

## Research Article

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## Sources of Awareness of HIV/AIDS Prevalence among Secondary School Students in Southern Cross River State, Nigeria

Rosemary I. Eneji<sup>1</sup>
Okon Offiong Patrick<sup>1</sup>
Veronica A. Undelikwo<sup>1</sup>
Esther P. Archibong<sup>2</sup>
Stephen Adi Odey<sup>1</sup>
Eyang Brian Obue<sup>2</sup>
Tangban Egbe Ebagu<sup>2</sup>
R. P. Abia<sup>1</sup>

<sup>1</sup>Department of Sociology, University of Calabar, Calabar, Cross River State, Nigeria <sup>2</sup>Department of Social Work, University of Calabar, Calabar, Cross River State, Nigeria

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### Abstract

The provision of information on HIV/AIDS in Nigeria's secondary schools is often considered inadequate to prevent or limit the scourge among teenagers. In this study, we examined the sources of information for secondary school students on prevalence of the disease in the southern senatorial district of Cross River State, Nigeria. The sources examined included parents, teachers, the social media, health care professionals and the mass media. Eight hundred students in five randomly selected secondary schools were sampled for questionnaire administration, of which 789 were retrieved for analysis. Majority of the students had some knowledge of the causes, mode of transmission, and preventive measures of HIV/AIDS, but they lacked adequate access to the various sources of more specific information available on the subject matter. Only 187 respondents (23.7%) agreed that their parents taught them about sex education in connection with HIV/AIDS. Our data showed low parental knowledge of the spread of the disease, hence the inadequate education of their wards. About 78% of the respondents agreed that the social media provided more information on HIV/AIDS. However, nearly all the respondents (about 92%) did not use social media sites because they had no access to browsing phones or computers. Many of the respondents heard about HIV/AIDS from health counselors and community health workers in their areas of residence. The overall results indicated that prevalence of HIV/AIDS in the study area could be moderated by knowledge of the disease facilitated by adequate information and increased awareness. There is need to intensify the awareness through the mass media and other outlets considered in this study, starting from the home.

Key words: HIV, students, secondary school, Nigeria, information

## 1. Introduction

Secondary school pupils in Nigeria's Cross River State are mostly adolescents, which is a developmental period marked by discovery and experimentation, characterized by myriads of physical and emotional changes. At this stage, the pupils have little sense of focus and are often confused. Despite being advised to be careful, easy access to phonographic and sexually explicit images from electronic sources often induce them more to experimentation. Cultural, religious as well as moral barriers do deny these young people access to information about their bodies that can ensure their safety and the associated health risks (Archibong et al., 2020; UNAIDS, 2008). In Nigeria, improvements in treatment have reduced the number of new cases of the disease among very young children and enhanced the number and ratio of infected children surviving up to or beyond adolescence; nevertheless, new cases among adolescents and young adults have continued to rise (D'Angelo et al., 2006).

According to UNAIDS (2017), most of the HIV-infected people are in poor developing countries, of which about 25 million are in sub - saharan Africa; of this number, 19.4 million are in East and Southern Africa. Based on data from NACA (2015), Nigeria has the second largest HIV epidemic globally. Although its prevalence among adult is much smaller (2.9%) than other sub-saharan African countries like South Africa (18.9%) and Zambia (12.4%), the larger population of Nigeria suggests that 3.2 million people had HIV in 2016 (UNAIDS, 2017). HIV prevalence is highest (55%) in Nigeria's south-south states and lowest (1.8%) in the South East. The prevalence rate in rural areas (4%) was slightly higher than in urban areas (3%) (NACA, 2015). Data from the Nigerian National Population Commission (2013) suggest that 4.2% of young people (aged 15-24 years) lived with HIV and women were more infected and much younger in life than men of the same age bracket. In some states, the epidemic is more concentrated and driven by high risk behaviours, while in others, it is driven by multiple sexual partnerships in the general population. In Cross River State, with a population of 4 million, about 56,000 persons live with HIV.

