

Assessing Nigerian University Students' Knowledge About HIV/AIDS

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ABSTRACT The HIV/AIDS knowledge survey was carried out among Nigerian university students to assess their level of knowledge about HIV/AIDS. A total of 900 undergraduates of Niger Delta University, Wilberforce Island, Nigeria participated in the study. They consisted of 520 male students and 380 female students within the age bracket of 18 years and 40 years ($M = 20.62$, $SD = 2.28$). The main finding of the study indicated that current students have a highly favourable knowledge about HIV/AIDS. To this end, HIV/AIDS interventions that college counsellors could adopt to sustain this trend were advocated.

INTRODUCTION

The Acquired Immune Deficiency Syndrome (AIDS), caused by the Human Immune-deficiency Virus (HIV) was first identified in the early 1980s in United States of America and has now spread like 'wild fire' to all parts of the universe (UNAIDS, 2001). Since the first incident of the AIDS epidemic, a total of 21.8 million people have died of the disease. Of this total, 17.5 million were adults, and 4.3 million were children under 15 years. Of a total of 13.2 million orphaned by AIDS worldwide since the first incident, Ninety-five percent (95%) of them live in Africa. In addition, it is estimated that about 25.3 million Africans live with HIV or AIDS (Peltzer et al., 2002), with about 16,000 people being infected with HIV everyday. Although the impact would not be uniform between or even within countries, the AIDS epidemic is distinct in that it mainly strikes young adults between the ages of 25 and 45 yrs. This means that people are ill and die during the years in which they are most economically productive and are expected to play the greatest role as providers, care givers and nurturers in families and communities (Alutu, 2002; UNAIDS, 2001).

In Nigeria, even though the exact number of people living with HIV/AIDS is not known, the Federal Ministry of Health had estimated that over 2 million Nigerians were infected with HIV by mid-1999. This number may be a mere speculation given the fact that it is practically

difficult to give accurate information on seroprevalence rate in Nigeria because like other developing countries, under-reporting the result of management and logistics problems can hamper efficient data collection and analysis (Ekpo, 1994; Momodu and Momodu, 1998).

In other places in Africa, the situation is not different. Teka (1993) reports that sero-epidemiological surveys conducted in Ethiopia since 1987 indicate that the prevalence of HIV infection seems to be increasing. This is also the situation in Tanzania, which is known to have reported the largest number of AIDS cases in any country of the world.

REVIEW OF RELATED LITERATURE

According to the Joint United Nations Program on HIV/AIDS, it is estimated that about 40 million adults and 2.7 million children were living with HIV at the end of 2001 (UNAIDS, 2001). In Africa, the total number of people living with HIV/AIDS by the end of 2001 was put at 28.2 million. AIDS now kills ten times more people a year than war. In addition, one-tenth of the adult population aged 15-49 years in Africa is infested with HIV/AIDS (UNAIDS, 2001).

In Nigeria, it has been reported that by 1987, majority of students sampled had already heard of HIV/AIDS. For example, in a study conducted with students of Obafemi Awolowo University, Ile-Ife, Nigeria indicated that majority of the students heard of HIV/AIDS from newspapers

and magazines for the first time in 1987, with only a handful of them reporting that they had heard of AIDS between 1982 and 1986 (Fabiya, 1993).

Cok et al. (2001) report that university students have moderate level of knowledge about the transmission of symptomology and prevention of the disease, though, with a great deal of misconception regarding HIV/AIDS. Similarly, Singh et al. (1997) report that although students were reasonably knowledgeable about the role of sexual contact, blood transfusion, infected needles and vertical transmission, they had misconceptions about the transmission of HIV through casual contact; as 57 percent of the respondents had thought that AIDS was preventable by vaccine, while 51 percent believed AIDS was curable. In the same vein, Oladepo and Brieger (1994) report that 90.6 percent of their sampled participants were familiar with the term AIDS and that 58.7 percent of the sampled population knew that AIDS was caused by a virus. However, majority of them believed AIDS could be transmitted through kissing, hugging and shaking of hands. Similarly, Okeke and Fortune's (1992) study shows that although most students knew that HIV could be transmitted through vaginal, anal sex, blood transmission and by sharing needles with HIV infected drug users, yet only few students knew that HIV cannot be transmitted by sharing clothing, sneezing and coughing, sharing of drinking glasses, shaking of hands, hugging, kissing, and from swimming pools.

