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Awareness and Knowledge of HIV Counselling and Testing among Undergraduate University Students in Lagos, Nigeria

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Author's contribution

This whole work was carried out by author SOA.

Original Research Article

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ABSTRACT

Background: HIV counselling and testing (HCT) is a key strategic entry point to prevention, treatment, care and support services.

Aim: The study aimed at determining the awareness of HIV counselling and testing among undergraduate university students in Lagos, Nigeria.

Methods: The study was a descriptive cross-sectional one conducted in May 2010 among students recruited from seven faculties within two of the campuses of Lagos State University, Ojo and Ikeja campuses.

Results: The level of awareness of HIV counselling and testing before the survey was high among both male and female respondents. The knowledge about HIV counselling and testing was poor irrespective of their Faculty of study.

Conclusion: Level of awareness of HIV counselling and testing seems to be high among undergraduate students in Lagos. However, the knowledge about HIV counselling and testing is still poor, even among medical students.

Keywords: Counselling; testing; awareness; knowledge; undergraduate university students.

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1. INTRODUCTION

Nigeria is one of the countries in the sub Saharan countries affected by HIV/AIDS pandemic. According to the Nigeria 2012 Global AIDS Response Country Progress Report, the National median HIV prevalence of HIV infection in Nigeria was estimated at 4.1% [1]. HIV/AIDS prevalence is highest among young people between the ages of 20 and 24 [2]. Over 60% of new HIV infections in Nigeria are in the 15-24 year age range [2]. Despite this high number of people living with HIV/AIDS in Nigeria, the knowledge of HIV/AIDS and uptake of voluntary counseling and testing (VCT) is still low [3,4]. No subject or segment of any population worldwide is excluded from HIV infection and this includes university students. HIV counselling and testing (HCT) consists of a minimum of pre- and post-test HIV counselling and testing. HIV counselling and testing (HCT) is a key strategic entry point to prevention, treatment, care and support services. Most studies in Africa show that knowledge of HIV test results promotes behaviour change and reduces transmission [5]. The benefits of early detection of the virus have also increased because the most effective treatment results occur in the earliest stage of HIV [6]. It is evident that sexual activity and engagement in high-risk behaviours, which favour the spread of HIV infection, are on the increase in tertiary institutions. A concern is that not all individuals who may be at risk for HIV infection close to be tested. Literature reports that only 36% of individuals who were classified as having high-risk behaviour had been tested for HIV [7].

It would not be unheard of that adolescents known for risk taking behaviour often enters into debut sexual relationships without protection considering their expected inexperience. This leaves them vulnerable to HIV infection, sexually transmitted infections (STIs), and unplanned parenthood. Access by young people (particularly girls) to sexual and reproductive health services in developing countries remains a major challenge. In many cultures, it is socially unacceptable for young people to be sexually active unless they are married. As a consequence, sexually active unmarried young people don't openly talk about their experiences with adults, including health workers. This therefore increases the likelihood of unprotected sexual relations.

In a study conducted by Ikechibelu et al. [8] to assess knowledge of HIV/AIDS and attitude towards voluntary counseling and testing (VCT) among undergraduate polytechnic students in southeast Nigeria it was observed that 63.2% of the respondents are aware of voluntary counseling and testing (VCT).

The appraisal of the knowledge of university students towards HIV counseling and testing is important and may have positive long-term consequences on the prevention and control of HIV among that vulnerable age group. There is a dearth of information regarding undergraduate university students, particularly in Lagos, Nigeria. Therefore, the main objective of this study was to appraise the awareness of HIV counseling and testing among undergraduate university students in Lagos, Nigeria. Although there are varied perceptions and perspectives on the likelihood of an epidemic of HIV/AIDS in Lagos State, it has the potential to become an epidemic due to the state's highly urbanized nature. According to the 2006 population and housing census, young people between the ages 10 to 24 years constitute one-third of the total population of Nigeria, [9].

