

Acceptability of voluntary counselling and testing among medical students in Jos, Nigeria

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Abstract

Background: Various preventive strategies have been employed to curb the spread of HIV infection as there is presently no cure. Abstinence, avoidance of multiple sexual partners, condom use, voluntary counselling and testing (VCT) and treatment of HIV-infected individuals form the cornerstone of HIV prevention. This study assessed the acceptability of VCT among medical students in a single institution in Nigeria
Methodology: Self-administered questionnaires were distributed to clinical medical students of the University of Jos in a cross-sectional study.

Results: Out of a total of 368 students surveyed, 178 (50.7%) have had VCT. There was no significant difference between the proportion of males and females who had had VCT previously (48.9% of males and 56.3% of females; $\chi^2 = 1.65$, OR = 0.76 95% CI: 0.46-1.20; $p = 0.19$). The majority of the respondents (83.1%) would want to have VCT. Fear of a positive test result was the main reason given by those who would be unwilling to be tested. Gender had no effect on the willingness of the subjects to have VCT as 81.8% of males and 87.1% of females were predisposed to it ($\chi^2 = 1.95$; OR = 0.63, 95% CI: 0.31-1.26). VCT acceptability was similar among sexually active and inactive respondents (80.2% and 80.2% respectively; $\chi^2 = 0.018$, $p = 0.99$).

Conclusion: Awareness of VCT services and acceptability of VCT among medical students is high. These students can be role models for the optimization of VCT services.

Key words: acceptability, HIV counselling, medical students, voluntary

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Introduction

Infection with the human immunodeficiency virus (HIV) is a global pandemic. Sub-Saharan Africa, although home to only 10% of the world's population, has approximately 70% of all the persons living with HIV infection/acquired immunodeficiency syndrome (AIDS) [1]. Nigeria, with a HIV seroprevalence of 4.4%, accounts for the second largest population of people living with HIV/AIDS (PLWHA) worldwide [2].

Various preventive strategies have been employed to curb the spread of this infection as there is presently no cure. Abstinence, avoidance of multiple sexual partners, condom use, voluntary counselling and testing (VCT) and treatment of HIV-infected individuals form the cornerstone of HIV prevention. VCT has been introduced in many low-resource settings as it helps to create awareness of an individual's HIV status and offers the opportunity for counselling on risk behavior modification. It also

lessens stigma and has become a first step to accessing care [3-5].

Acceptability of VCT has been studied among various student populations. In Tanzania, for example, 34.6% of students of health care professions and 43.3% of medical students have had VCT [6,7]. In Nigeria, acceptance rates of VCT among students of tertiary institutions range from 8.3% to less than 30% [8-10]. However, there are no studies in Nigeria documenting VCT acceptability among medical students.

Students of schools of medicine, besides being at risk of occupational exposure to HIV, are commonly within the age group at risk of contracting the infection through sexual practices. On the other hand, they also can function as role models among their peers and the general public in the fight against HIV/AIDS, including VCT. We embarked on this cross-sectional survey to describe the acceptability of VCT among clinical students at the University of Jos, Nigeria.

Materials and methods

Study design and setting

This was part of a cross-sectional study, conducted between August and October 2008, that was designed to assess the sexual behavior of clinical medical students at the University of Jos, north central Nigeria. The Jos University Teaching Hospital (JUTH), where the students receive their clinical training, is a tertiary hospital which provides comprehensive HIV/AIDS care as it is a recipient of the National Antiretroviral Program and the US President's Emergency Plan for AIDS Relief (PEPFAR). There are several VCT outlets in the hospital. The ethics committee of the Jos University Teaching Hospital approved the study.

Study subjects

A minimum sample size of 361 subjects was calculated using the formula for cross-sectional surveys:

$$N = (z_{1-\alpha})^2(p)(1-p)/\delta^2$$

Where N = minimum sample size
 $(z_{1-\alpha})^2$ = constant at 95% confidence interval (1.96)
 P = highest proportion of adults who accept VCT (62.2%) from the literature [11].
 δ = precision allowed (5%)

Data collection

Self-administered questionnaires were distributed to consecutive medical students in their fourth, fifth, and sixth years of training who consented to participating in the study. Information sought from the subjects included socio-demographic factors, knowledge about HIV/AIDS, and acceptability of VCT. The questionnaire used had eight questions to assess knowledge of HIV transmission, ten questions to assess knowledge on HIV prevention, and four questions to assess attitude toward persons living with HIV/AIDS. Acceptability of VCT was assessed using three questions (history of VCT in the past, willingness to have VCT, and reasons that subjects would not be willing to have VCT).