The respondents in Buggaleys' et al. (1997) study were quite knowledgeable about transmission of HIV through semen, blood and vaginal fluid. However, 50 percent of them believed that saliva transmits HIV. Similarly, Deshmukh et al. (1998) and Harding et al. (1999), revealed that their respondents were knowledgeable about transmission and symptomology, but there were misconceptions about the mode of HIV transmission. While the students were knowledgeable enough about contracting the disease from their partners, yet this did not prevent them from engaging in unprotected coitus. Conversely, Chakaraborty's et al. (1996) survey of the awareness and attitude of HIV/AIDS among students living in India and their counterparts that had migrated from India to the US, revealed that majority of the participants in both groups felt that their knowledge was inadequate. So is the study of Nicholas et al. (1994). Ambati et al.

(1997) revealed that although their respondents were aware that sexual intercourse and injecting drug use can transmit HIV, and shaking of hands and mosquito bites cannot transmit HIV; majority of the respondents did not also know that breastfeeding is a mode of transmission.

On the other side, Akande (1994), Delkin (1996), Fabiya (1993), Johnson et al. (1992), Ramsum et al. (1982) and Teka (1993) report high knowledge among their respondents, which Edem (1993) indicated predicts abstinence. Similarly, Friedland et al. (1991) report high knowledge about AIDS; although misconceptions about transmission of the virus was prevalent. Most respondents incorrectly identified mosquito bites and screened blood donations as methods of virus transmission. While a small segment failed to recognize sharing of razor blade and blood transfusion as possible means of contracting HIV infection.

Interestingly, Meneghin (1996) reports from 31 occasional interviews conducted with 10 university students and 21 detainees of University of Sao Paulo that most of the respondents were knowledgeable about HIV/AIDS issues. For example, 76.5 percent of the students and 67.9 percent of the prisoner population stated that AIDS was something very distant, yet after the blood samples, 50 percent of the students verbalized their fear of AIDS as did 71.4 percent of the prisoners.

Students' age has been reported to affect their knowledge about HIV/AIDS. For instance, Madhok et al. (1993) revealed that younger students when compared with their older colleagues took more precautions and steps to reduce their risk of HIV/AIDS infection, which implies that they were more knowledgeable about the consequences of HIV/AIDS. Similarly, Edem's (1993) survey to determine the percentage of students attending Nigerian university who have high-risk sex revealed that younger age predicted abstinence.

Globally, women account for 48% of adults who are infected with HIV/AIDS. In Sub-Saharan Africa, where HIV is spreading through heterosexual activities, women account for 55% of adults infected with HIV (UNAIDS, 2001). Infection rates in young women are far higher than that in young men. Average rates in teenage girls were over five times higher than in teenage boys. In addition, O'Leary et al. (1992) report women had higher perceived self-efficacy for

practicing safer sex and sexual history taking than the men. In fact, men were more apt to partake in risky sexual behaviour under the influence of drug than did women. Similarly, Madhok et al. (1993) revealed that women were more knowledgeable about the dangers of HIV/AIDS and had taken steps to reduce their risk of HIV infection. Further, Myer and Clement's (1994) study found women to have more positive attitudes toward condom use. In terms of specific condom use guidelines to prevent Human Immunodeficiency Virus (HIV) transmission, females were significantly more likely than men to be more aware of/or adhere to the rules. Furthermore, Orubuloye's et al. (1993) study that explored sexual empowerment of Nigerian women, observed that women's apparent success in refusing unwanted intercourse was attributable to their economic independence and strong lineage ties. In another adolescent-focused research in Africa, it was noted that knowledge regarding HIV prevention, acquisition, transmission and consequences of infection was high among female participants.

