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# CONFRONTING THE CHALLENGES OF REDUCING HIV AND OTHER SEXUALLY TRANSMITTED INFECTIONS AMONG IN-SCHOOL ADOLESCENTS IN THE RURAL AREAS OF IMO STATE OF NIGERIA.

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## ABSTRACT

**Introduction:** The challenge of minimizing HIV and other sexually transmitted infections among adolescents in the rural areas has been the uttermost concern of many researchers in both developed and developing countries. Studies have shown that most adolescents especially in-school adolescents in the rural areas are exposed to indiscriminate sexual practices due to conditions including rape from opposite sex, desire to have sex after watching pornography, poverty and others. This study investigated the extent to which in-school adolescents in the rural areas of Imo State protect themselves against sexually transmitted infections including HIV as well as the extent to which they are aware of mode of transmission of STIs. **Materials and method:** Cross--sectional descriptive design was used to collect information for the study. Three community secondary schools populated by both boys and girls were randomly selected for the study. It was assumed that using schools populated by both boys and girls will afford the researchers the opportunity of identifying the extent to which adolescent males and females engage themselves in risky sexual activities. Self-administered questionnaire containing open and closed ended questions served as instrument for data collection. The sample size for the study was 278. The study used all the Senior Secondary School Students in the three schools studied. It was assumed that the students in the Senior Secondary classes constitute the group of students that are sexually active. **Result:** The finding showed that out of 91 students studied in school number 1, 9(9.9%) males and 22(24.2%) females have had sex. Out of those who have had sex, only 10(8.7%) used condom during sex . In school number 2, out of 94 students studied, 15(16%) of the males and 27(28.7%) of the females have had sex . Out of this number, only 8(7%) used condom. In school number 3, out of 93 students studied, 17(18.3%) of the males and 25(26.9%) of the females have had sex. Out of the number that have had sex, only 12(10.4%) used condom. The main sources of information where the students learnt about STIs were television 50(22.7%), peers in school 45(20.5% and radio 44(20%). A good proportion of the students 159((56.6%) were aware that having unprotected sex with an infected person will expose them to STIs including HIV. As a result, 41.4% of them suggested the use of condom during sex as a protective measure against STIs. **Conclusion:** As a result of the students' poor knowledge on STIs and HIV mode of transmissions, there is need to health educate in-school adolescents on the benefits of maintaining abstinence as a sure method for preventing STIs and HIV infections.

**KEYWORDS:** Knowledge, practice, in-school adolescents, sexually transmitted infections, condom use.

## INTRODUCTION

Studies have shown that most adolescents especially in-school adolescents, because of financial and material gains, tend to engage in indiscriminate sexual practices. Such students show poor knowledge of the consequences of their actions.[1,2] It is disheartening to note that most adolescents today seem not to know various types and causes of (STIs) and as such, they engage in activities that expose them to STIs.

Studies have shown that STIs constitute great medical, social and economic problems among adolescents in developing countries including Nigeria.[3,4] To control STIs including HIV among school adolescents, studies have suggested that government's support for necessary

control measures should be initiated in good time so as to prevent serious consequences of STIs among adolescents.[5,6] This is necessary because teenagers and young adults could engage in all forms of sexual relations like anal, oral and others and are likely to have higher prevalence of (STIs) more often than other age groups.

Studies have stressed that adolescents between the age groups of 10 and 19 years are disproportionately living with HIV and AIDS and that millions of them are at risk of STIs. This is considerably higher among girls than boys.[7,8] This shows that adolescents constitute the population that is greatly at risk of HIV infection. Though new HIV infections among adolescents have been projected to decrease by 23 per cent between 2018 and 2030, this projection has been considered not good enough as to meet the global targets of HIV prevalence reduction.. This emanates from the findings that out of the 590,000 young people (ages 15–24) who were newly diagnosed with HIV infection in 2017, almost half (250,000) were adolescents between the ages of 15 and 19.[9-11] Ironically, in sub-Saharan Africa alone, 3 in 4 new infections in 15–19 year olds are girls. It is therefore, estimated that at the current rate of HIV incidence, without acceleration of control measures, that a total of 2.0 million adolescents would become newly infected with HIV between 2018 and 2030.[12,13]

