

Knowledge and Attitude of Nigerian Undergraduates toward Voluntary HIV Counseling and Testing: A Case Study

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Abstract

HIV/AIDS is a major health concern in Africa with half of new infections occurring in young people. This study aimed at assessing knowledge and attitude of Nigerian undergraduate towards voluntary HIV counseling and testing (VHCT) with the null hypothesis that knowledge and personal characteristics do not influence attitude. Descriptive study design was used. Information were collected from 174 undergraduates (from selected University) using structured questionnaire (78% reliability). All analyses were at $p \leq 0.05$. Result showed that most of the respondents (53%) visited the health counselor for VHCT only once particularly to fulfill admission procedure. Moderate level of knowledge of HIV/AIDS was observed among the respondents and poor attitudes toward VHCT. Factors responsible for the poor attitudes includes: peer influence and assumed public stigmatization. Positive and significant relationship was found between knowledge level and attitudes towards VHCT. The study concludes by emphasizing that HIV awareness drive by Nigerian institutions should be more intentional about increasing the knowledge of the youth especially as regards risky sexual behaviour and need for routine testing. Furthermore, Institutional policy framework combining parental and institutional guardians and counseling in combating HIV/AIDS in Nigeria should be explored.

Keywords: Knowledge, Attitude, HIV counselling and testing, Nigeria

INTRODUCTION

Human Immunodeficiency Virus/ Acquired Immunodeficiency Syndrome (HIV/AIDS) has become one of the most serious, devastating disease humanity has ever faced. It has remained a significant economic and public health concern with about half of the new infections occurring in young people (Asante and Otis-Boadi, 2013). According to World Health Organization (2016) report, 36.7million people are living with HIV/AIDS worldwide with Sub-Saharan Africa accounting for 70% of the global total. Unfortunately, only 54% of all people living with HIV knew that they have the virus until it starts to manifest (WHO, 2014). A more serious challenge today is the growing infection rates among adolescents in sub-Saharan Africa. Transactional sex is very common among young adults in Africa and this has been identified as one of the critical pathways for the spread of the virus. Available information shows that, consistently, about 2.6million to 4.5million Nigerians are living with HIV/AIDS, thereby identifying Nigeria as having the second-largest population of people living with HIV globally (Ogunmade, 2013). Young people are particularly vulnerable to infection. In research conducted in Nigeria by UNAIDS (2015), it was observed that about 3,200,000 adolescents between the age of 15 and 21 are living with HIV. Many of these youths are sexually active and in the tertiary Institutions thus, our Universities and colleges have become potential breeding grounds for HIV infections (Ebeniro, 2010; Onyene, Uzoka, Ikonta and Bakare, 2010; Tenibiaje, 2011; Madebwe, Madebiwe, Pazvakavamira and Kudakwashe, 2012). Wairimu (2013) noted that this may be due to the high rate of pre-marital sexual activity engaged in tertiary institution campuses coupled with other negative acts such as drug addition, cultism and excessive consumption of alcoholic drinks. Arogundade and Falooore (2012), stated that the issues of dating and mate- seeking behaviours of Nigerian youths are rapidly changing due to concept of modernization and globalization, hence the need for interventions that go beyond mere information provisions such as Voluntary Counseling and Testing (VCT) has become increasingly pertinent. VCT facilitate the process by which an individual undergoes counseling enabling him or her to make an informed choice about being tested for HIV (PSI, 2009; FHI, 2009;

Tenibiaje, 2011; Asante, 2013). The dissemination and creation of awareness on HIV/AIDS, as highlighted in many health policy programmes, has achieved some level of success in making people to be aware of the mode of transmission and prevention of HIV/AIDS. Unfortunately, many young adults in Nigeria are oblivious of the activities of the VCT centres let alone take advantage of them. Only about 2.6% of youths have utilized the VCT (with regional variations) (Nwabunnia, Ibeh and Ogbulie, 2014), despite the fact that the federal government of Nigeria and other agencies have spent a lot of money on sensitizing and informing people of what voluntary HIV counseling and testing is and its importance in HIV control

As part of the admission procedure in many tertiary institutions in Nigeria, students are expected to undergo a compulsory medical checkup and as part of the activities embedded in a medical checkup is voluntary HIV counseling and testing. However, only a few students go back for another round of checkup before graduation. It is likely that the low patronage of the VCT among the youth may be more of attitudinal and behavioural matter than lack of awareness. It is against this backdrop that this research seeks to determine the knowledge and attitude of undergraduate students toward voluntary HIV counseling and testing in a selected Nigerian University.

