

Knowledge about HIV/AIDS, level of awareness and Reported Risk Behaviours in a cohort of street-involved youths in Oyigbo, Rivers State, Nigeria

Frank-Peterside N, Nneji LC, Okerentugba PO, Okonko IO

Medical Microbiology Unit, Department of Microbiology, University of Port Harcourt, P.M.B. 5323, Choba, East-West Road, Port Harcourt, Rivers State, Nigeria;

E-mail address: iheanyi.okonko@uniport.edu.ng, Tel: +2348035380891

ABSTRACT: This study was carried out to determine the knowledge of HIV/AIDS and reported risk behaviours in a cohort of street-involved youths in Oyigbo local government area of Rivers State, Nigeria. It also aimed at determining their sexual behaviour and their level of awareness of some of the factors that promote the spread of HIV. One hundred street-involved youths (41 males and 59 females; ages 15-28 years) were recruited for this study. Information was obtained using a Performa specially designed for this purpose. The results showed that of the 100 questionnaires administered, 100 (100.0%) responded. The study showed that 31.0% of the youths were living with their parents; 21.0% stayed alone; 18.0% lived with their relatives and 30.0% stayed with their friends. The results also showed that 14.0% of the youths have had blood transfusion while 80.0% have not had blood transfusion. It also showed that 75.0% of the youths have shared sharp objects, 76.0% used condoms during sexual intercourse; 9.0% do not use condoms while 15.0% used condoms but not always. Thirty-two percent (32.0%) had history of injection drug use (IDU) and 33.0% had involved in survival sex. Sixty-five percent (65.0%) of them took excess alcohol and sometimes drugs, 45.0% knew their HIV status while 55.0% were unaware of their status. It also showed 86.0% knew about HIV/AIDS, 90.0% knew that HIV/AIDS is real, 77.0% knew that HIV/AIDS is not curable but preventable, and 90.0% knew that it was wise to know one's status. The following prevalences were recorded for perceived factors that promote the spread of HIV among youths: unprotected/unplanned sex (78.0%), use of unsterilized sharp instruments (60.0%), transfusion with unscreened blood (32.0%), and unfaithfulness among partners (30.0%), poor information/illiteracy (31.0%), stigmatization (30.0%), ignorance (33.0%) and poverty (43.0%). However, our study showed that 22.0% of the youths were ignorant of the fact that HIV/AIDS can be transmitted through unprotected/unplanned sex; 40.0% were ignorant of the use of unsterilized sharp instruments; 68.0% were ignorant of transfusion of unscreened blood and 70.0% were ignorant of the fact that unfaithfulness among partners promotes the spread of HIV. While 57.0 - 69.0% claimed ignorant of factors such as poor information/illiteracy, stigmatization, ignorance and poverty. This study has shown the knowledge, attitude and practices of the HIV/AIDS in a cohort of street-involved youths in Oyigbo, Rivers State, Nigeria. Most youths still lack basic information on HIV/AIDS pandemic. It also suggests that intravenous drug use (IDU) is still prevalent among street-involved youths. The use of alcohol and other drugs that can impair decision making about sexual choices and behavior is frequent. This calls for a concerted effort to implement a clear-cut plan to establish the necessary infrastructure and resources to control HIV among youths.

[Frank-Peterside N, Nneji LC, Okerentugba PO, Okonko IO. **Knowledge about HIV/AIDS, level of awareness and Reported Risk Behaviours in a cohort of street-involved youths in Oyigbo, Rivers State, Nigeria.** *World Rural Observ* 2013; 5(4):37-43]. (ISSN: 1553-9865) <http://www.sciencepub.net/rural>. 7

Key words: Awareness, cohort, HIV, Knowledge, Street-involved, Youths, Nigeria

1. INTRODUCTION

Young people are particularly vulnerable to HIV infection because of the physical, psychological, social and economic attributes of adolescence (Earl, 1995; Oppong Asante and Oti-Boadi, 2012). A more serious challenge today, is the growing infection rates among the adolescents in sub-Saharan Africa (Oppong Asante and Oti-Boadi, 2012). There is great concern about the spread of human immunodeficiency virus (HIV) epidemic in or within the adolescent population (Maluwa-Banda, 1999, 2010).

