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Overview of HIV Prevention among In-school Adolescents in the Rural Areas of Abia State of Nigeria

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Abstract

Introduction: HIV prevention services to in-school adolescents need good planning and management. HIV risk reduction interventions are geared toward measuring sexual risk behaviour outcomes of adolescents that predispose them to HIV infection. The sexual behaviour of adolescents, especially in-school adolescents should be assessed in the process. Adolescents have been identified as the most vulnerable group for acquiring human immunodeficiency virus (HIV) and other sexually transmitted diseases (STDs) and as such, measures should be taken to prevent them from infection. One important reason for higher HIV prevalence among adolescents, especially girls, is the frequent practice of age-discrepant partnering, where older men, who are more likely to be infected with HIV, form sexual partners with younger girls. The objective of this study is to assess the knowledge and sexual behaviour of in-school adolescents in the prevention of HIV and AIDs in rural areas of Abia State.

Materials and Methods: This is a descriptive cross-sectional survey that was conducted between January and March 2020. Information was collected from 66 students of a community secondary school in the state. Participants were selected by a multi-stage sampling method and data were obtained using a semi-structured pre-tested questionnaire.

Results: Respondents consisted of 40(60.6%) females and 26(39.4%) males with ages ranging from 13 to 19. Some of the respondents 28 (42.4%), are living with parents while 24(36.4%) live with close relatives. A good number of the respondents 39(59.1%), accepted that their friends are HIV positive. Majority of them 49(74.2%) have not been approached for sexual relationships. About 17(25.8%) of the respondents accepted that they have boyfriends and girlfriends. Out of this number, 12(18.2%) of them said they have been approached for sex and only 2(3%) of them accepted having sexual relationships with the opposite sex. Finding showed that only 1(1.5%) of the respondents claimed to have ever used condoms during sex. Of the sexually active respondents, 49(74.2%) of them are aware that HIV is a virus infection caused by having multiple sex partners while 14(21.2%) were not sure whether HIV is a virus or bacterial infection.

Conclusion: The study revealed a gap in the knowledge of HIV prevention as well as inappropriate sexual behaviour among the respondents. Therefore, meaningful strategies that will be culturally sensitive to modify adolescent sexual risk behaviours should be adopted.

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Introduction

Human Immunodeficiency Virus has emerged as a major health and development concern among adolescents worldwide because as HIV epidemic spreads, younger age groups who are sexually active become exposed to the risk of infection because of their unprotected sexual behaviur. Studies have shown that young people are particularly vulnerable to HIV infection as a result of the physical, psychological, social and economic attributes of adolescents which expose them to risky sexual behaviours. Adolescents who begin sexual activity early in life are likely to have sex with multiple partners including those exposed to HIV infection. Thus, the need for HIV prevention programs to delay in-school adolescents' sexual debut. Individual behaviour change, especially sexual behaviour change, appears to be the most effective means to prevent further spread of HIV infection among these adolescents [1-3].

Nigeria has made tremendous success in reversing HIV pandemic through individual behaviour change such as abstinence, being faithful and condom use. However, there have been several opinions on the effectiveness of using only abstinence as an intervention in reducing HIV prevalence among the adolescents, indicating greater interest in promoting this method more on protection against unplanned pregnancy than on HIV and other sexually transmitted infections. Although abstinence and condom use have been highly recommended as measures for controlling the spread of HIV and AIDS among adolescents their uses as prevention strategies in Nigeria remain low [4-7]. The National HIV/AIDS and Reproductive Health Survey showed that only 47% of females and 27% of males aged 15-24 years adopt abstinence. In Nigerian, culture demands that sexual abstinence should be maintained before marital unions. However, due to the recent increase in the age at marriage, such culture is gradually disappearing since according to the 2008 Nigeria Demographic Health Survey, only 12% of women aged 15-19 now marry by this age and also 39% of women aged 20-24 years get married [8-12].

