ATTRIBUTION PATTERNS, ATTITUDE AND KNOWLEDGE OF HIV/AIDS ON SEXUAL BEHAVIOURAL CHANGE AMONG STUDENTS OF COVENANT UNIVERSITY, OTA, NIGERIA

Adekeye, O. A* **(Ph.D) & Adeusi, S. O**
Department of Psychology
Covenant University
Ota, Nigeria.

Abstract

Sexual behavioural change is central to HIV/AIDS control programme. This study was carried out among students (n = 603; average age = 18.9) of Covenant University, Nigeria. The study was designed to examine the impact of attribution patterns, attitude and knowledge of HIV/AIDS on sexual behavioural change. Three hypotheses were raised. Regression analysis, analysis of variance (ANOVA) and Pearson's r were used to analyze the data. The results show that attribution patterns and attitude towards HIV did not influence sexual behavioural change. In effect, knowledge of HIV was the best predictor of sexual behavioural change of respondents. The study also revealed that there was a significant effect of gender on sexual behavioural change of respondents while there was no significant effect of age. Another result shows that there was a strong correlation between perceived benefits and all the other variables. Fourteen percent (14%) of the respondents are sexually active, 520 or 86% indicated they are not sexually active. Eighty-nine percent (89%) of the respondents do not know of anyone who is HIV positive or died from AIDS while 11% knows someone who is HIV positive or had died from AIDS related complications. This study shows that young people using the perceived benefits variable in the Health Belief Model (HBM) coupled with adequate knowledge of HIV

* E-mail: jikeye@yahoo.com; 08035956630

knowledge have the power and ability to change their risky sexual behaviour.

Key words: Attribution patterns, Attitude, Knowledge, HIV/AIDS, Students, Young people, Perceived benefits and Sexual behavioural change.

Introduction

The HIV/AIDS epidemic is spreading rapidly and expanding to new regions daily, thriving on and amplifying poverty and exclusion. Africa continues to record the greatest number of HIV infections and deaths (Uwalaka & Matsuo, 2002). The HIV/AIDS pandemic, now approaching its third decade, shows little signs of abating. It strikes the poor and disadvantaged hardest, particularly where lack of education, illness, malnutrition, violence, armed conflict and discrimination are already well entrenched. Young people are at risk on an unparalleled scale (UNESCO, 2006). HIV/AIDS cases have been reported in all regions of the world, but most people living with HIV/AIDS (95%) reside in low- and middle-income countries, where most new HIV infections and AIDS-related deaths occur. The epidemic is considered a threat to the economic well-being, social, and political stability of many nations including Nigeria (Kapungwe, 2003 & United Nations, 2005).

Nigeria has the largest HIV epidemic in the sub-Saharan region (UNAIDS/WHO 2007). Although the percentage of adults infected with HIV is smaller than many other sub-Saharan African countries (notably in East and southern Africa), the country's large population means that almost 3.8 million Nigerians are living with HIV/AIDS. The national HIV prevalence among women attending antenatal clinics in Nigeria appears to be stable, but with large variations between different regions and states (Utulu & Lawoyin, 2007). Statewide HIV prevalence among pregnant women, for example, ranges from as low as 1.6% in Ekiti to 8% in Akwa Ibom, 10% in Benue (Federal Ministry of Health Nigeria, 2006), and 12% in Cross River State (HDR, 2004). Overall, 13 of Nigeria's 36 States and the Federal Capital Territory (FCT) had prevalence rates of over 5%. These figures give credence to the claim that there are explosive localized epidemics in some States (HDR, 2004). HIV prevalence has already reached pandemic proportions. With the first AIDS case in Nigeria reported in 1986; the epidemic has since grown rapidly. The adult HIV prevalence has increased from 1.8% in 1991 to 4.5% in

1996, 5.8% in 2001 before dipping to 5.0% in 2003 and 4.4% in 2005. The Nigerian epidemic has different faces with some states in the federation recording prevalence rates well over the national average; there is no state with a prevalence rate below 1% (HDR, 2004 & Yahaya, 2007).