Most youths, a group often characterized by a new-found sense of independence, experimentation with sex and sometimes drugs, and a feeling of

invincibility (Gayle et al., 1990). Most youths engaged in sex without proper protection and awareness about sexually transmitted infections (Srivastava and Srivastava, 2011). Risk factors associated with HIV, such as sex with a number of partners, clearly exist among adolescents and young adults, including those on university campuses (Arnstein, 1989; Gayle et al., 1990; Mbakwem-Aniebo et al., 2012).

Preventing HIV infection through education and working to develop and maintain safe forms of behavior that will reduce the risk of HIV transmission should be priorities of all institutions of higher education (Rogers et al., 1996; Mbakwem-Aniebo et al., 2012). Information from other studies on youths

suggest that intravenous drug use is not prevalent among students, but the use of alcohol and other drugs that can impair decision making about sexual choices and behavior is frequent (Gayle et al., 1990; Mbakwem-Aniebo et al., 2012).

Since qualitative research can help us to understand what people believe and their real lives (Gerish and Lacey, 2006; Fallahi et al., 2011; Mbakwem-Aniebo et al., 2012). Thus, this study was carried out with a quantitative and qualitative approach to determine the knowledge of HIV/AIDS and reported risk behaviours in a cohort of street-involved youths in Oyigbo local government area of Rivers State, Nigeria. It also aimed at determining the level of awareness of HIV in a cohort of youths in Oyigbo, Rivers State, Nigeria, their sexual behaviour as well as their level of awareness of some of the factors that promote the spread of the infection.

2. MATERIAL AND METHODS

2.1. Study area

This study was carried out in a cohort of street-involved youths in Oyigbo local government area of Rivers State, Nigeria.

2.2. Study population

A total of one hundred street-involved youths in Oyigbo (41 males and 59 females) of different age groups and socioeconomic status were enrolled in this study. The study was conducted from June 2011 to December 2011 until a total of 100 participants were attained. The ages of the street-involved youths ranged from 15 to 28 years. The female-male ratio was 1:1. All studies were performed according to the International Guidelines for Human Experimentation in Clinical Research. Permission and approval were sought from the community leaders in Oyigbo local government. Pre-test counseling was given to the street youths and those who consented were recruited for the study, and a structural questionnaire was used to collect demographic information and other information necessary to determine their knowledge about HIV and AIDS.

2.3. Survey and Data Analysis

A total of 100 questionnaires were administered and further subjected for statistical analysis. The method of data collection employed was by structured questionnaire. Data was obtained by quantitative methodology using structured questionnaires which were administered to the street-involved youths randomly. Confidentiality of the process was adequately explained to each participant, who was then given a number and the numbers were used on the forms instead of names. Information was obtained on demographic characteristics and

knowledge of HIV/AIDS regarding existence of HIV/AIDS, is it curable, ways of transmission and factors that promote the spread of the disease. It was expected that these respondents would give honest reply to the questions. All data generated was presented in Tables and subjected to statistical analysis (the χ^2 -test, with the level of significance set at $p < 0.05$) using statistical package for social sciences (SPSS) to determine any significant relationship between HIV awareness, age and gender.

3. RESULTS ANALYSIS

Of the 100 questionnaires administered, 100.0% responded. Ages of the respondents ranged from 15 to 28 years. Fifty nine percent of the respondents were females while forty-one percent were males. Table 1 summarizes the demographic characteristics of freshmen of Uniport, Choba, Port Harcourt, Southern Nigeria used in this study.

