
SECONDARY SCHOOL SOCIAL STUDIES STUDENTS'
KNOWLEDGE AND ATTITUDE TO HIV/AIDS: THE
INTERACTION EFFECTS OF GENDER AND SOCIO-
ECONOMIC BACKGROUND IN IBADAN

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Abstract

The study employed the pre-test, post-test, and control group quasi-experimental research design and engaged 387 Junior Secondary Class I students purposively selected as intact classes from three secondary schools in Ibadan in an HIV/AIDS direct classroom instruction. The study took cognisance of the students' gender and family affluence (socio-economic background) as moderating variables. This was to determine if the intervention would produce positive development of knowledge and attitude in the learners irrespective of their gender or socio-economic background. Results showed there was a significant main effect of treatment on the students' knowledge of, and attitude toward HIV/AIDS ($p < 0.05$); there was significant main effect of socio-economic background on students' knowledge of HIV/AIDS ($p < 0.05$), but not on attitude to HIV/AIDS ($p > 0.05$); there was no significant main effect of gender on knowledge of, and attitude to HIV/AIDS ($p < 0.05$); and there was no significant interaction of both variables on students' learning of HIV/AIDS. The study concluded that students' gender and socio-economic background can affect their knowledge and attitude to

HIV/AIDS but the two factors do not interact to affect their learning of HIV/AIDS.

Keywords: *HIV/AIDS, Secondary School Students Knowledge Attitude Gender Socio-economic Background*

Introduction

HIV/AIDS, a very serious global health problem has generated a lot of concerns. Such concerns are provoking researches in various fields of human endeavour. One of such concerns is the fact that the origin of HIV/AIDS is still shrouded in speculations and controversies. Such speculations and controversies include those that explain that HIV/AIDS is a product of “mutation of an existing innocuous virus, which became dangerous and virulent after being exposed to external/laboratory manouvres resulting in either laboratory accident or experiments in search of germs for biological warfare” (Adamu, 2003). Some other accounts explain that HIV is similar to SIV (Simian Immunodeficiency Virus (SIV), a virus that infects monkey and other primates in West and Central Africa (DeVita (Jr.), 1997; AIDS, 1994).

This last account suggests why most people believe that HIV/AIDS might have evolved from Africa. This conception or misconception is buttressed by the British Broadcasting Corporation in one of her news (BBC New, 2007; Tuesday, 30 October 2007, 01:50 GMT). According to the BBC, the consensus is that “HIV was introduced to North America by a Haitian immigrant who contracted it while working in the Democratic Republic of Congo in the early 1960s, or from another person who worked there during that time”. In a similar account provided by Zhu, Korber, Nahmias, Hooper, Sharp and Ho (1998), the hunting of African chimpanzees and monkeys (which carry SIV) for food has made epidemiologists to theorize that the disease appeared in humans after hunters came into blood-contact with monkeys infected with SIV that they had killed. Avert (2016) also provided some assertions credited to Gao *et al.* (1999), Bailes *et al.* (2003) and Sharp and Hahn (2011), which all suggested that HIV viruses got transmitted into humans through the flesh of chimpanzee consumed or through an exposed cut in the

body of the hunter and which later came in contact with the blood of the infected chimpanzee. In contrast to all the “western perspectives”, Africans have reacted that HIV/AIDS is a white man’s disease; America’s sex / birth control technique; and a weapon of biological warfare. Sometimes HIV/AIDS is seen as a punishment from God – “being the price for some western human behaviour, such as promiscuity, homosexuality and intravenous drug use” (Adamu, 2003).

However, these controversies appear very distorting and are capable of distracting the World from its major responsibilities of preventing the spread of HIV/AIDS and to also seek avenue to get cure for it. This may be because the cost of inattention to the consequences of HIV/AIDS may be very dire if existing statistics is anything to go by. As reported by the U.S. Department of Health & Human Services (2016),

36.7 million people worldwide are currently living with HIV/AIDS and 1.8 million children worldwide are living with HIV. Most of these children were infected by their HIV-positive mothers during pregnancy, childbirth or breastfeeding. The vast majority of people living with HIV are in low-and middle-income countries, particularly in sub-Saharan Africa. (Online)

Similarly, reports have it that in Nigeria, 3.5 million people are currently living with HIV. The adult HIV prevalence is 3.1%; over 250,000 are newly infected; 180,000 AIDS-related death are recorded; while 24% adults are on anti-retroviral treatment (UNAIDS, 2016). A further report by UNAIDS indicates that, 9% of all people living with HIV/AIDS live in Nigeria. National data also suggests that 1.3% of young women (15-24 years old) are living with HIV; while 0.7% of them are young men, 24% of whom could not correctly identify ways to prevent sexual transmission of HIV, and reject common myths. Among the common myths are the “*all na die, na die*” – “one death will kill one”, and “HIV does catch a black-man” slogan and “HIV can only be transmitted by sexual intercourse” ideas. There is also the belief, as read by the author on

the wall of a university toilet, that 'AIDS is an America Invention to Discourage Sex'. Moreover, 15% of Nigerian youth at ages less than 15 years are observed to be starting sexual intercourse early. This situation is one of the factors that increase HIV vulnerability among young people, especially because they do not use condom when engaged in sexual intercourse (Ajaegbu, 2015); and yet they don't present themselves for voluntarily HIV testing and counselling. Reports also have it that only 17% of young people know their HIV status in Nigeria (NACA, 2016). Ajaegbu (ibid) further remarked that things are actually falling apart with the increasing number of young people in Nigeria that engage in premarital sex. According to Ajaegbu, the youth are becoming increasingly exposed to the risk of HIV infection due to lack of experience and sex education.