Several recent studies have posited that individual behavioural change, particularly sexual behavioural change is the most effective means of preventing further spread of the dreaded virus and that perceived susceptibility must be coupled with accurate knowledge in order to bring about behavioural change (Ladebo & Tanimowo, 2002; Umalaka & Matsuo 2002 and Oster, 2007). Because no cure for HIV/AIDS is available, the only way to prevent HIV infection is to avoid behaviours that put a person at risk. Many people infected with HIV have no symptoms, and, therefore, there is no way of knowing with certainty whether a sexual partner is not infected unless he or she has repeatedly tested negative for the virus and has not engaged in any risky behaviour between tests.

Studies have shown that attribution or causality plays a major role in coming to terms with events of our lives i.e. failure, success and HIV serostatus (Weiner, 1993, Adekeye, 2009). Attribution theory is about how people explain things, which is one of the most amazing features of human beings. Attribution theory is concerned with how individuals interpret events and how this relates to their thinking and behaviour. The theory assumes that people try to determine why others do what they do. A person seeking to understand why another person did something may attribute one or more causes to that behaviour. When faced with a traumatic event such as being diagnosed with HIV, the individual tries to find an explanation why the traumatic event happened. One way to answer the question is self-blame (I caused it), or external, that is blaming others i.e. my partner infected or transmitted the virus to me. Many young people have distorted sense of vulnerability to HIV and that many young people tend to ignore the risk of infection, and in South Africa where the prevalence rate of HIV is high (6.1 million), some young people do not consider themselves to be at risk, others, in a focus group discussion stated that if they became infected, other people would be responsible for it (Kiragu, 2001). Closely related to attribution or apportioning of blame is the influence of knowledge of HIV/AIDS.

Several studies have reported a high level of awareness and knowledge of HIV/AIDS among young people (Fakeye & Fakeye, 1989; Abogunrin, 2004; Chakrovarty, Nandy, Roy, Sengupta, Chatterjee & Chaudhuri, 2007 & Adekeye, 2009), and average and low level of awareness and knowledge of HIV/AIDS among women college students and adolescents (Aggarwal & Rous, 2006 and Sharma & Mukherjee, 2007). Adegoke (2004) noted that despite the knowledge of HIV/AIDS, adolescents' risky sexual activities are on the increase. The rise in risky sexual behaviour and early initiation of sex, has led to an exponential rise in the spread of HIV/AIDS infection among youths, especially school-going adolescents (Abogunrin, 2004). Brieger and Oladepo (1994) found among most students of the University of Ibadan, a high degree of aversion to AIDS victims. Burnette, Redmon and Poling (1990) found among American college undergraduates that they generally expressed sympathy for AIDS victims, the tendency to work with AIDS patients was weak and subjects endorsed statements that promoted isolation of victims.

Approximately ten percent of adults in Sub-Saharan Africa are infected with the Human Immunodeficiency Virus (HIV) and the primary mode of transmission in the region is heterosexual sex (HDR, 2004, Adekeye, 2005, 2009). For this reason, sexual behaviour change is a major focus of HIV prevention efforts and understanding changes in behaviour is important for both predicting the future path of the epidemic and for developing policies. Existing literature generally points to limited changes in sexual behaviour in Africa (Adegoke, 2004 & Oster, 2007). There is need to incorporate a behaviour change model that is holistic because much of the existing work on behaviour change focuses on cultural barriers to changing behaviour – fatalism, low levels of female bargaining power and others (Caldwell, Orubuloye and Caldwell, 1999). Hence, for the purpose of this study, the health belief model was employed.

The Health Belief Model (HBM) is a psychological model that attempts to explain and predict health behaviours by focusing on the attitudes and beliefs of individuals. The HBM is based on the understanding that a person will take a health-related action if she/he feels that a negative health condition (i.e., HIV) can be avoided, has a positive expectation that by taking a recommended action, he/she will avoid a negative health condition (i.e., using condoms will be effective at preventing HIV), and believes that he/she can successfully take a

recommended health action such as using condoms comfortably and with confidence (Rosenstock, Strecher and Becker, 1994). Perceived benefit, which is one of the six key variables of the HBM deals with one's opinion of the efficacy of the advised action to reduce risk or seriousness of impact or the believed effectiveness of strategies designed to reduce the threat of illness. Perceived benefits may help young people understand that the recommended action would benefit them (Rosenstock, Strecher and Becker, 1994; Glanz, Rimer & Lewis, 2002). This study therefore aims at exploring the impact of attribution patterns, attitude and knowledge of HIV/AIDS on sexual behavioural change among students of Covenant University