Table 1: Demographical characteristics/parameters of street-involved youths in Oyigbo, Rivers State, Nigeria

Characteristics	No. tested (%)
Sex	
Males	41(41.0)
Females	59(59.0)
Age groups (years)	
15-20	33(33.0)
21-28	67(67.0)
Total	100(100.0)

3.1. Knowledge of HIV and AIDS

Table 2 shows distribution of respondents' knowledge on HIV/AIDS in a cohort of the street-involved youths in Oyigbo, Rivers State, Nigeria. Of the 100 youths who responded, 31.0% were living with their parents; 21.0% stayed alone; 18.0% lived with their relatives and 30.0% stayed with their friends. The results also showed that 14.0% of the youths have had blood transfusion while 80.0% have not had blood transfusion. It also showed that seventy-five percent of the youths have shared sharp objects for the past 6 months. Seventy-six percent (76.0%) of the youths used condoms during sexual intercourse; 9.0% do not use condoms while 15.0% used condoms but not always. Thirty-two percent (32.0%) had history of injection drug use (IDU). Thirty-three percent (33.0%) of the youths had involved in survival sex. Sixty-five percent (65.0%) take excess alcohol and sometimes drugs. Forty-five percent (45.0%) knows their HIV status while 55.0% have not undergone any HIV screening. Our results also showed that of the 100 youths who responded to the questionnaire, 86.0% knew about HIV/AIDS, 90.0% knew that HIV/AIDS is

real, 77.0% knew that HIV/AIDS is not curable but preventable, and 90.0% knew that it is wise to know one's status (Table 2).

Table 2: Distribution of Respondents Knowledge on HIV/AIDS in a cohort of the street-involved Youths in Oyigbo, Rivers State, Nigeria

S/N	Characteristics	No. of Respondents (%)		
		Total n=100	Males n=41	Females n=59
1.	Who are you living with?			
	Parents	31 (31.0)	9 (29.0)	22 (71.0)
	Relatives	18 (18.0)	5 (27.8)	13 (72.2)
	Friends	30 (30.0)	15 (50.0)	15 (50.0)
	Alone	21 (21.0)	12 (57.1)	9 (42.9)
2.	Any history of blood transfusion?			
	Yes	14 (14.0)	9 (64.3)	5 (35.7)
	No	86 (86.0)	32 (43.3)	54 (56.7)
3.	Any history of sharing sharp objects?			
	Yes	75 (75.0)	28 (37.3)	47 (62.7)
	No	25 (25.0)	13 (52.0)	12 (48.0)
4.	Any history of survival sex?			
	Yes	33 (33.0)	6 (18.2)	27 (81.8)
	No	67 (67.0)	35 (52.2)	32 (47.8)
5.	Use of condom?			
	Yes	76 (76.0)	27 (35.5)	49 (64.5)
	No	9 (9.0)	5 (55.6)	4 (44.4)
	Not always	15 (15.0)	9 (60.0)	6 (40.0)
6.	History of injection drug use?			
	Yes	32 (32.0)	27 (84.4)	5 (15.6)
	No	68 (68.0)	14 (20.6)	54 (79.4)
7.	Excess alcohol intake or drugs?			
	Yes	74 (74.0)	35 (47.3)	39 (52.7)
	No	26 (26.0)	6 (23.1)	20 (76.9)
8.	Gone for HIV test before?			
	Yes	49 (49.0)	31 (63.3)	18 (36.7)
	No	51 (51.0)	10 (19.6)	41 (80.4)
9	Do you know about HIV/AIDS?			
	Yes	86 (86.0)	37 (43.0)	49(57.0)
	No	14 (14.0)	4 (28.6)	10 (71.4)
10	Is HIV/AIDS real?			
	Yes	90 (90.0)	41(45.6)	49 (54.4)
	No	10 (10.0)	0 (0.0)	10(100.0)
11	Is HIV/AIDS curable?			
	Yes	23 (23.0)	5 (21.7)	18 (78.3)
	No	77 (77.0)	36 (46.8)	41 (53.2)
12	Is it wise to go for HIV Test?			
	Yes	90 (90.0)	35 (38.9)	55 (61.1)
	No	10 (10.0)	6 (60.0)	4 (40.0)
	Total	100(100.0)	41 (41.0)	59 (59.0)