2. METHODOLOGY

The study was a descriptive cross-sectional one conducted in May 2010 and was carried out among students of Lagos State University (LASU), Lagos in South west Nigeria. LASU is one of the major and largest tertiary educational institutions in the economic nerve centre of Nigeria. It was established in 1983 by the enabling law of Lagos State of Nigeria for the advancement of learning and establishment of academic excellence. The university caters for a population of over 61, 000, enrolled in full-time and part-time programme at the Diploma, Undergraduate, and Postgraduate. LASU is a Multi-Campus, Non Residential University with four fully owned campuses having its main campus at Ojo. Other campuses are at Epe (where the Engineering Faculty is located), Ikeja (where the College of Medicine is located) and Surulere, as well as six external/affiliated campuses. There are six faculties on the main campus (Art, Education, Law, Management Science, Science and Social Science Faculties).

The minimum sample size was determined using the standard statistical formula for sample size:

$$n = Z^2 (P) (1 - P) / E^2$$

Based on the estimated awareness level of 27.6% [10], 95% confidence level (Z-score value: 1.96) and 5% precision level, the estimated minimum sample size was approximately 200 (Z=1.96; P=0.276; E=0.05). However, 200 students were sampled. The number of study subjects from each Faculty was evenly allocated irrespective of the size of the Faculty.

A multi-stage sampling method was used to select study participants. Two campuses were selected by simple balloting, namely the main campus at Ojo town and Lagos State University College of Medicine at Ikeja campus. The study population was 100 to 300 level students recruited from all Faculties in the main campus while the study population recruited from the Lagos State University College of Medicine at Ikeja were preclinical students (i.e. 200 and 300 level) to avoid information bias if clinical students were recruited. Random sampling was used to select departments and levels for administration of data instrument. The researcher visited and administered the questionnaires to the eligible students in their lecture theatre during their lectures session. Systematic random sampling method was used to select participants. Informed consent was sought from the subjects, verbally, before they were recruited into the study.

Data collection was by qualitative means with the aid of pre-tested self-administered questionnaires. The questionnaire is made up of questions related to knowledge, perception about, cause, mode of transmission and prevention of HIV/AIDS. The data was analyzed using Statistical Package for Social Science (SPSS) version 17.0. Tests of associations were tested using the Pearson's Chi square test. Level of significance was set at $p < 0.05$.

The awareness of HIV counseling and testing by the respondents was assessed by inquiring about awareness of a test that identifies persons with HIV. The knowledge of the respondents was assessed by 22 items. Items reflected information about components of HIV counseling and testing, benefits of HIV counseling and testing, and places where HIV counseling and testing are provided and were responded to by ticking the appropriate response. Each response was scored "0" or "1" if wrong or correct respectively. The HIV counseling and testing knowledge test was scored for the number of correct responses, with less than 11 correct responses (<50%), between 11 to 16 correct responses (50–70%) and

greater than 16 correct responses (>70%) categorized as poor, fair and good knowledge respectively.

3. RESULTS

3.1 Characteristics of Study Subjects

A total of 200 respondents completed the survey. One hundred and nine (54.5%) of them were males while ninety-one (45.5%) were females, giving a ratio 1.2 to 1.0 of males to females. The lowest age for both genders was 14 years while the highest age was 44 years. The lowest age for males and females, respectively, were 14 years and 16 years. The highest age for males and females was 44 years and 35 years respectively. The mean age for males and females was 23.31 (4.197) years and 21.36 (3.533) years, respectively. 91.0% of the study subjects were single while 7.0%, 1.5% 0.5% of them were married, divorced and separated, respectively.

3.2 Awareness of HIV Counseling and Testing

A high percentage of the respondents (97.0%) had heard of HIV counseling and testing before the survey interview. The percentage of the respondents that are aware of HIV counseling and testing at the survey time according to gender were 93.6% and 95.6% of male and female respectively (Table 1). The gender difference observed in the awareness of HIV counseling and testing is not significant ($p=0.53$). The surveyed subjects within the age group 14–24 years had significant higher proportion of subjects who are aware of HIV counseling and testing compared with subjects older than 24 years ($p=0.00$). The faculty of science and medicine had the highest proportion of subjects who are aware of HIV counseling and testing at surveyed period. The observed difference between faculty of study and awareness of HIV counseling and testing was not significant ($p=0.98$).