Research Hypotheses

The study tested three hypotheses:

1. There will be a combined contribution of attribution patterns, attitude and knowledge of HIV/AIDS on participants' sexual behavioural change
2. There will be a significant main effect of sex and age on sexual behaviour change
3. There will be a relationship among the variables of the study and the demographic indicators of sex, age and sexual activity

Methods

The Study Sample

Covenant University as at time of this study comprises of two (2) Colleges: Science and Technology; and Development Studies, with about six thousand full time and fully boarded students. Data were collected from 610 students from April 2010 to May 2010, involving the two colleges. Stratified, proportional and systematic sampling techniques were employed to cater for variables such as population of college, sex, age and current level of study. The questionnaire forms were administered at the beginning of classes with permission sought from departmental heads and concerned lecturers.

Instruments

Four standardized scales were used to measure the various constructs of the study i.e. attribution patterns, attitude, knowledge of HIV/AIDS and sexual behavioural change.

Reliability of Scales

The Attitude scale was adapted (Ingham and Stone, 2006), with a Cronbach alpha of 0.81. The Knowledge scale was adapted from Tan,

Pan, Zhou, Wang, and Xie (2007). They reported a coefficient of 0.78. A Cronbach's alpha of 0.73 was reported for the adapted sexual behavioural change scale by Uwalaka and Matsuo (2002). The Attribution scale, a self designed scale has a Cronbach alpha of 0.78. The reliability estimate of the scales obtained from a test-retest coefficient ranges from 0.79 to 0.86 for the three scales.

Data Analysis

The study used three main parametric tests-regression analysis, ANOVA and correlation coefficient. Regression analysis was employed to test the predictive power of the predictor variables (attribution, attitude and knowledge) on the criterion variable (sexual behavioural change). Analysis of variance (ANOVA) was used to compare mean difference between sex and age. A 2*2 ANOVA design was employed where sex and age were between-subject factors, while correlation analysis was used to assess the relationship between the study variables and demographic factors such as sex, age and sexual activity. Seven cases were deleted due to improper filling leaving a total of 603 cases for use in this study.

Results

Table 1: Demographic Features

Variables	N	%	Variables	N	%
Sex			**Age**		
Male	372	62	16-18	402	67
Females	231	38	19-22	201	33
			Have you tested for HIV		
Sexually Active					
Yes	83	14	Yes	560	93
No	520	86	No	25	4
			About to	18	3
Number of religious services attended per week			**Do you know someone who is HIV Positive or Had died of AIDS?**		
1	Nil	-			
2	6	1	Yes	67	11
More than 2	597	99	No	536	89

There are six hundred and three (603) participants, 372 males (62.0%) and 231 females (38.0%). Majority of participants are younger adolescents, 402 are between ages 16-18 while 201 are between 19-22 years, with an average age of 18.91. Five hundred and sixty (560) participants have tested for HIV, 25 had not gone for HIV test while 18 reported that they were getting ready for HIV test.

Majority of the participants attends more than two religious services in a week and this is due to the nature of the university.

Hypothesis 1: There will be a combined contribution of attribution patterns, attitude and knowledge of HIV/AIDS on participants' sexual behavioural change

Table 2: Summary of Regression Analysis with Sexual Behavioural Change as Dependent Variable

R	= 0.232
R^2	= 0.054
R^2Adjusted	= 0.049
Std Error	= 14.91268

ANOVA[b]

Sources of Variation	Sum of Squares	df	Mean Square	F-ratio	Sig
Regression	7562.774	3	2520.925 222.388		.000a
Residual	133210.393	599		11.336	
Total	140773.167	602			

a Predictors: (Constant), Knowledge, Attitude, Attribution
b Dependent Variable: Sexual Behaviour Change

Results of data analysis revealed that the independent variables (Attribution, Attitude and Knowledge) are weak predictors of Sexual Behavioural Change of respondents (R= .232; R^2 = .054; $F_{(3, 602)}$ = 11.336; p<0.005). When combined, they predicted about 5% of the variation in sexual behavioural change of respondents.