In somewhat a similar vein, Jadack's et al. (1995) survey shows that men respondents reported engaging in significantly more risky behavior than women. Most men reported that intercourse without a condom occurred in unplanned and spontaneous situations, while under the influence of alcohol, drug or with a person not well known. Women reported that intercourse without condom would only occur in a long time relationship. Further, women were significantly more comfortable abstaining from sexual intercourse and asking partners about sexual history. Conversely, Singh's et al. (1997) study among college students in Pune, India found that women were less knowledgeable than their male counterparts meaning that men were more knowledgeable about the hazards of HIV/AIDS than the women. On a different note, Akande's (1984) survey reports a study with students Obafemi Awolowo University, Ile-Ife and University of Zimbabwe, Harare, found no significant difference by gender of students in their overall knowledge of HIV/AIDS.

The field of study may serve as a determinant of university students' knowledge of HIV/AIDS. Deshmukh's et al. (1998) survey in Nagpur city, India with university students confirms a difference in their knowledge of HIV/AIDS based on their field of study. The study indicated that Science students were significantly more

knowledgeable about AIDS related issues and in general had fairly positive attitude towards people with AIDS compared with students in the Arts and Commerce fields. Similarly, Sachdev's (1998) study showed a difference in the knowledge of HIV/AIDS based on course of study. Specifically, the study revealed that response from Nurses (13.92), Social workers (13.29) and the Humanities (10.71) indicated a difference between the Humanities, and the Science (including science related fields).

RATIONALE FOR THE STUDY

Given the prevalence of incidents of HIV/AIDS, with over 40 million people infected with AIDS by 1997, with Africa accounting for more than 60 percent of the cumulative cases of HIV/AIDS infection worldwide, (Ainsworth and Over, 1994; Momodu, 1998, WHO, 1995, 1997), it is considered important to carry out empirical research on the knowledge of HIV/AIDS; since the HIV/AIDS situations at any one time vary between regions and countries as well as within countries, states, provinces and districts (UNAIDS, 2001). In addition, HIV/AIDS epidemic and its context are far from static and are subject to potentially rapid changes. We can therefore not assume that University students have adequate knowledge of HIV/AIDS. For example, an earlier research in Nigeria (i.e., Alutu and Ethibhio, 1997) indicates that there abound misconceptions as to the etiology and transmission of the HIV virus. Alutu and Etiobhio's (1997) study of a sample of 158 adolescents revealed that 38% of the respondents believed that AIDS can be transmitted through hand shaking and hugging while the greater majority believed it can be contracted through toilet seats. This revelation was particularly shocking viewed from the perspective that about 20 years into the HIV epidemic, millions of young people know little about HIV/AIDS.

Even with the high prevalence rate of HIV/AIDS epidemic in Nigeria, there are at present no counseling units specially designed for counseling in HIV/AIDS. Whereas, in East Africa where the HIV infection rate was once the highest in the continent, through proper counselling the rate of infection has drastically reduced. In Uganda, through "The AIDS Support Organization (TASO)," the estimated prevalence rate has come down from 14% in the early 1990s

to its current rate of 8 %. This care and support organization was established by HIV infected individuals and partners, family members or friends of those who died of AIDS. TASO has been particularly active in counseling people affected with HIV/AIDS and in training counselors. But in Nigeria, which is the most populous country in sub-Saharan Africa, the AIDS epidemic is gradually expanding and should not be left to explode before drastic measures are taken to re-dress the situation. The intentions of this study were threefold: (a) project the level of HIV/AIDS knowledge among university students in Nigeria; (b) survey the differences in HIV/AIDS knowledge among various groups of Nigerian University students; and (c) suggest some counselling implications that would help to sustain university students' favourable knowledge about HIV/AIDS.

RESEARCH METHODS

A total of 900 undergraduates of Niger Delta University, Wilberforce Island, Nigeria participated in the study. The respondents consisted of 520 male students and 380 female students within the age bracket of 18years and 40 years ($M=20.62$, $SD=2.28$), randomly selected on an equal basis from the nine existing Faculties in the university.