All these, prevalence of HIV/AIDS among the youth population, inability to correctly identify ways to prevent sexual transmission of HIV and reject common myths and early sexual debut by minors, refusal to present self for voluntarily HIV testing and counselling are indicative of lack of appropriate information (knowledge) and inappropriate attitude to HIV/AIDS. They are also suggesting that special attention should be given to direct teaching of the learning content of HIV/AIDS in the secondary school where a large cluster of the youth are found. This is with the view to promoting clear understanding of how HIV is transmitted when it becomes AIDS, its signs and symptoms, how to seek medical attention, how to flee HIV/AIDS risk-related practices, discouragement of stigmatization of people living with HIV/AIDS, among others.

In buttressing the above position, the Population Action International – PAI, as far back as 2001 (which is still relevant till date), remarked that efforts to inform the public and promote public awareness are critical, in the face of the AIDS pandemic and the spread of sexually transmitted infections. According to PAI, the threat of HIV/AIDS has heightened the importance of programmes that help men and women, and especially young people to strengthen their communication and negotiation skills. The PAI then recommended successful strategies that stress comprehensive sexuality education, encouraging delay of first intercourse, and providing access to a range of contraceptive options, will assist young

people to strengthen their communication and negotiation skills (*The PAI Report Card, 2001*).

The recommendations above are worthy of implementation because it is becoming more worrisome seeing a family and society investing in her youth with expectations of gains, now producing a crop of HIV-infected youth: most of whom should have brought greater benefits to the family and the society (*Olagunju, Busari & Ogunbiyi, 2004*). The United Nation's Agency for International Development (UNAID) in her own opinion has stressed the need to "prevent HIV/AIDS through appropriate care, and with focus on school-based communication for children and youth at risk" (*United Nations, 1998*). The US-based Centre for Development and Population Activities - CEDPA (2016) also explains that powerful positive individual and social behaviour change will result if strategic and deliberate investments are made to improve the well-being of young people (both girls and boys), especially with regard to reproductive health, and HIV/AIDS issues. According to CEDPA, such programmes include those that emphasize delay of the age of sexual initiation and increase condom and contraceptive use. CEDPA thus recommends effective programmes incorporating the visions, perceptions, and needs of the diverse population of youth and actively seeking the involvement of youth in planning, implementation and evaluation of development activities that have a direct impact on their daily activities.

The above opinion could be considered very important apparently because the youths have been observed to be engaging in unsafe sexual behaviours and yet, demonstrating a low rate of behaviour change after learning about AIDS, especially from general public education programmes on the media - Radio, Television. Bill Boards, public campaigns and other general out-of-school programmes; and although the media have been reported as very influential in creating awareness, they appear to be relatively incapable of influencing attitudinal change (*Al-Owaish, Mousa, Anwar, Al-Shoumer & Sharma, 1999*). This is also inviting direct teaching that will facilitate not only knowledge acquisition, but development of attitude too, especially among adolescents in the secondary school. *Al-Owaish, et al. (ibid)* however observed that

information acquired by the youth, outside the classroom through other media (public campaign and mediated programmes) has not yielded desired results of adequate knowledge and desirable attitudinal change towards HIV/AIDS. This is because the youths are still engaging in unsafe sexual behaviours, and demonstrating low rate of behaviour change after learning about HIV/AIDS. The same is also the case in present time as earlier recounted above. It may therefore be a politic attempt to test what the schools may likely offer: since there are now existing school-based and classroom-focused curricula for HIV/AIDS education, which recommend certain subjects as the carrier subject of its learning content.

Bregman and Stallmeister (2004) posed two fundamental questions that have bearing with the above opinion. They asked:

Which schooling programmes are effective at lower and upper secondary levels to supply young people with good information on health issues and civic and life skill; and which learning programmes are increasing participation and reducing dropout rates among at-risk youth at the secondary school level?

While Bregman and Stallmeister (2004) were trying to provide answers to these questions, they remarked that the HIV/AIDS' epidemic is presenting social challenges to the education sectors in respect of the supply of teachers; meeting the needs of increasing numbers of orphans; adapting to new interactions within the schools and between school communities; curriculum modification; altered roles of teachers and education system; and the planning and management of the system. They (Bregman & Stallmeister) further remarked that "the secondary education system can respond to the social and health crisis by providing information on health issues, fostering positive civic values, teaching life skills, and by targeting at-risk youth ". They therefore identify "health education" (meant to provide information to young people on protecting themselves from disease) and "civic education" (meant to give students the skills and understanding to play an effective role in society, and help them to become informed and responsible citizens) as the life-skill programmes directed at youth-at risk.

