Sex Behaviour Change in Response to the HIV/AIDS Threat among University Students in Abakaliki, Ebonyi State

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SUMMARY

Objective: To assess the sexual behaviour change of unmarried students of Ebonyi State University (EBSU) Abakaliki, in response to the HIV/AIDS epidemic.

Method:

Setting: Nigerian undergraduate students belong to the age group that is sexually active, and prior studies have documented an appreciable knowledge of the HIV pandemic among them. Hetero-sexual intercourse remains the commonest route of HIV/AIDS transmission.

Design: A cross sectional descriptive survey of self-reported sexual behaviour changes of students of EBSU.

Result: There was a high level (95.9%) of awareness of HIV/AIDS, and more than 94% knowledge of the various routes of its transmission. About one third (31.9%) had misconception that deep kissing did not transmit HIB, and another 7.5% believed that causal contact such as shaking hands transmits the virus. Generally, 66.7% reported adopting various sex behaviour changes. Specific behaviour changes include avoidance of premarital sex (34.7%), consistent use of condoms (13.6%), faithfulness to one partner (11.1%), reduction of the number of sex partners (2.5%), and various combinations of these (41.3%). Awareness of HIV/AIDS and age were significant factors in these behavioural changes.

Conclusion: A high proportion of the students in this study reported having changed their sex behaviour in response to the HIV/AIDS epidemic. It is noteworthy that more people reported avoidance of premarital sex as their preferred sexual behaviour change.

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Key words: **Sex behaviour; Change; HIV/AIDS; Students; Ebonyi State University Abakaliki.**

INTRODUCTION

The currently evolving HIV/AIDS pandemic represents the most serious health threat to the survival of mankind and human society since the beginning of the 20th century.

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Available data suggests that by the end of 2005, more than 60 million people worldwide were living with HIV/AIDS while 10 million had died from its associated illnesses since its inception in 1981[1]. Sub-Saharan Africa bears a disproportionate burden of HIV/AIDS morbidity and mortality, accounting for 66 percent of infected persons and about 80% of its mortality, though it constitutes only 10% of the global population[2]. Combined with hunger, HIV/AIDS represents the greatest threat to the lives, well-being, and development of the people in the African continent [3]. Nigeria's current average national HIV/AIDS seroprevalence rate was 4.5% and Ebonyi state's sero-prevalence was 4.6% by 2005 [4]. Though she has lower HIV sero-prevalence rate than some countries in Eastern and Southern Africa, being the largest country in Africa, she has the highest number of people living with HIV/AIDS (PLWHA), accounting for 20 per cent of the PLWHA within Africa [3]. The greatest toll of HIV/AIDS is exerted on the youths in the 15-25 year age group. This group constitutes about 60 per cent of the PLWHA globally [5-6], and has the highest HIV/AIDS sero-prevalence and incidence rates both locally and globally [4,5,7].

In Nigeria, like the rest of Africa, unprotected heterosexual intercourse remains the commonest route for HIV/AIDS transmission and is promoted by diverse sociocultural, economic, and behavioural factors [3]. Sexual activity begins in adolescence in most parts of the world, and reaches maximum level in the 20-30 year age group [9]. Since youths are at special risk of contracting HIV infection, and unprotected heterosexual intercourse is the commonest route of infection, their sexual behaviour and the possible implications this might hold for their HIV/AIDS vulnerability, is of major public health interest. Incidentally, many youths are not aware of their heightened HIV/AIDS and other sexually transmitted diseases' vulnerability.

Previous studies of the sexual behaviour of Nigerian youths indicates that it is characterized by early age of sexual initiation, has short-lived encounters, involves multiple sex partners, and displays little or no concern for the consequences of this sexual behaviour pattern [10-16]. It is possible that this pattern of sexual behaviour may be a reflection of limited knowledge, carelessness, indifference to consequences or an effect of increasing societal tolerance of promiscuity. On the other hand, changing mores and shrinking of cultural differences in sexual behaviour arising from the globalization of modern communication, glamorization of sex in advertisements, and weakening of traditional structures and instruments of social control might have contributed to this.[17,18]

There have been suggestions that having knowledge of sexually transmitted infections and HIV/AIDS vulnerability can motivate an individual to consciously modify his sexual behaviour, so as to reduce the risk of becoming infected [10]. This study is therefore aimed at assessing the students' awareness of HIV/AIDS, and the sex behaviour change adopted by them in response to the HIV/AIDS epidemic.

MATERIALS AND METHODS

Study Location

This study was conducted at Ebonyi State University, Abakaliki, located in the South Eastern part of Nigeria, about 80 kilometers NE of Enugu. The university consists of three campuses, viz CAS, PRESCO, and Ishieke, located in different parts of the fast growing capital city, Abakaliki, an area renowned for indigenous production of rice, yam, and other staple foods.