Table 3: Relative Contribution of the independent Variables to the Prediction

Predictor Variables	Un standardized coefficients		standardized	t-ratio	p
	B	SEB	B		
(Constant)	7.848	1.382		5.677	.000
Attribution	.087	.060	.089	1.436	.152
Attitude	.076	.069	.068	1.103	.271
Knowledge	.242	.064	.235	3.802	.000

a Dependent Variable: Sexual Behaviour

Results from Table 3 revealed the relative contribution of each of the independent variables to the prediction of Sexual Behavioural Change of respondents. Attribution patterns (β= .089; t=1.436 p=>0.05), Attitude (β= .068; t= 1.103, p>.05) and Knowledge of HIV (β= .235; t= 3.802, p<0.05). In effect, Knowledge of HIV is the best predictor of sexual behavioural change of respondents.

Hypothesis 2: There will be a significant main effect of sex and age on sexual behaviour change

Table 4: Analysis of Variance on effect of Sex and Age on Sexual Behaviour Change

Source	Type III SS	df	Mean Square	F	Sig.
Corrected Model	1155.147	3	385.049	1.652	.176
Intercept	1955154.878	1	1955154.878	8388.156	.000
sex	1016.302	1	1016.302	4.360	.037
age	315.589	1	315.589	1.354	.245
sex * age	784.199	1	784.199	3.364	.067
Error	139618.021	599	233.085		
Total	4012303.000	603			
Corrected Total	140773.167	602			

Table 4 shows that there is a significant effect of sex on sexual behavioural change ($F_{(1, 599)} = 4.360$, $p < 0.05$), but there was no significant effect of age on sexual behavioural change of respondents ($F_{(1, 599)} = 1.354$, $p > 0.05$). The hypothesis, which states that there will be a significant main effect of sex and age on sexual behaviour change was accepted for sex, but rejected for age.

Hypothesis 3: There will be a relationship among the variables of the study and the demographic indicators of sex, age and sexual activity

Table 5: Correlation Analyses between Attribution, Attitude, Knowledge, Sexual behaviour and the demographic variables.

Variables	2	3	4	5	6	7	8
1 Age	.192**	.244**	.054	.010	.037	.115*	.215**
2 Sex		.012	.061	.017	.031	.112**	.215**
3 Sexual activity			.025	.024	.016	.052	.011
4 Attribution				.359**	-.152**	.012	.125**
5 Attitude to HIV					.199**	.021	.133*
6 Knowledge of HIV						.252**	.224**
7 Sexual behavior							.154**
8 Perceived Benefits							

*** = p<.001**
**** = p< .05**

Attribution patterns has a positive correlation with attitude towards HIV (0.359 $p<0.05$) and a negative but significant correlation with knowledge of HIV ($r = -0.152$ $p<0.05$). Age has a positive correlation with sex ($r = 0.192$ $p<0.05$), sexual activity (0.244 $p<0.05$) and sexual behaviour (0.115 $p<0.001$). Sex has a positive and significant relationship with sexual behaviour (0.112 $p<0.05$). Attitude is positively correlated with knowledge of HIV (0.199 $p<0.05$). Knowledge of HIV has a positive and significant relationship with respondents' sexual behaviour (0.252 $p<0.05$). Perceived benefits is positively correlated with age (.215), sex (.215), attribution patterns (.125), attitude to HIV (.133), knowledge of HIV (.224) and sexual behavioural disposition (.154).

Discussion

This study explored variables such as attribution patterns, attitude and knowledge of HIV/AIDS and their impact on sexual behavioural change among students of Covenant University. Most of respondents (560 or 93%) have tested for HIV in the last six (6) months, 18 or 3% are about to undergo a recent HIV test while 25 or 4% have not gone for HIV test in the last year. Majority of the respondents are not sexually active, only 83 or 14% reported been sexually active. About 89% of the students do not know someone who is HIV positive or had died of AIDS. Finding from the first hypothesis reveals that the independent variables of attribution patterns, attitude and knowledge of HIV are weak predictors of the criterion variable, sexual behavioural change. ($R= .232$; $R^2 = .054$; $F_{(3, 602)} = 11.336$; $p<0.05$). When combined, they predicted about 5% of the variation in sexual behavioural change of respondents. Further analysis indicated a relative contribution of each of the independent variables to the prediction of sexual behavioural change of respondents. Attribution patterns ($\beta= .089$; $t=1.436$ $p=>0.05$), attitude towards HIV ($\beta= .068$; $t= 1.103$, $p>.05$) and Knowledge of HIV ($\beta= .235$; $t= 3.802$, $p<0.05$). Attribution patterns and attitude towards HIV did not influence sexual behavioural change. In effect, knowledge of HIV is the best predictor of sexual behavioural change of respondents. This result is consistent with World Youth Report (2003), Adegoke (2004) and Adekeye (2009). They reported that a high level of HIV knowledge influences sexual behaviour change among adolescents and other populations.

