



Preventing HIV/AIDS through education: the role of primary and secondary school teachers in Nigeria

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Abstract

Objective: This study was aimed at assessing the knowledge, opinion and practices of Nigerian primary and secondary school teachers on HIV/AIDS education

Method: A self-administered questionnaire was used to collect data on demography, knowledge of HIV transmission and prevention, training on HIV transmission and prevention and teaching of students on HIV/AIDS. A composite scale for HIV knowledge was defined by pooling all scored knowledge variables based on 25 questions. Knowledge was adjudged good if 20 - 25 questions were answered correctly; fair if 13 - 19 questions were correct and poor if less than 13 were correct.

Result: Using the composite scale for knowledge, less than half (48.9%) had good knowledge, 41.5% had fair knowledge while 9.6% had poor knowledge of HIV transmission and prevention. Primary school teachers were less knowledgeable than their secondary school counterparts ($p = 0.000$). Only 46.3% ($n = 125$) of the teachers reported educating their students about HIV/AIDS. Most teachers blamed the non inclusion of HIV in the school curriculum for not teaching students about HIV while others (38%) claimed the children were too young to be educated on HIV/AIDS.

Conclusion: Teachers can make a major contribution in preventing HIV transmission in Nigeria. About 90% of them had good to fair knowledge but misconceptions were noted. There is a great need for proper training of teachers to correct misconceptions so that they can impart correct knowledge to the students. Lack of inclusion of HIV/AIDS education in the curriculum calls for a serious policy change.

Key words: HIV/AIDS, Teachers, Knowledge, Prevention

Introduction

Human Immunodeficiency virus (HIV) infection and Acquired Immune deficiency Syndrome (AIDS) are health care issues of immense importance globally. HIV spreads rapidly both within countries and across their borders. It affects people regardless of age, gender, geography or sexual orientation. Globally there are approximately 34 million people currently living with HIV and nearly 30 million people have died of AIDS related causes since the beginning of the epidemic^(1,2). A total of 2.3 million children less than 15 years were estimated to be living with HIV in 2005, while 700,000 children less than 15 years were newly infected in the same period⁽³⁾. In 2011 there were 3.4 million children living with HIV and 330,000 new infections among children and 230,000 AIDS deaths⁽⁴⁾.

In Nigeria the epidemic has extended beyond the commonly classified high-risk groups and is now common in the general population. All the states in Nigeria have general population prevalence of over 1%⁽⁵⁾. Nigeria is home to more people living with HIV than any other country in the world except South Africa and India with about 3.2 million people infected with the virus⁽³⁾. While the national HIV prevalence for 2003 was 5%, a prevalence of 5.2% was recorded among young people aged 15 - 24

years. Also the highest prevalence of infection was among those with only primary school education (5.9% and secondary school education (5.4%). Women with only primary or secondary education also had much higher rates of non-marital sex partnerships (6.6% and 14.6% respectively) and reported higher rates of boy-friend sexual relationships (7.2% and 16.2% respectively)⁽⁵⁾. Therefore younger ages as well as primary and secondary education levels were associated with higher risk of HIV infection in Nigeria. A study on AIDS awareness and knowledge among final year primary school children in Port-Harcourt, Nigeria revealed that only 59.1% knew that AIDS could be transmitted sexually and 23.8% were not aware of any preventive measures⁽⁶⁾. Another recent study has shown that 63.3% of adolescents in Ilesa, Southwest Nigeria had sexual intercourse. The median age at first intercourse among the adolescents was 12 years with a range of 6 - 19 years⁽⁷⁾.

It therefore means that HIV/AIDS education should start early and many studies have demonstrated that education in general and sex education in particular is the most effective way of postponing sexual activity, preventing both unwanted pregnancies and transmission of sexually transmitted diseases including HIV⁽⁸⁻¹¹⁾. The school provides an ideal setting for HIV education because the school years cover a period that runs from childhood to adolescence. These are influential stages in life when lifelong sustainable



behaviors as well as beliefs and attitudes are developed.

This study was aimed at assessing the knowledge, opinion and practices of Nigerian primary and secondary teachers on HIV/AIDS education.

Materials and method

Study design: A descriptive study was carried out in five local government areas of Lagos State Nigeria. Primary and secondary schools teachers were drawn from both public and private schools.

A self-administered questionnaire was used to collect data on demography, knowledge of HIV transmission and prevention, training on HIV transmission and prevention and teaching of students on HIV/AIDS.

A composite scale for HIV knowledge was defined by pooling all scored knowledge variables based on 25 questions.

Knowledge was adjudged good if 20 - 25 questions were answered correctly; fair if 13 - 19 questions were correct and poor if less than 13 were correct.

Epi info version 6.04 was used for data entry and analysis

Means, standard deviation and other measures of central tendency and dispersion were determined for quantitative variables while frequency distributions were generated for qualitative variables. The chi square test of association was used where appropriate. Difference was taken as significant at the level of $P < 0.05$.

Result

A total of 272 teachers participated in the study. There were 69.9% females and 30.1% males. The ages of the respondents ranged from 17 - 58 years with a mean of 38.9 ± 9.0 years. The mean years of teaching experience was 13 years with a range of 1 - 35 years. The demographic data of the respondents are shown on (Table 1).