The university has been growing at a fast pace, and has a student population of about 12,000 made up of regular (undergraduate and postgraduate), "work and study programme" (WASP), and the pre-degree programme students. Most of the students in the university live off-campus, in self-rented private hostels located in different parts of the city.

Study Design

This is a cross-sectional descriptive study of self-reported sexual behaviour change of university students in response to the HIV/AIDS epidemic in Nigeria.

Sample Size And Sampling Technique

Through a multi-stage random sampling technique, a sample size of 360 students was drawn for the study using the formula for sample size determination in cross-sectional studies ($N = Z^2pq/d^2$) [29]. The prevalence rate of 25.7% of sexual activity among youths, derived from a study conducted in Port Harcourt [12], was used as the prevalence (P) in this calculation. A minimum required sample size of 293.4 was calculated, but this was increased to 360 in order to increase the power of the study.

The first stage of the sampling by balloting selected the CAS campus as the location of the study. This campus houses the Faculty of Agriculture and natural resources management (FARM), the faculty of Law, and the Pre-Degree school. Using the same balloting method, one department each from the two faculties (Faculty of Agriculture and Natural Resources Management {FARM}, and Faculty of Law), and the Pre-Degree school were selected. The final stage of the sampling consisted in consecutive recruitment of the students who were met in class in the mornings in each selected department at the time of arrival of the data collectors. Recruitment continued until the sample size was achieved.

Data was collected by research assistants (5^{th} year medical students of the university on community medicine posting) using a structured self-administered questionnaire containing mostly close-ended questions. In order to ensure confidentiality, respondents completed the questionnaires privately and returned same in sealed opaque envelopes.

Informed consent was obtained from each student before completing the questionnaire. All married students were excluded from the study. Pertinent information elicited by means of the questionnaires include the respondents' socio-demographic characteristics, awareness and belief about HIV/AIDS, knowledge of its transmission, sources of information on HIV/AIDS, and the influence of HIV/AIDS awareness on intended and / or actual sex behaviour change. The behaviour change was assessed by means of the participants' response to the following three questions, viz:

a. Have you considered it necessary to change your sex behaviour in response to the HIV/AIDS epidemic?
B. What forms of behaviour change do you intend to adopt?
C. What specific sex behaviour change have you actually adopted?

Data Analysis

Data was analyzed using SPSS version 11.0 statistical software. Presentation of data was by means of tables and percentages. Chi-square statistic was used to assess the statistical significance of differences between groups when cell sizes were sufficient, whereas in cases not meeting this criterion; Fisher's exact test (two-tailed) was applied. Significance was set at $P < 0.05$.

Ethical Clearance

Prior approval for the study was obtained from the research ethics committee of Ebonyi State University Teaching Hospital (EBSUTH). Permission to carry out the study was obtained from the two Deans and the Director of the Pre-Degree school whose students participated in the study.

RESULTS

Of the 360 questionnaires distributed, 307 were successfully retrieved, giving a response rate of 85.3%. However 7 of the returned questionnaires contained very little analyzable information and were therefore eliminated from the data pool for analysis. The results discussed here are thus based on the analysis of the 300 completed questionnaires.

Socio-Demographic Characteristics

The age range of the respondents was from 15-37 years with a mean age of 23.7years and a standard deviation of ± 4.4years. Majority of the respondents (68.7%) were in the 20-25 year age group. Males constituted 52.7% of the sample, giving a 1:2:1 male to female ratio. The students at the lower levels of academic study (first and second year students, including pre-degree students) constituted a slight majority (55.0%).

There were more females than males in the younger age class ($X^2 = 7.97$; df=2; P=0.018), more males than females in the lower levels of study ($X^2 = 16.8$; df = 3; P = 0.007), and more of the younger respondents in the lower levels of study ($X^2 = 35.4$; df = 2; P = 0.000). See Table 1.

Awareness and Beliefs about HIV/AIDS and Its Transmission:

Majority of the respondents (95.9%) were aware of HIV/AIDS (that is, they have heard of HIV/AIDS before). Similarly, majority (91.0%) of the respondents believe that HIV.AIDS exists. Age influenced this as a higher proportion (94.7%) of those in the 20 25year age group compared to the other age groups (90% for = 26 years and 79.5% for those 15-19 years) believe that HIV/AIDS exists (X^2 = 17.8; df = 2; P = 0.0001). See Table 2.