Statistical analysis

Data was analysed using the Epi Info 2004 Statistical program. Means \pm SD and proportions were used to describe continuous and categorical variables respectively. The Chi-squared test was used to compare observed differences (proportions). A p

value of < 0.05 was considered statistically significant.

Results

Characteristics of study subjects

Of a total of 400 questionnaires distributed, 368 respondents (251 males and 117 females) had adequate data for analysis (Table 1). The mean age of the students was 24 ± 2 years. One hundred and thirty-nine (37.7%) had ever had sex, while 99 (26.9%) were sexually active within the last 12 months. The mean age at sexual debut was age 17 ± 2 years in those who admitted to having had sex before. The majority of the students (88.8%) rated their risk of contracting HIV as either none or small while 9.9% considered their risk as moderate and a further 1.3% admitted to being at high risk. Eighty percent of the respondents live under one (1) US dollar a day.

HIV knowledge

The majority of respondents (93.1%) correctly identified HIV as the cause of AIDS. The same proportion also knew that AIDS has no cure and have heard of drugs that can be used for treatment. Sex with multiple partners or commercial sex workers, transmission through blood and blood products, use of contaminated/unsterilized needles, lack of condom use, and mother-to-child transmission were rightly identified by the majority of respondents as possible means of HIV transmission (Table 1). Very few of the respondents ($< 4\%$) believed in the myths that HIV could be transmitted through witchcraft, mosquito bites, and sharing of personal effects.

Table 2 shows the knowledge of HIV preventive measures among the respondents. Abstinence as a preventive strategy was identified by 256 students (69.6%). Avoidance of sex with multiple partners and condom use were recognized by 299 (81.3%) and 316 (85.9%) students respectively as other means of preventing HIV infection. A large proportion (90.3%) of the students knew drugs that could reduce the transmission of HIV from mother to child. Additional measures (though unproven) which respondents thought would reduce risk of transmission of HIV include prayers (16.3%), avoidance of kissing (11.7%), and use of traditional herbs (3.3%).

Attitude towards people living with HIV/AIDS (PLWHA)

Over 90% of respondents would be willing to look after an infected family member living in the same house, whereas only 75.5% of them would eat

Table 1. Characteristics of medical students in Jos, Nigeria

Characteristics	
Number (M/F)	251/117
Age (mean ± SD), yrs	24 ± 2
Ever had sex before, %	37.7
Sexually active in the last 12 months, %	26.9
Age (yrs) at first sexual experience, %	
8-10	10.1
11-13	5
14-16	12.9
17 and above	71.9
Perceived risk of HIV acquisition, %	
None/Small	82.2
Moderate	8.5
High	1.7
Don't know	7.6
Risk factors for HIV acquisition, %	
Multiple sexual partners	6.1
Sex with commercial sex workers	1.9
Blood transfusion	1.9
Homosexual contact	1.9
Needle stick injuries	9.3

from the same plate. However, 40% would like the status of such a family member to remain secret, while 30% would disclose it and 30% were not sure of how to handle such information. Three hundred and two (85.3%) of the respondents would buy fresh vegetables from a PLWHA.

Voluntary counselling and testing

All the respondents were aware of the availability of VCT services within the hospital. One hundred and seventy-eight (50.7%) have had VCT. There was no significant difference between the proportion of males and females who had had VCT (48.9% of males and 56.3% of females; $\chi^2 = 1.65$, OR = 0.76 95% CI: 0.46-1.20; $p = 0.19$). The majority of the respondents (83.1%) would want to have VCT.

Eighty-one of the 101 (80.2%) sexually active and 201 of the 262 (80.2%) sexually inactive respondents were willing to have VCT; $\chi^2 = 0.018$, $p = 0.99$. There were an additional five respondents who did not have sufficient data for this analysis.

Fear of a positive test result was the main reason given by those who would be unwilling to be tested. Gender had no effect on the willingness of the subjects to have VCT as 81.8% of males and 87.1% of females were disposed to it ($\chi^2 = 1.95$; OR = 0.63, 95% CI: 0.31-1.26).

Given that 80% of the respondents live under one (1) US dollar a day, no further analysis was conducted to assess the relationship between socioeconomic status and VCT acceptability.