3.2. Knowledge of Transmission of HIV

Of the 100 youths who responded to the question on the knowledge of HIV transmission, 78.0% knew that HIV/AIDS can be transmitted through unprotected and unplanned sex. Sixty percent (60.0%) knew that HIV can be contracted through the use of unsterilized sharp instruments. Thirty-two percent of the respondents (32.0%) knew that transfusion of unscreened blood promotes transmission of HIV. Thirty percent (30.0%) of the respondents knew

that unfaithfulness among partners also promote the spread of HIV. While 31.0%, 30.0%, 33.0% and 43.0% of the respondents knew that poor information/illiteracy, stigmatization, ignorance and poverty respectively promote the spread of HIV among youths. However, our results also showed that 22.0% youths were ignorant of the fact that HIV/AIDS can be transmitted through unprotected and unplanned sex. Forty percent (40.0%) were ignorant of the fact that it can be contracted through the use of unsterilized sharp instruments. Sixty-eight percent (68.0%) of the youths were ignorant of the fact that transfusion of unsterilized blood promotes transmission of HIV. It also showed that 70.0% of the respondents were ignorant of the fact that unfaithfulness among partners promotes the spread of HIV. While 69.0%, 70.0%, 67.0% and 57.0% of the youths were ignorant of the fact that other factors such as poor information/illiteracy, stigmatization, ignorance and poverty promotes the spread of HIV (Table 3).

Table 3: Respondents knowledge on the factors that promote the spread of the disease; Oyigbo, Rivers State, Nigeria

S/N	Factors	No. of Respondents (%)		
		Total (%) n = 100	Males n = 41	Females n = 59
1.	Unprotected/unplanned sex			
	Yes	78 (78.0)	28 (35.9)	50 (64.1)
	No	22 (22.0)	13 (59.1)	9 (40.9)
2.	Unsterilized/sharp Instruments			
	Yes	60 (60.0)	25 (41.7)	35 (58.3)
	No	40 (40.0)	16 (40.0)	24 (60.0)
3.	Transfusion of unsterilized blood			
	Yes	32 (32.0)	5 (15.6)	27 (84.4)
	No	68 (68.0)	36 (52.9)	32 (47.1)
4.	Unfaithfulness			
	Yes	30 (30.0)	20 (66.7)	10 (33.3)
	No	70 (70.0)	21 (30.0)	49 (70.0)
5.	Poor information/ illiteracy			
	Yes	31 (31.0)	14 (45.2)	17 (54.8)
	No	69 (69.0)	27 (39.1)	42 (60.9)
6.	Stigmatization			
	Yes	30 (30.0)	10 (33.3)	20 (66.7)
	No	70 (70.0)	31 (44.3)	39 (55.7)
7.	Ignorance			
	Yes	33 (33.0)	11 (33.3)	22 (66.7)
	No	67 (67.0)	30 (44.8)	37 (55.2)
8.	Poverty			
	Yes	43 (43.0)	17 (39.5)	26 (60.5)
	No	57 (57.0)	24 (42.1)	33 (57.9)
	Total	100 (100.0)	41 (41.0)	59 (59.0)

4. DISCUSSION

Survey on the knowledge of HIV/AIDS and reported risk behaviours in a cohort of street-involved youths in Oyigbo local government area of Rivers State, Nigeria revealed that the segments of the population most affected by HIV/AIDS were youths aged between 15 – 28 years. In a way to stop the spread of HIV/AIDS, we must focus on youths and their sexual behaviour as well as their level of awareness of some of the factors that promote the spread of HIV.

This study showed that questionnaires however, provided a lot of information from the street-involved youths. It brings out the fact, feelings and misconceptions of the respondents. It can be assumed

that the males are more likely to be aware of HIV (Olowosegun et al., 2009; Mbakwem-Aniebo et al., 2012). One hundred percent (100.0%) of the respondents were still in their sexual active (reproductive) age, that is, 16 – 28 years. These ages are the active and productive years in agricultural production and they are crucial to agricultural development (Olowosegun et al., 2009; Mbakwem-Aniebo et al., 2012). Our study confirmed that majority of those who contract HIV fell under the age of 30 years (NDHS, 2003; Mbakwem-Aniebo et al., 2012). Based on the questions on the awareness of HIV/AIDS, 86.0% of the respondents at one time or the other have heard about HIV/AIDS but did not know much about

the agents responsible for HIV/AIDS pandemic. This is in agreement with previous report by Mbakwem-Aniebo et al. (2012) among fresh university students. It also corroborates previous findings by Orubuloye et al. (1995) and Olowosegun et al. (2009). Olowosegun et al. (2009) reported that 98.4% of the respondents in their study knew about HIV/AIDS. However, contrary to our finding, Nwachukwu and Orji (2008) reported that none of 167 fresh graduates in their study had any prior information of their HIV status. Also, Madani *et al.* (2004) reported that at diagnosis, some infected persons do not have prior knowledge of their HIV status.