The above picture (rooted in the position of the World Bank on secondary education in Africa) therefore clearly informs that the “target audiences” of HIV/AIDS education are secondary school students. It also suggests that “Civics”, otherwise called “Life-Skill” or (as called in Nigeria), “Social Studies”, defined as an “integration of experience and knowledge about human endeavour and human relations, designed to foster informed and ethical participation in a society” (*Barr, Bath & Shermis, 1997*) is a potential carrier-subject of the learning content of HIV/AIDS education in the school. In furtherance of this World Bank perspective, Bregman and Stallmeister (2004) expressed that “there is little up-to-date information about civic education (recently crafted from the Social Studies curriculum in Nigeria) for young people in sub-Saharan Africa, and how (its) education is integrated into the curricula at the secondary school level”. The last question that was raised in the World Bank perspective is “what role (could) teachers and their professional associations play in tackling a problem like HIV/AIDS, and in promoting positive social values?” (*The World Bank, 2004*).

Thus, having subscribed that Social Studies could be the carrier-subject of school-based HIV/AIDS education, answers to the question of its (HIV/AIDS) learning contents’ integration and the roles that teachers and professional associations could play may require a cursory study of the structure, curriculum and methodology of teaching Social Studies. According to Akinlaye Mansaray and Ajiboye (1996), the Social Studies’ curriculum is spiral, thematic and permits integration. It seeks to develop knowledge in all domains of the cognitive taxonomy and develops the learner’s attitudes, values and skills. It is amenable to the use of various instructional media, resources and flexible methods and strategies. All these defining characteristics may therefore buttress the fact that Social Studies may provide a convenient avenue for the teaching of any emerging societal issue and problem such as HIV/AIDS. Interestingly, the American Red Cross Curriculum and the Life Planning Education curriculum recommend the use of life-skill subjects as the carrier of the learning content of HIV/AIDS (*American Red Cross, 1998; ARFH, 2001*); and one of such subjects is Social Studies.

From the foregoing, it suggests that in Social Studies, an emerging social problem becomes an issue of intellectual discourse. This may be because the curriculum of the subject has been said to be flexible and amenable to the integration of new ideas, as the subject will definitely find an existing theme or topic into which the learning content of a new area or issue will be infused for direct classroom instruction. If HIV/AIDS is therefore a biomedical issue with social causes, it becomes a societal problem that should be discussed, if not as a direct theme or topic, but as a classroom example under the discussion of relevant topics such as health institutions, hygiene and sanitation, diseases and their causes, to mention but few.

By and large, if these assertions are true in respect of HIV/AIDS, then secondary school students who are in their adolescence who appear very vulnerable to contracting it as a fallout of their ignorance, restlessness and believe that they are indestructible and explorative nature (Ojedokun, 2014) should be taught about HIV/AIDS by the Social Studies teacher, especially because it appears that it is in Social Studies that the learners could learn about it better. This may also be because the climate of Social Studies seems friendlier as it provides avenues for learners to express themselves in a more meaningful way. In addition, the subject has a lot of teaching strategies in its 'quiver' to engage the teaching of any concept, no matter whether it is newly introduced or existing; and consequently enhancing students' knowledge of the subject-matter of discourse and development of desirable attitude towards the issue being discussed too.

However, while several studies have focused on the use of one strategy or the other to teaching the learning content of HIV/AIDS (Ojedokun, 2010a; Ojedokun, 2010_b), the interaction effects that the issues of gender and social economic background could have on secondary school students' knowledge and attitude to HIV/AIDS have not been empirically investigated to a dead end across cultures. In fact, a pilot study preceding this study has provided a separate result indicating that the two strategies (moral dilemma model of value clarification and peer-tutoring) engaged were individually better off than the conventional expository method of teaching.

Efforts were however not made to make a robust comparison of the two strategies to determine the main effect and order of effectiveness of the strategies in enhancing good knowledge of and desirable attitude to HIV/AIDS. It did not specifically report the moderating effects of students' gender and social economic background; whereas these are necessary to determine if these issues could provide a different line of performance by Junior Secondary School students if exposed to HIV/AIDS education through Social Studies. Providing inspiration for the above assertion, the Inter-Agency Gender Working Group (IGWG) of the United States' Agency for International Development Bureau for Global Health has recommended that gender must be integrated into Reproductive Health and HIV/AIDS programmes. The position of the IGWG (2003) is that differences in position and inequalities between women and men in programme planning, implementation and evaluation must be taken into account. It explains further that the relative power and roles of men and women "affect who does what in carrying out an activity, and who benefits"; and that inequalities and direct attention at reducing them will contribute to the effective development of programme, and to a large extent promote social equity/equality: because "experience has shown that sustainable changes are not realized through activities focused on either women or men alone" (IGWG, *ibid*). Besides, statistics establishing the fact that women are more vulnerable to HIV/AIDS than men (UNICEF, UNAIDS & WHO, 2003) are pointers to the fact that in designing programmes of activities in HIV/AIDS education in the classroom, differences in sex or status of being male or female should not be left untouched. This is one of the reasons why this study was considered essential. By implication, there may not be the need to separate the boys from the girls in the Social Studies classroom, especially when teaching about a health matter that affects both boys and girls, such as HIV/AIDS.