Findings from hypothesis 2 reveals that there is a significant effect of sex on sexual behavioural change of respondents ($F_{(1, 599)} = 4.360$, p

= 0.037) while there was no significant effect of age on sexual behavioural change of respondents ($F_{(1, 599)} = 1.354$, $p > 0.05$). The result of the study shows that perception of risk and high knowledge about HIV/AIDS does not necessarily translate to sexual behavioural change. This result is in tandem with other studies (Adegoke, 2004 & Adekeye, 2005). They noted that despite the knowledge levels of adolescents about HIV/AIDS, majority of young people regardless of sex and age still engage in unprotected sex thereby making them susceptible to HIV infections and further spreading the dreaded virus to unsuspecting partners. In contrast, Brook, Heim& Alkalay (1994) notes that male pupils were better informed than female pupils, and with age, the pupils' knowledge of HIV improved. This may have implications for sexual behaviour change and as noted by Chevannes (1998) that in some cultures, sex is taking into great consideration such as young men proving their masculinity by impregnating women. Studies (HRD, 2004 & UNAIDS, 2006) have shown that young people are especially vulnerable to HIV, while gender, socio-economic and cultural status, sexuality and age are important factors structuring vulnerability to HIV (Toroitich-Ruto, 2000).

There was a strong correlation between perceived benefits and all the other variables except sexual activity. This explains that students of different ages and sexes are agreed on the benefit of health information to reduce the effect of diseases on people. Perceived benefits correlate with attribution patterns, attitude towards HIV, knowledge of HIV and sexual behaviour. Studies involving couples in Africa show that knowledge of HIV promotes sexual behaviour change and reduces transmission (Allen, Karita, N'gandu, & Tichacek 1999). Attribution pattern which connotes causality of events is well correlated with attitude towards HIV. Bivariate analysis shows that students with either internal or external attribution displayed the same attitude towards HIV/AIDS. The finding that knowledge of HIV/AIDS correlates with sexual behavioural change, perceived benefits and attitude towards HIV is important for AIDS prevention efforts in Nigeria. According to Bartlett (2008) most individuals who are at the highest risk for HIV do not realize that they are at risk. Enosolease & Offor (2004) notes that high knowledge about HIV/AIDS do not necessarily translate to positive attitude towards HIV. Knowledge and attitude were positively correlated, which means the more people are aware of HIV, the more positive their attitude towards HIV and those living with HIV/AIDS. Studies such as Dutta & Bandyopadhyay (1994); Agrawal, Rao, Chandrashekar & Coulter

(1999) and Krasnik & Wangel (1990) supported this finding. In summary, young people in the age group 15-24 years, a majority of who are currently in colleges and universities have been identified as particularly vulnerable to the spread of HIV/AIDS. This study shows that young people with adequate knowledge of HIV knowledge have the power and ability to change their risky sexual behaviour.

References

Abogunrin, A. J. (2004). Sexual behaviour, condom use, and attitudes towards HIV/AIDS among school-going adolescents in Nigeria. *Unpublished Ph.D dissertation*, University of Ilorin, Ilorin.

Adegoke, A. A. (2004). Adolescence and adolescent problems in schools. In Adeyemi Idowu, *Guidance and counselling in education*. Ilorin: Indemac Publishers (Nig.) Ltd.

Adekeye, O. A. (2009). HIV Voluntary Counselling and Testing for Young People: The antidote for a healthy and positive living in Nigeria. *The Counsellor*: 25 (1): 1-5

Adekeye, O. A. (2005). Adolescents and the HIV pandemic. *The Researcher*. University of Ilorin, 3 (1): 23-28.

