

# ASSESSMENT OF THE DEPTH OF KNOWLEDGE OF HIV/AIDS BY SECONDARY SCHOOL STUDENTS IN SOUTHERN CROSS RIVER STATE, NIGERIA

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## ABSTRACT

The major purpose of this study was to determine the perception (depth of knowledge) of secondary school students in Southern Cross River State concerning HIV/AIDS, in terms of meaning and group at risk, routes of transmission, and prevention strategies. To accomplish the research purpose, one research question and one research hypothesis were formulated. The Research design adopted for this study was survey inferential. The sample consisted of 600 senior secondary school students drawn from a population of 17,587 senior secondary school students (as at the time of research). The instrument used was questionnaire. Population t-test and simple percentages for individual items were used in the analyses of data collected. The findings showed that the general perceptions of the secondary school students on HIV/AIDS are high. It was recommended, among others, that more health educators and guidance counsellors knowledgeable in HIV/AIDS issues should be employed in every secondary school.

**KEYWORDS:** Assessment, Perception, Knowledge of HIV / AIDS, HIV / AIDS Prevention.

## INTRODUCTION

The students in secondary schools as used in this paper are those in senior secondary schools who are mostly adolescents. The period of adolescence according to Onyejiaku (1991) falls within ages 12 and 19 years with both inter and intra-sex variations. Coons (1986) sees the adolescence period as a time of worry and problems, the best of times and worse of times. The best of times often results from friendship ties and sexual activities between boys and girls. Isangedighi (1994) sees the period of adolescence as a time of growth spurt, caused by increased hormonal activities. He also described the period as one of great exploratory activities, especially sexual activities, self-awareness and development.

In recent years, there have been frightening reports by world health bodies on the rapid spread of Human Immunodeficiency Virus (HIV) and the resultant Acquired Immune Deficiency Syndrome (AIDS) in all the continents of the world (World Health Organization, 1998). These reports recognize sexual intercourse as a major route of transmission, and indicate rapid spread among sexually active youths aged 15-24 years. A large number of the senior secondary school students fall into this age bracket.

As at the end of 2005, 40.3 million people comprising 38 million adults, 17.5 million women and 2.3 million children below 15 years were living with HIV/AIDS worldwide. Total deaths due to HIV/AIDS in 2005 alone were 3.1 million, comprising 2.6 million adults and children below 15 years. In Nigeria 3.6 million people are said to be living with HIV/AIDS. Sentinel reports of 2003 showed Cross River State as having 12% prevalence rate of HIV/AIDS the highest rate of infection in Nigeria.

The World Health Organization (WHO) has stated its inability to produce vaccine as well as cure for HIV/AIDS infections. Most importantly, WHO has stated that the period of HIV infection and testing positive takes 3-6 months. However, during this period, the individual carries the virus, can transmit it to another person, but does not manifest the outward symptoms of the virus/disease. So, he/she is a healthy carrier. Here lies the danger at hand especially among the sexually active youths.

This study was, therefore, derived from great concern about the vulnerability of adolescents to HIV/AIDS infection. According to Social Marketing Adolescent Sexuality Health (SMASH, June 2000), young people today are at the high risk

of contacting sexually transmitted diseases which include HIV/AIDS. The young people are now more sexually active at younger ages than the ones in the previous generations. These youths tend to be uninformed about HIV and AIDS. Sometimes they are misinformed about sexuality and therefore very reluctant to seek for correct information and the preventive measures. Again, the young people may not believe they are at risk of infection, but may be holding unto half-truths and outright wrong information, thus having distorted knowledge about the virus and the syndrome. There is therefore need to direct research study on the knowledge of HIV/AIDS among the students.

## LITERATURE REVIEW

Perception has been viewed differently by various individuals and authors. Coons (1986) define perception as a process of selection, organization and interpretation of stimuli from the environment. Denga (1987) defines perception as a process by which the individual uses his sense organs to transform stimuli in the environment into awareness of object. In simple terms, perception is the understanding of knowledge or it is a specific idea or impression made on an issue/object depending on information gathered.

According to Gibson's theory of perception, as explained by Travers (1977), there are five major information systems related to the human beings orientation to his external environments. The systems, the author maintained include visual, auditory, the haptic or touch, taste and smell. The visual system is concerned with sights, auditory system concerned with orienting the ears to collect information from individuals and mass media. The haptic or touch system is complex and has to do with receptors. To gather adequate information on HIV/AIDS, all the senses have to be maximally utilized. The perception of HIV/AIDS by the students will be centered on meanings of HIV/AIDS, signs and symptoms and group at risk, knowledge of routes of transmission and preventive strategies.