Health programmes in Cross River state are generally more favourable to adults and young children than adolescents. Thus, secondary school pupils are left out of care services for infectious disease control, especially sexually transmitted diseases like HIV/AIDS (ICPD, 2008). The provision of information on HIV/AIDS in Secondary Schools is not adequate (ICPD, 2008). We suggest that lack of appropriate resources for creating HIV/AIDS awareness in schools are responsible for the inadequacy. Secondary school students need to be given more awareness about HIV/AIDS to moderate their behavior and reduce health risks. Unfortunately, the desired awareness, especially the specific knowledge of the disease is still low and unreliable (Oyo-Ita et al., 2005; Wodi, 2011).

Sources of information about HIV/AIDS among pupils were commonly from television, electronic media, schools or parents (Fassler et al., 1990; Croft and Sorrentino, 1991). Many health information messages are poorly disseminated to adolescents and some dubious information may have negative financial, social, or personal consequences. A comprehensive knowledge of AIDS is necessary to demystify beliefs, alter risky behavior and create a more humane and compassionate response to individuals with the disease. The adolescent, which is the focus of this study, constitute the bulk of secondary school students, and have largely been overlooked with regards to information on HIV/AIDS in Nigeria. Therefore, there is need to focus more on them using an integrated approach to their health, education and social needs. Unfortunately, the mode of transmission and sources of information on the control of HIV/AIDS are not robust enough to educate the young population in Cross River state. In the southern Senatorial District of the state with 7 local government areas, the rate of infections among adolescents, mostly in secondary schools, has increased considerably. As a result, the State Agency for the Control of AID (SACA), FHI, 360, Save the Children Foundation and other donor agencies have intensified effort to reduce the prevalence through programmes like sexual network tracing, orphan and vulnerable children caregiver services, HIV/AIDS awareness and sensitization programmes, free HIV/AIDS testing services, free distribution of condoms and Free ART services. Despite all these intervention services, the virus is still on the

increase among adolescents.

This study examined the various sources of information available to secondary school students and how these influence their attitude to the prevalence of HIV/AIDS.in the Southern Senatorial district of Cross River State. Findings from here may provide useful guide to policy makers to formulate new policies or review old ones to improve the students' knowledge and awareness of HIV/AIDS.

## Methodology

## 2.1 Study area

The study was conducted in the Southern senatorial district of Cross River State, Nigeria. The district comprises seven (7) Local Government Areas (Akamkpa, Akpabuyo, Biase, Bakassi, Calabar South and Odukpani Local Government Areas) out of the eighteen in Cross River State.

## 2.2 Sampling

Eight hundred secondary school students from five randomly selected Local Government areas were sampled for study. The sampling was based on a multi stage technique. First, a complete list of all public secondary schools across the seven local government areas was obtained from the Ministry of Education and five local government areas were randomly selected. This comprised Akamkpa, Akpabuyo, Biase, Calabar South and Odukpani. Thereafter, ten secondary schools were purposively sampled across the five local government areas. Subsequently, a proportional random sampling of students was done from the delineated classes (SSI - SS3) as shown in Table 1.

**Table 1:** Sample distribution of selected Secondary Schools in southern senatorial districts of Cross River State, Nigeria.

Local government area	Name of school	Population	Sample
Calabar south	Government Secondary School (GSS), Atu	421	152
Calabar south	GSS, Anantigha	195	98
A11 I.C.A	GSS, Akamkpa	269	102
Akamkpa LGA	GSS, Old Netim	110	60
011 :164	Community Secondary School (CSS), Okong	37	10
Odukpani LGA	GSS, Odukpani	163	8o
AL L. L.C.A	CSS, Ikut Akwa, Akpabuyo	252	83
Akpabuyo LGA	School Ikot /Idem Odo	104	50
D.	Biase Secondary School, Ehom	194	90
Biase	CSS, Adim	176	75
Total		1921	800

Primary data were collected with the aid of a standard questionnaire, supplemented with interview and focus group discussion. The questionnaire contained three sections - A, B and C. Section A comprised of demographic variable of the respondents. Section B contained the opinion section, aimed to determine the level of respondents' adherence to the HIV/AIDS prevalence. Section C allowed respondents to freely tick any item that suits their opinion on HIV/AIDS prevalence. A pilot test was carried out using 20 respondents from the study population which were not part of the selected clusters for the purpose of establishing the reliability of the questionnaire. Cronbach alpha method was used to confirm the reliability (George and Mallery, 2003).

#### Data analysis 2.3

Data collected from this study were analyzed using the Statistical Package for Social Sciences (SPSS) Version 20 and summarized into frequency counts, percentages, and mean plus the associated standard deviation.