Similarly, the issue of Socio-Economic Status (SES) i.e. home background of students (youth) who are the target-audience of HIV/AIDS education is equally essential. This is because children come from various home backgrounds. There are variations in the level of education, occupation, wealth and income of their parents.

According to Kobiowu (1998), the variables of education, occupation, wealth and income are determinants of life and educational opportunities and academic success of learners. Kobiowu thus classifies the society into three: comprising people, who occupy the High, Middle, and Low strata of the social system. Each of these has its descriptive characteristics, by which their children could also be classified as having come from either a High, Middle or Low class homes. The classifications could also have significant influences on students' entry-behaviours and performance at school. Thus the pre-school information that those students have of HIV/AIDS, its meaning, mode of transmission, effects, prevention and cure is dependent to a large extent on the socio-economic background of parents. What informs this is that education, occupation, and income determine home assets, child-rearing pattern and drive for children's education and upbringing. It also goes a long way to make "children enter school with varying degrees of preparation for the school behaviour that leads to success" (or otherwise) (Slavin, 2000). According to Slavin, children's behaviour, attitude and value (towards education) vary, because there is a modest positive correlation between social class and achievement." In the context of this study, socio-economic status of parent is presumed to determine the degree of incidental learning (knowledge already acquired), and attitudinal dispositions that students hold towards HIV/AIDS. Also, since the focus of this study was to categorize the secondary school students on the basis of their family affluence, only two social classes (high and low) were labelled for the study. However, the extent to which this factor could influence learning of the subject-matter of HIV/AIDS among secondary school students in Ibadan a metro-cosmopolitan city with secondary schools with diverse students from varying socio-economic background require investigation.

Premised on all the explanations above, the objectives of this study were to

- i. examine the main effect of treatment (exposure to HIV/AIDS instructions in the Social Studies Classroom) on the secondary school students' knowledge of, and attitude to HIV/AIDS;

- ii. investigate the main effect of gender on secondary school students' knowledge of, and attitude to HIV/AIDS;
- iii. investigate the main effect of socio-economic background of secondary school students' on their knowledge of, and attitude to HIV/AIDS; and
- iv. determine the interaction effects of socio-economic background, gender and treatment on secondary school students' knowledge of, and attitude to HIV/AIDS.

Hypotheses

The following hypotheses were tested at 0.05 alpha level:

- H₀ 1 :** There is no significant main effect of exposure to HIV/AIDS instruction received in the Social Studies classroom on secondary school students'
- (a) knowledge of HIV/AIDS and
 - (b) attitude to HIV/AIDS.
- H₀ 2:** There is no significant main effect of socio-economic background on the Secondary school students'
- (a) knowledge of HIV/AIDS and
 - (b) attitude to HIV/AIDS.
- H₀ 3:** There is no significant main effect of gender on the secondary school students'
- (a) knowledge of HIV/AIDS and
 - (b) attitude to HIV/AIDS.
- H₀ 4:** There is no significant interaction effect of treatment and socio- economic background on secondary school students'
- (a) knowledge of HIV/AIDS and
 - (b) attitude to HIV/AIDS.
- H₀ 5:** There is no significant interaction effect of treatment and gender on secondary school students'
- (a) knowledge of HIV/AIDS and
 - (b) attitude to HIV/AIDS.

H₀ 6: There is no significant interaction effect of socio- economic background and gender on secondary school students' (a) knowledge of HIV/AIDS and (b) attitude to HIV/AIDS.

H₀ 7: There is no significant 3-way interaction effect of treatment, socio- economic background and gender on secondary school students' (a) knowledge of HIV/AIDS and (b) attitude to HIV/AIDS.

Method

The study employed the quasi-experimental design, with two experimental groups and one control. There were two treatment groups (students taught the learning content of HIV/AIDS using value clarification strategy, peer tutoring strategy, and the control group taught with the expository method of teaching). A 3x2x2 factorial matrix was employed in the study. i.e. Treatment at 3 levels gender at 2 levels, and socioeconomic background of students at 2 levels (high and low).

The independent variable: This comprised the mode of instruction (teaching methods) used in Social studies for the purpose of HIV/AIDS education. They were at 3 levels:

1. Value Clarification teaching method,
2. Peer-Tutoring methods, and
3. Control (without instruction at all)

The Dependent Variable: This comprised two measures obtained from secondary school students after Social Studies lesson on HIV/AIDS (i.e. knowledge of, and attitude to HIV/AIDS).