Globally, treatment and care services to adolescents are poor because some of the adolescents living with HIV today were infected as infants. The problem is that lack of access to testing, treatment and counseling services, have contributed to the increased numbers of AIDS-related deaths among adolescents. This remains the major concern in meeting the needs of this vulnerable adolescents.[14-16] However, unprotected sexual intercourse and injection of drugs continue to be the main modes of transmission among adolescents who were not infected during infancy. To organize support and strengthen preventive measures targeted for in-school adolescents who are at greater risk of having urge for same sex relationships as well as drug use, there is need to confront the challenge of reducing adolescent sexual risk-taking behaviors through intervention.[17-19] It has been noted that the neurological, psychological, and behavioral changes that take place during adolescence, are what contribute to the adolescents' high vulnerability to HIV infection.[20-23] However, the infection risks are considered higher among girls than boys as a result of gender-based inequalities like marginalization and sexual violence.[24-26] This makes the female gender disproportionately affected by HIV.[27]

The problem is that many adolescents engage in sexual intercourse with multiple partners and without using condoms thus, exposing themselves to STIs including HIV.[28-31] The practice of some adolescents having sexual intercourse with multiple sexual partners prior to marriage has encouraged STIs including HIV as well as unplanned pregnancy.[32-36] Ideally, condoms are recognized as important forms of contraception that can prevent unplanned pregnancy and the transmission of most STIs. Unfortunately, most adolescents use condoms sparingly during sex. That means that comparatively, only few adolescents use condoms during every sexual intercourse.[37-40] even those living in countries where HIV infection is widespread who are at a much higher risk of contracting HIV through sexual intercourse.[41-43]

It has been found that some in-school adolescents frequently engage in unprotected sexual intercourse even with partners in high-risk groups for material gains. These patterns of sexual life which some adolescents engage in have important implications for intervention. First, it suggests the need for effective HIV education programs for in-school adolescents. Furthermore, it suggests more focused programs that target groups of adolescents who are at higher risk of HIV infection. However, intervention services for in- school adolescents should address reduction in the risks of unprotected sexual intercourse, drug use, needle sharing, and in addition, focus on the benefits of abstinence.[44-46]

This study adopted strategies that discouraged unintended pregnancy, STIs including HIV among in-school adolescents. It also emphasized the benefits of adolescents delaying initiation of sexual intercourse before marriage. It assessed the extent to which adolescents are aware of different types of STIs and their modes of transmission.

**Objectives of the study**

- To determine the sexual habits of in-school adolescents
- To identify the extent to which adolescents are aware of other types of STIs one is exposed to with high risk sexual activities.
- To highlight the skills in-school adolescents could acquire to maintain abstinence.
- To investigate the willingness of in-school adolescents to adopt HIV prevention measures.

## MATERIALS AND METHOD

Cross-sectional descriptive design was used to collect information during the study. Three co-educational community secondary schools in the local government area were randomly selected for the study. The schools chosen are Community Secondary School, Amakaohia representing school number 1, Community Secondary School, Amaimo school number 2, and Community Secondary School, Avuvu which is school number 3. It was assumed that using co-educational schools (schools populated with both boys and girls), will afford the researchers the opportunity of identifying the extent to which adolescent males and females engage themselves in risky sexual activities. The sample for the study consisted of all the 278 students in the senior classes of the three schools studied. The study used all the senior

students in the schools studied because it was assumed that they constitute the group of students that are sexually active. The researchers concentrated on empowering the students on how to use the skill of body language to reinforce the verbal message of repeatedly refusing sex so as to maintain abstinence. The emphasis was more on how to refuse having sex at all or at worst unprotected sex. Self-administered questionnaire containing open and closed ended questions was used to ascertain the sexual practice of in-school adolescents, and this served as instrument for data collection. Data were analyzed with descriptive statistics.

## RESULTS

**Table 1: Sex Distribution of the students in the schools studied.**

| School | Male | Female | Total |
|---|---|---|---|
| Community secondary school Amakaohia, school number 1 | 34(12.2%) | 57(20.5%) | 91(32.7%) |
| Community secondary school Amaimo, school number 2 | 46(16.5%) | 48(17.3%) | 94(33.8%) |
| Community secondary school Avuvu, school number 3 | 49(17.6%) | 44(15.8%) | 93(33.5%) |
| Total | 129(46.4%) | 149(53.6%) | 278(100%) |

The sex distribution of the respondents is contained in Table 1. From this Table, 129(46.4%) are males, while 149(53.6%) are females.