Allen, S. A., Karita, E., N'gandu, N. & Tichacek, A. (1999). The evolution of voluntary testing and counselling as an HIV prevention strategy. In Gibney l, Climente, R. & Vermund, S. H., *Preventing HIV in developing countries: Biomedical and behavioural approaches*. New York: Kluwer Academic / Plenum Publishers. Retrieved from http://www.popline.org/docs/1375/157644.html

Aggarwal, R. & Rous, J. (2006).Awareness and quality of knowledge regarding HIV/AIDS among women in India. *The Journal of Development Studies*. 42 (3): 371-401. Retrieved from http://ideas.repec.org/a/taf/jdevst/v42y2006i3p371-401.html

Agrawal, H. K: Rao, R. S.; Chandrashekar, S. & Coulter, J. B. (1999). Knowledge of and attitude to HIV/AIDS of senior secondary school pupils and trainee teachers in Udupi District, Karnataka, India. *Journal of Tropical Pediatrics*: 19:143-149.

Bartlett, J. G. (2008). *Patient information: Testing for HIV*. Retrieved from http://www.uptodate.com/patients/content/topic.do?topicKey=~.YGDl3P/mLI/5R

Brieger, W. R. and Oladepo, O. (1994). AIDS knowledge, attitude and behaviour patterns among university students in Ibadan, Nigeria. *African Journal of Medical Sciences*. 23:119-25. Retrieved from www.ncbi.nlm.nih.gov/pubmed/7625299

Brook, U., Heim, M. & Alkalay, Y. (1994). Attitude and knowledge of high school pupils in Holon (Israel) toward AIDS. *Israel Journal of Medical Science:* 30(9):699-705. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/8088982?dopt=AbstractPlus&holding

Burnette, M. M., Redmon, W. K. and Poling, A. (1990). Knowledge, attitudes and behaviour of college undergraduates regarding acquired immune deficiency syndrome. *College Studies Journal*. 24:27-38. Retrieved from www.blackwell-synergy.com/doi/abs/10.1111/j.1559-1816.1998.tb01666

Caldwell, J., Orubuloye, I.O., and Caldwell, P. (1999). Resistances to Behavioural Change to Reduce HIV/AIDS Infection in Predominantly Heterosexual Epidemics in Third World Countries, *Health Transition Centre*, 1999. Retrieved from home.uchicago.edu/~eoster/hivbehavior.pdf

Chakrovarty, A., Nandy, S., Roy, R., Sengupta, B., Chatterjee, S., Chaudhuri, R. N. (2007). A study of awareness on HIV/AIDS among higher secondary school students in Central Kolkata. *Indian Journal of Community Medicine*. 32:228-9. Retrieved from http://www.ijcm.org.in/text.asp?2007/32/3/228/36841

Chevannes, B. (1998). "*Tie the heifer-loose the bull"*. Commissioned by UNICEF/Jamaica. Retrieved from www.childinfo.org/mics/mics3/docs/Jamaica_Situation_Analysis_on_Gender_2007.pdf

Dutta, C., and Bandyopadhyay, D. (1994). Knowledge and attitude in relation to HIV/AIDS among in-service nurses of Calcutta, India. International Conference on AIDS. ; 10: 376. Retrieved from http://gateway.nlm.nih.gov/MeetingAbstracts/ma?f=
102209283.html

Enosolease, M. E. & Offor, E. (2004). Acceptance Rate of HIV Testing among Women Seeking Induced Abortion in Benin City, Nigeria. *African Journal of Reproductive Health*. 8 (2): 86-90. Retrieved from http://links.jstor.org/sici?sici

Fakeye, O. O. and Fakeye, T. I. (1989). AIDS in Africa: A survey of knowledge, attitudes and beliefs among students in Nigerian Universities. *Nigeria Medical Practice*, 17 (4), 62-66

Federal Ministry of Health Nigeria (2006). The 2005 national HIV seroprevalence sentinel survey among pregnant women attending antenatal clinics in Nigeria: *Summary position paper*. April. Abuja.

Glanz, K., Rimer, B.K. & Lewis, F.M. (2002). *Health Behaviour and Health Education. Theory, Research and Practice*. San Fransisco: Wiley & Sons.

Human Development Report (Nigeria 2004). *HIV and AIDS: A challenge to sustainable human development*. U.N.D.P.

Ingham, R. and Stone, N. (2006). Topics for individual interviews and focus group discussions: Partner selection, sexual behaviour and risk taking, in: Cleland J, Ingham R and Stone N, Asking Young People About Sexual and Reproductive Behaviours: Introduction to Illustrative Core Instruments, *UNDP/UNFPA/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction*: Geneva. Retrieved from who.int/reproductive-health/adolescent/docs/qestionnaire_intro.pdf.

