Knowledge of HIV/AIDS, Attitude and use of Voluntary Counselling and Testing among Adolescents in Senior Secondary Schools, Enugu North Local Government Area, Enugu State

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Abstract

Background: HIV/AIDS is a global public health phenomenon and majority of individuals who contacted the virus live in Sub-Saharan Africa. Adolescents are indicated to be at the center of HIV/AIDS epidemic. Hence, the study was designed to assess knowledge of HIV/AIDS, attitude and use of Voluntary Counselling and Testing (VCT) services among senior secondary school students.

Material & Methods: A descriptive cross sectional survey design was used to select 416 government senior secondary school students in Enugu north local government area, Enugu state. Purposive sampling was used to select the Local Government Area and two (2) Government senior secondary schools while stratified proportionate sampling was used to select students from each class according to the number of students and gender. A structured questionnaire developed by the researchers was used for data collection. Descriptive and inferential statistics (T-test and Pearson correlation test) were used for data analysis.

Results: Majority 259 (66.1%) of adolescents had poor knowledge about HIV/AIDS. Attitude towards use of VCT services was positive (2.92) and greater proportion of the respondents indicated good utilization 208 (53.1%) of VCT services. There was no significant difference in the knowledge of HIV/AIDS and utilization of VCT services between male and female students ($P>0.05$). Also, no significant relationship exists between attitude and use of VCT services ($r = 0.061, P = 0.230$); and between knowledge about HIV/AIDS and utilisation of VCT services ($r = 0.072, P = 0.156$).

Conclusion: Despite intense media campaigns and awareness programs on HIV/AIDS, adolescent in the study are still ignorant about HIV/AIDS hence it is recommended that HIV/AIDS should be included in the school curriculum and taught in class like every other general subject.

Keywords: Adolescents; Attitude; HIV/AIDS; Knowledge; Secondary school students; Use of VCT Services

Introduction

HIV/AIDS is a global public health phenomenon and a major challenge to health and development. The scourge arising from HIV/AIDS creates burden on health care facilities and decrease economic productivity [1]. Globally, around 2 million individuals were infected with HIV and this has been the lowest incidence since the year 1990 [2]. Africa as a continent and Nigeria as a country has made great effort in curbing the spread of HIV/AIDS and in reducing the disease mortality. Evidence reveals that majority of individuals who contacted the virus live in Sub-Saharan Africa [3]. After South Africa, Nigeria has the second largest number of people living with HIV/AIDS. Furthermore, recent estimate revealed a 41% reduction in the incidence of HIV/AIDS in Africa between the year 2000 and 2014 [2]. Adolescence period which is marked by discovery and experimentation comes with a lot of physical and emotional changes. It is supposed that majority of the individuals get infected with the virus at this developmental stage. This is because adolescents indulge in sexual activities and due to ignorance; many of their sexual contacts are unprotected thereby increasing their vulnerability to sexually transmitted disease...
including HIV/AIDS [4]. Regrettably, with a poor health seeking behavior, they are less inclined to seek medical help or counseling. Hence they present the largest number of new cases of HIV reported in Africa [5]. Existing evidence revealed that adolescents aged 15-24 years make up of 20 percent of world population and account for 60 percent of new infections per year globally [6]. According to the World Health Organization and the Joint United Nations Program on HIV/AIDS, young people are much more prone to HIV infection due to lack of correct health information, indulgence in risky behaviours, and lack of access to adequate reproductive health services. However, it is worthy to note that the adolescent age group is potential resource for preventing transmission of HIV/AIDS virus. Hence they need adequate information to make appropriate choices in form of sexual behavior or relationships and this can be done at the secondary school level [7].

Knowledge is a crucial step in addressing prevention of HIV as it can impact attitude to the disease and sexual practice. Lack of knowledge has been implicated as the major reason for high risk sexual behaviours especially among youths [8,9]. Previous studies done in Nigeria revealed that general awareness on HIV/AIDS may be high but the specific knowledge of the disease is still poor. More so, worthy to note that the level of accurate knowledge possessed by adolescents regarding HIV/AIDS will influence their attitude and use of voluntary counseling and testing services [10,11].

Voluntary counseling and testing services is a key component of HIV surveillance, prevention and care [2]. VCT services enables individuals to learn whether they are infected with the virus, understand the implications of their serostatus and make more informed choices for the future [12]. According to Commonwealth Regional Health Community Secretariat [1] the expected effect of VCT is to lower HIV transmission through reduction in high-risk sexual behavior, improved medical care (particularly for sexually transmitted infections), and improved access to care and support services for both HIV-positive and HIV-negative persons. Additionally, the National HIV/AIDS Strategic Plan (2010-2015) was focused on attaining universal access goal of providing VCT services to 80% of the (eligible) population [13]. The strategic plan provides measures to enhance access to the hard to reach population such as the youths. However, despite obvious vulnerability of this group to HIV infection, voluntary counseling services targeting them are few. In Nigeria, there are no or few school based counseling services rather Voluntary Counselling & Testing Services are predominantly clinic based. Hence, utilization of VCT services by this group is very low [12] and there might be a link between the fear of being rejected or stigmatized in the community and the rate of use of VCT in Nigeria. It is believed that improving access to VCT services and promoting attitude change can help increase its utilization and also promote initiation of risk reduction behaviours [14,15].

