and the use of condom during sex; between gender and condom use; and between Gender and having multiple sex partners. However, there was a significant relationship between the perception of risk of contracting HIV/AIDS and the use of condom during sex. Following the findings of the study, the following recommendations are hereby suggested. Firstly, that sensitization of the students by the media and other means of information regarding STI including HIV/AIDS, should prioritize its goals and objectives more at targeting behavior change rather than giving out information alone. Secondly, the study found a low condom ever use rate, irrespective of the reported high level when engaging in high risk sex. Consequently, priority should be accorded to enhancing the level of use of protective and preventive measures, such as condom and encouraging abstinence.

ETHICAL APPROVAL

Prior permission was sought and obtained from the authorities of the University of Abuja before the study commenced. Recruitment into the study was voluntary and nobody was coerced into participation. Confidentiality was maintained by asking respondent not to write their names.

LIMITATIONS

The study is limited in that it was carried out in a school environment involving 356 students, thereby making the research participants very selective. Any generalization of the results of this study must be made with caution. More so, Sexually Transmitted Infections (STIs) and HIV/AIDS are sensitive topics that many young people are reluctant to talk about. As such, there could be some bias in the filling of the questionnaires.

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COMPETING INTEREST

The authors have declared that no competing interests exist.

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