HIV/AIDS Risk Behavioural Tendencies Among Secondary School Students In Gombe (Nigeria)

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Citation

Abstract
A cross sectional survey of HIV/AIDS risk behavioural tendencies among in-school youths, was conducted in Gombe metropolis, Nigeria. A total of 400 respondents were selected using multistage sampling technique, but only 395 of completed questionnaires were finally found usable. The subjects were in the ratio of 50.8% males to 49.2% females and their ages ranged between <13 and 24 years. Although, almost all of them (98.4%) ever heard of HIV/AIDS before and majority (88.9%) have heard of condom, sex-related risky behaviours were still prevalent among them. This includes multiple sex partners in the last one year (10.5%), multiple life-time sex partners (14.1%), low rate of condom use in last sex (22.7%), sex in exchange for money or favour (9.8%), early sexual debut at less than 13 (18.8%), sex with female sex workers (12.2%) and diagnosed with STDs (6.8%). This scenario calls for urgent intervention measures such as HIV/AIDS school education programmes in the state and region.

INTRODUCTION
Acquired Immunodeficiency Syndrome (AIDS) is a fatal illness caused by a retrovirus known as the human immunodeficiency virus (HIV) which breaks down the body's immune system, leaving the victim vulnerable to a host of life threatening opportunistic infections, neurological disorders, or unusual malignancies\(^1\). The term AIDS actually refers to the last stage of HIV infection. It is a modern disease affecting both developed and developing countries, and both young and adult populations.

Since 1981 when AIDS was first described among homosexuals in the US the world has witnessed unprecedented scale of devastation and incapacitation of mankind by the disease on virtually every part of the globe\(^2,3\). In less than 20 years tens of millions of people got infected with the deadly virus. The developing countries, especially of the Sub-Saharan Africa (SSA) got the worst blow.

Today, it is estimated that there are more than 40 million People Living With HIV/AIDS (PLWHA) worldwide, about 95% of whom live in the developing world\(^1,5\). SSA accounts for about two third (25.3million) of these PLWHA, though it constitute only about 10-11% of the world population\(^1,3,6\) and \(^8\). To this lot Nigeria contributes about 3 million with a prevalence rate of 4.4%\(^5\). Although current data indicate apparent decline, hope for a drastic reversal of this trend seems not to be in sight, as there are about 5 million new cases globally with SSA, Nigeria inclusive, accounting for 64% of these\(^1,5,6\). This seems to be suggesting that the present preventive and control measures against the disease needs to be radically reviewed and overhauled. But a baseline for this must be provided by HIV infection risk behavioural surveys among high risk sub populations as the adolescent youths in secondary schools. This is because the mystery behind the intractable pandemic is shrouded around behaviour\(^8\).

Already countries of the world have paid a heavy price, with over 20 million HIV related deaths toll since 1981, and over 3 million of such deaths were recorded in the year 2005 alone; 500,000 of whom were children under 15 years\(^1,6,9\). It is estimated that every minute a Nigerian man, woman or child becomes infected with HIV. And that nearly a million people have been maimed by AIDS, while more than two million children have been orphaned. Furthermore, it has been projected that if adequate effective control measures are not taken; by 2010 Nigeria will have between 10 to 15 million PLWHA which is about 26% of adult population\(^11\).

Globally, unprotected heterosexual activity is the predominant route of HIV transmission. Other modes of transmission include unprotected penetrative sex between
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men, injecting drug use and unsafe blood transfusions and injection\(^1\). These are fundamentally crucial to designing effective prevention programmes. In SSA, the main mode of HIV virus transmission is heterosexual intercourse and young people who are generally more sexually active become the most vulnerable subgroup of the population\(^3,9\).

UNAIDS report on global AIDS epidemics\((2004)\) show that today’s youth generation is the largest in history, with nearly half of the world’s population being young people under 25 years. The report added that young people between the ages of 15 and 24 are the most threatened, accounting for half of all new cases of HIV globally\(^9\). However, the report maintained that young people in different parts of the world face different kinds of risks, and that prevention programming must be designed differently.

SSA is said to contain almost two-thirds of all young people living with HIV-approximately 6.2 million, 75% of whom are females\(^5\). The adolescents in Nigeria constitute 20% of the total population and those in the northern part are more exposed to HIV infection risk behaviours than their southern counterparts\(^11\). Teenage pregnancy and motherhood was shown to be highest in the north than in southern Nigeria - reasons for these differences being majorly socio-cultural. It has also been shown that despite demonstration of a high level of awareness about HIV/AIDS and STIs\((63.5\%)\) the adolescent young women in north eastern Nigeria are inclined to indulge in risky sexual practices for “perceived benefits”\(^11\).

