



The Knowledge of HIV/AIDS among Senior Secondary School Students in a Local Government Area of Edo State, Nigeria.

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KEYWORDS

HIV/AIDS,
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ABSTRACT

Introduction

The level of accurate knowledge adolescents have about HIV/AIDS, is important to enhance effective preventive actions, which ultimately result in a decrease in the incidence of the disease among adolescents. This study assessed the level of knowledge of HIV/AIDS and the first source of the information on HIV Counselling and Testing (HCT) among senior secondary school students in Ikpoba Okha Local Government Area of Edo State, Nigeria.

Methodology

A descriptive cross-sectional survey was done in 2010, using self-administered, semi-structured questionnaires administered to senior secondary school students in ten mixed senior secondary schools selected from each of the ten wards in the LGA using multistage sampling technique.

Results

A total of 383 questionnaires were administered and analyzed. The mean age of respondents was 15.6+1.5years. The level of awareness about HIV/AIDS was high 307(80.2%). Overall the respondents had poor level of knowledge of HIV/AIDS. Level of knowledge about HIV/AIDS was associated with class of respondents ($p=0.003$) but not with sex of respondents ($p=0.079$). Parents were first source of information about HCT to 182(47.5%) respondents.

Conclusion

The level of knowledge of HIV/AIDS among senior secondary school students in Ikpoba Okha LGA was poor. Parents were mainly the first source of information on HCT for the respondents. There is need for more research to update knowledge and information on adolescent health issues and services related to HIV/AIDS.

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INTRODUCTION

Lack of adequate information and services available to adolescents could contribute to the higher risk of vulnerability of adolescents to HIV/AIDS.¹ Young people are more vulnerable to sexually transmitted infections (STIs) because of biological and behavioural reasons yet they are

usually less informed about STIs including HIV/AIDS. In addition, many adolescents dread the medical system which often leads to delay in seeking health care^{1,2} HIV/AIDS affects all facets of life including every social institution with worse effects on women, children and youths.^{3,4}

Over 3.1 million Nigerians are living with HIV.⁵ In

2008 alone, 2.23million children were orphaned by AIDS in Nigeria⁴ a figure higher than the previously reported 800,000 orphaned children in 2003 in the country by the same disease.⁶ According to the HIV Sero-Sentinel Survey of 2010 in Nigeria, the prevalence of HIV/AIDS in Benin City was 7.5% and the urban prevalence of the disease among women aged 15-24 years in Edo State was 6.5%. Also, the prevalence of the disease among young people aged 15-24 years in Nigeria was 4.1%.⁷

The level of accurate knowledge adolescents have about HIV/AIDS will improve their attitude towards HIV/AIDS and people living with HIV/AIDS (PLWHA) and ultimately lead to a decrease in the incidence of the disease among adolescents.⁸ In Nigeria, awareness of HIV/AIDS is high but the correct knowledge of the routes of transmission and methods of prevention have remained low.⁷ Studies have revealed that most adolescents lack the skills and knowledge to protect them against HIV/AIDS.⁹⁻¹¹ HCT is universally acknowledged as an entry point to HIV prevention, treatment, care and support, including providing accurate information on HIV/AIDS. The demand and supply of this service is low due to low awareness and misconceptions.^{3,4}

This study assessed the level of knowledge of HIV/AIDS among senior secondary school students in Ikpoba Okha Local Government Area of Edo State, Nigeria and also determined their first source of information on where HCT can be obtained. It is hoped that the study would improve the information on HIV/AIDS available to adolescents in the local area and indeed the global village.

METHODOLOGY

The research was carried out in Ikpoba Okha LGA of Edo State, Nigeria. Ikpoba Okha Local Government Area with its headquarters at Idogbo

lies at longitude 8012 east of the Greenwich meridian and between latitude 50 and 6015 north of the equator. The LGA total population was 371106 consisting of 185132 males and 185974 females.¹² Over 50% of the population is engaged in agriculture. There are 43 registered senior secondary schools in the LGA made up of 19 public and 24 private schools. The population of students in the senior secondary schools (SSS) was 9202, consisting of 4183(45%) males and 5019(55%) females respectfully.¹³