**Table 2: distribution of in-school adolescents who have had sexual intercourse by gender.**

| School | Gender | Have had sex | | Gender | Have had sex | | Total |
|---|---|---|---|---|---|---|---|
| | Male | Yes | No | Female | Yes | No | |
| Community secondary school, 1 | 34(37.4%) | 9(9.9%) | 25(27.5%) | 57(62.6%) | 22(24.2%) | 35(38.5%) | 91(100.%) |
| Community secondary school, 2 | 46(48.9%) | 15(16%) | 31(33%) | 48(51%) | 27(28.7%) | 21(22.3%) | 94(100%) |
| Community secondary school, 3 | 49(52.7%) | 17(18.3%) | 32 (34.4%) | 44(47.3%) | 25(26.9%) | 19(20.4%) | 93(100%) |

Table 2 shows the proportion of males and females in each school who have had sexual intercourse. Findings in school number one showed that 9(9.9%) of males and 22(24.2%) females have had sexual intercourse, in school number two, 15(16%) males and 27(28.7%) have had sex while in school number three, 17(18.3%) males and 25(26.9%) females have had sex. In all, the proportion of females who have had sexual intercourse is greater than that of the males. The proportion of those who use condoms during sexual relationship was explored. This is contained in Table 3.

**Table 3: Proportion of in-school adolescents who use condoms during sex.**

| Schools | Use condom during sex | | |
|---|---|---|---|
| | Yes | No | Total |
| Community secondary school, 1 | 10 (8.7%) | 21(18.3%) | 31(27%) |
| Community secondary school, 2 | 8(7%) | 34(29.6%) | 42(36.5%) |
| Community secondary school, 3 | 12(10.4%) | 30(26%) | 42(36.5%) |
| Total | 30(26.1 %) | 85(73.9%) | 115(100%) |

Table 3 contains the proportion of students in each school who use condom during sexual intercourse. On the whole, only 30(26.1 %) of the students in the three schools studied use condom during sex. See Table 3 for more details.

**Table 4: In-School adolescents' awareness that unprotected sex constitutes risk to STIs.**

| Schools | Awareness that unprotected sex constitute risk to STIs | | |
|---|---|---|---|
| | Yes | No | Total |
| Community secondary school, 1 | 65 (23.4%) | 26(9.3%) | 91(32.7%) |
| Community secondary school, 2 | 72(25.9%) | 22(7.9%) | 94(33.8%) |
| Community secondary school, 3 | 83(29.9%) | 10(3.6%) | 93(33.5%) |
| Total | 220(79%) | 58(21%) | 278(100%) |

The students' knowledge on the risks of unprotected sex was explored. From the findings, 65 (23.4%) of the students in school number one, 72(25.9%) of students in school number two, and 83(29.9%) of students in school number three respectively, are aware that unprotected sexual intercourse constitutes risks for STIs.

**Table 5: In-School adolescents' sources of knowledge about STIs.**

| Sources of knowledge | Community secondary school, 1 | Community secondary school, 2 | Community secondary school, 3 | Total |
|---|---|---|---|---|
| Television | 10(4.5%) | 18(8.2%) | 22(10%) | 50(22.7%) |
| Radio | 12(5.5%) | 14(6.4%) | 18(8.2%) | 44(20%) |
| Newspaper | 6(2.7%) | 4(1.8%) | 6(2.7%) | 16(7.3%) |
| Parents | 8(3.6%) | 9(4.1%) | 6(2.7%) | 24(10.9%) |
| Peers in school | 13(5.9%) | 15(6.8%) | 17(7.7%) | 45(20.5%) |
| Friends | 7(3.2%) | 10(4.5%) | 13(5.9%) | 30(13.6%) |
| Other medium | 9(4.1%) | 2 (0.9%) | 1(0.5%) | 12(5.5%) |
| **Total** | 65(29.5%) | 72(32.7%) | 83(37.8%) | 220(100%) |

The sources of the students' knowledge about STIs were examined. From Table 5, majority of the students studied got information about STIs from television, peers in school and radio. See the Table for more details.