Gombe state, with Gombe metropolis as the state head quarters, is one of the six states that comprise north eastern Nigeria. HIV prevalence in the state as per 2003 HIV sentinel survey\((HSS)\) was 6.8%, and 4.9% in the 2005 HSS which were quite in excess of the 5% and 4.4% national rates respectively\(^9\). This partly explains the issues highlighted in the preceding paragraph. A secondary school based study is undoubtedly more likely to reveal a lot about the predisposing factors to the prevalence of such risky behaviours among young people in Gombe and northern Nigeria by extension. Though targeted prevention may be politically difficult in public schools setting, a culturally competent AIDS prevention education relevant to identified adolescent risk behaviours is urgently needed. The starting points are behavioural surveys.

A number of studies conducted elsewhere have implicated factors such as urbanization, poverty, socioeconomic status \((SES)\), low level of education, ethnicity, and alcoholism and drug abuse as correlates of HIV infection risky behaviours\(^2,3,11-17\). A re-examination of some of these factors within the context of the local environment and culture is key to exploring newer and more effective control measures. At the moment the only available data for baseline quantification of local morbidity of HIV/AIDS are the National Demographic and Health Survey \((NDHS)\) and the ante-natal clinic \((ANC)\) based National HSS for HIV seroprevalence surveillance. While providing us with an operational data base for planning, administration, monitoring and evaluation of HIV/AIDS prevention and control programmes, these data still remains inadequate in the face of continuously evolving patterns of HIV morbidity and mortality among the at-risk populations of our society.

The key issues in this study are hereby raised in the following questions;

What is the level of awareness about HIV infection risk behaviours among secondary school students in Gombe State? What are the factors responsible for HIV/AIDS risk behaviours prevalence among the students? What is the pattern of distribution of sociodemographic variables of the respondents? What is the attitude of the students towards the risk of HIV infection?

The youths are an important target population of every society, in that sooner or later they transit into the workforce of the nation. But these adolescent youth so full of curiosity and experimentation often expose themselves early to the grave risk of HIV infection. Assessing the trends and determinants of these tendencies among the youth would throw light on safer behaviour choices that can be instrumental to remedial changes. The 2003 NDHS in Nigeria revealed that among the age group of 15-24 years, only 21% males and 18% females demonstrated correct knowledge of ways of preventing the sexual transmission of HIV infection\(^16\). And the “behaviors that may lead to HIV infection are usually initiated in adolescence”, because before they graduate from high school, majority of those in-school adolescents have become sexually active\(^3\).

**METHODS**

**SETTING AND STUDY DESIGN**

Gombe metropolis is the Nigerian Gombe State capital. It is a metropolitan LGA, occupying the central part of the entire state. It is located at a commercial confluence in the heart of the north east geopolitical region of Nigeria. There are not less than seventeen \((17)\) public and private secondary
schools located in various parts of the city, with an estimated total of 15,700 students. This study was designed to be a cross sectional descriptive survey intended to capture HIV infection risk behavioral patterns among the secondary schools students in Gombe metropolis, Gombe state, Nigeria.

**SAMPLING METHODOLOGY**

The sampling technique adopted for this study was multistage sampling method.

A list of seventeen public and private secondary schools in Gombe metropolis, which were registered with Gombe state ministry of education, constituted the stage one sampling frame for this exercise. A total of five among these schools comprising three publicly and two privately owned were selected by a simple random technique. The schools included were Government Science secondary school (GSSS) Gombe, Pilot Day Secondary School (PDSS) Gombe, Universal Day secondary school (UDSS) Gombe, All Saints College Gombe, and Government Girls College Gombe (GGC) Doma.

Based on the literature reviewed, the age groups chosen for this study was 15-24, which were most likely to be captured in the classes three of the junior secondary school (JSS 3) category and all the three senior secondary school (SS 1,2and 3) category. In each of the five schools sampled, each class level was subjected to a second stage, simple random sampling in order to select a class out of the various arms of the level (A,B,C,D,E etc.)

Finally in each class sampled in stage two, twenty (20) male and female, students were again selected by simple random sampling. These were done in three coeducational secondary schools while in the other two, comprising a boys’ secondary school and a girls’ college, all respondents were males and females respectively. Thus, selecting a total of eighty (80) students from each of the five schools. Overall, making a total of four hundred (400) students that constituted the estimated sample size of this survey.

