J-MWAN 5 (2017) 53- 63

SEXUAL BEHAVIOUR, HIV AWARENESS AND WILLINGNESS FOR FREE HIV SCREENING AMONGS TERTIARY INSTITUTION POPULATION IN BENUE, NORTH-CENTRAL NIGERIA.

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KEY WORDS: Sexual behaviour, willingness, HIV screening
RUNNING TITLE: Sexual Behaviour, HIV awareness and willingness for screening among population at Tertiary Institution.

Summary

Aim and Objectives: HIV/AIDS epidemic continues to be a global challenge particularly among young people. The aim was to assess the sexual behaviour, HIV/AIDS awareness and willingness to undergo a free HIV screening among the State University community.

Materials and Methods: A Descriptive cross-sectional study was conducted among students and staff of the University community. Data was obtained through self-administered, semi-structured questionnaire. Consented respondents were screened, counselled and informed of their results. Data was analysed using SPSS version 19 software.

Results: Out of 779 participants, 447 (57.4%) were males, 63% were within 21-30 years of age. Over 90% had secondary or tertiary level of education. Seventy seven percent of the participants were single. Over 90% were aware of HIV and 2/3 (79.6%) of the total clients were willing to be screened for HIV. Forty per cent of the responding clients had never been previously tested. Among the 319 clients that submitted for the screening 16 (5.0%) were HIV reactive. Thirteen (81.2%) of the reactive cases were single and had two or more sexual partners.

Conclusion: The study population had high level of awareness concerning HIV/AIDS with low uptake for HIV screening services. Multiple sexual partners also existed among the HIV positive respondents. Thus, a great risk to the entire community and could greatly undermine the efforts to prevent spread of the infection. Public Health workers should adopt impact strategies that would modify risky sexual behaviour, promote uptake of HIV screening services and subsequently contribute to curbing the spread of the epidemic.

Introduction

The HIV/AIDS epidemic continues to be a global challenge with an estimated 33.3 million people living with HIV globally.[1] It is the leading cause of death in adults in Africa[2]. In Sub-Saharan Africa, it is estimated that 23.5 million people are living with the virus. This accounts for over 2/3 (69%) of all people infected with HIV in the world.[3,4] Nigeria is known to have the 3rd highest population with people living with HIV/AIDS after South Africa and Botswana.[2,,5,6,7] The country's national HIV sero-prevalence survey among pregnant women attending Antenatal clinic revealed a prevalence of 4.1% with zonal variations ranging from 1% in Kebi to 15.2% in Rivers State.[8] The infection is fast spreading with no age, gender or racial discrimination. In developing countries it occurs mostly among people where about half of those living with the virus are between the ages of 15-24 years.[9,10] Since there is no yet permanent cure for this infection, the main strategy for curbing the spread now is the prevention of new cases. Currently, major public health efforts are geared towards the scale-up of HIV testing. This leads to early diagnosis and, the knowledge of ones HIV-serostatus may minimize HIV transmission by reducing risky behaviour.[1,8]

Testing can also help increase access to treatment particularly for this population group that are usually sexually active and thereby reduce HIV-related morbidity and mortality. In addition, a negative sero- status could be very motivating for clients to ensure they remain negative through the adoption of risk reduction strategies. The success of the scale up strategy is a function of willingness to utilize the available testing services. Previous National surveys had revealed a high level (72%) of desire to have HIV test carried out with actual low level of uptake (14%).[3]Barriers such as the fear of an HIV-positive test result, HIV-related stigma, and the resulting impacts on relationships with family and public authorities are among the reasons why people generally do not get tested for HIV.[1,6] In one of the ten states with the highest prevalence rate of HIV, it is important that a study be carried in her University Community where great proportion of her young people is harbored. Generally, the University environment offers minimal parental supervision. This creates a great opportunity for young people to engage in risky sexual behaviour that predisposes them to acquisition and transmission of sexually transmitted infections including HIV/AIDS.[10]
The main objective of the study was to determine the sexual behaviour, level of awareness of HIV/AIDs and willingness to undergo free HIV test among the study population.

Materials and Methods

This was a descriptive cross sectional study conducted among members of the State Universitycommunity in North Central zone, Nigeria in 2013. This was carried out during a medical screening and vaccination program organized by hepatitis B/HIV/AIDS research group of the Institution domiciled in the departments of Medical Microbiology and Community Health. Participants included staff (including their wards) and students of the University community.

With the aid of a self-administered structured questionnaires, information on age, gender, marital status, nature of marriage, level of education, sexual behaviour, among others were elicited from participants. Informed verbal consent was obtained from the participants. HIV/AIDS counselling and testing was conducted for clients who accepted to be tested. The study was approved by Ethical and research committee of the Institution.