Studies conducted in other countries revealed that teaching safer sex practices using condom rather than emphasizing abstinence will generate moral challenge for the adolescents especially the in-school who are sexually active. However, realizing that factors such as media, low self- esteem, desire to conform to perceived peers' premarital sexual activity, poverty, unwillingness to refuse sex, and late marriage will negatively influence adolescents' sexual abstinence, therefore, the need to discourage them will be necessary [13-15]. Realizing that the National Policy on health & development of adolescents & young people in Nigeria, promotes abstinence as the key intervention researchers should use to encourage HIV prevention among young people, there is need to assess the sexual behaviour of adolescents that can promote abstinence to reduce the risk of HIV infection.

In Nigeria, promoting condom use among adolescents has faced religious, logistic, social and economic obstacles suggesting the necessity to emphasize abstinence more than condom use during adolescents' HIV prevention programmes [16-18]. This calls for the need to examine adolescents' sexual behaviour and knowledge in the social context in which they live, learn and make decisions. Therefore, the factors and social contexts that influence the adoption of safe measures to prevent HIV and other sexually transmitted infections are explored. Thus, the research provides insightful information to policy makers, adolescents' sexuality leaders and the educational

institutions on strategies to prevent HIV infection among in-school adolescents. This study identifies strengths and weaknesses in providing HIV risk reduction interventions in secondary schools. One benefit of this study is that the in-school adolescents in the communities who seem underrepresented in most HIV prevention programmes in the State are enabled to avoid sexual risk behaviours creating some awareness to them. The aim of this study was to discourage the factors and conditions that negatively influence the sexual behaviours of in-school adolescents in the rural areas so that, where necessary, package for them interventions that will protect them from being exposed to HIV infection.

Young people of today have various sources of obtaining information on HIV and AIDS yet adequate knowledge on how to minimize HIV risk behaviours is critical for protecting adolescents from HIV infection [19-21]. It has been estimated that globally 29 adolescents will acquired HIV infection every hour and that approximately 1.8 million adolescents aged 10–19 years will live with HIV and majority of them will be girls [22-24].

Materials and Methods

This was a descriptive cross-sectional survey conducted between January and March 2020. Information was collected from 66 students of a community secondary school in Abia State. Participants were selected by a multi-stage sampling method and data were obtained using a semi-structured pre-tested questionnaire. This descriptive, cross-sectional study was designed to measure knowledge of the causes and prevention of HIV and AIDS; to assess factors and conditions that influence the sexual behaviour (promoting and obstructing factors) among in-school secondary school students. The study was conducted in Umuahia Local Government Area (LGA) in a co-educational school in Abia State, Nigeria. The data was collected using both quantitative and qualitative data collection instrument. The instrument was field-tested to ensure its reliability and validity.

Multistage sampling technique was employed in the selection of the sample. Students in senior secondary classes 1-3 (SS1-3) were used. These were considered to be the sexually active groups that can appropriately provide responses to the questions in the questionnaire. In the selected school, students who were available in the three arms of the senior classes were randomly selected. This was done by a systematic random selection of students. For this study, students who were not in senior classes were ineligible and did not participate in the study. Eligibility criteria considered were consent of the teachers and respondents to participate in the study and availability of SS1-3 students as at the time of the survey.

The selected 66 students later completed a set of semi-structured questionnaire that assessed, among others, the demographic characteristics, sexual activity, self-efficacy to refuse sex, social life styles, knowledge of HIV and AIDS, social approval and peer pressure for premarital sex.

For the data analysis, frequency tables were generated for relevant variables. Descriptive statistics such as means, mode, and standard deviations were used to summarise continuous variables. Associations between the outcome variable and each explanatory variable were investigated using chi-square test. Odds ratios and 95% CI were computed. Analysis with a probability of .05 or less was considered as significant. The qualitative data was triangulated with the quantitative results.