**DATA COLLECTION TOOLS AND TECHNIQUE**

The main data collection tool for this investigation comprised a 41-item structured questionnaire. The items were harvested from various standard instruments with a few modifications adapted to suit some peculiarities of the study population of this survey.

The questionnaires were self administered on captive groups of the student respondents in their classes in the five schools. All ethical considerations were ensured. The questionnaire was field tested on a group of ten (10) students, randomly selected in one of the schools outside the five samples prior to the real exercise.

**DATA ANALYSIS**

Data analysis was done on the epi info 2002 soft ware. Check and validation tools of the software were employed to validate and edit the various data entries that were made.

The questions were precoded to ease data entry and processing. Dependent and independent variables were carefully sorted and relationships between them were determined by cross tabulations, while simple frequency tables were generated to show the distribution of study variables. All measurements were within 95% Confidence Intervals (CI) or p-values <0.05. Differences in observations were tested using Chi-square ($X^2$) test.

**RESULTS**
A good majority (80.5%) of the students fell within the age bracket of 15-19 and most (87.7%) of them were urban dwellers. The middle and lower SES levels representing 55.0% and 36.6% respectively carried the bulk of respondents. Awareness about HIV/AIDS among respondents was 98.4%, about condom 88.9%, while only 39.5% knew that AIDS has no cure. 70.5% of them knew that a healthy looking person can have AIDS. No significant difference was found in level of awareness about HIV/AIDS between Urban and Rural respondents.

Blood transfusion (71.9%) and unprotected sex (62.8%) were most identified by the respondents as ways of contracting HIV/AIDS, whereas 1.5% and 4.1% of respondents misconceived witchcraft and mosquito bite as other means of contracting HIV/AIDS respectively. The frequency count of responses and their percentages include multiple answers. Sixty five point three (65.3%) of respondents identified abstinence, 34.9% condom use and 37.9% keeping faithful to an uninfected partner, correctly as ways to avoid contracting HIV, while a 7.1% minority held misconception about avoiding sharing toilet and other items with HIV positive persons also as means of avoiding HIV infection.
Seven point five percent (7.5%) of respondents were exposed to substance abuse, 35.1% to bad friends, 47.1% to friends who had abortion, 35.4% to sex advances, 44.7% to early sexual debut, 14.1% to multiple lifetime sex partners.

Slightly more than half (54.4%) of respondents declared negative HIV sero-status, 84.6% agreed to be tested, 57.3% of them felt not at risk of HIV infection, while 30.8% understood they were at risk. Eleven point nine percent (11.9%) simply didn’t know whether or not they were at risk.

There was significant gender variation in serostatus self reporting (P<0.05). Females tended to report negative HIV status (54.8%) than males (50.2%). There was 10.3% self reported seroprevalence among young men. HIV status reporting was significantly higher among rural respondents, with 14.6% reporting positive while 7.6% only reported positive among urban respondents (P<0.05).

Nine point seven percent (9.7%) of respondents had either had or aided abortion. The rate of condom use in last sex was 22.7%. Seven point eight percent (7.8%) others acknowledged receiving blood transfusion of uncertain safety. A fair proportion (28.2%) of them had shared needle
or sharp instruments. Six point eight percent (6.8%) had ever been diagnosed with STD. The rate of sex with FSW was 12.2%. Another 9.8% of respondents acknowledged involvement in sex in exchange for money or favour. And 8.2% were victims of rape or forceful sex.

**Figure 6**
Table 6: Distribution of Respondents according to Consent to sex for money/favour and Agreement to be tested by level of Needs Satisfaction at home and SES

<table>
<thead>
<tr>
<th>(1) Level of Needs Satisfaction at Home</th>
<th>No</th>
<th>Yes</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>509</td>
<td>191</td>
<td>700</td>
</tr>
<tr>
<td>Not well</td>
<td>286</td>
<td>203</td>
<td>489</td>
</tr>
<tr>
<td>Very well</td>
<td>216</td>
<td>236</td>
<td>452</td>
</tr>
<tr>
<td>Well</td>
<td>162</td>
<td>288</td>
<td>450</td>
</tr>
<tr>
<td>Total</td>
<td>1467</td>
<td>1408</td>
<td>2875</td>
</tr>
</tbody>
</table>

A good percentage (33.3%) of those who consented to sex for money felt their needs were “not well” met at home. Twenty three (23.0%) of those who gave consent felt their needs were just “well” met, while only 11.1% of those who felt their needs were “very well” met at home consented. Differences in consent to sex for money was significant among various SES strata (P<0.05). Those in the lower SES showed more (21.1%) tendency than the others. Respondents in the Upper (100%) and Middle (92.9%) SES demonstrated significant willingness to be tested than those of the lower SES (81.0%).