Table 1. Awareness of HIV counseling and testing among study subjects

	Awareness		p-value
	No	Yes	
Gender			0.53+
Male	7(6.4)	102(93.6)	
Female	4(4.4)	87(95.6)	
Age group (years)			0.00+
14–24	3(2.4)	121(97.6)	
≥25	3(6.5)	43(93.5)	
No response	24(80.0)	6(20.0)	
Faculty of study			0.98+
Art	1(3.6)	27(96.4)	
Education	2(6.9)	27(93.1)	
Law	2(7.1)	26(92.9)	
Management science	2(6.9)	27(93.1)	
Medicine	1(3.5)	28(96.5)	
Science	1(3.5)	28(96.5)	
Social science	2(7.1)	26(92.9)	

+ = Chi-square test (χ^2)

3.3 Sources of Awareness of HIV Counseling and Testing

The sources of information of HIV counseling and testing as detailed in (Table 3) revealed that most respondents, 128 (22.5%), were informed about HIV counseling and testing through television and radio (Table 2). The uncommon source of information on HIV counseling and testing among the study subjects include church and school religious fellowships/ faith based gatherings, friends, group discussion, health talk during boy's brigade camping event and peer educational programme.

Table 2. Sources of awareness of HIV counseling and testing

Source	Male		Female		Total	
	n	%	N	%	n	%
Hospital	47	14.0	36	15.4	83	14.6
Journals	23	6.9	16	6.9	39	6.8
Posters	30	8.9	26	11.1	56	9.8
Seminars	36	10.7	25	10.7	61	10.7
Conferences	25	7.4	11	4.7	36	6.3
Textbooks and class notes	17	5.1	15	6.4	32	5.6
Internet	35	10.4	15	6.4	50	8.8
Television and radio	72	21.4	56	23.9	128	22.5
Newspaper and magazines	47	14.0	31	13.3	78	13.7
Church and school fellowship	1	0.3	1	0.4	2	0.3
Friends	1	0.3	1	0.4	2	0.3
Group discussion	1	0.3	0	0.0	1	0.2
Health talk at Boys' Brigade	1	0.3	0	0.0	1	0.2
Peer educational programme	0	0.0	1	0.4	1	0.2

3.4 Knowledge of HIV Counseling and Testing

Only one-fifth of male respondents and one-eighth of female respondents have good knowledge of HIV counseling and testing (Table 3). The knowledge of HIV counseling and testing was not significantly different among males compared to their female counterparts. The magnitude of respondents with good knowledge of HIV counseling and testing was comparable between respondents within the age group 14–24 years and those ≥ 25 years ($p=0.33$). Majority of the respondents irrespective of their Faculty of study have poor knowledge of HIV counseling and testing. The respondents from faculty of medicine have the highest percent of respondents with good knowledge of HIV counseling and testing. However, these observed difference in knowledge of HIV counseling and testing among faculty of study of respondents was significant ($p=0.00$). Almost three-fifth of the respondents who have good knowledge of HIV counseling and testing did perform the testing prior to the survey. The observed difference between knowledge and performance of HIV counseling and testing among the study subjects was significant ($p=0.02$).

Table 3. Knowledge of HIV counseling and testing among study subjects

Variables	Knowledge			p-value
	Poor	Fair	Good	
Gender				0.14+
	Male	48(54.9)	37(34.0)	24(22.0)
	Female	50(44.0)	30(33.0)	11(12.1)
Age group (years)				0.33+
	14 – 24	54(43.6)	48(38.7)	22(17.7)
	≥25	24(52.2)	13(28.3)	9(19.6)
	No response	20(66.7)	6(20.0)	4(13.3)
Faculty of study				0.00+
	Art	16(57.2)	9(32.1)	3(10.7)
	Education	17(58.6)	10(34.5)	2(6.9)
	Law	10(35.7)	16(57.2)	2(7.1)
	Management science	20(69.0)	5(17.2)	4(13.8)
	Medicine	6(20.7)	11(37.9)	12(41.4)
	Science	13(44.8)	10(34.5)	6(20.7)
	Social science	16(57.2)	6(21.4)	6(21.4)
HCT performance				0.02+
	No	51 (52.0)	42 (62.7)	15 (42.9)
	Yes	39 (39.8)	25 (37.3)	20 (57.1)
	No response	8 (8.2)	0 (0.0)	0 (0.0)

+=Chi-square test (χ^2)

4. DISCUSSION

The overall awareness of HIV counseling and testing among the respondents surveyed was very high (97%). This was higher than a rate of 63.2% reported by Ikechebelu et al. [8] among polytechnic students in southeast Nigeria. The observed difference may be possibly an effect of study site, factors such as place of residence and standard of living influenced the awareness of health services. The two study sites differed markedly from each other not only with respect to socioeconomic status of the people but also with respect to other factors like infrastructure.