Discussion

The main findings of this study were that: a) knowledge of HIV transmission and its preventive measures is high among medical students in the University of Jos; and b) the acceptability of VCT is high as half of the students have had VCT before and eight out of every 10 of them would want to have VCT. Additionally, our study also showed that the attitude of these medical students towards PLWHA is positive (as over 90% would have an infected family member living with him/her and 75% would share household utensils with such a person).

Few studies of this nature exist among medical students on the acceptability of VCT for us to compare our findings with. In a study of 186 Tanzanian medical students, 43.3% had had VCT [7]. Another study conducted among Tanzanian students of health care professions (medical students consisting of 32.4%), where all the participants were aware of VCT services, found that only 34.6% had had VCT [6]. These figures are much lower than that from our study. This discrepancy may be explained by differences in study characteristics, notably the proportion of sexually active individuals and their risk perception as seen in the Tanzanian students of health care professions compared to ours [6]. While the majority (94.6%) of the respondents in that study were sexually active, only 37.7% of the respondents in our study had ever had sex. This may have imparted the perceived risk of HIV acquisition in these groups as the proportion of those with perceived high risk is three times higher among the Tanzanian students compared to ours. It is then likely that those with lower risk perception (as a result of not having had sex ever) would readily accept VCT. This is further reinforced by the fact that acceptability of VCT is readily hampered by fear of a positive result (as shown in previous studies and ours) [6,12].

Another reason for the higher acceptability of VCT in our study may be the availability of a comprehensive HIV/AIDS care and treatment program in our institution. The Jos University Teaching Hospital HIV/AIDS program, funded by the Nigerian government and the US President's Emergency Program for AIDS Relief (PEPFAR), currently has over 18,000 patients in care and 13,000

Table 2. Knowledge of HIV preventive measures among clinical students at the Jos University Teaching Hospital

	Yes n, (%)	No n, (%)
Abstinence	256 (69.6)	112 (30.4)
Avoidance of high risk sex: Sex with multiple partners	299 (81.3)	69 (18.8)
Sex with commercial sex workers	313(85.1)	55 (14.9)
Sex with homosexuals	277 (75.3)	91 (24.7)
Sex with intravenous drug user	243 (66)	125 (43)
Sex with HIV infected persons	308 (83.7)	60 (16.3)
Condom use	316 (85.9)	52 (14.1)
Avoidance of sharps	312 (84.8)	56 (15.2)
Avoidance of unsafe blood transfusion practices	149 (40.5)	219 (59.5)

on highly active antiretroviral therapy. It is then not surprising that students within such an environment would be positively disposed to VCT. Additionally, it is likely that the positive attitude of the students towards PLWHA would have been imparted on the VCT acceptability rate recorded in this study.

Although the literature is scanty on VCT among medical students, it is however replete with studies documenting VCT within the community. VCT acceptability rates of 11% to 62.2% have been reported among adults in various African countries [11,13-16]. In Nigeria, acceptance rates of VCT among students of tertiary institutions ranged from 8.3% to less than 30% in reported studies [8-10]. Within the community, however, VCT acceptability rates range from 42% among urban youths to 72.3% of rural dwellers [17,12]. Thus the VCT acceptability rate among our students is twice that of comparable age groups. This finding has important implications for HIV preventive strategies in Nigeria and other developing countries that have huge HIV/AIDS burden. Medical students, having demonstrated high VCT acceptability, could serve as peer educators among youths.

The findings of our study must be interpreted in the context of the limitations encountered. This was a questionnaire-based cross-sectional study in which we relied completely on information provided by the

respondents. It may also be argued that some bias could have been introduced by the fact that the researchers were teachers at the same university. However, the method of data collection had no identifiers thus ensuring confidentiality and anonymity. Additionally, there was no face-to-face interview with the respondents, reducing the tendency to fabrication. Another limitation to our study was the inability to provide VCT services; hence we could not assess VCT uptake as this would have enabled us validate the acceptability. However, the result of our study provides a scaffold for which VCT uptake can be evaluated among medical students. Lastly, our study was a single institutional survey and the results may not be generalizable to the majority of medical students. Nevertheless, it provides useful information for planning a multicenter study.

In conclusion, HIV knowledge among clinical students at the University of Jos is good. The students' awareness of VCT services is excellent and the acceptability of VCT is quite high. These students can be role models for the optimization of VCT services. The fear of a positive result, however, remains a barrier for some students. There is the need for continual education as it would enhance optimization of VCT services.

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