Moderating variables: These were

- (a) Socio-economic background of students at two levels: High and Low.
- (b) Gender: Male and Female.

The target population of this study were Class I male and female students of Junior Secondary School (JSS) in Ibadan Oyo State, Nigeria. The rationale behind their selection was that, the curriculum of JSS I provides a slot for the discussion of the theme Health Institution, presumed to be amenable to the integration of the learning content of HIV/AIDS. Also, because the JSS 1 students were primary school leavers who were not only just forming the youth identity, but were also at the outset of puberty, where all adolescent characteristics will start to manifest in sequence : as a result of their biological and physiological development. They are therefore better off if well prepared for the challenges attached to this stage of development. The subjects of the study were however JSS I students from 3 secondary schools purposively selected i. e. three intact classes, from three different schools. For the experimental group A, there were 147 students of JSS Class 1. The experimental group B comprised 111 students from of JSS Class 1. The control group also comprised 130 students of the Class 1.

Five Peer Tutors (1 boy and 4 girls) trained to teach the JSS 1 students were selected among JSS 2 class, from a school where the value clarification package was validated. They were selected on the basis of their performances in the post test of knowledge and attitude and volunteerism i.e. not all students who did well participated in the peer tutoring exercise, but those who did well and were also willing to participate in the teaching exercises. This was done with the assistance of their class teachers after due permission from principals of the schools.

A researcher self-designed sets of instruments (2 of them), were validated using the "Pearson r". The instruments addressed the level of HIV/AIDS knowledge that the learners have acquired following the experiment, and also tested attitude as well. They are

(a) Test of knowledge. This was a 30-item multiple choice test format requesting basic information on (1) arm of class and number of the testee in the class roll (2) name of the school and (3) gender. It thus requested the testee to choose which of the options A-D that best answers each of the questions raised, i. e one Stem and Four responses, with one Best Answer and three Distracters. Each correct response on the question

attracted 1 mark each. Hence the instrument was scored on a total of 30 marks. The test's $r = 0.74$

(b) Test of attitude. This was divided into two sections (A&B). Its Section A asked name of school, number of the student on the school roll, gender, parental education, occupation, home asset of parents, parents use of leisure hours and the language of communication in the testee's home. It also sought information on previous knowledge of HIV/AIDS and the medium from which such information was acquired. This was with a view to determining the socioeconomic background of each of the learners, by adding the scores provided against each of the demographic variables of education and occupation of parents, home asset of parent and language of communication at home and the previous knowledge of the students about HIV/AIDS. The overall total was expressed in percentage of the total score (69) to get a percent-correct score. Scores obtained based on the information provided by the respondents were calculated in percentage of the overall total score. Scores in the range of 70-100% put the respondents in the high background; while scores ranging between 0 and 69percent put the respondent in the low socio-economic background. Section B was a 25-item 4-point Likert attitude scale that tested the attitudinal dispositions of the students to HIV/AIDS. It sought to test the degree of agreement or disagreement of each of the testees to each of the statements made in reference to HIV/AIDS. Each level of agreement had an assigned mark i.e. Strongly Agree, Agree, Disagree, and Strongly Disagree assigned a score of 4, 3, 2, and 1 respectively. However, an inverse grading of 1,2,3,4 was assigned in respect of statements that were otherwise negatively stated to Strongly Agree, Agree, Disagree, and Strongly Disagree respectively. The total score of each individual testee was therefore determined by an addition of scores of his/her agreement with each of the statement items. The test's r was 0.83

Procedure for data collection

The research instruments which were administered in the form of pretest and post treatment (posttest) to the subjects of the study were distributed and supervised by the researcher and the cooperating school teachers who incidentally had taught the JSS students and supervised peer educators. The researcher was present with two Research Assistants in his company in all administrations. The researcher recruited and remunerated them by himself. All research instruments were administered once in a school, a lesson after the revision and a film watch. The posttest administrations were done at the last period (1.20 - 2.30pm), extending beyond the school period by 30-minutes, so that the periods of other school subjects were not affected as a result of the length of the period expended on the administration of the test. All testing procedures were completed in 70 minutes i.e. 45 minutes for the multiple-choice test and 25 minutes for the completion of the attitude measurement scale.

Data Analysis

The scripts of the three tests at both pretest and posttest were marked according to their scoring keys. The grand total scores obtained by each of the respondents in each of the three tests were used as data for the study. The scores obtained were classified on the gender and the socio-economic background dichotomies. Data obtained were processed, by computation, using the Analysis of Covariance (ANCOVA) statistics. All obtained results were tested at 0.05 alpha levels.

Results

The results of this study are presented as follows, hypothesis by hypothesis:

H₀ 1 (a) rejected: There was significant main effect of exposure to HIV/AIDS instruction received in the Social Studies classroom on secondary school students' knowledge of HIV/AIDS ($F=265.73$; $P < 0.05$).