Kapungwe, A. K. (2003). Traditional cultural practices of imparting sex education and the fight against HIV/AIDS: The case of initiation ceremonies for girls in Zambia. *African Sociological Review*, 7 (1): 2-8.

Kiragu, K. (2001).Youth and HIV/AIDS: Can we avoid catastrophe? Population Reports, Series L, No. 12. Baltimore, the Johns Hopkins University Bloomberg School of Public Health, *Population Information Program*, Retrieved from http://www.infoforhealth.org/pr/112/ 112print.shtml

Krasnik, A. and Wangel, M. (1990). AIDS and Danish adolescents--knowledge, attitudes, and behaviour relevant to the prevention of HIV-infection. *Danish Medical Bulletin*: 37(3):275-9. Retrieved from ttp://www.ncbi.nlm.nih.gov/pubmed/2357908?dopt=Abstract.Plus&holding

Ladebo, O. J. and Tanimowo, A. G. (2002). Extension Personnel's Sexual Behaviour and Attitudes toward HIV/AIDS in South-Western Nigeria. *African Journal of Reproductive Health*, 6 (2): 51-59. Retrieved from http://www.jstor.org/stable/3583130

Oster, E. (2007). *HIV and Sexual Behavior Change: Why not Africa?* _University of Chicago and NBER. Retrieved from home.uchicago.edu/~eoster/hivbehavior.pdf

Rosenstock, I., Strecher, V., and Becker, M. (1994). The Health Belief Model and HIV risk behaviour change. In R.J. DiClemente, and J.L. Peterson (Eds.), *Preventing AIDS: Theories and Methods of Behavioral Interventions* (pp. 5-24). New York: Plenum Press

Sharma R, Mukherjee S. (2007). Awareness status of HIV/AIDS amongst the workers from organized sector. *Indian Journal of Sexually Transmitted Diseases.* Retrieved from http://www.ijstd.org/text.asp?2007/28/2/115/39023

Tan, X., Pan, J., Zhou, D., Wang, C., and Xie, C. (2007). HIV/AIDS knowledge, attitudes and behaviours assessment of Chinese students: A Questionnaire Study. *International Journal of Environmental Resources and Public Health* , 4(3), 248-253. Retrieved from http://www.mdpi.org/ijerph/papers/ijerph2007030009.pdf

Toroitich-Ruto, C. (2000). *The Effect of HIV/AIDS on Sexual Behaviour of Young People in Kenya.* Nairobi: Family Health International

Uwalaka, E. & Matsuo, H. (2002). Impact of knowledge, attitude and beliefs about aids on sexual behavioural change among college students in Nigeria: The case of the University of Nigeria, Nsukka. *West Africa Review*, 3 (2). Retrieved from www.biomedcentral.com/1471-2458/5/95

Utulu, S. N. & Lawoyin, T. O. (2007). Epidemiological features of HIV infection among pregnant women in Makurdi, Benue State, Nigeria. *Journal of Biosocial Science*, 39(3):397–408.

United Nations. (2005). *UNAIDS Report on the Global HIV/AIDS Epidemic*

UNAIDS/WHO (2007). *2007 AIDS Epidemic Update*. Retrieved from http://data.unaids.org/pub/EPISlides/2007/2007_epiupdate_en.pdf

UNESCO (2006). *Strategy for HIV/AIDS prevention education.* Retrieved from http://www.unesco.ru/files/docs/unescos_strategy_for_aids_prevention_education.pdf

UNAIDS (2006). *Report on the Global AIDS Epidemic*.

Weiner, B. (1993). On sin versus sickness: A theory of perceived responsibility and social motivation. *American Psychologist*, 48, 957-965.

Yahaya, L. A. (2007). *Trends and challenges of HIV/AIDS counselling in Nigerian secondary schools. A case study of Kwara State.* Paper presented at the 8th Counselling Conference of Kenya Association of Professional Counsellors. 4th- 6th September, 2007. Retrieved from www. Kapc.or.ke/index_files/dr-yahaya_lasiele_alabi.pdf_

* **Sussan Olufunmilola Adeusi is currently on her Ph.D at the Department of Psychology, Covenant University, Ota, Nigeria.**