## **Results and Discussion**

Table 2 shows the socio-demo graphic characteristics of respondents, 497 (62.9%) of whom were females and 292 (37%) males. Thus, female respondents dominated the study population. Six hundred and thirty-nine (81%) of the students were between 12-15 years, 120 respondents (15.2%) were 16-lg years and 30 (3.8%) were more than 20 years old. This showed that adolescents between 12 and 16 years old dominated the study population. The distribution of respondents by class of study showed that 381 (48.3%) were in SSI, 308 (38.8%) were in SS 2 and 100 (12.9%) were in SS3 Class. This showed that SSI student were the most studied during the research. The distribution of the studied population by school is also shown in Table 2. Government Secondary School, Atu had the highest population studied.

Based on religious affiliation, 699 (88.6%) were Christians, 57 (7.2%) were Muslims, and 33 (4.2%) were in other religions. Christians are the largest religious sect in Cross River state. The distribution of respondents by parents' educational status showed that only 54 (6.9%) of them were not educated, 309 (39.2%) were SSCE holders, 246 (31.2%) were NCE holders, 138 (17.5%) were B.Sc holders and 191 (4.2 %) had other levels of education. Thus, the parents were generally literate enough to guide their children on the subject matter.

**Table 2:** Demographic indices of the respondents.

Variable	Frequency	Ratio (%)
Sex		
Male	292	37.0
Female	497	63.0
Total	789	100
Age (Years)		
12-15	639	81.0
16-19	120	15.2
≥20	30	3.8
Total	789	100
Class		
SS <sub>1</sub>	381	48.3
SS <sub>2</sub>	308	38.8
SS <sub>3</sub>	100	12.9
Total	789	100
School		
Government Secondary School, Atu	231	29.3
Government Secondary School, Anantigha	90	11.4
Government Secondary School, Akamkpa	138	17.5
Government Secondary School, Old Netim	75	9.5
Okoyong Community Secondary School	6	0.8
Government Secondary School, Odukpani	60	7.6
Community Secondary School, Ikot Ewa	45	5.7
Government Secondary School, Ikot Edem Odo	27	3.4
Baise Secondary School, Ehom	42	5.3
Community Secondary School, Adim	75	9.5
Total	789	100

Variable	Frequency	Ratio (%)
Religious affiliation		
Christianity	699	88.6
Muslim	57	7.2
Others	33	4.2
Total	789	100
Parents' education		
Not educated	54	6.9
SSCE	309	39.2
NCE	246	31.2
BSc	138	17.5
Others	42	4.2
Total	789	100

It is generally considered that sexual education in relation to HIV prevention positively affects the sexual behaviour of students; for instance, it influenced the delay in initiation of sexual activities and increased the usage of condoms (Abdulraheem & Fawole, 2009). Previous studies in Nigeria (Oyo-Ita et al., 2005; Bamise et al., 2011) have shown that general awareness of HIV/AIDS may be high but the specific knowledge of the disease was still poor.

Table 3 shows result on how parental information and knowledge influence students' awareness of the prevalence of HIV/AIDS. Only 187 respondents (23.7%) agreed that their parents taught them about sex education while the majority, 602 students (76.3%) disagreed. Two hundred and eighty-eight of the students (36.5%) understood that domestic sex education could prevent them from contacting HIV/AIDS, while 501 (63.5%) did not agree. As to whether parental level of education influenced their knowledge of HIV/AIDS, 596 of them (75.5%) answered Yes while 193 (24.5%) answered No. Only137 students (17.4%) agreed that their parents ever taught them about mode of transmission of HIV/AIDS, while 652 (82.6%) did not.