- H₀ 1 (b) rejected:** There was significant main effect of exposure to HIV/AIDS instruction received in the Social Studies classroom on secondary school students' attitude to HIV/AIDS ($F= 119.61$; $P < .05$).
- H₀ 2 (a) rejected:** There was significant main effect of socio-economic background on secondary school students' knowledge of HIV/AIDS ($F= 5.72$; $P < 0.05$):
The MCA showed that participants in the high socio-economic background (SEB) had an adjusted posttest mean score ($x = 47.81$) higher than their counterparts in low SEB ($x= 45.57$) at the knowledge level.
- H₀ 2 (b) not rejected:** There was no significant main effect of socio-economic background on secondary school students' attitude to HIV/AIDS ($F= 3.791$; $P > 0.05$).
- H₀ 3 (a) not rejected:** There was no significant main effect of gender on secondary school students' knowledge of ($F= 1.656$; $P > 0.05$).
- H₀ 3 (b) not rejected:** There was no significant main effect of gender on secondary school students' attitude to ($F= 2.260$; $P > .05$) HIV/AIDS.
- H₀ 4 (a) not rejected:** There was no significant interaction effect of treatment and socio-economic background on secondary school students' knowledge of HIV/AIDS ($F= 0.32$; $P > 0.05$).
- H₀ 4 (b) not rejected:** There is no significant interaction effect of treatment and socio-economic background on secondary students' attitude to HIV/AIDS. ($F= 1.15$; $P > 0.05$).

H0 5 (a) not rejected: There was no significant interaction effect of treatment and gender on secondary school students' knowledge of (F= 0.629; P > 0.05).

H0 5 (b) not rejected: There was no significant interaction effect of treatment and gender on secondary school students' attitude to HIV/AIDS (F= 1.86; P > 0.05).

H0 6(a) not rejected: There was no significant interaction effect of socio- economic background and gender on secondary school students' knowledge of HIV/AIDS (F = 1.47; P > 0.05).

H₀ 6(b) not rejected: There was no significant interaction effect of socio- economic background and gender on secondary school students' attitude to HIV/AIDS (F = 0.19; P > 0.05).

H₀ 7(a) not rejected: There was no significant 3-way interaction effect of treatment, socio-economic background and gender on secondary school students' knowledge of HIV/AIDS (F= 0.74; P> 0.05).

H₀ 7(b) not rejected: There was no significant 3-way interaction effect of treatment, socio-economic background and gender on secondary school students' attitude to HIV/AIDS (F= 0.02; P> 0.05).

Discussion

It has been indicated according to the findings of this study that teaching the HIV/AIDS learning content through Social Studies, especially because Social Studies is an integrated subject which allows the use of thematic approach to content selection and spiral approach to content organization (Ivowi, 2000), and using the value-clarification and peer-tutoring (life-skill) strategies will assist secondary school students knowledge of HIV/AIDS. It will as well,

help them to develop the right attitude to the pandemic. This submission is informed by the fact that it has been empirically shown that there is a significant main effect of treatment on secondary school students' knowledge of, and attitude to, HIV/AIDS. This may then imply that the cognitive (knowledge) and the affective (attitude) aspects of learning have been positively affected. Perhaps it may be adduced that attitudes are products of knowledge acquisition, as demonstrated by the respondents of this study. This finding may then appear to have confirmed an opinion expressed by Klausmeier and Ripple as far back as (1971). According to Klausmeier and Ripple, attitude has three interrelated components, cognitive (information), affective (feelings) and action tendencies (behavioural dispositions). Therefore, a change in attitude (which could result in behavioural change) may be attributed to an acquisition of knowledge, probably because behavioural change consists of both knowledge and emotional elements (*Olagunju and Busari & Ogunbiyi, 2004*).

The study has also found out that there was no significant main effect of gender on secondary school students' knowledge and attitude to HIV/AIDS. However there was significant main effect of SEB on knowledge and attitude to HIV/AIDS. The initial assumption was that gender (the status of being male or female) might have a place in HIV/AIDS education for knowledge and positive attitudinal dispositions to HIV/AIDS. However, the contrary has been indicated. The impression that the researcher holds is that since the schools selected for the study were mixed-schools (of both boys and girls), and common curricula provisions have been made for them in terms of learning content, instructional objectives, and materials, then a difference may be least expected. But there were differences in their adjusted posttest mean score. The male students rated higher at the level of knowledge than the female; and the female students higher at the level of attitude than the boys.

At any rate, the result obtained in this study (in respect of gender) might likely be a true picture of the place of gender when teaching about HIV/AIDS in the Social Studies classroom. According to the Inter-agency Gender Working Group (IGWG) of the United States' Agency for Internal Development Bureau for Global Health

(2003), "sustainable changes are not realized through activities focused on either men or women alone". Perhaps a significant difference might be, if the students have been separately taught in "male only" or "female only" classrooms; and the opinions of Willis and Daisley (1992) may be relevant. According to Willis and Daisley,

In single sex groups ... (youth) are usually quick to share deeply held values and work with each other to prioritise their values. This gives sure personal foundation for work on goal setting or image building and raising profiles later (P66)

The Willis-Daisley opinion expressed here may therefore not be true. This study has found out that, given an equal chance to learn, providing similar experiences, female and male could learn together and achieve together.