Knowledge of teachers

Only 23.5% of the teachers could give adequate answers to the open-ended question "What is HIV?" The answers included an incurable sexually transmitted disease, a viral infection transmitted through blood or the virus that causes AIDS. 20.2% could only give the meaning of the acronym HIV. While 75.4% of the respondents believed that an HIV infected person could not be identified from the looks, 11.4% believed it was possible and 13.2% were not sure.

Majority of the teachers (94.1%) believed that HIV could be prevented while 3.3% believed it could not and 2.6% were not sure. Using the composite scale for knowledge, 48.9% had good knowledge, 41.5% had fair knowledge while 9.6% had poor knowledge of HIV transmission and prevention. Primary school teachers were less knowledgeable than their secondary school counterparts ($p = 0.000$).

Knowledge of the respondents on mode of transmission of HIV is shown on (Table 2) while knowledge on prevention of HIV transmission is shown on (Table 3).

Table 1. Demographic data of the respondents

Characteristics	N	(%)
Age (years)		
17 - 25	25	(9.5)
26 - 35	57	(21.6)
36 - 45	114	(43.2)
>45	68	(25.8)
Not specific	8	(2.9)
Gender		
Male	82	(30.1)
Female	190	(69.9)
Marital status		
Married	209	(76.8)
Single	57	(21.0)
Widowed	6	(2.2)
Length of training		
1 - 4 Years	167	(62.3)
> 4 Years	101	(37.7)
Not specified	4	(1.5)
Teaching experience (years)		
1 - 5	70	(26.0)
6 - 10	37	(13.8)
11 - 20	106	(39.4)
21 - 35	56	(20.8)
Not specified	3	(1.1)
Type of school		
Private	56	(20.6)
Public	216	(79.4)
Level of School		
Secondary School	141	(51.8)
Primary School	131	(48.2)
Number of children (1 - 6)		
1 - 2	58	(21.3)
3 - 4	115	(42.3)
> 4	41	(15.1)
None	58	(21.3)
Age of oldest child of teachers (range 1 - 38 years, mean 15.6, 8.2 SD)		
1 - 10	66	(24.3)
11 - 20	85	(31.3)
> 20	59	(21.7)
Not specified	4	(1.5)
None	58	(21.3)
Age of youngest child of teachers (range 1 - 25, mean 6.7, 6.2 SD)		
1 - 10	125	(46.00)
> 10	69	(25.4)
Not specified	20	(7.3)
None	58	(21.3)

**Table 2. Knowledge of mode of transmission of HIV (N = 272)**

Mode	Yes (%)	No (%)	Not sure (%)
Unprotected sex	265 (97.4)	2 (0.7)	5 (1.8)
Blood transfusion	260 (95.6)	-	12 (4.4)
Use of non sterile needles	260 (95.6)	4 (1.5)	8 (2.9)
Having more than one sexual partner	238 (87.5)	13 (4.8)	21 (7.7)
Sharing bath sponge or towel	30 (11.0)	187 (68.8)	55 (20.2)
Contact with infected person's faeces	35 (12.9)	160 (58.8)	77 (28.3)
From mother to child	228 (83.8)	14 (5.1)	30 (11.0)
Manicure and pedicure	220 (80.9)	21 (7.7)	31 (11.4)
Living in the same house	12 (4.4)	214 (78.7)	46 (16.9)
Sharing needles with others	248 (91.2)	9 (3.3)	15 (5.5)
Sharing eating and drinking utensils	22 (8.1)	194 (71.3)	56 (20.6)
Through mosquito bites	42 (15.4)	172 (63.2)	58 (21.3)

Table 3. Knowledge of methods of preventing HIV (N = 255)

Methods	Number (%)
Wash regularly	24(9.4)
Not sharing bathing sponge or towel	36(14.1)
Use of sterile needles	181(71.1)
Use of condoms	174(68.2)
Abstinence	194(76.1)
Being faithful to one partner	193(75.7)
No contact with blood	164(64.3)
Education	140(54.9)
Taking antibiotics	23(9.0)
Vaccination	35(13.7)

Table 4. Reasons for not educating students on HIV/AIDS n = 145

Reasons	Number (%)
Young age of students	50(34.5)
It is the doctor/nurse's duty	10(6.9)
Their parents should teach them	27(18.6)
Not included in the school curriculum	107(73.8)
Do not know how or what to teach about HIV	15(10.3)
Lack of time to teach	17(11.7)

* Some teachers gave multiple answers

Table 5. Predictor variables for educating students on HIV/AIDS

Variables	B Coefficient	95% Confidence		Partial F - Test
		Lower	Upper	
Age	0.0315863	-0.070122	0.133295	0.3741
Qualification	-0.0116992	-0.072608	0.049210	0.1431
Years of experience	0.0168436	-0.069382	0.103069	0.1480
Type of school	0.1879105	0.056380	0.319441	7.9166
Training	0.2506582	0.132733	0.368584	17.5243
Knowledge of teacher	0.0852017	-0.007796	0.178199	3.2557



Education of students on HIV

Only 46.3% (n = 125) of the teachers reported educating their students about HIV/AIDS. The reasons given by the remaining 145 (53.7%) teachers for not educating the students are shown on **(Table 4)**.