**DISCUSSIONS**

Out of the 400 questionnaires administered to the in-school adolescents, 398 were retrieved and processed. However, 3 out of the recovered instruments were found not usable; hence only 395 were entered and analyzed.

Gender wise, the sample population for this survey comprised 199 (50.8%) male and 193 (49.2%) female secondary school students, giving a male-female sex ratio of 1:1. Majority of the respondents fell within the age bracket of 15-19 years old representing 80.5%. Those below age 15 were only 6.8%, while the rest 12.7% were aged 20-24.

This survey revealed high levels of awareness about HIV/AIDS (98.4%) as well as condom (88.9%) among the respondents. High levels of HIV/AIDS awareness were also established in other findings by UNFPA (94.1%), the National AIDS/STIs and Reproductive Health Survey (NARHS)-96%, Ezeoke et al (95.7%) both among the young and general population. However, on condom awareness in Gombe, the finding of this study unveiled a much higher level (88.9%) than that of UNFPA (39%). Only 39.5% of the in-school adolescents correctly indicated that AIDS has no cure, 31.6% believe that AIDS can be cured, while the remaining 28.9% simply didn’t know whether or not AIDS has cure. This wide knowledge gap among youths is capable of breeding carefree and risky behaviours in regard to HIV infection. A cross tabulation of condom use in last sex with opinion on cure for AIDS revealed a very strong statistical association (X² = 1234.5948, P<0.05). Up to 63.5% of those who indicated “yes AIDS has cure” didn’t use condom in the last sex. Majority of the respondents (70.5%) correctly indicated that a healthy looking person can still have HIV, corresponding to UNAIDS knowledge indicator number 2, “no incorrect beliefs about AIDS.”

When level of awareness about HIV/AIDS was investigated according to place of residence, no significant difference was found between rural (95.9%) and urban (98.8%) respondents. Previous population wide studies in Nigeria had established significant difference in level of awareness about AIDS between urban (higher) and rural (lower) respondents.

The knowledge of respondents about ways of contracting AIDS was highest on blood transfusion (71.9%) followed by unprotected sex (62.8%) and unsterilized instruments/reused needles and sharps (40.3%). Homosexual contact was uncommonly indicated (19.2%), though it has been variously reported in Nigeria. The highest misconception was on kissing (6.3%), followed by mosquito bite (4.1%) and the least was witchcraft or charm (1.5%).

This study also looked at the distribution of respondents by ways to avoid contracting HIV/AIDS. Abstinence was correctly indicated by 65.3% of them, being faithful to one uninfected partner by 37.2%, condom use by 34.9%, while the misconception of avoiding sharing facilities with HIV
positive persons was indicated by 7.1% of them. The low level of awareness about condom as a preventive measure against HIV/AIDS may explain why the low (22.7%) rate of condom use in last sexual intercourse.

Substance abuse among the adolescents was observed only in regard to Drugs/Indian hemp (4.0%) and alcohol intake (2.7%). Thirty five point one percent (35.1%) of the students indicated maintaining friendships of negative influence on them, another 47.1% have had friends who committed abortion. Proposals for sex were either made or received by 35.4% of the student respondents. Eight point eight percent (8.8%) of them had more than five life time sex partners, another 5.3% of them had between 2 to 5, while 11.3% had one sex partner in their life time. Age at first sex peaked within the age group of 16-18, by 44.6%. Eighteen point eight percent (18.8%) had sexual debut at less than 13 years. These key variables have been implicated as predisposing factors to risky sexual behaviours among young people. The prevalence of these tendencies among the in-school adolescents underscores the need for cause specific intervention in our school AIDS education programmes.

This study also examined the distribution of respondents according to attitude and awareness about the risk of HIV infection. Nine point four percent (9.4%) reported positive HIV status, 54.4% negative while 36.2% “don’t know.” Overall, 84.6% of respondents were willing to be tested for HIV. When asked whether or not they were at risk of HIV infection, 30.8% of them indicated yes, 57.3% no, while the rest 11.9% didn’t know whether or not they were at risk. From deductive reasoning, the 69.2% that indicated either no or I don’t know are more likely to be at highest risk because they are less likely to take precaution against risk behaviours. Likewise, the 15.4% that indicated non willingness to be tested are more likely to be at risk of reckless behaviours.

