

Sexual Practices, Knowledge and Prevention of Sexually Transmitted Diseases among Upper Grade Secondary School Adolescent Students in Uyo, Nigeria

***Udoh, SB¹; Idung, AU¹.**

Department of Family Medicine Faculty of Clinical Sciences University of Uyo Uyo Nigeria

Abstract:

Background: Adolescence- a period of transition from childhood to young adulthood is a critical period of human development characterized by rapid physical changes that result in awakening of sexual feelings and development of sexual behaviours. As the quest heightened to experiment on sexual adventures, adolescents fantasize into unsafe sexual practices. Adolescents are generally known to display high risk behaviours that make them vulnerable to contacting and transmitting STIs including HIV/AIDS as well as having unplanned pregnancy and poor general reproductive health

Aim: To assess sexual practices, knowledge and prevention of sexually transmitted diseases (STIs) among upper grade secondary school adolescent students in Uyo, Nigeria.

Method: This was a prospective study using multistage, clustered sampling design.

Results: Out of a total of 408 adolescent students, 243(59.6%) made up of 119(49.0%) males and 124(51.0%) females respectively were sexually active. Commonest sexual practice was vagino-penile(100.0%). Fifteen(6.2%) and 9(3.7%) respondents also engaged in oral and anal sex respectively. Fifty one (21%) of them had more than one sexual partner at time of study, while 136(56.0%) of them engage in unprotected sexual intercourse. Sixty four(26.3%) of them practiced masturbation.

Conclusion: Sexual activities are high among the upper grade secondary school adolescents with associated high risk practices. Even though their knowledge of common STIs and their preventive methods appear to be good, there is need to introduce adolescent sexual health education in secondary schools in this environment. This will provide a platform to correct some myths about sexual practices among the adolescents where such exist.

Keywords: Adolescents; Sexual practices; knowledge; prevention; sexually transmitted infections.

I. Introduction

Adolescence- a period of transition from childhood to young adulthood is a critical period of human development characterized by rapid physical changes that result in awakening of sexual feelings and development of sexual behaviours. As the quest heightened to experiment on sexual adventures, adolescents fantasize into unsafe sexual practices. Adolescents are generally known to display high risk behaviours that make them vulnerable to contracting and transmitting STIs including HIV/AIDS as well as having unplanned pregnancy and developing poor general reproductive health (1). Current global trends show a disproportionate increase in incidences of human immunodeficiency virus (HIV) infection among 15–24 year olds, compared to other population segments in many countries including Nigeria (2). Early sexual debut is common among Nigerian school students which in some cases result in forced early marriages. An association does exist between family polygamy and sexual initiation before or during adolescence in a typical Nigerian society (3). Generally, pregnancy and early unplanned motherhood in most cases mark the end of school attendance. Studies have shown that by age 13 years, over a quarter of the students in our secondary schools are sexually active while by age 16 years, 21% of female adolescents are either pregnant or have given birth(3). Nigeria's birth rate for adolescents is one of the highest in the world. Expectedly, poor health indices including maternal mortality rates as well as the prevalence of sexually transmitted infections, including HIV among this group is exceptionally high. Despite the increasing evidence attributing the upsurge of HIV/AIDS in developing countries to ignorance and high poverty levels (4), sexual behaviour and attitudes remain important factors contributing to the widespread transmission of the disease. Generally most adolescents lack credible access to reproductive health information as well as skills to resist sexual pressure from more experienced, older peers and men. Sexual activities among adolescents take place in most unusual places including school toilets, fields and during evening visit to the church (5). Sex education is not part of the secondary school curriculum in Nigeria. Odeyemi et al in Lagos showed that friend's sexual behaviour, the person whom the adolescents reside with, parent's marital status, availability of funds to meet basic needs, and watching pornography were factors promoting early sexual debut among adolescents(6). Presently there is no strict law restricting pornography in Nigeria. It is not unusual to see pornographic magazines being sold in the open alongside with other dailies with secondary /primary school students congregating together with adults "enjoying" free readership of these materials. Sexually explicit images sent by smartphones and internets actively compliment pornography due to their unrestricted use.

Uyo is the capital of Akwa Ibom state, one of the states in the Niger Delta region. Oil prospecting in the Niger delta region has promoted not only migration of people from other parts of Nigeria to the region for various economic reasons but also cause serious environmental degradation due to near perennial oil spillage and destruction to the ecosystem(7). This has led to abandonment of the traditional economic activities of the local people leaving them more impoverished. Paradoxically, this has left the people poorer in the midst of plenty thereby leading to development of adaptive economic survival strategies including prostitution with the adolescents participating actively in such activities(8). Recently, there has been an upsurge of antisocial activities including rape, prostitution/commercial sex work, kidnapping and youth restiveness in the region. Adolescents with little or no power to negotiate safe sex practices who form integral part of the society are not left out. Some adolescents out of economic necessity engage in sex trade for financial rewards while others are coerced into sexual activities by men's professed biological need for multiple sexual partners(9). Without exaggeration, sexual activities are high in this region. This in no doubt is partly due to high population of emigrants who reside here either prospecting for job in the oil and gas industry or are already employed. Udonwa et. al in their study suggested that wealthy oil workers migrating into the region use their wealth to gain access to impoverished girls in the Delta to engage in unprotected sex(10). This is particularly true since most of them including married people migrated alone leaving their spouses behind.