With regard to the socio-economic background of students, measured in the context of this study in terms of parental education, occupation, home assets, home language and use of leisure (by parents), it was assumed that children from high socio-economic background would have more access to information about HIV/AIDS than those from the low background. This was assumed to be capable of making for differences in knowledge of and attitude to HIV/AIDS. But the reverse was the case. Once these two categories of students were almost achieving at equal rates in knowledge and attitudinal dispositions to HIV/AIDS, then the opinion of Kobiowu (1998) that the variables of education, occupation, wealth and income are determinants of life and educational opportunities, and academic success of learners may not be applicable. This also negates the opinion of Slavin (2000) that suggests a modest positive correlation between social class and achievement. Hence, socio-economic background may not likely be the determinant of the degree of incidental learning that learners bring into the HIV/AIDS education classroom. In fact this may portray other agencies of socialization other than the school (e.g. media), as institutions that are capable of bridging the gap between the poor and rich in the school.

Moreover, in respect of the two-way interaction effects of (1) treatment and gender (2) treatment and socio-economic background and (3) gender and socio-economic background; and the three-way interaction effects of (1) treatment (2) gender and (3) socio-economic background, it may be summarily explained that once gender and socio-economic background did not create main effects on knowledge of, and attitude to HIV/AIDS among secondary school students, less emphasis should be placed on them. This position is informed by the fact that the interactions of all these arrangement have not yielded any effect; and these may not be far from the opinions of Willis and Daisley (1992) (on gender), Kobiowu (1998) and Slavin (2000) (social class and achievement), expressed above. A reason that may be advanced for this is that the subjects of the study were intact classes of students of co-educational institutions. Besides, the package designed for them, did not have a gender-biased or socio-economic undertone. The students engaged in the study were assumed to have had equal level of understanding of HIV/AIDS, and have entered the class of Social Studies that carried the subject matter, to reinforce what they might have known or to learn what they are equally unaware of.

Conclusion

The thrust of this study was to find out whether an integration of HIV/AIDS as an emergent concept, and taught with value-clarification and peer tutoring would assist secondary school students' knowledge of HIV/AIDS, and also develop positive attitude towards HIV/AIDS in them. From the findings, it can be deduced that the value-clarification method is better in teaching about HIV/AIDS than the peer tutoring, which is equally good; although the application of both are seen to have resulted in significant main effect on secondary school students' knowledge of, and attitude to HIV/AIDS. Factors of gender and socio-economic background and their dual interactions, and also with treatment may also not be relevant in teaching about HIV/AIDS (in Social Studies). It is however assumed that when other school subjects are utilized there may be a different result. It is also further assumed that if students are probably separated for teaching on the male-female and low-high

socio-economic background dichotomies there could be interaction effect. However, such actions may be considered to be very unsustainable (*Willis & Daisley, 1992*).

Recommendations

Based on the findings of this study, it is hereby recommended that Social Studies should be employed as the carrier-subject of the HIV/AIDS' learning content, because of its flexibility to accommodate any emerging social issue, especially because it is a custodian of learner-centered teaching strategies that are capable of assisting students' acquisition of knowledge and development of desirable attitude to HIV/AIDS than the conventional expository method, which has been criticized as learner-centered. Moreover, it is suggested that that the study be replicated with a view to confirming or refuting its findings. A follow up study to the assess behavioural changes in the form of test of HIV/AIDS-risk-related practices among the secondary school students used for this study may also be reasonable. A longitudinal study that will involve a larger audience of secondary school students will also be good, in determining the efficacy of the life skill strategies used in this study. An adaptation of the procedures of this study in other school subjects may also be valuable to the expansion of the frontier of knowledge on HIV/AIDS intervention in the schools. An adoption of the procedures used in this study in single sex schools will also be a good initiative at determining the influence of gender on secondary school students' knowledge and attitude to HIV/AIDS.