The relationship between gender and HIV status reporting was strong and the difference was significant (p<0.05, X²=1433.62). Self reported HIV status was highest among females (54.8%), who reported negative and up to 10.3% males reported positive. As a youth population, the female respondents who are more ambitious to get life partners were more likely to hide their HIV positive status or claim negative status for fear of stigmatization. By place of residence, the rural respondents showed more tendencies (70.7%) for negative HIV status reporting than their urban counterparts (50.3%). In the same vein, the rural respondents exhibited highest (14.6%) positive reporting than urban (7.6%) dwellers. The differences were statistically significant. This scenario has the potential to favour the thriving of this epidemic among rural adolescents.

The distribution of respondents’ agreement to be tested by SES showed that all (100%) respondents in the upper SES were willing to be tested, and the least in this regard were those in the lower SES (81.0%). The relationship was strong and the differences quite significant (P<0.05). These differences may be due to more access to information and VCT services as well as affordability among upper SES respondents. This finding also has implication for HIV education programme design – to factor in SES differences.

The distribution of respondents by HIV infection risk behaviour indicators showed that 9.7% of the in-school adolescents had ever committed abortion or at least aided one. Rate of condom use during last sexual intercourse was 22.7% though about 88.9% level of awareness about condom had earlier been established among them. The gap between knowledge and behaviour cum practice must be closed by targeted behavioural change communication (BCC) and other culturally oriented approaches. Seven point eight percent (7.8%) of respondents admitted being transfused with blood whose safety may not be guaranteed. Sharing of sharp instruments was found among 28.2% of respondents while 6.8% had ever been diagnosed with STD. Twelve point two percent (12.2%) had ever had sex with FSWs, while 9.8% others got involved in sex for money or favour. Furthermore, 8.2% of this young people had ever been victims of rape or forceful sex. In the past one year, 10.5% of them had multiple sex partners. Again, a very strong relationship between levels of satisfaction with needs met at home and consent to sex because of money was demonstrated. Thirty three point three percent (33.3%) of those who indicated “not well” and 23.0% of those who indicated just “well” had consented to sex because of money, while only 11.1% of those who indicated “very well” did consent. This tendency was found to be more among those in the lower SES (21.1%) than the others. This has further confirmed poverty as one of the driving forces of the AIDS epidemic in the study population. Marital status of parents as an indication of family background was related with rate of abortion and number of sex with boy or girl friend among respondents. Highest percentages of abortion were found among adolescents from single (20.0%) and divorced (16.7%) parents home background. And respondents from divorced parents’ home had the highest
(66.7%) proportion of those who had ever had sex with boy or girl friend more than five times. This was followed by those from single parents’ home (50.0%). These relationship were strong and the differences significant (P<0.05).

CONCLUSIONS

The findings of this survey provide the ground to conclude as follows;

Though awareness about HIV/AIDS was very high (98.4%) among the students, awareness about the risk of infection was low (30.8%).

Despite a relatively high (88.9%) level of awareness about condom, the rate of condom use was very low (22.7%) among the students.

That there was a high (9.4%) HIV prevalence by self declared HIV status, among the adolescents. This is higher than the official overall prevalence rate (4.9%) for Gombe State.

There was a preponderance of HIV infection risk behavioural tendencies among the students. Such included abortion (9.7%), low rate of condom use (22.7%), sharing of sharp instruments (28.2%), STDs (6.8%), sex in exchange for money or favour (9.8%), rape or forceful sex (8.2%), multiple sex partners in the past one year (10.5%), friends who committed abortion (47.1%), sex with female sex workers (12.2%), early sexual debut (at age <13, 18.8% and at 15 and below, 66%)

RECOMMENDATIONS

In view of the findings of this survey, I wish to make the following recommendations:

School AIDS education programme in Gombe State and north eastern Nigeria should be reinforced with well designed BCC messages targeted at sensitizing secondary school students in Gombe State about the potential risks of HIV infection at their age.

Voluntary Counseling and Testing (VCT) services should be extended or reinforced in all secondary schools in Gombe State.

Similar risk behavioural surveys should be carried out among out-of-school adolescents in Gombe.

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