A descriptive cross-sectional survey was done over a period of two months in 2010. Self-administered, semi-structured questionnaires were administered to SSSI-III students in ten mixed senior secondary schools in the LGA. The questionnaire was adapted from the 2009 United Nations General Assembly Special Session (UNGASS) on HIV/AIDS Indicators.¹⁴ The minimum sample size for the study was calculated as 383 using the formula for determining sample size for defined population.¹⁵ The sample units were registered senior secondary school students in the selected schools and classes that were present at the time of the survey. A multistage sampling method was used for the selection of respondents. A school was selected from each of the ten wards that made up the LGA by simple random sampling method from a list of schools in the LGA obtained from the Ministry of Education at the LGA Headquarters in Idogbo. Then, 38 respondents were selected per school using systematic sampling technique after stratifying the respondents according to sex, males 171(45.0%) and females 212(55.0%). Three additional respondents were selected (one each from 3 schools selected randomly by balloting from the ten schools used for the study) to complete the required 383 respondents

A written permission to carry out the study was obtained from the Chief Inspector of Education, Ministry of Education at the Local Government

Headquarters. Permission was also obtained from the various principals of the schools. Verbal consent was obtained from the respondents before inclusion in the survey. The respondents were assured of anonymity and confidentiality. Furthermore, all questionnaires were kept confidential and no one except the researcher has access to them. Health education on HIV/AIDS prevention was done in all the schools used for the study. Data was analyzed using SPSS version 16 and presented in frequency tables. Test of association was done using chi-square test and the difference in statistical association was considered significant at p-value less than 0.05. A scoring system was used to assess knowledge of the respondents. One mark was assigned to correct information provided by respondents in the questionnaire related to knowledge and the total score of all the information was converted to percentage. The following were rated based on the percentage score of the respondents: >75%(very good); 60-74%(good) ; 50-59%(fair) ; and

<50%(poor).

RESULTS

A total of 383 respondents participated in the study, 171(45.0%) males and 212(55.0%) female students. The mean and median age of respondents in years was 15.6(+1.5SD) and 16.0 respectively. In addition, the mean age for boys and girls in the study were 15.9 (+1.5SD) and 14.4(+1.5SD) years respectively. Over half of the respondents, 218(56.9%) were in the age class interval of 16-19years. There was a statistically significant difference between the mean age of males and females, $t=9.73$, $p=0.000$. The various classes had similar proportion of respondents of approximately 30% and almost all the respondents 371(96.9%) were Christians (Table I)

More than two-fifth of respondents fathers, 185(48.3%) and mothers, 161(42.0%) had tertiary education while 2(0.5%) of the fathers and mothers no formal education. Table II

Table I: Socio-demographic characteristics of respondents

Characteristics	Frequency (%)		Total
	Male	Female	
Age (years)			
12 – 15	54 (14.0)	110 (28.8)	164 (42.8)
16 – 19	116 (30.3)	102 (26.6)	218 (56.9)
20 – 23	1 (0.7)	0 (0.0)	1 (0.7)
Class			
SSS I	50 (13.0)	70 (18.3)	120 (31.3)
SSS II	60 (15.4)	70 (18.5)	130 (33.9)
SSS III	61 (15.9)	72 (18.8)	133 (34.7)
Religion			
Christian	166 (43.4)	204 (53.5)	371 (96.9)
Moslem	5 (1.3)	7(1.8)	12(3.1)
Total	171 (45.0)	212 (55.0)	383 (100.0)

Table II: Educational status of parents of respondents

Educational qualification	Frequency (%)	
	Father	Mother
None	2 (0.5)	2 (0.5)
Primary	62 (16.2)	99 (25.8)
Secondary	109 (28.5)	111 (29.0)
Tertiary	185 (48.3)	161 (42.0)
Post graduate	25 (6.5)	10 (2.6)
Total	383 (100.0)	383 (100.0)

There was a very high awareness among the respondents about: STIs 353(92.2%); HIV/AIDS 307(80.2%); route of transmission of HIV/AIDS 320(83.6%); and screening for HIV/AIDS

320(83.6%). There was a statistically significant difference in association between sex and awareness about HIV/AIDS ($p=0.002$) as the awareness was higher in proportion among the males 149(87.1%) than the females 158(74.5%). Table III

Table III: Awareness of respondents about: STIs; HIV/AIDS; Route of transmission; and screening for HIV/AIDS