Measures: The HIV/AIDS knowledge inventory used in eliciting data for this study was adapted from the Umeh's (1997) HIV/AIDS Knowledge items questionnaire and Richards' (2003) Knowledge and Attitude towards HIV/AIDS scale. The Umeh's (1997) inventory was made up of 22 items, which were constructed by him and some questions used in similar surveys. It was used in eliciting data from students of a university in Northwestern town in the USA. The Richards' (2003) scale had five sections and was used to gather data from counsellors in Zimbabwe about their knowledge and attitude towards HIV/AIDS. The current questionnaire was made up of two sections. Section A sought Personal information of the respondents such as Age, Sex, and Course of study. Section B was made up of 28 items adapted from Richards' (2003) and Umeh's (1997) Knowledge of HIV/AIDS questionnaires to elicit information from the respondents on their knowledge about HIV/AIDS. All the items in section B were rated on a four-point Likert type scale ranging from strongly

agree to strongly disagree.

The questionnaire was content validated by three professors at the Florida International University, Miami, USA and Ambrose Alli University, Ekpoma-Nigeria. The split-half method was adopted to determine the reliability of the instrument, which yielded the reliability co-efficient of 0.76

Procedures: The questionnaires were mailed to the identified respondents through the Dean of Students of the university, with return postage also duly paid for. The intentions of the research had been duly explained to the authorities of office of the Dean of Students of the Niger Delta University, who were in turn expected to enlighten their students about the intention of the present study. Confidentiality of their responses and strict adherence to individual privacy were fully assured.

Analyses: To establish students' level of knowledge about HIV/AIDS, the mean score of all the responses was computed and compared with the arbitrarily set minimum point for favourable knowledge (which is given as 50.01). The minimum point for favourable knowledge was arrived at bearing in mind the fact that on a four-point Likert type scale, with twenty-five items raised to measure the level of knowledge about HIV/AIDS, the baseline for favourable knowledge would be 50.01 and above.

T-test for significant difference was used to analyze research questions 2, 3 and 4. While One-way ANOVA was used to analyze research question 5.

RESULTS

1. What is the HIV/AIDS knowledge among Nigerian University students? The overall score on the HIV/AIDS Knowledge inventory ranged from 25 to 100 ($M=86.73$, $SD=30$). When compared with the arbitrarily set minimum point for favourable knowledge, it can be concluded that Nigerian university students have a highly favourable knowledge about HIV/AIDS.
2. Do male and female undergraduates differ significantly in their knowledge about HIV/AIDS? The result indicated a significant difference between male and female students in their knowledge about HIV/AIDS ($t=49.13$, $P<0.05$). Male students ($M=94.64$, $SD=3.51$, $N=541$) had a significantly higher knowledge

about HIV/AIDS than their female counterparts ($M=78.82$, $SD=5.40$, $N=359$).

3. Is there any significant difference between married and single students in their knowledge about HIV/AIDS? The results indicated that married ($M=81.32$, $SD=3.60$, $N=180$) and single students ($M=80.89$, $SD=3.11$, $N=720$) do not significantly differ in their knowledge about HIV/AIDS ($t=1.60$, $P>0.05$).
4. Do Adolescent and Adult students significantly differ in their knowledge about HIV/AIDS? The results indicated that a significant difference existed between Adolescents and Adults in their knowledge about HIV/AIDS ($t=48.09$, $P<0.05$). From the respondents' scores, Adolescents ($M=96.72$, $SD=3.78$, $N=589$) had a higher knowledge about HIV/AIDS than the Adult ($M=79.31$, $SD=5.77$, $N=311$) students.
5. Is there any significant difference in the knowledge about HIV/AIDS among sampled students across all the faculties in the university? The results indicated that students of various faculties did not have the same knowledge about HIV/AIDS. The result of the One-way ANOVA indicated a significant difference [$F(8, 891)=0.978$, $P<0.05$] in students' knowledge about HIV/AIDS when surveyed across the existing faculties.