**Table 3:** Sources of information in regards to parents.

Item	Yes	No
Do your parents teach you about sex education?	187(23.7)	602(76.3)
Does domestic sex education prevent children from contacting HIV/AIDS?	288(36.5)	501(63.5)
Parental level of education influence children's knowledge about HIV/AIDS	596(75.5)	193(24.5)
Have your parent(s) ever taught you about mode of transmission of HIV/AIDS?	137(17.4)	652(82.6)
Do you value your parent's instruction about contraceptive use more than any other source of information?	228(28.9)	561(71.1)
If your parent(s) had thought you about HIV/ AIDS prevention, should you have known more about HIV/AIDS?	628(79.6)	161(20.4)
Your parents don't know much about HIV/AIDS?	647(82.0)	142(18)
Through your parents' knowledge about HIV/AIDS, do you have a better knowledge?	199(25.2)	590(74.8)

In any case, only about 29% of the students valued their parent's instruction about contraception use more than any other source of information;561 (about 71%) did not. As to whether if their parents had taught them about prevention, they should have known more about HIV/AIDS, majority of the students (79.6%) agreed. However, majority (82%) of them agreed that their parents knew little about the disease. As a result, only about 25% of the students considered that they would have been more knowledgeable had their parents' cautioned them about the disease.

The role of parents in the prevention of HIV/AIDS should naturally be strong (Uche and Osaghae, 1996; Odey, 2004; Briggs, 2001). Parents are the first teachers of their children, right from homes, where values, traditions and morals in the community are learnt. The influence of parenting

on the behaviours of the youths, including risk-taking ones, has been well studied (WHO, 2007). It is generally expected that parents should monitor their children's activities and guide them with useful information and services. The role of parents should include diagnosis and assessment of a child's potential and orientation, as well as counselling on the dangers of sexually transmitted diseases. The overall results showed low parental knowledge of the spread of HIV/AIDS, hence the inadequate sex education from the home source for secondary school students in the study area. Some parents even argued that discussing sex with children only leaves them curious, with a desire to experiment (Ugoji and Agokei, 2012). According to Kabiru and Orpinas (2010), sex education programmes would benefit adolescents and alert them to factors that predispose them to HIV/AIDS.

A previous study in Bangladesh (Kirby et al., 2007) showed that students gained very good knowledge of HIV/AIDS from textbooks and teachers. Table 4 shows the responses of the students to questions relating to sources of information from their teachers. About 500 students (63.5%) agreed that their teachers taught them about HIV/AIDS while 288 of them (36.5%) disagreed. About 85% of the students agreed that their teachers taught about safe sex practices, while 14.17% disagreed. Also, about 67% of the students agreed that their teachers taught about the use of contraception compared with 32.9% that did not. Majority (73%) of them agreed that the schools permitted open talks about HIVAIDS. According to Boscarino and DiClemente (2006) students' knowledge on prevention of transmission was seldom applied to their sexual practice, as most of the boys used condom irregularly, while others saw no need to use condoms at all.

**Table 4:** Sources of information from teachers.

Question	Yes	No
Do your teachers teach you about HIV/ AIDS?	501(63,5)	288(36.5)
Do your teachers teach about safe sex practices?	673(85.3)	116(14.17)
Do your teachers teach about the use of contraception?	529(67.1)	260(3)
Does your school permit open talks about HIVAIDS?	573(72.6)	216(27.4)

Among the subjects that teach about HIV/AIDS, about 49% of students identified Biology; 41.4%, Physical and Health Education; 19%, Food and Nutrition and 8.4% choose none of these. Thus, Biology and Physical and Health Education provided the most information on HIV/AIDS and its mode of prevention. The students reported use of condom as the most taught contraceptive method, 4.9% reported pills, 1.9% reported injectable, 3.4% reported emergency contraception, 1.1% reported use of intrauterine devices, 3.0% reported abstinence, and 3.7% reported none of these. Thus, condoms are the most taught method of contraception. About 78% of the students learnt about the disease during seminars, 16.5% from Biology teachers, 2.3% from friends and 1.1% from their school principal. This shows that HIV/AIDS in public schools are a common topic of discussion during seminars.

Table 5 shows the sources of information on HIV/AIDS for students from the social media. The Facebook social was source of information against contacting HIV/ADS for 72% of the students, WhatsApp was the source for 38.5% and Instagram for 87.7%. About 78% of the respondents agreed that the social media provided more information on HIV/AIDS. However, nearly all the respondents (about 92%) did not use social media sites because they had no access to a browsing phone. About 67% of the students considered that the social media rather increased the spread of HIV/AIDS among adolescents. Overall, the results showed a low level of information from social media because most of the students neither had phones nor frequently used the social media sites identified. However, the social media platforms were used increasingly for HIV prevention and treatment efforts elsewhere (Adeyi et al., 2006; Deirdre, 2010). These media also provided users the chance to generate, share, and receive information that transcends geographic borders, and under complete anonymity (Ferguson, 2009; Isibor and Ajuwon, 2004). The social media do offer a neutral platform for engagement with inperson treatment and prevention schedules for people living with HIV/AIDS (Kaplan, et al., 2010;

Matt, 2010). Their widespread use represents an important avenue for communication about HIV (Melkote and Steeves, 2001). For effective communication on these media, the content of messages should not exceed the recipients' capacity to accept and understand, implying that messages should vary according to the audience (Isibor and Ajuwon, 2004).