In Nigeria, the report of UNAIDS (2019) indicated that the South-South zone of the country has the highest HIV prevalence, at 3.1% among adults aged 15–49 years. HIV prevalence is also high in the North Central zone (2.0%) and in the South East zone (1.9%). HIV prevalence is lower in the South-West zone (1.1%), the North East zone (1.1%) and the North West zone (0.6%). The report, like other studies, also showed that young female sex workers constitute a major source of HIV infection; with HIV prevalence rates of 27.4% and 21.1% among brothel-based and non-brothel based female sex workers respectively.

The National Agency for the control of AIDS (2015), reported that the national HIV prevalence by age group showed an increasing prevalence by age group from 3% among respondents aged 15-19 age group to 4.6% among the 20-24 age group and 5.4% among the 25-29 age group. The prevalence peaks at 5.7% among the 30-34 age group and then declines to 4.9% among respondents aged 35-39 years old and 3.6% among the 40-49 years age group.

Early sexual experience is common in Nigeria, which begins at less than 15 years old for 15% of Nigeria's youth. This has been one of the factors enhancing HIV vulnerability and prevalence among adolescents, alongside very insufficient counseling and low HIV testing rates (National HIV/AIDS and Reproductive Health Survey, 2012). As part of efforts to ameliorate the prevalence of HIV especially among young people in Nigeria, WHO (2007), has recommended HIV Counseling and Testing (HCT). HCT can either be client initiated testing (voluntary counseling and testing) or provider initiated counseling and testing. Irrespective of the type, HCT should involve a pre- test counseling, post -test counseling, and follow up counseling. HCT should be readily accessible and provide routine services to young people (Eze, 2014). The main objective of this study is to assess the knowledge and attitude of Nigerian undergraduate towards voluntary HIV counseling and testing (VHCT) with evidence from a selected school.

1.1 Conceptual model

The study applied the Health Belief Model (HBM). HBM is a psychological model that attempts to explain and predict health behaviours. This is done by focusing on the attitudes and beliefs of individuals. The HBM was first developed in the 1950s by social psychologists Hochbaum, Rosenstock and Kegels working in the U.S. Public Health Services (Rosenstock, 1974). The model was developed in response to the failure of free tuberculosis (TB) health screening program. Since then, the HBM has been adapted to explore a variety of long- and short- term health behaviours, including sexual risk behaviours and the transmission of HIV/AIDS. The HBM is based on the understanding that a person will take a health-related action if that person:

1. feels that a negative health condition (i.e., HIV) can be avoided,
2. Has a positive expectation that by taking a recommended action, he/she will avoid a negative health condition (i.e., using condoms is effective at preventing HIV), and
3. Believes that he/she can successfully take a recommended health action (i.e., he/she can use condoms comfortably and with confidence).

The HBM was spelt out in terms of four constructs representing the perceived threat and net benefits: perceived susceptibility, perceived severity, perceived benefits, and perceived barriers. These concepts were proposed as accounting for people's "readiness to act." An added concept, cues to action, would activate that readiness and stimulate overt behaviour. A recent addition to the HBM is the concept of self-efficacy or one's confidence in the ability to successfully perform an action. This concept was added by Rosenstock in 1988 to help the HBM better fit the challenges of changing habitual unhealthy behaviours.

Adapting the Health belief model, following Rosenstock (1974), this study conceptualized that Voluntary Counseling and Testing (VCT) education will equip the undergraduate students with information that will improve their knowledge on the importance of VCT services for HIV/AIDS. A right or wrong attitude toward VCT/HCT may be formed based on the level of knowledge the individual has acquired. Accurate information on VCT may lead to belief in the effectiveness of the service, thereby leading to positive preventive action. Whereas, in a situation where there is no programme and awareness campaign as well as poorly delivered information and understanding of VCT, negative attitudes toward the service may result. The application of the model to this study can be summarized as follows:

1. Undergraduates believe they may have been exposed to HIV (perceived susceptibility)
2. Undergraduates believe that the consequences of getting HIV without knowledge or treatment are significant enough to try to avoid the infection (perceived severity)
3. Undergraduates believe that the recommended action of getting tested for HIV would benefit them-possibly by being assured that they are not harbouring the disease and would not infect others (perceived benefits)

4. Undergraduates identify their personal barriers to getting tested (i.e. getting to the clinic (transportation) or being seen at the clinic by someone they know (perceived barriers).