References

- Avert. (2016). Origin of HIV and AIDS. Retrieved Friday 28 October 2016 from <http://www.avert.org/professionals/history-hiv-aids/origin>
- Adamu, H.Y. (2003). *AIDS awareness*, Ibadan: Spectrum Books Limited. PX1.
- Ajaegbu, O.O. (2015). Premarital Sex, HIV and Use of Condom among Youths in Nigeria. *Arts and Social Sciences Journal*, 6 (5). p. 1-4.
- Akinlaye, F. A. Mansaray, A. & Ajiboye, A. (1996). *Fundamentals of teaching Social Studies, Lagos: Purmark Nigeria Ltd.*
- al-Owaish R1, Moussa, M.A., Anwar, S., al-Shoumer, H., Sharma P. (1999). Knowledge, attitudes, beliefs and practices about HIV/AIDS in Kuwait. *AIDS Educ Prev*. 1999 Apr; 11 (2):163-73.
- American Red Cross. (1995). *Act Smart: HIV/AIDS education Curriculum for three age groups*. USA: Stay Well.
- Avert. (2016). Origin of HIV and AIDS. Retrieved Friday 28 October 2016 from <http://www.avert.org/professionals/history-hiv-aids/origin>
- Bailes, E. et al (2003) 'Hybrid Origin of SIV in Chimpanzees' *Science* 300(5626):1713
- Barr, R.D., Barth, J.L. & Shermis, S.S. (1977). Defining the Social Studies in the Middle School. *Social Studies Education*, Sept .1991.
- Bregman, J. & Stallmeister, S. (2004). *Secondary education in Africa*. Proposal on a regional study of the African Region of World Bank. Retrieved July 25, 2004, from www.worldbank.org
- British Broadcasting Corporation. (2007). "Key HIV strain 'came from Haiti'". *BBC News*. 2007-10-30. Retrieved 28 October 2016 from <http://news.bbc.co.uk/2/hi/health/7068574.stm>
- Center for Development and Population Activities. (2016). *HIV/AIDS*. (Washington D.C.) Sept. 21.
- DeVita, V.Jr., et al. (1997). Eds. *AIDS: Etiology, diagnosis, treatment and prevention*, 4th Ed. 1997.

- Gao, F. *et al.* (1999). 'Origin of HIV-1 in the chimpanzee Pan troglodytes troglodytes' *Nature* 397(6718):436-441.
- Interagency Gender Working Group. (2003). *A Manual for Integrating Gender Into Reproductive Health and HIV Programmes from Commitment to Action*. Prepared by Caro, D. Schueller, J. and Ramsey, M. U.S.A.: IGWG. P. 52.
- Klausmeier, H. J. & Ripple, R. E. (1971). *Learning and Human Abilities: Educational Psychology, Third Edition*, New York: Harper and Row.
- Kobiowu, S.V. (1998). *Fundamental Issues in Social Foundations and Sociology of Education*, Ibadan: Cardinal Crest Ltd. P7 – 11.
- Olagunju, M. Busari, T. & Ogunbiyi. O. 2004. *Differential Impacts of Peer Educators and Role-playing Strategies on Students' Knowledge and Practices on HIV/AIDS: Implications for Science Curriculum Development*. Paper presented at 6th ISSBI International African Regional Workshop Held at Yaounde, Cameroon, July 25-31.
- UNAIDS (2014). 'The Gap Report' Retrieved 11 November 2016 from <http://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/nigeria>
- Nigeria Federal Ministry of Health. (2013) 'National HIV & AIDS and Reproductive Health Survey 2012, (NARHS Plus II)'
- Nigeria Federal Ministry of Health. (2013) 'National HIV & AIDS and Reproductive Health Survey 2012, (NARHS Plus II)'
- Ojedokun, O. E. (2010a). Relative efficacy of moral dilemma of value clarification on secondary school students' knowledge and attitude to HIV/AIDS. *The African Symposium*. 10 (1). P83.
- Ojedokun, O. E. (2010_b). Relative efficacy of peer-tutoring on secondary school students' knowledge and attitude to HIV/AIDS. *African Journal of Education and Information Management*. 11 (1 & 2).
- Ojedokun, O. E. (2014). Vulnerability of secondary school students to HIV/AIDS: Implication for Social Studies Instruction. *Mediterranean Journal of Social Sciences*. 5 (1). P333.

- Sharp, P. M. & Hahn, B. H. (2011) 'Origins of HIV and the AIDS pandemic' Cold Spring Harbour *Perspectives in Medicine* 1(1):a006841
- Slavin, R. E. (2000). *Educational Psychology, Theory and Practice*. Boston; Ally and Bacon p. 243.
- UNAIDS. (2016). People living with HIV globally <http://www.unaids.org/en/regionscountries/countries/nigeria>
- United Nations. (1998). Force for Change: World AIDS Campaign with young people in www.unaids.org/highband/events/wad/1998/force.html. April 22. Accessed March 11, 1999 by Population Reports.
- UNESCO. (2003). *The State of Education in Nigeria*, Abuja: UNESCO
- UNICEF (2008). Life skill. Retrieved February 28, 2008 from http://www.unicef.org/lifeskills/index_8017.html
- U.S. Department of Health & Human Services (2016). The Global HIV/AIDS Epidemic. Retrieved Tuesday November 1st 2016 from [www. AIDS.gov](http://www.AIDS.gov)
- Willis, W & Dailey, J. (1992). *Developing women through training*, London: The McGraw, Hill Book Company. P 66-67.
- Zhu, T., Korber, B. T, Nahmias, A. J., Hooper, E., Sharp, P.M. & Ho, D. D. (1998). An African HIV-1 sequence from 1959 and implications for the origin of the epidemic. *Nature*. 391, 594-597