Ethical Consideration

The ethical committee of the Abia State University Teaching Hospital approved the project before starting. The consent of the Director Ministry of Education as well as that of the Principal of the community school studied was got before the commencement of the study. The teachers' written consent was obtained prior to the administration of the questionnaire. The students' consent was obtained orally before the questionnaire administration and the respondents' anonymity was protected by ensuring that no individual identifiers existed in the instruments or in the electronic data set.

Results

Respondents' Demographic Characteristics

The sex of the respondents who participated in the survey consisted of 40(60.6%) females and 26 (39.4%) males. The mean age was 16.39 years (SD ±

2.19) with most respondents 45 (68.2%) in the age range of 16 – 18 years. See Tables 1&2

The finding showed that most of the respondents were single, except 1(1.5%) that was widowed see table 3.

From table 4, a good number of the respondents are living with their parents 28 (42.4%), and close relatives 24(36.4%). Also, a good number of the respondents 60(90.9%) have 1-5 sisters and brothers respectively.

The school fees of 25(37.9%) of the respondents and 24(36.4%) of others were paid by parents and close relations respectively table 5.

The respondents were made up of students in senior secondary classes, SS 1 -3 table 6.

The Respondents' Knowledge on the Causes of HIV Infection Showed that 49(74.2%) of the respondents were aware that HIV is a virus infection caused by having multiple sex partners see table 7.

A good number of the respondents 39(59.1%) accepted that some of their friends are HIV positive. See table 8.

The respondents were asked the actions that can expose someone to HIV infection. The result showed that majority of the respondents 61(92.4%) had no idea of the actions that could constitute risk to HIV infection. Some do not even know that using the same toothbrush with someone HIV positive can expose them to HIV infection. See table 9 for details.

The respondents were asked those who have been approached for sexual actions. The result showed that majority of the respondents 49(74.2%) have not been approached for sex. Only 17(25.8%) of the respondents accepted that they have been approached for sexual relationships. See table 10.

The number of respondents who have actually had sexual intercourse with those who approached them for sex was explored. From the findings, only 2(3%) agreed that they have had sex. See table 11 for details.

The respondents were asked the protective measures they use against pregnancy or HIV infection during sex. From the findings only 1(1.5%) reported using condom during sex. See table 12 for details.

The respondents were asked those who have ever shared needles with others. From the findings, 16 (24.2%) accepted having shared needles with people. See table 13 for details

The respondents were asked to state the types of infections one can get by sharing needles with others. The result showed that a good number of the respondents 53(80.3%) had the impression that sharing needles with others can cause HIV infection.

The ways in which HIV can be transmitted were enumerated by the respondents. From the findings, a good number 56(84.8%) of the respondents had no idea of how HIV can be transmitted. Table 15 contains the details of the findings.

The respondents made suggestions on ways in which HIV infection can be prevented. Table 16 contains the suggestions the respondents made.

Discussion

In this survey, knowledge of the causes and prevention of HIV among the respondents was not encouraging and this is in consonance with several studies [8,9]. This implies that interventions should be designed to increase knowledge of HIV and related issues among in-school adolescents in the rural areas. However, a good number of the respondents 49(74.2%) were aware that HIV is a virus infection caused by having multiple sex partners and yet, 61(92.4%) of the respondents had no idea of the actions that can constitute risk to HIV infection. Some of the respondents did not even know that using the same toothbrush with someone HIV positive can expose them to HIV infection, or that kissing can also be a risk factor. The fact that a good number of the respondents 53 (80.3%) had the impression that sharing needles with others can cause HIV infection and yet 16(24.2%) of them accepted having shared needles with others also presupposes poor knowledge to HIV risk factors. These findings can be attributed to peer group influence of adolescents where most of them without considering the consequences, become vulnerable to extraneous factors like peer and media influences, poor parental control and secondary sexual characteristics. In view of these findings, there is need to provide intervention strategy that will emphasize sex-refusal skills to counter the