The present study showed that the age group 14 to 24 years was found to be associated with the highest percent of awareness and this observation is statistically significant. This is likely to be due to easy availability, accessibility to as well as interest in electronic media (e.g. radio, television, internet e.t.c.) within this age group.

It was observed from the current study that more female respondents were aware of HIV counseling and testing than male respondents. This gender difference in awareness was not significant. This finding is in agreement with the study done on "Utilization of voluntary counseling and testing (VCT) services in Harar Town Ethiopia" by Lemessa [11] in which female were found to be more aware about voluntary counseling and testing (VCT). In another study by Admasu et al. [12] conducted in North and South Gondar, it contradicts the aforementioned view and concluded that there was no significant difference between male and female in their knowledge about voluntary counseling and testing (VCT) for HIV. Lack of

significance difference in percent of awareness was observed on stratification according to faculty of study.

A comment on the source of awareness about HIV counseling and testing is desirable at this point. It was observed that the students had multiple responses with regard to source of information about HIV counseling and testing. Majority of the students heard it from mass media (television and radio) which are readily available at their homes and within their hostels. A similar finding was demonstrated among Tanzanian health professional students [11] as well as among undergraduates in a polytechnic in a south-east Nigeria [8].

The present study revealed that respondents from Faculty of Medicine had the highest rate when the percentage of respondents who had good knowledge of HIV counseling and testing was compared according to their faculty of study. This is most likely a consequence of inclusion of HIV/AIDS related topics as part of their course curriculum.

Although respondents from Faculty of Medicine had the highest rate of percent of respondents with good knowledge, however, more than half of respondents in the faculty have misconceptions on knowledge, perception about, cause, mode of transmission and prevention of HIV/AIDS. This implies that there is need to include information on HIV/AIDS in the school curriculum of all students, preclinical medical students inclusive, so that the students will be better informed.

The findings from this study reflect that majority of the respondents who had performed HIV counseling and testing prior to the commencement of the study had good knowledge of HIV counseling and testing. The observed difference is possibly an effect of the pre- and post-testing counseling which was not compared in the current study. Pre- and post-test counseling is considered to be an integral and essential parts of HIV testing which is designed to give information before and after HIV testing respectively.

Overall, the knowledge of HIV counseling and testing among respondents was poor. A similar pattern was observed in a community study conducted by Iliyasu et al. [10] among adults in northern Nigeria. Ikechebelu et al. [8] also reported poor knowledge among undergraduates in a polytechnic in south-east, Nigeria. This poor knowledge in HIV counseling and testing may fuel the spread of HIV/AIDS. This study also showed that male respondents were more knowledgeable of HIV counseling and testing than their female counterparts. The findings agree with those of previous author [13]. The explanation for the difference in knowledge in HIV counseling and testing between males and females is not clear.

In this study, faculty of study has been found to be a determinant of HIV counseling and testing knowledge. The highest percent of respondents with good knowledge of HIV counseling and testing are from faculty of medicine. The reason may be the fact that HIV/AIDS forms part of the course curriculum of students recruited from Faculty of medicine.

5. CONCLUSION

In conclusion, most respondents were aware of HIV counseling and testing and the majority became aware through mass media (television and radio). Majority of the respondents, including medical students had poor knowledge of HIV counseling and testing. The school health programme should be strengthened as appropriate health messages can be passed to students in school. Good knowledge of HIV counseling and testing is significantly

associated with high performance of HIV counseling and testing. Health workers should play a more prominent role in providing information about HIV counseling and testing.

CONSENT

Not applicable.

ETHICAL APPROVAL

Not applicable.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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