Knowledge of the Route of Transmission

The students' knowledge of the route of HIV/AIDS transmission is high though with some misconceptions. The proportion of those identifying the various routes of HIV/AIDS transmission is as follows:

- Unprotected sex 95.8%
- Use of unsterilized sharp objects 95.7%
- Transfusion with unsafe blood 94.1%
- Deep kissing 31.9%, and
- Casual contact (shaking of hands) 7.5%

Age, sex, and level of study did not influence the knowledge that HIV/AIDS could be transmitted through the use of unsterilized sharp objects. Only age influenced the knowledge that HIV/AIDS could be transmitted both through unprotected sex (X^2 {Yates corrected} =4.97; Fisher exact 2-tailed P value=0.0003), and through exposure to unsafe blood transfusion (X^2 [Yates corrected] =7.27; Fisher exact 2 tailed P value = 0.006). See Table 3.

Sources of Information on HIV/AIDS

The data shows that the respondents obtained their information on the HIV/AIDS from diverse sources. Majority of the respondents (57.8%) obtained their information from multiple sources; 14.9% each from radio and television 3.3% from friends. See Table 4.

Sex Behaviour Change in Response to the HIV/AIDS Epidemic

Majority of the respondents (261 or 87%) were sexually active, 275 (91.7%) reported intention to change their sex behaviour, while 174 (58%) reported they have already changed their sexual behaviours. Only age of respondents influenced intention to change behaviour as a higher proportion of respondents in the 20-25 year age group (96.1%) compared to the other age groups (87.5% for those = 26 years and 77.8% for those 15-19 years) reported intention to change their behaviour (X^2 = 19.89; df = 2; P = 0.00004). See Table 5.

Contrariwise, none of the socio-demographic variables influenced actual change, but belief in the existence of HIV/AIDS and knowledge that unprotected sex is a route of HIV/AIDS transmission. Thus, a higher proportion (71.5%) of those who believe that HIV/AIDS exists than those who did not believe (12.0%) reported to have changed (X^2 [Yates corrected] = 15.20; Fisher's exact 2-tailed P value = 0.000). See Table 6A. Similarly, a higher proportion of those who knew that HIV/AIDS could be transmitted through unprotected sex (68.1%) than those who did not know (31.3%) reported to have changed their sex behaviour (X^2 {Yates corrected}= 9.07; Fisher's exact 2-tailed P value = 0.009). See Table 6B.

On the specific sex behaviour change, the following were the proportion of students reporting:

- Avoidance of premarita l sex 34.7%
- Consistent use of condoms 13.6%
- Faithfulness to one partner 11.1%
- Reduction in the number of sex partners 2.5% and
- Combination of condom use and reduction of sexual partners 41.3%

The socio-demographic variables (age, sex, and level of study) did not influence the specific behaviour change.

Table 1: Socio-demographic characteristics of respondents:

Age (Years)	Sex: Male (%)	Female (%)	Total (%)
15-19	20 (37.0)	34 (63)	54 (100)
20-25	112 (54.4)	94 (45.6)	206 (100)
=26	26 (65)	14 (35)	40 (100)
Total	158 (52.7)	142 (47.3)	300 (100)
	X^2= 7.97;	Df =2; P = 0.02	
Level of Study:			
100			
(First Year & Pre-Degree	53 (66.3)	27 (33.7)	80 (100)
200	35 (41.2)	50 (58.8)	85 (100)
300	29 (41.4)	41 (58.6)	70 (100)
400	41 (63.1)	24 (36.9)	65 (100)
Total	158 (52.7)	142 (47.3)	300 (100)
	X^2= 16.79;	Df =3; P = 0007	

Table 2: Relationship between age and belief in the existence of HIV/AIDS

Age (Years)	Belief in the Existence of HIV/AIDS: Yes (%)	No (%)	Total (%)
15-19	41 (79.5)	13 (20.5)	54 (100)
20-25	195 (94.7)	11 (5.3)	206 (100)
= 26	36 (90)	5 (10)	40 (100)
Total	272	28	300
	X^2 = 17.8; df 2;	P = 0.00001	

Figures in parenthesis are percentages.

Table 3: Relationship between age and knowledge of means of transmission of HIV/AIDS

A	Transmitted through Yes (%)	Unprotected sex No (%)	Total (%)
Age (Years)			
15-19	45 (84.9)	8 (15.1)	53 (100)
= 20	242 (97.97)	5 (2.03)	247 (100)
Total	**287**	**13**	**300**
	X^2 = 14.97; 2 –tailed P value	Fisher's exact = 0.0003	
B	**Transmitted through Yes**	**Unsafe blood transfusion No**	**Total**
15-19	46 (85.2)	8 (14.8)	54 (100)
= 20	236 (95.9)	10 (4.1)	246 (100)
Total	**282**	**18**	**300**
	X^2 = [Yates corrected] 2 tailed P value = 0.006	= 7.27; Fisher's exact	

Figures in parenthesis are percentages.