HIV Screening was done at no cost to participants after pretest counselling. After identification of the clients, disinfection of appropriate site was done. Client's sample was then collected into properly labelled EDTA bottle. Test strip was opened, using a disposable Pasteur pipette, a drop of blood was put into the specimen site and 2 drops of diluents were then added and the mixture was allowed to migrate to the viewing site. Interpretation was done in which red or pink band at the test and control sites was considered positive. Similar band only at the control site was interpreted as negative, while band occurring only at the test site was considered an invalid result. Fourth generation enzyme immunoassays (EIA) HIV kits manufactured by Alere Medical Company Limited was used for initial screening, participants who were positive were then re-tested using UniGold manufactured by Trinity Biotech. If the second test confirms positivity, the client was considered to be HIV positive.Those participants with HIV sero-negativity were post-test counselled on how to remain negative. Similarly, clients with HIV sero-positive results were counselled and sent for further laboratory tests and possible treatment.

Results were fed into and analysed using SPSS version 19 software, chi-square (X^2) was used to compare association between proportions and P-value of<0.05 was considered significant at 95.0% confidence level.

Results

A total of 779 individuals were recruited into this study consisting of 332(42.6%) females and 447(57.4%) males. Majority (63.4%) of the respondents were between 21 and 30 years. Over 90% of the study group attained up to secondary or tertiary level of education. Majority (77%) of the respondents were single while 22% were married and mostly in a monogamous setting as shown in Table1.

Table 2 showed the level of awareness on HIV/AIDS among the study population. Ninety seven percent of the study population had heard of HIV.Most (85.6%) of the respondents

cited testing as a way of knowing if someone has HIV. In addition, 91.3% of them agreed that a healthy looking person could have HIV. The commonly cited routes of transmission of HIV were sexual contact (94.7 %) use of contaminated needles (80 %), use of infected blood (50.2%) and from an infected mother (33 %).
Within the last one year preceding the study 42.1% had gone for an HIV test. However, over one third (40.9%) of the respondents had never gone for an HIV testing. Although most 620(79.6%) of the respondents agreed to carry out the test on the day of screening, only 319 (56.5%) of them submitted themselves for the screening exercise. Out of which 16 (5%) tested positive for HIV as shown in table 3.

Among the 16 respondents that tested positive 50% were within 21 to 30 years of age, although positivity was not seen to be significantly associated with respondents age statistically (x^2=2.49, P=0.289). Over 50% of the positive cases were male but this was also not significantly associated with gender statistically(X^2=0.8394, p=0.17). The respondents that were single were 1.745 times more likely to be HIV positive compared to their married counterparts (OR=1.745, CI 0.4854-6.276). Almost 1/3 of the positive clients had two or more sexual partners, although positivity here was also not significantly associated with number of sexual partners statistically as shown in table 4

Discussion

HIV/AIDS remains a growing public health challenge in developing countries particularly among young people. They are a very vulnerable group mainly due to their kind of life style on university campuses. They are commonly known for high level of sexual activity which is a platform for which many people contract the infection. In this study it was evident that the respondents were very aware of HIV/ AIDS as 757(97.2%) were ever aware of HIV, over 50% of the respondents knew more than two routes of transmission and 577(85.6%) of them knew testing as a means of knowing someone's HIV Status. This level of awareness is consistent with similar studies done within and outside Nigeria[11,12, 13,14]. Although this level of awareness was considered to be high, one fifth (20%) of them were not willing to be tested for HIV meanwhile 40% of the total respondents had never been tested previously. This implies that high level of awareness has not translated to willingness to test for HIV. This confirms the result from a community survey carried out where those with higher level of education showed lower interest to test[11]. In this study even among those that were willing (79.6%) to be tested, only 319(51.4%) of them eventually presented themselves to be screened. This implies that willingness is not synonymous to actual uptake even though the screening was of no cost to the respondents.

Uptake for HIV testing has

remained a challenge as it has been reported by some studies that the willingness to test for HIV is negatively associated with sexual activity and having many sexual partners.[15]On the

contrary, other studies carried out revealed that their participants had good knowledge concerning HIV and were also willing to be tested [16-18] Subsequent studies should therefore focus on the predictors of HIV test among this vulnerable population. In another study carried out in Ghana, it was revealed that sexual activity was a negative predictor for willingness to test for HIV as those that were not sexually active were twice as willing to test for HIV[11]. This may explain why another study that had only 37% of participants sexually active were more willing to go for Testing.[18]In a similar study conducted in a tertiary Institution in Nigeria where about 25% were sexually active not all of them had undergone an HIV test[19]. Among the respondents that did the test 16(5%) tested positive for HIV, 80% of which were single and thirty years or less. Twelve (75%) of them also had one or more sexual partners although the positivity statistically, was not significantly associated with the socio-demographic characteristics, it showed that the chances of having HIV was higher among the singles with OR of 1.74. This is quite worrisome considering the impact on the future reproductive carrier of the respondents with its multiplier effect.