Adolescents belong to the most active segment of the population hence the need for a more focused study of their reproductive health practices which is a panacea for controlling STI/HIV spread among in Nigeria.

II. Material And Methods

Study Area:

The study was carried out in public Secondary Schools in Uyo urban. At the time of study, there were eleven public secondary schools located in the Uyo urban with total student's enrolment of 17,750 in the upper grade classes (SS1-SS3). These schools were chosen for the study because the students comprised of those in their early, middle and late adolescence from diverse ethnic and socioeconomic class families living in the main city of Uyo and its environs. Uyo is the capital of Akwa Ibom State-one of the 36 states in Nigeria. Nigeria is divided into six geopolitical zones as follows: North-East, North-West, North-Central, South-East, South-West and South-South. Uyo is located in the South-South geopolitical zone, which is often referred to as the Niger Delta Region of Nigeria. Akwa Ibom State -the highest oil producing state in the Niger Delta region/Nigeria has an estimated population of about 5.2 million people and is surrounded by Abia state, Cross River state and Rivers state(11).

Sample.

The minimum sample size of 368 students was determined using the formular;

$$n = \frac{Z^2 P (1-P)}{d^2}$$

Where;

n = minimum sample size (when population is greater than 10,000)

z = the standard normal deviate, usually set at 1.96, which corresponds to the 95% confidence interval.

P = proportion in the target population [taken here as 40.0 % from previous study](12)

d = degree of accuracy (taken here as 5%)

The figure was rounded off to 408 students for ease of sampling.

Ethical approval:

Ethical approval was obtained from the Research and statistics unit of Akwa Ibom State Ministry of Education. To select the respondents, Uyo urban was divided into three (3) zones with the schools evenly distributed. We used clustered sampling design to select two (2) schools from each zone in the first stage i.e. making a total of six (6) schools and 68 students in senior secondary classes (SS 1-3) selected from each of the six schools in the second stage. For each selected school, the researchers visited the schools ahead of time to intimate the school principal and teachers of the aim of the study and sought for their co-operation.

Pretesting Of Questionnaire

Pretesting of the questionnaire was carried out prior to commencement of study. This was done in order to identify/correct errors in the questionnaire, ascertain understanding of the questionnaire by the students as well as the adequacy of the questionnaire in collecting the required information from the students. The questions and answers were in English language. In all, twenty(20) questionnaires were administered to students selected randomly from SS1-3 in two(2) secondary schools. This helped us to understand that the questions/language in the instrument was well understood by the students

Data Collection.

Data collection took place from Monday to Friday each week from 10th February to 28th February, 2014 on agreed time in each of the schools. Two teams of research assistants distributed the pre tested questionnaires to the sampled students during each session of survey in their classrooms. Participants were adequately assured of the confidentiality of information to be obtained from them. They were told that they were at liberty to leave any question on the questionnaire blank if they so desired and that their responses will remain anonymous even after the study. However, the students were not allowed to interact with one another throughout the period of filling the questionnaire to discourage and check against peer influences on response to the questions. Time limit was not imposed for filling the questionnaire. However, majority of the students completed the questionnaire within 15 minutes.

Participants were excluded from final analysis if they failed to answer “YES” to the question ‘Have you ever had sexual intercourse (Sex with another person)?’

Data Analysis

Data Analysis: The data so collected were analyzed using Statistical Packaging for Social Sciences (SPSS version 17). Simple descriptive statistical analysis was performed and the results presented below.

III. Results

A total of 408 upper grade teenage students participated in the study. Of these, 243 answered “YES” to the opening question “Ever had sex?” Percentage of sexually active teenagers in this study was 59.6%. This was made up of 119(49.0%) males and 124(51.0%) female whose ages ranged from 13 to 19 years.