While 98.5% of the teachers believed that HIV/AIDS education is necessary, only 59.4% of them had received any formal training on HIV/AIDS. Most of them (79.5%) felt that the training was adequate.

Bivariate analyses showed statistically significant association between educating students and age of teacher (p = 0.004), academic qualification (p = 0.001), years of experience

(p = 0.016), school type (p = 0.000), knowledge of teachers (p = 0.017), class being taught (p = 0.000) and having received training on HIV/AIDS (p = 0.000). However when multiple regression analysis was done only the type of school and having been trained on HIV/AIDS transmission and prevention were significant. This is shown on **(Table 5)**.

Opinion on appropriate age and class for education

Most of the teachers (98.5%) believed that HIV education of students was necessary. More than half (54.0%) also believed education should start between ages 6 and 10 years while 24.5% preferred 5 years and below and 21.5% preferred 10 years and above.

On the appropriate class for commencement of HIV education, 71.3% would want education to start from primary school level while 28.7% wanted secondary school level.

Discussion

Education leading to the reduction of risk taking behaviors remains a critical component of HIV infection prevention. Schools therefore have a particular advantage in HIV infection prevention initiatives because they have access to children and adolescents during the developmental stages of life when they acquire skills that will enable them develop healthy lifestyles.

This study has shown a high level of general knowledge about the transmission and prevention of HIV among primary and secondary school teachers in Nigeria. Majority of them were aware of established routes of HIV/AIDS transmission and various ways of preventing it. However, various misconceptions were found which calls for concern. Some studies from Nigeria and other parts of the world have reported similar misconceptions⁽¹²⁻¹⁵⁾. 24.6% of the teachers either believed that an HIV infected person could be identified based on facial appearance or were not sure. Also worrisome was the 41.2% and 31.2% who believed that an infected person's feces or bathing sponge respectively could transmit the virus. While 94.1% of the teachers believed that HIV could be prevented, only 54.9% believed that education could be a tool for its prevention. Also, 31.8% and 23.9% did not think that use of condoms or abstinence respectively could prevent its transmission.

The proper training of the teachers regarding HIV/AIDS to correct these misconceptions is important so that they can impart correct knowledge to the students. Studies have reported that education leading to the reduction of risk-taking behaviour remains a critical component of efforts to prevent HIV

infection⁽⁹⁻¹¹⁾. The responsibility to provide such education is broadly shared by families, the media, health professionals, schools and Non governmental Organizations that serve youths. Schools however have a particular advantage because they have the expertise and access to the students over an extended period during the formative years.

More than half of the teachers were not educating their students on HIV transmission and prevention even though their knowledge was adequate. Oshi et al also reported this⁽¹²⁾. Educating students on HIV was significantly associated with the educational qualification of the teachers, as teachers who had higher qualifications were more likely to teach the students about HIV/AIDS. Also teachers who had good knowledge of HIV/AIDS were more likely to teach the students. The greatest barrier revealed by this study was a lack of inclusion of HIV/AIDS in the school curriculum (73.8%). HIV/AIDS education should be included at all levels of education

The claim that the children were too young to be educated on HIV/AIDS by 34.5% of the teachers is worrisome.

Significantly more primary teachers held this view, and could have thought that the students were too young to understand the education. While the process of educating young people about AIDS can be a challenging one, there is no set age at which AIDS education should start, and different countries have different regulations and recommendations. In some countries like Nigeria this is a very sensitive subject, and some groups regard teaching young people how to protect themselves before they begin having sex, rather than after.

AIDS education initiatives need to begin early (primary school levels) in Nigeria to be effective as the age of first sexual intercourse in Nigeria in a study was 6 - 19 years⁽⁷⁾. Secondly, misconceptions about HIV/AIDS are widespread among young people; early education will produce better-educated young people who are more likely to acquire the knowledge, confidence and social skills to protect themselves from the virus.

It is also essential to reach young people before they engage in high-risk behaviour including drug and alcohol use. Information on HIV/AIDS should be integrated into primary school curricula and offered throughout the school years. This should be timely, age-appropriate and relevant to the situations and culture of schoolchildren and their families. At an early age young people do not require detailed information but sequential, developmentally appropriate information, which should be delivered gradually, as they grow older.

Conclusion

Teachers in this study had adequate level of knowledge about HIV transmission and prevention even though most of them have not been formally trained on HIV. Majority of them were aware about established routes of HIV/AIDS.



Various misconceptions regarding HIV/AIDS transmission and prevention are a matter of concern. Major reasons for not educating the students include lack of inclusion of HIV/AIDS in the school curriculum and young age of students.

Teachers can make a major contribution in preventing HIV transmission in Nigeria but there is a great need for proper training of teachers to correct misconceptions so that they can impart correct knowledge to the students. Lack of inclusion of HIV/AIDS education in the curriculum calls for a serious policy change.

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