Table 1. Sex of the respondents

Sex	Frequency	Percentage
Female	40	60.6
Male	26	39.4
Total	66	100

Table 2. Respondents' Ages in years

Ages in years	Frequency	Percentage
13 – 15	17	25.7
16 – 18	45	68.2
19 years and above	4	6.1
Total	66	100

Table 3. Respondents' marital status

Marital status	Frequency	Percentage
Single	65	98.5
Widowed	1	1.5
Total	66	100

Table 4. Respondents and people they are living with

Those respondents live with	Frequency	Percentage
Father and mother	28	42.4
Mother only	9	13.6
Father only	4	6.1
Close relation	24	36.4
Living alone	1	1.5
Total	66	100

Table 5. persons who pay school fees for the respondents

Persons who pay school fees	Frequency	Percentage
Father and mother	25	37.9
Father only	6	9.1
Mother only	9	13.6
Close relation	24	36.4
Family friend	2	3
Total	66	100

Table 6. The respondents and their classes

Classes	Frequency	Percentage
S.S 1	10	15.2
S.S 2	17	25.8
SS.S 3	39	59.1
Total	66	100

Table 7. Respondent's knowledge on the causes of HIV infection

Causes of HIV infection	Frequency	Percentage
Virus got by multiple sex partners	49	74.2
Bacterial got by multiple sex partners	3	4.5
None of the above	14	21.2
Total	66	100

Chi-square			
Chi-Square tests	Value	df	Asymp. Sig. (2- sided)
Pearson Chi-Square	3.074[a]	2	.215
Likelihood Ratio	4.233	2	.120
Linear-by-Linear Association	.067	1	.796
N of Valid Cases	132		

2 cells (33.3%) have expected count less than 5. The minimum expected count is 1.50.

Table 8. Respondents' knowledge of those HIV positive

Those HIV positive	Frequency	Percentage
Brother	26	39.4
Boy/girl friend	39	59.1
None	1	1.5
Total	66	100

Table 9. Respondents and knowledge of actions that can constitute risk to HIV infection

Actions	Frequency	Percentage
By having unprotected sex	6	9.1
Having sex with animals	1	1.5
Sitting close to infected person	1	1.5
Shaking hands with infected person	0	0
Using same toothbrush with infected person	0	0
By kissing	0	0
Using the same needle for injection	2	3.
Using public toilet	0	0
Being transfused with infected blood	1	1.5
No idea	61	92.4
Total	66	100

Table 10. Respondents that were approached for sexual relationships

approached for sex	Frequency	Percentage
Yes	17	25.8
No	49	74.2
Total	66	100

Table 11. Respondents who have had sex with those that approached them for sex

Respondents who have had sex	Frequency	Percentage
Yes, I have had sex with them but only once	2	3
No, I have not had sex with any of them	16	24.2
Not applicable	48	72.7
Total	66	100

Table 12. Respondents and protective measures they use against pregnancy or HIV

Variables	Frequency	Percentage
Uses condoms for sex	1	1.5
Not applicable	65	98.5
Total	66	100

Table 13. Respondents who have shared needles with others

Have shared needles	Frequency	Percentage
Yes	16	24.2
No	50	75.8
Total	66	100

Table 14. Respondents' and knowledge of infections caused by sharing needles

Infections caused	Frequency	Percentage
HIV	53	80.3
Malaria	7	10.6
Hepatitis	1	1.5
Syphilis	1	1.5
Tuberculosis	1	1.5
No idea	3	4.5

Table 15. HIV can be transmitted through the following options

Variables	Frequency	Percentage
By sharing food	0	0
By using public toilet seat	0	0
By sharing razor blade	3	4.5
By using the same bath towel	0	0
By kissing	0	0
By having unprotected sex	7	10.6
No idea	56	84.8

Table 16. suggestions on how to avoid HIV infection

Variable	Frequency	Percentage
Reject all forms of sex before marriage	8	12.1
Always use condom during sex	2	3
Students should not have sex	7	10.6
Avoid visiting opposite sex	9	13.6
Reject unnecessary gifts from opposite sex	3	4.5
Avoid all forms of friendship	10	15.2
Do not have too many friends	8	12.1

restraining forces obstructing HIV prevention among in-school adolescents in the communities.