A study conducted in Eastern Indonesia in 1998 covering three provinces of Bali, Ujung and East Nusa Tenggara showed some interesting results. The three provinces were said to be part of Behavioural Surveillance Survey (BSS) (Cremer, 1998). As reported by Cremer (1998), 2,850 respondents were used consisting of 600 female commercial sex workers, 150 direct clients of the female commercial sex workers, 100 homosexuals, 200 transvestites

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(persons who derive sexual pleasure from wearing clothes of the opposite sex), 600 sailors, 600 truck drivers and 600 public transport drivers. The results of the study showed low level of knowledge about the existence of HIV/AIDS; the perception of the means of transmitting the disease was also reported to be low. The respondents were reported to have wrong perceptions that only foreigners, prostitutes and their clients were sources of spread of HIV/AIDS.

Berhane and Zakus (1995) conducted a survey in Addis Ababa, Ethiopia to assess the community knowledge on HIV/AIDS. In that study, 530 respondents were used, 464 of the respondents reported having heard about HIV/AIDS. Over 90% of them had identified the various routes of HIV transmission and 80% perceived that maintaining a single sex partner was a way to prevent acquisition of HIV/AIDS.

Udoh (1998) conducted a research in Uyo, Akwa Ibom State in ascertain the perception of adults concerning HIV/AIDS. A total of 200 respondents were used and 100% of them reported having heard of the existence of HIV/AIDS, 190 of them representing 95% reported having seen AIDS victim. On transmission of HIV/AIDS, Udoh found out that 100% of the respondents knew that the virus/syndrome can be transmitted through blood transfusion and sexual intercourse. On possible transmission through barbers' clippers, 55% of them perceived this route as a possible means of getting the disease, while 54% said HIV/AIDS could not be transmitted through the barbers' clippers.

An elaborate study was conducted in 1990 in 44 states in United States of America (USA) among adolescents by the Behaviour Risk Factor Surveillance System. The results showed that in Alabama for instance, among 2,140 youths who were studied, 81.1% of them accepted having heard of HIV/AIDS virus, 61.4% of the respondents, were aware that infected persons can look healthy and 19.1% believed HIV/AIDS can be transmitted through insect bites. In a similar study in California, 2,701 youths were studied, 87.9% of them had heard about HIV/AIDS at the time of research, while 69.1% of them were aware that infected persons could still look healthy (US, department of Health & Human Services, 1992).

This study had one major purpose: to determine the perception of secondary school students in Southern Cross

River State, Nigeria. The perception of the students was on meaning of HIV/AIDS and groups at risk, routes of transmission and preventive strategies.

#### METHODOLOGY

The study was survey. A total of 600 students were randomly selected from a population of 17,587 senior secondary schools students. The age range of the respondents was from 16years to above 19years. A 30 item-questionnaire was used for data collection. Each item was a 6-point Likert type scale of "very strongly agree", "strongly agree", "agree", "disagree", "strongly disagree", "very strongly disagree". The instrument was validated by experts in measurement and evaluation as well as educational research in Faculty of Education. Reliability of the instrument was done using Pearson's Product Moment Correlation on the first and second sets of data having chosen test-retest reliability method. The reliability estimates was .81 All copies of the questionnaire were retrieved since the researchers went personally to collect the data. A population t-test and simple percentages were used in the analyses of data collected.

#### DATA ANALYSIS AND RESULTS

##### Hypothesis 1

The level of perception of HIV/AIDS by secondary school students in Southern Cross River State is not significantly high.

In this hypothesis, the researchers reasoned that for the level of perception to be considered significantly high, the score representing the perception of the students should be greater than 35.0 (for a variable measured with 10 items), and 105.0 (for a variable measured with 30 items). For one item, a midpoint between "agree" (scored 4 points) and "disagree" (scored 3 points) was 3.5. So, for a variable measured with 10 items, the Reference Average Score was 3.5 x 10, which is 35.0; and for the overall variable measured with 30 items, the Reference Average Score was 3.5 x 30, which is 105.0

A population t-test was used to test the hypothesis. The hypothesis was tested on each of the three components of perception and on the overall perception of HIV/AIDS by the respondents. The result of the analysis is shown in Table 1.

**TABLE 1:** Population t-test analysis of the significance of the level of perception of HIV/AIDS possessed by Secondary school Students

S/N	Variable	Mean	SD	t-value	df
1.	Knowledge of meaning of HIV/AIDS and group at risk Reference average score	42.39	5.67	31.96*	599
		35.00	0.00		
2.	Knowledge of routes of transmission of HIV/AIDS Reference average score	42.60	6.30	29.53*	599
		35.00	0.00		
3.	Knowledge of prevention strategies against HIV/AIDS Reference average score	43.56	6.44	32.53*	599
		35.00	0.00		
4.	Overall perception of HIV/AIDS by students (S/Ns 1, 2 & 3) Reference average score	128.55	13.65	42.26*	599
		105.00	0.00		

\*Significant at .05 level (critical  $t=1.65$  for one tailed test; N = 600)

The result shows the observed mean scores of 42.39 (for knowledge of meanings of HIV/AIDS and groups at risk), 42.60 (for knowledge of routes of transmission), 43.56 (for knowledge of preventive strategies) and 128.55 (for overall perception of HIV/AIDS by students) are each significantly greater than the hypothesized reference average of 35.00 (for

each of the three aspects of perception) and 105.00 (for the overall perception).