A lot of studies both locally and globally have explored knowledge of HIV/AIDS, attitude and use of VCT services among different groups of individuals including secondary school students. However, it is obvious from anecdotal survey that there is widespread ignorance and misconception about the disease (AIDS), VCT services among Nigerian population and specifically within the adolescent age group. Based on the foregoing, this study seeks to explore the knowledge of HIV/AIDS, attitude and use of VCT services in two selected senior secondary schools in Enugu North Local government area, Enugu state. The findings of this study will provide a basis for future prevention programs on HIV/AIDS Infection, correct negative attitude and promote use of voluntary counseling and testing services.

Methods

The study adopted descriptive cross sectional survey design. A sample of 416 was drawn from total population of 1358 Senior Secondary School Students using finite population formula, which consists of all the adolescent male and female students from SS1 to SS3 in the two selected Senior Secondary Schools. Purposive sampling was used to select the Local Government Area and the two (2) Government senior secondary schools while stratified proportionate sampling procedure was used to select students from each class according to the number of students and also according to gender in each class. Students within the age of 15-24 years, physically and mentally stable, available at time of data collection and willing to participate were included in the sample. A structured questionnaire developed by the researchers was used for data collection. The items were generated based on the research objectives and hypotheses and guided by the literature review. The questionnaire consists of two sections (A and B) with a total of 26 items. Section A had (6) items to obtain information on demographics data of respondents, Section B has a total of 19 questions organized in three (3) subscales and was structured to obtain information on the knowledge, attitude and use of VCT among senior secondary students. Reliability of the instrument using Cronbach correlation coefficient was 0.78.

Data collection

Data collection was done by the researchers with the help of three (3) research assistants. The instrument was administered to the students during break periods to avoid interrupting their learning activities and the form teacher for each class was assigned to us by the principal of the school to help control the student and ensure compliance. The questionnaire was administered on the spot to the students who met the inclusion criteria and data was retrieved immediately. Data collection lasted for 3 weeks.

Data analysis

Data were statistically analyzed using IBM, Statistical Package for
Social Sciences (SPSS) version 20. Descriptive statistical analysis including frequencies and percentages, mean and standard deviation were used to describe demographic characteristics, knowledge of HIV/AIDS, attitude and use of VCT services. Inferential statistics was used to test the hypotheses generated for the study. T- test was used to test the difference in knowledge and utilization of VCT services between male and female respondents at 0.05 level of significance while Pearson’s correlation statistics was used to test relationship between attitude and use of VCT services; and Knowledge of HIV/AIDS and use of VCT services.

Results

| S/N | Item                        | Frequency | Percentage % |
|-----|-----------------------------|-----------|--------------|
| 1   | Age Group                   |           |              |
| A   | <15years                    | 169       | 42.70%       |
| B   | 15 – 19years                | 220       | 55.60%       |
| C   | 20 – 24years                | 4         | 1.00%        |
| D   | >24years                    | 3         | 0.80%        |
|     | Mean age                    | 15.8 (SD=3.3) yrs |          |
| 2   | Gender                      |           |              |
| A   | Male                        | 198       | 50.00%       |
| B   | Female                      | 198       | 50.00%       |
| 3   | Class                       |           |              |
| A   | SS1                         | 188       | 47.50%       |
| B   | SS2                         | 139       | 35.10%       |
| C   | SS3                         | 69        | 17.40%       |
| 4   | Religion                    |           |              |
| A   | Christianity                | 386       | 97.50%       |
| B   | Islam                       | 9         | 2.30%        |
| C   | African Traditional Religion| 1         | 0.30%        |
| 5   | Marital status              |           |              |
| A   | Married                     | 5         | 1.30%        |
| B   | Single                      | 387       | 97.70%       |
| C   | Divorced                    | 3         | 0.80%        |
| D   | Separated                   | 1         | 0.30%        |
| 6   | Ethnicity                   |           |              |
| A   | Enugu                       | 280       | 70.70%       |
| B   | Anambra                     | 27        | 6.80%        |
| C   | Imo                         | 29        | 7.30%        |
| D   | Abia                        | 23        | 5.80%        |
|     | Ebonyi                       | 18        | 4.50%        |
|     | Others (Cross-River, Delta, Edo, Benue) | 19 | 4.80% |