**Table 5:** Sources of information from social media.

Item	Yes/true	"No/false
Does Facebook social help you from contacting HIV/ ADS?	569(72.1)	220(27.9)
I learnt about HIV/AIDS from WhatsApp.	304(38,5)	485(61.5)
I learn about HIV AIDS on Instagram.	97(12.3)	692(87.7)
I learnt about HIV/AIDS through Twitter.	438(55.5)	351(44.5)
Through social media sites, we have more information on HIV/AIDS.	614(77.8)	175(22.2)
I don't use social media sites because I don't have a browsing phone to access HIV/ AIDS information.	723(91.6)	66(8.4) -
Social media has rather increased the spread of HIV/AIDS among adolescents.	527(66.8)	262(33.2)

On the sources of information from health care professionals, about 36% of the respondents relied on family doctors but most (about 64%) did not (Table 6). Also, 59.3% received information from health talks and seminars compared with 50.7% who did not. Sixty-nine percent of the students derived information from HIV/AIDS counselors compared with 30.8% who did not. Most of the students (86.2%) received awareness on HIV/AIDS prevention from Community health workers while 13.8% did not. Nurses in health centers were the source of information for 371 students (47%) and not for 418 students. These result showed that most of the respondent heard about HIV/AIDS from a health counselor and community health workers in their area of residence. Considering the insufficiency of trained health professionals to deliver anti-retroviral treatment, the World Health Organization endorsed the involvement of lower cadres of health personnel in HIV care delivery (Rich et al., 2012). However, their work is neither properly understood nor documented to allow for a harmonized approach to their utilization, remuneration and retention (Gusdal at al., 2011). Although some view them as an essential component of the health care system, others are more critical of their role (Wouters et al., 2009).

Moher et al. (2010) noted that efforts to scale up HIV treatment and care in sub-Saharan Africa were relatively successful, but they also exposed pre-existing weaknesses in health systems, especially the lack of health workers to provide ART (Pope et al., 2006). Sub-Saharan Africa has just 3% of the global health workforce (Silverman, 2001). Community health workers (CHWs) are thus frequently used in many settings, including to support the work of better qualified health workers or to address specific low-level responsibilities (Eneji et al. 2020). In some situations, CHWs could be a cost-effective approach to rendering certain case management services (Grimwood et al., 2012).

**Table 6:** Sources of information from health care professionals.

Item	Yes/true	No/false
I heard about HIV/ AIDS from our family doctor.	287(36.4)	502(63.8)
I heard about HIV/ AIDS from health talks and seminars?	468(59.3)	321(40.7)
I heard about HIV/AIDS from HIV/AIDS counselors	546(69.2)	243(30.8)
Community health worker in my village educated me about HIV/AIDS prevention.	680(86.2)	109(13.8)
I heard about HIV/AIDS transmission from a nurse in my community's health centre	371(747.0)	418(53)

Table 7 shows the response to the source of information on HIV/AIDS prevalence from the mass

media. More than half of the respondents agreed that newspapers were the more reliable source of information about HIV/AIDS, 33.5% strongly agreed, 5.3% disagreed and 4.9% strongly disagreed. Also, about 70% of the respondents agreed that they heard about HIV/AIDS from television programme, 19.5% strongly agreed, 6.8% disagreed while 3.8% strongly disagreed. Four hundred and nine of them agreed that they obtained information on transmission through radio programmes, 257 strongly agreed, 70 disagreed and 47 strongly disagreed. The mass media through radio, print and TV do communicate with large numbers of people within the population (Abia et al., 2012). In rural areas, the ownership of radios is common; even in farming populations, pocket radios are often carried along for obtaining information, news and entertainment. The print media convey information on prevailing health and disease conditions. The use of mass media plus face-to-face intervention reduced the risk of HIV infection and number of partners, and enhanced use of condoms (Lupton, 1994). The awareness of AIDS and use of condoms were also increased among the sexually active population (McCombie et al., 2002; Agha, 2003). A mass media campaign in Kenya successfully increased HIV testing of people aged 15 to 39 years (Marum et al., 2008).