In this study, 90.0% of the respondents knew that HIV/AIDS is real, 77.0% knew that HIV/AIDS is not curable but preventable and 90.0% knew that it is wise to know one's status. This trend is similar to the reports by Yahaya (2000), Olowosegun et al. (2009) and Mbakwem-Aniebo et al. (2012). Fourteen percent of the street-involved youths used in this study results have had blood transfusion, 75.0% have shared sharp objects, 76.0% used condoms during sexual intercourse, 32.0% had injection drug use (IDU), 33.0% involved in survival sex, 65.0% took excess alcohol and sometimes drugs and 45.0% knew their HIV status. According to Mbakwem-Aniebo et al. (2012), these are the factors which if practiced could lead to the contracting of HIV/AIDS. Needle sharing that is not related to intravenous drug use — for injecting anabolic steroids among athletes, for example — should also be considered potentially dangerous (Rogers et al., 1996; Mbakwem-Aniebo et al., 2012).

In this study, of all the modes of contracting HIV, unprotected and unplanned sexual intercourse (78.0%) were the most commonly known to the street-involved youths. Sixty percent of the respondents knew that HIV/AIDS can be transmitted through the use of unsterilized sharp instruments. This finding supports that of Isibor and Ajuwon (2004) on journalists' knowledge of AIDS. While in that of Olowosegun et al. (2009), the perception of the respondents on HIV/AIDS is high, 90.4% believed that it is a serious deadly disease but lack the information that could help them to live dignified life. Interestingly in consonance with Mbakwem-Aniebo et al. (2012), many of respondents were unaware that unsterilized blood transfusion, sharing of sharp instruments as well other risky practices of AIDS was as risky as sexual intercourse.

Previous studies on youths have shown that they still have misconceptions about HIV and its modes of transmission (Goodwin and Roscoe, 1988; Landefeld et al., 1988; Thomas et al., 1989; Manning et al., 1989a; Rogers et al., 1996; Mbakwem-Aniebo et al., 2012). In this study, 31.0-43.0% respondents believed that poor information/illiteracy,

stigmatization, ignorance and poverty promote the spread of HIV. The spread of HIV/AIDS is on the increase due to ignorance (Olowosegun et al., 2009; Mbakwem-Aniebo et al., 2012). Our findings on risk behaviors and perception of risk for HIV were also consistent with previous research among college or university students (Gayle et al., 1990; Rogers et al., 1996; Olowosegun et al., 2009; Mbakwem-Aniebo et al., 2012).

Also in this study, 76.0% of the youths used condoms during sexual intercourse; 9.0% do not use condoms while 15.0% used condoms but not always. Moreover, youths with a reasonable knowledge of HIV may not perceive themselves to be at risk and may continue to engage in high-risk behavior (Landefeld et al., 1988; Rogers et al., 1996; Mbakwem-Aniebo et al., 2012). Previous studies have also documented that youths (college or university students) indulge in many of the behaviors that promote HIV transmission, including having sex with multiple partners (Mbakwem-Aniebo et al., 2012), having unprotected sexual intercourse, and using drugs or alcohol during sex (Johnson et al., 1992; Taylor et al., 1997; Lewis et al., 1997; Duncan et al., 2002; Thomas et al., 2008; Mbakwem-Aniebo et al., 2012). Iwoh (2004) also reported that there was low knowledge of HIV/AIDS/STIs among prison staff in Nigeria. Olowosegun et al. (2009) also reported that most people were not aware of the implication of sharing the same razor in cutting their nails.