In comparison of the findings with that of [13] on the knowledge and prevention of HIV and AIDS, where high awareness was found, the respondents in this study had poor awareness. This could be due to the social exposure which was community based compared with that of [13] survey which was urban based. It is expected that adolescents in the urban areas will have more exposure to HIV prevention strategies than those in the rural areas.

The finding that greater number of respondents 53(80.3%) had the impression that sharing needles with others can cause HIV infection and yet 16(24.2%) of them accepted having shared needles with others is a source of concern. This finding seems to mirror the findings from the National HIV/AIDS and Reproductive Health survey that showed a higher risk behaviour for HIV and AIDs among adolescents [7]. The finding which suggests greater HIV risk-taking behaviour is hardly surprising given the fact that adolescents perceive conforming to group norm as a normal practice which young people could not avoid. The widespread perception that adolescents conforming to group norm is beyond their control and demands immediate intervention has been reported by other researchers [12]. While an insignificant number of adolescents 1(1.5%) accepted using condom during sex majority of others did not. Surprisingly, higher proportion 56(84.8%) of the adolescents had no

knowledge of how HIV is transmitted. This finding can be attributed to the fact that in-school adolescents in the communities may not have sufficiently benefitted from HIV prevention strategies as much as their counterparts in the urban areas. This study lends further support to the notion of unequal HIV prevention strategies to adolescents. The finding suggests a sense of entitlement to sex education to in-school adolescents in the communities. The notion reflects the double standards in which researchers and health workers play while providing intervention strategies to adolescents. Researchers and health workers are expected to provide intervention programmes to all adolescents irrespective of place of residence or social status. Given the consistency of this finding with other studies, in-school HIV risk reduction programmes in the communities should deserve funding, support and implementation. The intervention programmes to be funded will concentrate on building the life skills of adolescents on how to resist peer pressure, casual sex, build assertiveness, and on how to set life goals. This means that the intervention strategy will encourage behaviour change that would create favourable attitude that will minimize the practice of having risky sexual relationships among in-school adolescents.

From this study, predictors of poor knowledge of preventive measures, especially risky sexual behaviours have been identified as: lack of knowledge of likely infections one can get through sharing of needles, not knowing that kissing, sharing toothbrush, being transfused with infected blood and also refusing to use condom during sex are risk factors to HIV infection. These findings are in consonance with that of [8] that examined the constraints to protective sexual behaviour among youths.

However, thorough understanding of these predictive factors will assist researchers and health workers to package effective interventions that will target the factors so as to promote protective sexual behaviours among in-school adolescents.

Conclusion

The study has identified the factors that affect protective sexual behaviours and those that constitute risk among in-school adolescents in the communities. Therefore, complementary interventions such as peer education and role modeling are necessary in addressing these factors. Given the fact that sexual behaviours of in-school adolescents are influenced by multiple factors, the researchers hereby recommend an integrated multi-sectoral intervention that will reduce the factors. This is particularly important in view of the evidences which suggest that using only one preventive strategy may not delay sexual debut or reduce the risk of HIV transmission among adolescents.

Limitations of the Study

Usually using self-reported assessments for sexual behaviour are prone to biases that could affect the reliability and validity of the measures. Such biases could range from participants level of understanding of sexual behavioural terminologies, to recall biases, self-presentation, fear of confidentiality on reports provided and also fear of being stigmatized for the behaviour in question. Our study focused on sensitive issues on sexual behaviours that predispose individuals to HIV infection which stigma is normatively attached to in Nigeria.

While these might affect the accuracy and generalizability of the findings, efforts were made to mitigate the impacts by assuring the respondents of full confidentiality and also by making the questionnaire a guided self-administered process.

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