The Fisher's LSD test that was further applied to show the direction of the difference indicated that Students of the Faculty of Health Sciences had the highest level of knowledge about HIV/AIDS ($M=84.02$), then followed by students of the Faculty of Engineering ($M=81.57$). Then followed by students of the Faculty of Social Sciences ($M=80.52$). Followed by Faculties of Sciences ($M=80.03$), Education ($M=79.96$), Management Sciences ($M=77.80$), Law ($M=77.26$). Students of the faculty of Arts ($M=74.21$) had the least knowledge about HIV/AIDS when compared across all the faculties of the university (A copy of the Fisher's LSD analysis can be obtained from the Senior Author upon request).

DISCUSSIONS

The high level of knowledge about HIV/AIDS among Nigerian university students as reported in this study may be connected with the aggressive campaigns that have over the years been championed by relevant health and

community based institutions. In addition, the efforts of relevant organs of the United Nations, several Non-Governmental Organizations and relevant government institutions have been aimed at educating the students on the causation, transmission route and prevention of HIV/AIDS. This trend of findings has a very bright future for the prevention and control of the HIV/AIDS pandemic among the adolescents and youths, who are most vulnerable. Furthermore, this highly favourable knowledge about HIV/AIDS would most likely bring about a positive attitude towards people living with HIV/AIDS, with many more people embracing safe sex and even sticking to one sex partner or abstaining from sex.

Another finding of this study indicates that male students had significantly higher knowledge about HIV/AIDS than the female students. This result is in contrast with that of Orubuloye et al. (1993), which reports a higher knowledge among female participants regarding HIV prevention, acquisition, transmission and consequences of infection.

Adolescents were found to have higher knowledge about HIV/AIDS than adult students. This is consistent with the earlier findings of Madhok et al. (1993), which indicates that younger students when compared with their older colleagues, took more precautions and steps to reduce their risk of HIV/AIDS.

The field of study that a student is enrolled was found to determine students' knowledge about HIV/AIDS. As expected, the students of the faculty of health sciences, which includes medical sciences had the highest knowledge about HIV/AIDS. This result is consistent with that of Sachdev's (1998) study that showed a difference in the knowledge of HIV/AIDS based on course of study. Specifically, the study revealed that response from Nurses (13.92), Social workers (13.29) and the Humanities (10.71) indicated a difference between the Humanities, and the science (including science related fields).

Limitation of the study

This study is limited in that it was carried out in a school environment in Nigeria, thereby making the research participants very selective. Therefore, any generalization of the results of this study must be made with caution.

IMPLICATIONS FOR SERVICE PROVIDERS

This research has shown that Nigerian university students currently have a highly favourable knowledge about HIV/AIDS. This trend could be sustained by service providers doing AIDS prevention and counselling with students who are one of the populations at highest risks of contracting HIV. To achieve this, counsellor education faculty may consider partnering with health educators to provide in-service training for college counsellors already in the field; as college counsellors would be expected to assist in educating the students, staff and the entire university community about HIV/AIDS. In addition, counsellor educators could further help to sustain the highly favourable knowledge about HIV/AIDS among university students by teaching college counsellors the clinical facts about the transmission of the disease. They could also organize a scientific lesson on the transmission of HIV/AIDS. This is most likely going to help college counsellors come to a clearer understanding of how HIV/AIDS can be transmitted; and also the effective ways to protect oneself from transmission (Costin et al., 2002.)

This study also has implications for college counsellors and other service providers in that it will increase positive effect on counselling that can be maintained over a substantial period of time. There is therefore the need for significant others to partner with the Non-Governmental Organizations and college counsellors to provide regular service for students and also update students' knowledge on new information on HIV/AIDS

Finally, college counsellors could routinely interact with students and the entire campus community on the following topics: Substance abuse, teen sexuality, depression, suicide, sexual and physical abuse, problems with family and friends, concerns about career and future and questions about the meaning of life. College counsellors could uniquely and valuably contribute their services to the campus environment by playing a very vital role in students' lives.

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