On the scale to determine whether posters on HIV/AIDS reduce its prevalence, 63.3% of the students agreed, 15.2% strongly agreed, 10.0% disagreed while 9.5% strongly disagreed. Majority (64.3%) of the students agreed that handbills from HIV sensitization programmes could reduce its prevalence. The majority (73.4%) also agreed that the most valuable source of information on HIV/AIDS were the mass media. By implication, the mass media are a major information source for secondary school students in the study area. Kalada et al. (2012) noted that the mainstream media, especially broadcasters, did mainstream HIV issues across a number of programmes to ensure the message permeated a huge segment of society.

**Table 7:** Sources of information from mass media.

Question	A	SA	D	SD
Newspapers information about HIV/AIDS is more reliable.	444(56.3)	264(33.5)	42(5.3)	39(4.9)
I heard about HIV/AIDS from television programmes.	551(69.8)	154(19.5)	54(6.8)	30(3.8)
I heard about HIV/AIDS transmission from radio	409(51.8)	257(32.6)	70(8.9)	47(6.o)
programmes,	409(51.8)	25/(32.0)	70(8.9)	4/(0.0)
Posters about HIV/AIDS will reduce its prevalence	515(63.3)	120(15.2)	79(10.0)	75(9.5)
Hand bills from HIV/AIDS sensitization programmes reduce	507(64.3)	137(17.4)	81(10.3)	64(8.1)
its prevalence	507(04.3)	13/(17.4)	61(10.3)	04(6.1)
The mass media generally is the most valuable source of	579(73.4)	87(11.0)	57(7.2)	66(8.3)
information about HIV/AIDS	579(73.4)	6/(11.0)	57(7.2)	00(0.3)

Agree (A); Strongly Agree (SA); Disagree (D); Strongly Disagree (SD).

About 77% of the students agreed that HIV/AIDS was increasing daily due to low level of awareness and 81% of them had no knowledge about HIV/AIDS and its mode of transmission (Table 8); 80% of the students agreed that their knowledge of HIV/AIDS could have helped them determine it prevalence. Most (75.2%) of them considered that adherence to HIV/AIDS treatment services could reduce its spread among secondary school students. For most (73%) of the respondents, social support from friends, health workers, teachers, parents and the media could reduce the spread of HIV/AIDS. These results imply that prevalence of HIV/AIDS in the study area could be due to limited knowledge of the virus caused by lack of information.

**Table 8:** HIV prevalence.

Item	Yes/true	No/false
HIV/AIDS is increasing every day due to low level of awareness.	607(76.9)	182(23.1)
I don't have any knowledge about HIV/ AIDS and its mode of transmission.	637(80.7)	152(19.3)
My knowledge of HIV/AIDS will determine its prevalence.	631(80.0)	159(20)

Item	Yes/true	No/false
If we adhere to HIV/ AIDS treatment services its will reduce its spread among us.	593(75.2)	196(24.8)
Social support from friends, health workers, teachers, parents and the media will reduce the spread of HIV/AIDS.	575(72.9)	205(26.0)

## 4. Conclusion

This study examined information sources in relation to HIV/AIDS prevalence among secondary school students in Southern Cross River State, Nigeria. It showed that although majority of the students in the area had knowledge of some of the causes, mode of transmission, and the preventive measures of HIV/AIDS, they lacked adequate access to the various sources of more specific information available on the subject matter. There is need to follow up on the awareness of HIV/AIDS created by the mass media and other outlets. Although general awareness on HIV/AIDS appears high, the specific knowledge of the disease or infection is still poor and has contributed to erroneous beliefs and poor attitude towards those living with AIDS. Parents and teachers should constantly emphasize the negative health impact of HIV to their wards to moderate their behaviour. HIV/AIDS education and counselling should be incorporated as one of the compulsory general study subjects in these secondary schools through the interpersonal health education approach. Workshops and seminars for secondary school teachers and students on current HIV/AIDS related matters would certainly intensify the awareness.

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