5. CONCLUSION

In this study, information obtained from questionnaires distributed reveals that awareness campaigns are making impact on youths but the acquisition of knowledge may not be the application of knowledge. This study confirmed the fact that many Nigerians youths are aware of the fact that it is wise to know one's status of HIV, so the result in this study is not surprising. In this study, 90.0% of the youths knew that it is wise to know their status. It can be deduced that knowledge of HIV/AIDS in a cohort of street-involved youths is common and the common route of transmission include; unprotected/unplanned sexual contact, blood transmission and use of unsterilized sharp instrument. These results demonstrated that HIV and the potential for its transmission are present among street-involved youths. The potential clearly exists, however, to further stop the spread of HIV/AIDS infection in this population, preventive measures are needed and advocated among youths. Furthermore, a multifaceted approach to prevention of HIV/AIDS, which includes individual, peer, familial, school, church and community programs is necessary to reduce the incidence of HIV/AIDS in young people.

Correspondence to:**Iheanyi O. Okonko**

Department of Microbiology,
University of Port Harcourt,
PMB 5323 Uniport Post Office, Choba,
East-West Road, Port Harcourt, Nigeria;
E-mail:mac2finney@yahoo.com;
iheanyi.okonko@uniport.edu.ng
Tel.: +234 803 538 0891

REFERENCES

1. Arnstein, R.L., 1989. Sex and anxiety on campus: thirty-five years thereof. *Journal American College Health*; 37:247–253.
2. Duncan, C., D.M. Miller, E.J. Borskey, B. Fomby, P. Dawson, and L. Davis, 2002. Barriers to safer sex practices among African American college students. *Journal of National Medical Association*;94:944–951.
3. Earl D. Re-examination of the paradigm of HIV risk reduction in Adolescents. *Journal of the American Osteopathic Association* 1995; 95(12): 725-728.
4. Fallahi, H., S.S. Tavafian, F. Yaghmaie, and E. Hajizadeh, 2011. Stigma, Discrimination, and the Consequences of HIV-AIDS for People Living With It in Iran. *Life Science Journal*;8(4):503-510
5. Gayle, H.D., R.P. Keeling, M. Garcia-Tunon, B.W. Kilbourne, J.P. Narkunas and F.R. Ingram, et al., 1990. Prevalence of the human immunodeficiency virus among university students. *New England Journal of Medicine*; 323:1538–1541
6. Gerish K., and A. Lacey, 2006. *The Research Process in Nursing*. 5th edition. Oxford. Blackwell publishing. pp 337-339.
7. Goodwin, M.D., and B. Roscoe, 1988. AIDS: students' knowledge and attitudes at a midwestern university. *Journal of American College of Health*; 36:214–222.
8. Isibor M. D., and A.J. Ajuwon, 2004. Journalists' knowledge of HIV/AIDS and attitude to persons living with HIV in Ibadan. *African Journal of Reproductive Health*,8(2): 101-10
9. Iwoh, I, 2004. "HIV/and the Workplace: Preventing Low Productivity among Personnel of Nigeria Prison Service." Paper Presented at the 15th International Conference on AIDS 2004, Bangkok, Thailand.
10. Johnson, R.L., W. Douglas, and A. Nelson, 1992. Sexual behaviors of African-American male college students and the risk of HIV infection. *Journal of National Medical Association*;84:864–868.
11. Landefeld, C.S., M.M. Chren, J. Shega, T. Speroff, and T. McGuire, 1988. Students' sexual behavior, knowledge, and attitudes relating to the acquired immunodeficiency syndrome. *Journal of General and Internal Medicine*; 3:161–165.
12. Lewis, J.E., R.M. Malow, and S.J. Ireland, 1997. HIV/AIDS risk in heterosexual college students. A review of a decade of literature. *Journal of American College of Health*; 45:147–158.
13. Madani, T.A., Y.M. Yagob, J.H. Mohammed and N.S. Huzaim, 2004. Epidemiology of the Human immunodeficiency virus in Saudi Arabia; 18 years result and prevention from an Islamic perspective. *BMC Infect Diseases*, 4: 1186-1178.
14. Maluwa-Banda DW. 1999. HIV/AIDS-Related Knowledge and Self-Reported Sexual Behaviour of Secondary School Students in Southern Malawi: Implications of AIDS Education and Counselling. A PhD Thesis University of Malawi Educational Foundations Department, Chancellor College, Zomba, MALAWI, pp1-25
15. Maluwa-Banda DW. 2010. HIV/AIDS-Related Knowledge and Self-Reported Sexual Behaviour of Secondary School Students in Southern Malawi: Implications of AIDS Education and Counselling. Available at <http://www.apicom.org/ids-document/>. Retrieved October 17, 2013, 04.09am
16. Manning, D., D.M. Balson, N. Barenberg, and T.M. Moore, 1989a. Susceptibility to AIDS: what college students do and don't believe. *Journal of American College of Health*; 38:67–72.
17. Manning, D.T., N. Barenberg, L. Gallese, and J.C. Rice, 1989b. College students' knowledge and health beliefs about AIDS: implications for education and prevention. *Journal of American College of Health*; 37:254–259.
18. Mbakwem-Aniebo C, Ezekoye CC, Okonko IO. 2012. Knowledge About HIV/AIDS, and Reported Risk Behaviours Among Freshmen of The University of Port Harcourt, Port Harcourt, Southern Nigeria. *World Applied Sciences Journal* 16 (8): 1093-1103
19. NDHS, 2003. National Demographic and Health Survey, National Population Commission, Abuja, Nigeria.
20. Nwachukwu, N.C., and A. Orji, 2008. Sero Prevalence of Human Immunodeficiency virus among Some Fresh Nigerian Graduates, *Research Journal of Immunology* 1(2): 51-55.
21. Olowosegun, T., J.A. Akangbe, O.M. Olowosegun, A.M. Sule, A.O. Sanni, and P.I. Ifejika, 2009. Knowledge, Attitude and Practices of HIV/AIDS in Selected Fishing Communities of Kainji Lake Basin. *Nature and Science*; 7(10):1-9
22. Oppong Asante K, Oti-Boadi M. 2012. HIV/AIDS knowledge among undergraduate university students: implications for health