Table 1: Demographic distribution of the students.

| S/N | Item                                                      | Frequency | Percentage % |
|-----|-----------------------------------------------------------|-----------|--------------|
| 7   | Have you heard about HIV/AIDS?                           |           |              |
| A   | Yes                                                       | 392       | 99.00%       |
| B   | No                                                        | 4         | 1.00%        |
| 8   | If yes, from where did you get your information about HIV/AIDS? |           |              |

Table 1: Demographic distribution of the students.
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**Table 2:** Respondents knowledge of HIV/AIDS among adolescents (n=396).
Table 3: Respondents attitude towards use of VCT services.

| S/N | Use of VCT services                                           | Yes          | No  |
|-----|--------------------------------------------------------------|--------------|-----|
| 19  | Have you ever taken an HIV test at one time or the other?    | 293(74.7%)   | 99(25.3%)   |
| 20  | Do you intend to have VCT for HIV in the future?             | 248(63.3%)   | 144(36.7%)   |
| 21  | Did you voluntarily accept to do HIV test after you have received counselling? | 289(73.7%) | 103(26.3%)   |
| 22  | Did you appreciate the VCT services because they are free?  | 322(82.1%)   | 70 (17.9%)   |
| 23  | Do you go for HIV test whenever you exposed yourself to people you don’t know? | 137(34.9) | 255(65.7%)   |
| 24  | Do you find it convenient to use voluntary counselling and testing services because it is voluntary? | 383(72.2%) | 109(27.8%)   |
25. Are you satisfied with the facilities and manner of personnel conducting the counselling and testing services? | 326 (83.2%) | 66 (16.8%) 
---|---|---
26. Do your school’s hospital/ clinic have facilities for voluntary counselling and testing services? | 89 (22.7%) | 303 (77.3%) 

Table 4: Summary of responses on utilization of VCT services.

| Category                  | Frequency | Percentage (%) |
|---------------------------|-----------|----------------|
| Poor utilization of VCT   | 184       | 46.5           |
| Good utilization of VCT   | 208       | 52.5           |

Decision rule: Scores: 5-7 (70% and above) - Good utilization of VCT 
Scores 0-4 (0 – 69%) - Poor utilization of VCT

Table 5: Respondents use of voluntary counselling and testing services, (N=396).

| Sex   | N  | Mean | Stdev. | T   | Df  | P-value |
|-------|----|------|--------|-----|-----|---------|
| Male  | 197| 1.97 | 1.06   | -0.018 | 390 | 0.851   |
| Female| 195| 1.95 | 1.06   |       |     |         |

Table 6: T-test comparison of the mean scores on the knowledge of HIV/AIDS between male and female students (n=396).

| Sex   | N  | Mean | Stdev. | T   | Df  | P-value |
|-------|----|------|--------|-----|-----|---------|
| Male  | 197| 4.46 | 1.6    | 0.327 | 390 | 0.744   |
| Female| 195| 4.41 | 1.55   |      |     |         |

Table 7: T-test comparison of mean scores on gender difference in the utilization of VCT services.

Discussion

The current study assessed knowledge of HIV/AIDS, attitude and use of voluntary counseling services among senior secondary school in Enugu North local government area, Enugu state. Adolescent age group was chosen for this study because of their engagement in sexual activities, risky behavior and high vulnerability to sexually transmitted infections like HIV/AIDS. The findings of this study revealed that knowledge of HIV/AIDS among respondents in our study locality was poor 259 (66.1%). Regrettably, despite media campaigns and awareness on HIV/AIDS done both locally and nationally, the respondents in this study do not have basic information concerning HIV/AIDS. This finding may be explained by the possibility that some of the students do not have access to the information outlets (media and so on). Also, the school which would have been a good place to instill the basic knowledge did not incorporate the topic (HIV/AIDS) into the curriculum. In line with our study, findings from among senior secondary schools students in India revealed deficient knowledge regarding HIV/AIDS [7]. Contradicting our findings, students in Uvwie, Delta state Nigeria and Benji Mazi, South west Ethiopia had fairly good knowledge of HIV/AIDS [15,16]. Being aware of HIV/AIDS as an infectious disease does not denote having comprehensive knowledge of the infection. Oyo-Ita, Ikpeme, Etokidem, Offor, Okokon and Etuk, [10], reported that although awareness on HIV/AIDS is high among secondary school adolescents in Calabar, the knowledge of the disease is still poor. However, contrary to the assertion mentioned above concerning non-inclusion of HIV/AIDS in school curriculum, majority of the respondents in this study indicated they got information about HIV/AIDS from the school. This disagrees with a study carried out in Delta state, Nigeria which cited media (40%) as the main source of information about HIV/AIDS among adolescents [15]. Additionally, researchers have reported media as the most important source of HIV/AIDS information among respondents in their study locality [17,18]. Nevertheless, in agreement with our study result, school was identified by respondents in Cameroon as their main source of information about HIV/AIDS [19]. Use of contaminated material was identified as the most common means of transmitting HIV among our respondents. Contrary to this study result, unprotected
sex was identified as the major means of transmission in India and Cameroon respectively [7,17]. Surprisingly, Barnise et al., (2011) reported that secondary school adolescent in Osun state believed that HIV can be contracted via mosquito bite and kissing. This portrays low level of knowledge regarding mode of transmitting HIV/AIDS in Osun, Nigeria. Meanwhile, the respondents in this study reported that abstaining from sexual intercourse is the most potent method of preventing HIV/AIDS among adolescents. This agrees with the results of Haddison et al., [19] in Cameroon who reported that 95.4% of their respondents identified abstinence as the major means of preventing HIV/AIDS. However, some studies reported condom as the best means of protection against HIV [7,17].