	Frequency (%)		Total
	Male	Female	
Awareness about STI			
Yes	153(39.9)	200(52.3)	353 (92.2)
No	18 (4.7)	12 (3.1)	30 (7.8)
$\chi^2 = 3.104, p = 0.078(p>0.05), df = 1$			
Awareness about HIV/AIDS			
Yes	149 (38.9)	158 (41.3)	307 (80.2)
No	22 (5.7)	54 (14.1)	76 (19.8)
$\chi^2 = 9.457, p = 0.002(p<0.05), df = 1$			
Awareness of route of transmission			
Yes	141 (36.8)	189 (46.8)	320 (83.6)
No	30 (7.9)	23 (8.6)	63 (16.5)
$\chi^2 = 3.558, p = 0.059(p>0.05), df = 1$			
Awareness about screening for HIV/AIDS			
Yes	140 (36.6)	180 (47.0)	320 (83.6)
No	31 (8.1)	32 (8.4)	63 (16.5)
$\chi^2 = 0.634, p = 0.426(p>0.05), df = 1$			
Total	171(45.0)	212 (55.0)	383(100.0)

More than half of the respondents 202(52.7%) knew the causative agent of HIV/AIDS to be viral. Some of the respondents 15(3.9%) and 12(3.1%) believed HIV/AIDS was caused by witchcraft and spirits respectively (Table IV) Majority of the respondents had poor knowledge

about: the mode of transmission 293(76.5%); signs and symptoms 226(59.0%); and opportunistic infections 358(93.5%) of HIV/AIDS. There was no statistical difference between the sex of respondents and the knowledge about HIV/AIDS ($p>0.05$). Table V

Table IV: Respondents' knowledge about the cause of HIV/AIDS

Cause	Frequency (%)		
	Male	Female	Total
Witchcraft	7 (1.8)	8 (2.1)	15 (3.9)
Spirit	6 (1.6)	6 (1.5)	12 (3.1)
Virus	88 (23.0)	114 (29.7)	202 (52.7)
Fungi	40 (10.4)	45 (11.8)	85 (22.2)
Bacteria	30 (7.8)	39 (10.2)	69 (18.0)
Total	171 (45.0)	212 (55.0)	383 (100.0)

$\chi^2 = 0.498$, $df=4$, $p=0.974$ ($p>0.05$)

Table V: Respondents knowledge about: the mode of transmission; signs and symptoms; and control of spread of HIV/AIDS.

Knowledge about	Frequency (%)		
	Male	Female	Total
mode of transmission			
Good	25 (6.5)	33 (8.6)	58 (15.1)
Fair	12 (3.2)	20 (5.2)	32 (8.4)
Poor	134 (35.0)	159 (41.5)	293 (76.5)
$\chi^2 = 0.852$, $p = 0.651$ ($p> 0.05$), $df = 2$			
Knowledge about signs and symptoms			
Good	40 (10.5)	53 (13.8)	93 (24.3)
Fair	30 (7.8)	34 (8.9)	64 (16.7)
Poor	101 (26.4)	125 (32.6)	226 (59.0)
$\chi^2 = 0.229$, $p = 0.892$ ($p>0.05$), $df = 2$			
Knowledge of opportunistic infection			
Good	3 (0.7)	2 (0.6)	5 (1.3)
Fair	7 (1.8)	13 (3.4)	20 (5.2)
Poor	161 (42.0)	197(51.4)	358 (93.5)
$\chi^2 = 1.245$, $p = 0.537$ ($p>0.05$), $df = 2$			
Total	171 (45.5)	212 (55.5)	383 (100.0)

Parents were the first source of information about where HCT can be obtained for 182(47.5%) respondents. There was no statistically significant difference between the sex of respondents and the first source of information on where to obtain HCT (p=0.513). Table VI

The class of respondents had significant influence on the level of knowledge of HIV/AIDS, as the class of respondents' increased from SSI to SSII and to SSIII the level of knowledge of HIV/AIDS also

increased(p=0.003). Table VII

Male and female respondents with good overall level of knowledge of HIV/AIDS were 32(18.7%) and 38(17.9%). About half of the females 104(49.1%) and almost three-fifth of the males 100(58.5%) had poor overall level of knowledge about HIV/AIDS. The level of knowledge of HIV/AIDS was independent on sex of respondents (p=0.079). Table VIII

Table VI: Primary source of information of respondents about where one can screen for HIV/AIDS

Source	Frequency (%)		Total
	Male	Female	
Friends	13 (3.4)	13 (3.4)	26 (6.8)
Parents	82 (21.4)	100 (26.1)	182 (47.5)
Book/magazine	23 (6.1)	37 (9.7)	60 (15.8)
Radio/TV	41 (10.7)	54 (14.1)	95 (24.8)
Others	12 (3.1)	8 (2.1)	20 (5.2)
Total	171 (45.0)	212 (55.0)	383 (100.0)

$\chi^2=3.274$, $df=4$, $p=0.513(p>0.05)$

Table VII: Class of respondents and the level of knowledge about HIV/AIDS.