The presence of multiple sexual partners among HIV reactive respondents that are mostly single would also undermine the efforts to prevent spread of the disease as many more are put at risk of contracting the virus among this vulnerable population. The children yet unborn are also not exempted from this great risk. This call for result oriented researches and adoption of innovative strategies and approaches that would curb the spread.

Conclusion and Recommendation: The study revealed high level of awareness among the population group concerning HIV/AIDS. There was however low uptake of free mobile HIV screening services. Multiple sexual partners also existed among the HIV positive clients. This is a great risk to the entire community and could undermine the efforts to prevent spread of the infection. The priority therefore must be innovative strategies to reduce occurrence of new cases and sustaining of current preventive efforts.

Public Health workers should target this vulnerable group with information and strategies that would reduce stigma, modify risky behaviour, promote uptake of HIV screening services and subsequently contribute to curbing the spread of the epidemic particularly among the young population.

Further research should be conducted to explore and appropriately address the predictors of unwillingness to HIV testing among this population group.

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Table 1: Socio-demographic characteristics of respondents.

1. Age group (years)	Frequency (n=779)	Percentage (%)
= 20	143	18.4%
21 -30	494	63.4%
31 -40	106	13.6%
41 -50	33	4.2%
=51	3	0.4%
Total	**779**	**100**
2. Ethnic Group		
Tiv	468	60.1%
Idoma	146	18.7%
Igede	42	5.4%
Igbo	15	1.9%
Yoruba	3	0.4%
Hausa	1	0.1%
Others	104	13.4%
Total	**779**	**100**
3. Gender		
Male	447	57.4%
Female	332	42.6%
Total	**779**	**100**
4. Level of Education		
Tertiary	418	53.7%
Secondary	319	40.9%
Primary	18	2.3%
None	6	0.8%
Others	18	2.3%
Total	**779**	**100**
5. Marital Status		
Single	600	77.0%
Married	174	22.3%
Divorced	3	0.4%
Widowed	2	0.3%
Total	**779**	**100**
6. Nature of Marriage		
Monogamy	158	88.3%
Polygamy	19	10.6%
Others	2	1.1%
Total	**179**	**100**

Table 2: HIV Awareness among respondents.

Variable	Frequency (n=779)		Percentage (%)
Ever aware of HIV			
Yes	757		97.2%
No	22		2.8%
How can you know that a person has HIV?			
Constant sickness	38		5.6%
Testing	576		85.6%
Weight lost	11		1.6%
Don't know	29		4.3%
Others	19		2.8%
Can a healthy looking person have HIV?			
Yes	659		91.3%
No	48		6.6%
I Don't Know	15		2.1%
***How can someone get HIV into his body?**	**YES (%)**	**NO (%)**	**I DON'T KNOW (%)**
Sexual contact	739 (94.9)	21 (2.7)	19 (2.4)
Hugging	108 (13.9)	568 (72.9)	103 (13.2)
Use of contaminated needles	623 (80.0)	69 (8.9)	87 (11.9)
Sharing of clothing	107 (13.7)	558 (71.6)	112 (14.7)
From infected mother	257 (33.0)	132 (16.9)	410 (50.1)
Use of infected blood	391 (50.2)	92 (11.8)	316 (38.0)
From dirty toilets	184 (23.6)	315 (40.4)	300 (36.0)
From drinking contaminated water	144 (18.5)	496 (63.7)	139 (17.8)

- **Total over 779 due to multiple responses**

Table 3: Practice of VCT among respondents.

Variable	Frequency (n=779)	Percentage (%)
When last did you go for HIV test?		
0 -6months	153	22.0%
7 -12 months	140	20.1%
More than 12 months	103	14.8%
Never	284	40.9%
I don't know	99	2.2%
Is your spouse aware of your HIV status?		
Yes	363	46.60%
No	159	20.41%
I don't know	87	11.17%
No Response	170	21.82%
Are you aware of your partner's HIV status?		
Yes	329	42.23%
No	275	35.30%
No Response	175	22.47%
Will you agree to carry out HIV test today?		
No	159	20.4%
Yes	620	79.6%
HIV Test Result		
Positive	16	5.0%
Negative	303	95.0%

Table 4. Demographic features versus HIV Status of respondents

Variable	HIV Status		statistics
	Reactive(N=16)	Non- Reactive(N=303)	
Age (years)			
=20	5	49	X^2-2.49Df-2
21-30	8	177	P-0.287
=31	3	77	
Gender			X^2-0.8394
Male	9	135	Df-1
Female	7	168	P-0.17
Marital status			Fischer's exact=0.292
Single	13	216	OR=1.745
Married	3	87	CI- 0.4854-6.276
No of sexual partners			
0	4	91	X^2-0.197
1	7	127	Df-2
=2	5	85	P-0.9