Calculated t-values of 31.96, 29.53, 32.53 and 42.26 are each greater than the critical t-value of 1.65 (for a directional test). The null hypothesis was rejected. This means that the level of knowledge possessed by the

secondary school students in southern Cross River State in area of (i) meaning of HIV/AIDS and groups at risk (ii) routes of transmission and (iii) preventive strategies of the disease is significantly higher than an average level. Therefore, the level of perception of HIV/AIDS is significant among the chosen sample and by generalization

among the senior secondary school students in the research area.

In addition to these general results, the researchers decided to find out the percentage of respondents who possessed adequate knowledge (or correct information) about HIV/AIDS by considering individual items. The perception of the students on HIV/AIDS specifically on knowledge of meanings of HIV/AIDS and groups at risk is shown in Table 2.

TABLE 2: Percentages of agreement and disagreement to items on knowledge of meaning of HIV/AIDS and groups at risk

S/N	Items	% of Agreement	% of Disagreement	Total
1.	HIV means Human Immunodeficiency Virus	93.0	7.0	100.00
2.	AIDS means Acquired Immunodeficiency Syndrome	81.0	9.0	100.00
3.	AIDS is only a white man's disease and so does not concern the blacks	27.0	73.0	100.00
4.	Testing HIV positive means the person is very healthy and will not have AIDS	49.0	51.0	100.00
5.	When a person has HIV, he/she will later develop AIDS	83.0	17.0	100.00
6.	Someone who has HIV may not look sick even for a long time	77.0	32.0	100.00
7.	All persons who are thin or lean in appearance are AIDS victims	40.0	60.0	100.00
8.	HIV/AIDS is common among truck and other long distant drivers	47.0	53.0	100.00
9.	The youths are also at the risk of contacting HIV/AIDS	75.0	25.0	100.00
10.	Women who have sex with men are at risk of having HIV/AIDS	57.0	43.0	100.00

N = 600 in all cases

The results in Table 2 show a significant high level of perception of the meaning of HIV/AIDS and groups of risk. However, it was of interest to note that as much as 27% of the respondents agreed that HIV/AIDS is a white man's disease and so does not concern blacks. Also as high as 49% of the respondents agreed that a person who tests HIV positive is very healthy and will not have AIDS. These showed low knowledge of the respondents about the virus/disease.

Important also is the fact that as high as 25% of respondents disagreed with item 9 which stated that the youths are also at the risk of contacting HIV/AIDS. This shows low knowledge that youths are at the risk of contacting HIV/AIDS.

For knowledge of routes of transmission of HIV/AIDS, the responses are shown in Table 3.

**TABLE 3: Percentages of agreement and disagreement to items on knowledge of routes of transmission of HIV/AIDS**

S/N	Items	% of Agreement	% of Disagreement	Total
1.	HIV/AIDS is transmitted mainly through sexual intercourse with an infected person	86.0	14.0	100.00
2.	HIV/AIDS is transmitted through injection with unsterilized or already used needles	79.0	21.0	100.00
3.	HIV/AIDS can be transmitted from an infected mother to her child, while in the womb	81.0	19.0	100.00
4.	AIDS can be transmitted through blood transfusion	90.0	10.0	100.00
5.	HIV/AIDS can be transmitted through circumcision and tribal marks	67.0	33.0	100.00
6.	HIV/AIDS is highly transmitted through having sex with harlots	75.0	25.0	100.00
7.	HIV/AIDS can be transmitted through mosquitoes and other insects	58.0	42.0	100.00
8.	HIV/AIDS can be transmitted through the use of public toilet	52.0	48.0	100.00
9.	HIV/AIDS can be transmitted by using sharp skin piercing instrument during initiation into cults/secret societies	70.0	30.0	100.00
10.	HIV/AIDS can be transmitted through sharing the same bed, bus, classroom and shaking of hands with an infected person	38.0	62.0	100.00

N = 600 in all cases

The results show high perception of various routes of transmission of HIV/AIDS. However, 21.0% of the respondents had low knowledge of transmission of HIV/AIDS through the use of unsterilized injection needles. Similar results showing

low knowledge were noticed on a number of items, such as items 5, 6, and 9.