Voluntary counseling and testing s is “process by which individuals undergo counseling to help them make an informed choice about being tested for HIV” [20] VCT being the entry point of prevention and management of HIV/AIDS, it has been implicated to be the most effective approach to control HIV/AIDS. Despite poor knowledge of HIV/AIDS found in this study, the respondents demonstrated positive attitude towards voluntary counseling and testing services. Majority of the respondents were aware that VCT will help them know their HIV status and also aware of where the test can be done. The current finding may probably be that the adolescent recognized that VCT will help them know their serostatus; and early diagnosis can help avert consequences of developing AIDS. Also, this finding may be because that the VCT services are provided for free, hence no cost is incurred accessing the services. This is validated by the responses of the participants in the study. Sukar, [21] reported that attitude towards HIV testing among youths can be influenced by accessibility and availability of VCT centers. In agreement with our study result. Regardless that majority of adolescents in our study indicated they do not undergo HIV screening whenever they are exposed to infected individual, the finding of this study revealed that majority of the respondents had undergone HIV tests and are willing to have VCT for HIV in the future. Therefore, in overall, utilization of VCT services in our study locality was good. Good utilization of VCT services probably may be linked to positive attitude demonstrated by our study participants, or because the services are free, voluntary, convenient or made part of medical checkup for admission into school. Provision of free VCT services is key to increasing uptake of HIV test [22] Unlike our study result, findings among high school students in the Tiko health district, Cameroon revealed that only 27.8% student had used VCT and it was significantly lower than 80% objective set by Cameroon government [19]. Previous studies reported that only a few (24.3%) of secondary school pupil in Mwanza ever used available VCT services and low uptake of HIV counseling and testing services [12].

Gender difference in knowledge of HIV/AIDS was assessed among our respondents. The result shows that there is no significant difference in the knowledge of HIV/AIDS between male and female students (P>0.05). Hence, both male and female adolescents in this study had same level of knowledge regarding HIV/AIDS. This result may be because our study subjects have been all age mates who are exposed to the same information. They are all play mates and possibly the information available to the females are also available to males. In addition, considering the fact that our respondents do not have comprehensive and in-depth information about HIV, it becomes difficult to assess which gender is more knowledgeable. A study in Fako division Cameroon reported that there was no significant difference in Knowledge, attitude and practice regarding HIV/AIDS between female and male participants [21]. Furthermore, the relationship between attitude towards HIV VCT services and Use of VCT services was assessed using Pearson correlation statistics. The result shows that there was no significant relationship between attitude towards HIV voluntary counselling and use of VCT services. Therefore, the respondents in this study revealed that their attitude towards VCT services has no influence on their uptake of VCT services. This is contrary to the reports of researchers [14,23] who stated that promoting attitude change can help increase utilization of VCT services. Regarding gender difference in utilization of VCT services, this study revealed no significant difference in the utilization of VCT services among male and female adolescents (P>0.05). Thus, both group of adolescent accessed VCT services equally. Contradicting our result, a study of high school students in Tiko health district, Cameroon revealed that females were 3 times (OR= 2.97, CI 1.99, 4.66) more likely to have gone for VCT than males.

Conclusion

The senior secondary school students in our study are aware of HIV/AIDS but do not possess adequate information about the disease. However, they demonstrated positive attitude towards VCT services and good use of the HIV testing services, while they reported absence of school based counselling and testing services. Therefore, in order to develop proper understanding of HIV/AIDS, cause, spread and prevention, the topic (HIV/AIDS) should be included in the school curriculum and taught in class like every other general subject. Furthermore, voluntary counseling and testing services should be situated and provided in schools to help improve access and uptake of these services by secondary school students.

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