2. METHODOLOGY

Descriptive design was used for the study which was carried out among selected students of a University which is in Ogun State, Nigeria (the name of the University is withheld for ethical reasons). The University, being in Ogun state, is located almost equidistant between Ibadan and Lagos. According to the registry of the University, enrolment of students was about 8,400 as at the time this study was conducted.

The convenience sampling technique was used to select 174 undergraduates from the different halls of residence, from a sampling frame of 7095, as participants in the study. The sample size was calculated using Nassiuma (2000) formula given as,

$$n = \frac{NC^2}{C^2 + (N-1)e^2} \dots\dots\dots (1)$$

Where;
 C=coefficient of variation (20%)
 n = sample size; N=population
 e =error margin (1.5%)

Thus,

$$\frac{7095 \times (0.2)^2}{(0.2)^2 + (7095-1) \times (0.015)^2} = 174$$

Selection of respondents was from 15 halls of the resident. For ethical reasons, details of these halls have been omitted here. The structured questionnaire was used to collect information related to personal characteristics, knowledge and attitudes of undergraduate students towards voluntary HIV counselling and testing. The questionnaire was subjected to validity and reliability tests to ensure standardization. All the constructs in the questions were found reliable at an average Cronbach alpha score of 0.76. Ethical approval for the study was obtained from Babcock University Health Research Ethical Committee (BUHREC). Further, all the respondents filled a consent form and the researcher assured them of their complete anonymity and confidentiality. The data collected were analyzed using descriptive statistics and Pearson’s Product Moment Correlation. Data analysis was done using the Statistical Package for Social Sciences (Ver. 21) and all analysis was done at P≤0.05.

3. RESULTS AND DISCUSSION

3.1 Demographic Data

Table 1 presents the demographic characteristics of the participants. Most of the respondents (81%) were in the age bracket of 16-25 years and mostly females (72.4%). Most of the students interviewed have spent more than a year in the university (about 75%) thus they are expected to have made other voluntary visits for HIV test and counselling. Unfortunately, Most of the respondents (53%) visited the health counsellor for HCT only once when it was required as part of admission procedure. Abiodun, Sotunsa, Ani and Jaiyesimi (2014) also obtained similar result in their study.

Table 1: Distribution of respondents by Demographic factors

Variables		Frequency (n = 174)	%
Age	16-25 years	141	81
	26-35years	27	15.5
	36-45 years	5	2.9
	46 years and above	1	0.6
Sex	Male	48	27.6
	Female	126	72.4
Level of study	100 level	44	25.3
	200 level	40	23
	300 level	54	31
	400 level	29	16.7
	500 level	7	4.0
Religion	Christianity	142	81.6
	Islam	32	18.4
Regularity of visiting HCT	Once	92	52.9
	Seldom	72	41.4

	Regular as required	10	5.8
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Source: Computed from survey data, 2018

3.2 Respondents Level of Knowledge about HIV/AIDS and attitude towards HIV Counseling and Testing

Assessing the knowledge statements in the knowledge construct showed that many of the respondents have lower knowledge in risky sexual practices, drug and vaccine management of the disease (See Table 2). Less than 40% of the respondents claimed to know that withdrawn ejaculation during coitus is not enough to prevent the spread of HIV and only 36% know that deep kissing can transmit the HIV virus. Some 49% of the respondents agreed that there are vaccines for preventing HIV infection and 42% believe HIV/AIDS has treatment. Omeonu, Babalola and Agbede (2014), also presented similar assessments of Nigerian youth which calls for a rethinking of the national reproductive health education.

Table 2: Distribution of respondents by HIV Knowledge

Knowledge variables	True	I don't know	False
	Freq (%)	Freq (%)	Freq (%)
Pulling out the penis before a man climaxes comes keeps a woman from getting HIV during sex.	60(34.5)	45(25.9)	69(39.7)
There is a vaccine that can stop adults from getting HIV	49(28.2)	60(34.5)	65(37.4)
Some drugs have been made for the treatment of AIDS	73(41.9)	46(26.4)	55(31.6)
People are likely to get HIV by deep kissing, putting their tongue in their partner's mouth, if their partner has HIV	63(36.2)	52(29.9)	59(33.9)
Taking a test for HIV one week after having sex will tell a person if she or he has HIV	51(29.3)	59(33.9)	64(36.8)

Source: Computed from survey data, 2018

Respondents' level of knowledge of HIV/AIDS was assessed using a construct of knowledge statements. Level of knowledge was rated as poor (with an average score between 1 and 2), moderate (with an average score of 3) and high (with average score between 4 and 5). Results in Table 3 shows that there is moderate level of knowledge of HIV and AIDS among undergraduates in the study area. This is expected to positively influence their attitudes towards HVCT.