**Table 6: In-school adolescents' knowledge about types of STIs.**

| Knowledge about types of STIs | Community secondary school, 1 | Community secondary school, 2 | Community secondary school, 3 | Total |
|---|---|---|---|---|
| HIV/AIDS | 78(19.8%) | 85(21.6%) | 67(17%) | 230(58.5%) |
| Gonorrhea | 35(8.9%) | 42(10.7%) | 24 (6.1%)) | 101(25.7%) |
| Chlamydia | 2(0.5%) | 1(0.3%) | 0(0%) | 3(0.8%) |
| Candidiasis | 2(0.5%) | 4(1%) | 1(0.3%) | 7(1.8%) |
| Syphilis | 19(4.8%) | 22(5.6%) | 10(2.5%) | 51(12.9%) |
| Genital warts | 1(0.3%) | 0(0%) | 0(0%) | 1(0.3%) |
| Total | 137(34.8%) | 154((39.2%) | 102(26%) | 393(100%) |

Multiple choice

The extent to which the students have knowledge of different types of STIs that one is exposed to during unprotected sex was sought. From the findings, the students had poor knowledge of other types of STIs. The main STIs they were aware of are HIV/AIDS, Gonorrhea and Syphilis. Table 6 shows the findings.

**Table7: In-School adolescents' knowledge about modes of transmission of STIs.**

| Modes of transmission | Community secondary school, 1 | Community secondary school, 2 | Community secondary school, 3 | Total |
|---|---|---|---|---|
| Kissing an infected person | 12(4.3%) | 11(3.9%) | 5(1.8%) | 28(10%) |
| Hugging an infected person | 1(0.4%) | 2(0.7%) | 1(0.4%) | 4(1.4%) |
| Eating with an infected person | 30(10.%) | 25(8.9%) | 35(12.5%) | 90(32%) |
| Having unprotected sex with an infected person | 45(16%) | 60(21.4%) | 54(19.2%) | 159((56.6%) |
| Total | 88(31.3%) | 98(34.9%) | 95(33.8%) | 281(100%) |

Multiple choice

The students' knowledge on the mode of transmission of STIs including HIV was explored. From the responses, some of the students showed poor knowledge of STIs modes of transmission. However, a good proportion of them 159(56.6%) are aware that having unprotected sex with an infected person is a mode of transmission. Table 7 contains details of the findings. The students' suggestions on how to prevent STIs including HIV were also requested. Table 8 contains the suggestions the students gave.

**Table 8: Students' suggestions on methods of preventing STIs/HIV.**

| Response category | Community secondary school, 1 | Community secondary school, 2 | Community secondary school, 3 | Total |
|---|---|---|---|---|
| Maintaining abstinence | 27(6.5%) | 20(4.7%) | 34(8.1%) | 81(19.4%) |
| Staying with only one partner | 37(8.8%) | 40(9.6%) | 35(8.4%) | 112(26.8%) |
| Using condom during sex | 58(13.9%) | 65(15.6%) | 50(12%) | 173(41.4%) |
| Taking antibiotics after sex | 12(2.9%) | 19(4.5%) | 21(5%) | 52(12.4%) |
| Total | 134(32.1%) | 144(34.4%) | 140(33.5%) | 418(100%) |

The students in each school were requested to suggest methods of preventing STIs/HIV among adolescents. The students made several suggestions as contained in the Table. From the suggestions the students made, 112(26.8%) of them suggested staying with only one partner, 173(41.4%) suggested using condom during sex while 81(19.4%) suggested maintaining abstinence.