Class	Frequency (%)			Total
	Poor	Fair	Good	
SSSI	78 (65.0)	30 (25.0)	12 (10.0)	120 (100.0)
SSS II	70 (53.9)	36 (27.7)	24 (18.4)	130 (100.0)
SSS III	56 (42.1)	43 (32.0)	34 (25.6)	133 (100.0)
Total	204 (53.3)	109 (28.5)	70 (18.3)	383 (100.0)

$\chi^2 = 15.817$, $df = 2$, $p=0.003(p<0.05)$

Table VIII: Sex of respondents and the level of overall knowledge regarding HIV/AIDS

Sex of Respondent	Frequency (%)			Total
	Good	Fair	Poor	
Male	32 (18.7)	39(22.8)	100(58.5)	171 (100.0)
Female	38 (17.9)	70(33.1)	104(49.1)	212 (100.0)
Total	70 (18.3)	109(28.3)	204(53.3)	383 (100.0)

$\chi^2 = 5.078$, $df = 2$, $p = 0.079(p > 0.05)$

DISCUSSION

More than half 218(56.9%) of the respondents were in the age class interval of 16-19years which is appropriate for students in senior secondary school. The difference in mean age between males and females was $t=9.73$, $p=0.000$ which was statistically significant. Almost all the respondents, 371(96.9%) were Christians, possibly because Christianity is the dominant religion in the locality.

There was a very high awareness among the respondents about HIV/AIDS 307(80.2%). A finding similar to the NARHS Plus, 2007 survey¹⁶ and other studies carried out in the country.^{4,11,17,18}

Generally, majority of the respondents had poor comprehensive knowledge about HIV/AIDS: the mode of transmission 293(76.5%); signs and symptoms 226(59.0%); and opportunistic infections 358(93.5%) of HIV/AIDS. This finding was similar to results of some studies done in Nigeria^{11,16,19} where researchers reported observed gaps and misconceptions in the knowledge of HIV/AIDS by adolescents such as transmission of the disease through insect bite, hand shake and kissing,^{11,16-20} incorrect definition of HIV/AIDS; poor knowledge of signs and symptoms of the disease.^{11,16-20} The National Policy on HIV/AIDS revealed the findings of several population-based surveys which have reported gaps between high awareness and comprehensive knowledge and behaviour regarding HIV/AIDS⁴ which corresponds to findings from this study. Misconceptions such as transmission of HIV through insect bite and witchcraft may weaken motivation to practice safer sexual behaviour and worsen the effects of the disease.¹⁴

The class of respondents had significant influence on the level of knowledge of HIV/AIDS, The class of respondents had significant influence on the level of knowledge of HIV/AIDS, as the class of respondents' increased from SSI to SSIII the level of knowledge of HIV/AIDS also increased. The level of knowledge of HIV/AIDS was independent on sex of respondents. Early accurate knowledge of

HIV/AIDS can result in increased public health benefits through decreased risky behaviour that could spread the disease.²¹

Several studies have shown that adolescents obtain information about HIV/AIDS and HCT mainly from the media especially electronic media.^{11,18,20} Parents were the first source of information 182(47.5%) for respondents about HCT in this study.

The role of parents in providing this information is commendable since HCT would provide accurate information on HIV/AIDS prevention, if the service is accessed by adolescents. There should be an implementation of the youth-friendly, skill-based health education activity in schools as stated in the School Health Policy and its Implementation Guidelines^{22,23} in order to reduce the misconceptions about HIV/AIDS among adolescents.

CONCLUSION

The knowledge regarding HIV/AIDS was poor among senior secondary school adolescents in Ikpoba Okha Local Government Area of Edo State, Nigeria. The class of respondents had significant influence on the level of knowledge of HIV/AIDS, however the level of knowledge of HIV/AIDS was independent on sex of respondents. There is need for more research to update knowledge and information on adolescent health issues and services related to HIV/AIDS.

Parents were however the first source of information for majority of respondents about where HCT can be obtained in this study. There should be an implementation of the youth-friendly, skill-based health education activity in schools as stated in the School Health Policy and its Implementation Guidelines in order to reduce the misconceptions about HIV/AIDS among adolescents.

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