Table 4: Sources of information on HIV/AIDS

Source of information	Frequency	Percentage
Radio	44	14.9
Television	44	14.9
Friends	10	3.3
Church	10	3.3
Other: Hospital, Newspaper, Relations etc	17	5.8
Multiple sources	168	57.8
Total	**293**	**100**

Table 5: Relationship between age and intention to change sex behaviour

	Intention to change Yes (%)	Sex behaviour No (%)	Total (%)
Age Class:			
15-19	42 (77.8)	12 (22.2)	54 (100)
20-25	198 (96.1)	8 (3.9)	206 (100)
= 26	35 (87.5)	5 (12.5)	40 (100)
Total	275	25	300
	$X^2 = 19.9$; Df = 2;	P = 0.00004	

DISCUSSION

This study the self reported intended and actual sex behaviour changes taking place amongst students in a tertiary institution in Nigeria in response to the HIV/AIDS epidemic. Though there is a gap between reported intended sex behaviour change (91.6%) and reported actual change (58%), the fact that students are changing their sex behaviour in response to the HIV/AIDS epidemic means that the vigorous campaign going on in Nigeria is making impact in this vulnerable population group. This could explain the persistent drop in HIV sero-prevalence in recent times since 2001. [20] it is noteworthy that up to 34.7% of the respondents in this study reported avoidance of premarital sex in response to the HIV/AIDS epidemic. It means that this can be successfully promoted as a preventive strategy against HIV/AIDS in this population and should therefore be reinforced as a preventive measure against HIV/AIDS and other sexually transmitted infections. Recognising that social consensus, peer support, and external validation of sex behaviour represent major determinants of whether individuals would attempt, adopt, or sustain the practice, [21] it follows that active promotion of avoidance of premarital sex in populations could enhance its widespread adoption as a normative behaviour standard and a preventive strategy against HIV/AIDS and other sexually transmitted infections. This is more so in the context of the findings that 24.8% of the males and 49.8% of the females aged 15-19years in Nigeria had engaged in sexual intercourse. [22] Any preventive health strategy that could help to delay the initiation of sexual involvement will ultimately reduce the spread of HIV/AIDS in the population.

This study revealed a high rate of HIV/AIDS awareness as well as knowledge of its routes of transmission among the study population. The 95.9% awareness rate obtained in this study is quite comparable to that obtained amongst antenatal women [23,24] from the same region of the country,but higher than the rate obtained among adolescent hawkers in Western Nigeria. [25] Be that as it may, the researchers had expected 100% awareness amongst the students given that this study was conducted in a University setting with their presumed high level of access to information. The observed gap in HIV/AIDS awareness among these students clearly suggests the necessity of continuing educational and empowerment programmes in all segments of the society without assuming that any particular group now possesses requisite knowledge by virtue of social or academic positioning.

The finding that 9.0% of the respondents do not believe that HIV/AIDS exists gives cause for concern. It is not certain to what degree this view relates to the vociferous proclamation of some media personalities, especially church leaders who in recent times have made claims in relation to the existence of HIV/AIDS. Varga had drawn attention to the documented increase in new cases of HIV/AIDS occasioned by the controversial comment of the South African President which tended to doubt the existence of the disease [26]. The role of the media in fostering misconceptions, inaccuracies, and misinterpretations in relation to sensitive issues of public interest has been documented [27].

The level of correct identification of the routes of transmission of HIV/AIDS observed in this study was much higher than the rates reported for antenatal patients [23] and adolescent hawkers, [25] probably an effect of the higher educational attainments of the current study population. However, only 31.9% of the respondents recognized deep kissing as a possible mode of HIV transmission, and 7.5% erroneously believed that casual contact with an infected person could transmit the infection. These gaps in knowledge and misconceptions about HIV transmission that needs to be corrected, particularly that casual contact transmits HIV/AIDS as this could lead to stigmatization and discrimination towards persons living with HIV/AIDS with its attendant impact on collective societal denial and increased transmission rates.

It is uncertain to what extent the findings of this study can be generalized to students of tertiary institutions in Nigeria. In this regard, the obvious limitation of this study needs to be highlighted. This is that the study relied on self-reported sex behaivour change of the students as any study on sex behaviour is value-laden.

CONCLUSION AND RECOMMENDATION

Taking due cognizance of this limitation, we therefore conclude that a high proportion of the students of Ebonyi State University have changed their sex behaviour in response to the HIV/AIDS threat.

We therefore recommend as follows:

- Avoidance of premarital sex in addition to the other preventive measures against HIV/AIDS should be vigorously promoted in this population.
- Youth friendly centres to improve access to correct information on HIV/AIDS should be established in our campuses. These centres should incorporate voluntary counseling and testing (VCT) services.
- Educational and public enlightenment campaigns should continue in this population in order to fill the gaps in knowledge and correct the misconceptions

about HIV/AIDS transmission. In this regard, HIV/AIDS epidemiology and prevention should form an integral part of the General Studies (GST) course for all students of the university where a student will be required to pass a course work in it.

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