- education programs in Ghana. *African Health Sciences* 2013; 13(2): 270 – 277
23. Orubuloye, I.O., O.P. Omoniyi, and W.A. Shokunbi, 1995. Sexual Networking, STDs and HIV/AIDS in Four Urban Gaols in Nigeria. *Health Transition 1995 Review, Supplementary to Volume 5* pp. 123-129.
 24. Rogers, A.S., D. Futterman, L. Levin and L. D'Angelo, 1996. A profile of human immunodeficiency virus—infected adolescents receiving health care services at selected sites in the United States. *Journal of Adolescent Health*; 19(6): 401-408
 25. Srivastava B. and Srivastava A. 2011. A study on open discussion of HIV/ AIDS among secondary school students with their parents in national capital region (NCR) of India. *Elixir Soc. Sci.* 41: 6029-6031
 26. Taylor, S.E., C. Dilorio, T.T. Stephens, and J.E. Soet, 1997. A comparison of AIDS-related sexual risk behaviors among African-American college students. *Journal of National Medical Association*;89:397–403.
 27. Thomas, P.E., A.C. Voetsch, B. Song, D. Calloway, C. Goode, L. Munday, J. Nobles, K. Sly, M.R. Smith, B. Williams, M. Shiloh, K. Patterson, S. Ward, P.S. Sullivan, and J.D. Heffelfinger, 2008. HIV Risk Behaviors and Testing History in Historically Black College and University Settings. *Public Health Report*; 123(Suppl 3): 115–125
 28. Thomas, S.B., A.G. Gilliam, and C.G. Iwrey, 1989. Knowledge about AIDS and reported risk behaviors among black college students. *Journal of American College of Health*; 38:61–66.
 29. Yahaya, M.K., 2000. Indigenous music and entertainment-education: Lessons from AIDS: *Batan na ewu zana in Bida Emirate Nigeria*. Stirling – Hardens Publishers 58p.

10/15/2013