The students were further tested on knowledge of preventive strategies against HIV/AIDS. Their responses are shown in Table 4.

**TABLE 4: Percentages of agreement and disagreement to items on knowledge of preventive strategies against HIV/AIDS**

S/N	Items	% of Agreement	% of Disagreement	Total
1.	The surest way of preventing HIV/AIDS is for adolescents to stay away from sex until they are married	84.0	16.0	100.00
2.	The use of condom during sex can prevent HIV/AIDS	80.0	20.0	100.00
3.	To avoid HIV/AIDS infection, blood should be screened in the hospital before transfusion	85.0	15.0	100.00
4.	Taking injections with new needles can also prevent HIV/AIDS	79.0	21.0	100.00
5.	Sticking to only one sexual partner can prevent the spread of HIV/AIDS	72.0	28.0	100.00
6.	Having hair-cut with sterilized clipper is another sure way of preventing HIV/AIDS infection	61.0	39.0	100.00
7.	Listening to radio and TV talks on HIV/AIDS issues can help in the fight against this disease	80.0	20.0	100.00
8.	Avoiding sex with harlots can prevent the spread of HIV/AIDS	67.0	33.0	100.00
9.	HIV/AIDS can be prevented if secondary school students have sex only among themselves and not with adults	41.0	59.0	100.00
10.	General behaviour change by youths of today is what is needed in the prevention of spread of HIV/AIDS	65.0	35.0	100.00

N = 600 in all cases

The result in Table 4 showed high level of knowledge of HIV/AIDS preventive strategies among the respondent. However, some results though low, were of interest to the researcher, one of such is item 9 of Table 4 which showed that as high as 41.0% of the respondents agreed that HIV/AIDS can be prevented if secondary school students have sex only among themselves and not with adults. This shows a very low level of knowledge. Again, as high as 35% of the respondents did not agree to behaviour change by youths as a preventive strategy against HIV/AIDS. This is of great concern to all stakeholders in the HIV/AIDS pandemic.

#### DISCUSSION OF FINDINGS AND CONCLUSION

The findings of this study showed that the level of perception of HIV/AIDS generally exhibited by the senior secondary school students in the area of study is significantly high. The significant high level of perception is reflected in all the three components of perception studied.

The high perception level is not surprising considering the level of campaign through mass media, schools and churches and by non-governmental organizations.

However, a small percentage of the respondents (27%) think that HIV/AIDS is simply a white man's disease that does not affect the blacks. This finding is similar to that conducted in Indonesia in 1998 by BSS. In that study, most respondents had low knowledge of the existence of the virus and syndrome. On groups at risk of contacting HIV/AIDS, 25% of the students did not know that youths are at risk of contacting HIV/AIDS.

On perception of routes of transmission, the findings showed high level of knowledge on most of the routes of transmission presented. The finding agrees with the results of research conducted by Udoh (1998) in Uyo, Akwa Ibom State. In that study, 100% of the 200 people studied, knew that HIV/AIDS can be transmitted through sexual intercourse, blood transfusion, barber's clippers, unsterile skin piercing objects. This high level of perception on HIV/AIDS could be due to enlightenment campaigns on HIV/AIDS in media houses, and is highly commendable.

Interestingly too, 42% of the respondents perceived that HIV/AIDS could be transmitted through mosquitoes and other insects. A similar result was obtained in a research conducted by USA Department of Health and Human Resources in 1990 among secondary school students. In that study, 19.1% of the students in Alabama believed that HIV/AIDS could be transmitted through insect bites. It does appear that youths irrespective of geographical location and race, are still in need of detailed information in this aspect.

On preventive strategies, it was found that the perception of HIV/AIDS by the student was high also. However, 21% of the respondents disagreed that injection with new needles can prevent the spread of HIV/AIDS. This shows low knowledge. As high as 39% of the students did not have adequate knowledge on the use of sterilized clippers to prevent HIV/AIDS.

Most striking result was shown in 41% of the students who agreed that HIV/AIDS can be prevented if secondary school students have sex only among themselves and not with adults. This shows a very low knowledge of transmission of HIV/AIDS, and is very dangerous. As high as 35% of the respondents did not agree to behaviour change by youths as being an HIV/AIDS preventive strategies. This calls for attention of all handlers of youths if the spread of HIV/AIDS scourge is to be controlled among the young people.

Generally, therefore, the perception of senior secondary school students on HIV/AIDS is high. This means that their level of knowledge of issues on HIV/AIDS is quite high. That is, more than 50% of respondents agreed with the truth embedded in the statements. This could be as a result of awareness created through vigorous campaigns. This is highly commendable. The authors also advocate the inclusion of HIV/AIDS as a unit in secondary school subjects such as social studies, biology and integrated science.

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