Respondents' Attitude rating of undergraduates towards HIV Counseling and Testing was assessed using a construct of attitude statements. Attitudes were rated as poor (with an average score between 1 and 2), moderate (with an average score of 3) and high (with average score between 4 and 5). Attitude, as hitherto highlighted, is a strong indicator of cue to performing an action, in the case of this study, seeking HIV Counseling and Testing. Results in Table 3 shows that most of the Undergraduates interviewed had poor Attitudes towards HIV Counseling and Testing. Khawcharoenporn, Chunloy, Apisarnthanarak (2016) observed similar situation among Thailand youth thus this seems to be common in developing countries

Table 3: Level of knowledge of undergraduates about HIV/AIDS

Variables	Freq.	Percentage	Max.	Min.	Mean	Standard deviation
Knowledge of HIV among undergraduates						
Poor (1-2)	56	32	3	1	2.1	0.31
Moderate (3)	102	58.6				
High (4-5)	15	8.2				
Total	174	100				
Attitude rating						
Poor (1-2)	98	56.3	4	1	1.99	1.03
Moderate (3)	52	29.9				
High (4-5)	24	13.8				
Total	174	100				

Source: Computed from survey data, 2018

Results in Table 4 shows major factors positively and negatively influencing the attitude of undergraduates towards HIV Counseling and Testing in the study area. Peer influence (reported by 62%) and assumed public stigmatization (reported by 68%) were ranked as the major factors negatively influencing respondents' free will to seek HIV Counseling and Testing as appropriate. This result agrees with the a priori expectation. Factors that could encourage positive attitude of respondents' towards HIV Counseling and Testing include family understanding and support (reported by 60%) and confidentiality of the information shared during counseling sessions (reported by 56%). These factors are Sine qua non to improving the policy framework for HVCT. This result establishes the importance of combining parental and institutional guardians and counseling in combating HIV/AIDS in Nigeria.

Table 4: Major factors influencing the attitudes of respondents' towards HIV Counseling and Testing

Factors	Freq (%)
<i>Factors having negative influence:</i>	
Peers influence or disapproval	108 (62%)
Public stigmatism with assumption that I have HIV if I decided to get tested	119 (68%)
<i>Factors having positive influence:</i>	
Family understanding and support	103 (60%)
Confidentiality of the information shared during counseling or tests	97 (56%)

Source: Computed from survey data, 2018

Table 5: Pearson Product Moment Correlation Analysis of relationship between respondents' knowledge and attitude towards HIV counseling and testing

Variables	N	R	Sig.	Remark
Knowledge of HIV	174	0.485	0.001	Significant
Attitude towards HIV counseling and testing	174			

Source: Computed from survey data, 2018

Further result as presented in Table 5 showed that there is a positive and significant relationship between HIV knowledge and attitudes towards HIV counseling and testing ($r = .485, p < .05$). Thus, the higher the HIV knowledge, the more positive will be the respondents' attitudes towards HIV counseling and testing. This result follows *a priori* expectation and confirms previous similar studies such as Onyeonoro (2014), and Mwangi et al. (2014), with respect to the health behaviour of youth in Nigeria and Africa generally.

4. CONCLUSION AND RECOMMENDATION

As part of the measures put in place to fight HIV/AIDS among young people in the tertiary institutions in Nigeria, facilities for Voluntary HIV counseling and testing have been put in place. Despite this effort, the patronage to centres for HIV counseling and testing (HCT) have been low and many of the young ones do not know their HIV status. This study assessed the knowledge and attitudes of Nigerian undergraduate students towards Voluntary HIV counseling and testing with evidence from a selected university in Ogun state. Results of the study showed that there exists a significant relationship between students' knowledge about HIV and their attitudes towards voluntary HIV counseling and testing. Despite their moderate level of knowledge, there is generally poor attitude towards voluntary HIV counseling and testing. Based on the findings, the following recommendations have been made:

- I. HIV awareness drive by Nigerian institutions should be intensified and repackaged to be more intentional about increasing the knowledge of the young people especially with respect to risky sexual behavior and need to undergo routine testing every 6 months.
- II. Institutional policy framework establishing the linkage and combination of parental and institutional guardians and counseling in combating HIV/AIDS in Nigeria should be explored.
- III. There is need for education and re-orientation on the need to stop stigmatizing people living with HIV/AIDS. If the right orientation is put in place, attitudes toward seeking voluntary HIV testing and counseling will be improved.

CONFLICT OF INTEREST

Authors declare no conflict of interest. All the authors made equal contributions

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