**Discussion of findings**

The idea the researchers had by encouraging the adolescents to insist on "no sex at all" or "unprotected sex" as well as on using body language to reinforce the verbal message of repeatedly refusing sex was to teach skills that will enable the adolescents to reduce the chances of being exposed to the risk of STIs. The researchers' role in building the skills of the adolescents helped to personalize the information they received thereby, motivated them to devote time to practice the skills acquired. This made the students to form small group discussions and simulations that brainstormed on how to achieve the skills for their benefits. This finding agrees with the views of,[12,15,17,23] that involving adolescents in intervention programs that promote reduction of reproductive health issues will enable them integrate the information they received into their lives thereby incorporate behavioral goals that will focus on delaying the onset of intercourse. Even those who have already engaged in sexual intercourse would avoid unprotected sex and also support the views that abstinence remains the best method of avoiding STIs including unplanned pregnancy. This helps to change the students' antecedents of sexual risk-taking thereby influence positive behavior change that will likely make the adolescents form small groups of those that may totally adhere to the instructions received.

The researchers' focus on using sensitive issues like exploring "students' knowledge on other types of STIs", " modes of STI transmission" and "proportion of students who have ever had sex" helped to identify the students' sexual risk taking behaviors. It also helped to show the proportion of adolescents who have delayed sexual intercourse and do not indulge in multiple sexual partners, or those who use condom during sex. This strategy helped the researchers to note appropriate interventions that would have positive impacts on the reproductive health issues of adolescents. Except HIV/AIDS, which 230(58.5%) of the adolescents recognized as a type of STI, the students had poor knowledge of other types of STI like Neisseria Gonorrhea, Candidiasis, Human Papilloma virus and others ,showing the extent to which this poor knowledge can expose adolescents to sexual risks. Appreciating the fact that adolescents are among the critical population that are disproportionately prone to STIs including HIV, there is need to introduce appropriate intervention that protects adolescents against negative life experiences. Recognizing that most adolescents infected with HIV through sex are' unaware of their HIV status especially in the early stages of the infection, it will be well-meaning to build early in life, the skills of adolescents capable of attracting positive reproductive health lifestyles. This lack of awareness of ones HIV status presupposes that early intervention should be provided. In this study, the proportion of female students who have had sex is 25(26.9%), while that of males is 17(18.3%) and out of this proportion, only 30(26.1 %) of them indicated using condom during sex even though 159((56.6%) of them were aware that unprotected sex is a risk factor for HIV infection. The fact that the students had poor knowledge of mode of transmission of STIs explains why a good number of the adolescents did not use condom during sex. Undoubtedly, because the main sources of the students information about STIs awareness were from television 50 (22.7%), radio 44(20%) and peers in school 45(20.5%) respectively, may have contributed to the laxity in the manner in which some adolescents Protected themselves from STIs. From this finding, it appears the roles of parents and teachers in educating adolescents on healthy reproductive lifestyles were lacking. Parents and teachers performing their respective roles in assisting adolescents to adopt positive lifestyles will help in maintaining goal #3 of the United Nations "Sustainable Development Goals" (SDG3) which ensures achieving healthy lives and promoting well-being for all ages by 2030 so as to end the epidemic of AIDS. To achieve this goal will require providing the adolescents with specific and appropriate interventions that will increase positive lifestyles on reproductive health. The finding that a limited number of the students 81(19.4%) suggested maintaining abstinence as a feasible way of preventing STIs shows the extent to which the students practice abstinence as a method of STIs prevention. However, 112(26.8%) of the students suggested "maintaining one sex partner" while 173(41.4%) proposed "using condom during sex". These findings agree with the views of.[25,40,46] that because of autonomy and peer group influences, adolescents are at a difficult crossroad to decide on how to avoid risk-taking behaviors. Adollescents' urge to belong and the desire to participate in peer group decisions compete with their thinking processes and preoccupy their self-image, as well as the need to fit in with peers. These contribute to the challenge of sustaining adolescents' focus on maintaining sound health, particularly on preventing STIs. Therefore, every effort should be made to provide adolescents with the care and support needed to maintain healthy lifestyles. The fact that in this study, the parents played little or no role in creating STIs awareness to the advantage of the respondents shows how uncommitted some parents are in providing sex education to the adolescents. Therefore family interventions which will emphasize sex education to build positive behavioral skills that will prevent unwarranted sexual activities prior to sexual debut are recommended. There is therefore, the need to educate in-school adolescents on the causes, effects and complications of sexually transmitted infections. This is premised on the fact that some of the students studied had wrong knowledge of the mode of transmission of STIs and also viewed HIV and AIDS as

sexually transmitted infections while Chlamydia and Gonorrhea were not.

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