Table 1 Sociodemographic characteristics of respondents

Characteristics	(n = 119)	(n = 124)
	Male(%)	Female(%)
Age in years		
10-13 (Early adolescence)	(0)	3(2.4)
13-16 (Middle adolescence)	77(64.7)	95(76.6)
16-19 (Late adolescence)	42(35.3)	26(21.0)
Religion		
Christianity	116(97.5)	99(79.8)
Muslim	2(1.7)	(0)
Others	1(0.8)	(0)
Ethnic group		
Ibibio/Efik	106(89.1)	99(79.8)
Ibo	7(5.9)	5(4.0)
Yoruba	3(2.5)	1(0.8)
Hausa	1(0.8)	(0)
Others	1(1.7)	19(15.4)
Year of Study		
SS1	39(32.8)	45(36.3)
SS2	42(35.3)	33(26.6)
SS3	38(31.9)	40(37.1)

Table 1 shows the Socio-demographic characteristics of the participants. No male student was in the early adolescent age while 3(2.4%) female participants were early adolescents. Seventy seven (64.7%) males were in the middle adolescent group while 42(35.3%) were late adolescents. Ninety five (76.6%) females were in middle adolescent group while 26(21.0%) were late adolescents. Majority of the participants, 116(97.5%) males against 124(100.0%) females were of Christian faith while 2(1.7%) and 1(0.8%) males were of Muslim and other religious faith respectively. The males were mainly of Ibibio/Efik tribe, 106(89.1%) while the Ibo, Yoruba, Hausa and other minority tribes accounted for 7(5.9%),3(2.5%), 1(0.8%) and 2(1.7%) respectively. Similarly, majority of the female participants,99(79.8%) were of Ibibio/Efik tribe while 5(4.0%),1(0.8%) and

19(15.4%) females respectively were of Ibo, Yoruba, Hausa and other minor ethnic groups. Thirty-nine(32.8%) of the males were in senior class 1 while 42(35.3%) and 38(31.0%) were in senior classes 2&3 respectively. Forty five (36.3%) of the female respondents were in senior class 1 while 33(26.6%) and 46(37.1%) were in senior classes 2&3 respectively.

Table 2 Distribution of sexual practices among the respondents

	Male	Female	Total(%)
	n = 119	n = 124	N = 243
Practices	Frequency (%)	Frequency (%)	
Vagino-penile	119(100.0)	124(100.0)	243(100.0)
Anal	2(1.7)	8(6.5)	9(3.7)
Oral	2(1.7)	13(10.5)	15(6.2)
Masturbation	63(52.9)	1(0.8)	64(26.3)
Lesbianism/homosexualism	(0)	1(0.8)	1(0.4)
Use of condom during last sexual activity			
Yes	26(21.8)	81(65.3)	107(44.0)
No	93(78.2)	43(34.7)	136(56.0)
Current no. of sexual partners			
One	114(95.8)	78(62.9)	192(79.0)
More than one	5(4.2)	46(37.1)	51(21.0)

Table 2 shows the sexual practices of the participants. Vagino- penile sex was the commonest sexual practice by both the male and female participants. Sixty-three (52.9%) of the male participants regularly engage in masturbation as against 1(0.8%) of the females. Seven (5.6%) of the female respondents also practiced lesbianism. Two (1.7%) males and 8(6.5%) females practiced anal sex while 2(1.7%) males and 13(10.5%) had ever practiced oral sex. Twenty-six (21.8%) male participants had used condom in their last sexual exercise compared to 81(65.3%)of the females. More females,46 (37.1%) were in sexual relationship with more than one sexual partners compared to 5(4.2%) males. Many of the males, 114 (95.0%) and 78(62.9%) females maintained one sexual partner.

Table 3 Knowledge of STIs according to types by respondents

	Male (%)		Female (%)	
	n = 119		n = 124	
	KP	KA	KP	KA
Gonorrhoea	114(95.8)	5(4.2)	124(100.0)	(0)
Candida	(0)	119(100.0)	65(52.4)	59(47.6)
HIV	103(86.6)	16(13.4)	121(97.6)	3(2.4)
Syphilis	39(32.8)	80(67.2)	16(12.9)	108(87.1)
Chancroids	(0)	119(100.0)	(0)	124(100.0)
Chlamydia	(0)	119(100.0)	(0)	124(100.0)
Trichomonas	(0)	119(100.0)	7(5.6)	117(94.4)
HPV	1(0.8)	118(99.2)	4(3.2)	120(96.8)
Genital warts	3(2.5)	116(97.5)	2(1.6)	122(98.4)
HBV	(0)	119(100.0)	1(0.8)	123(99.2)

Key: KP = Knowledge present, KA = Knowledge absent

Table 3 shows the distribution of students' knowledge of sexually transmitted diseases (STIs) according to types. All the 124 (100.0%) female and 114(95.8%) male participants knew Gonorrhoea to be a STI. Sixty five (52.4%) female participants were aware that Candida organisms can be acquired as a STI while no male participant knew that. A good number of the participants; 103 (86.6%) males and 121(97.6%) females knew that HIV can be transmitted during sexual contacts. Thirty nine (32.8%) males compared to 16(12.9%) females recognized syphilis as a sexually transmitted infection. None of the participants recognized Chancroids and Chlamydia as STI. Seven (5.6%) and 1(0.8%) females recognized Trichomonas and HBV respectively as

STI while no male participant recognized either. Three (2.5%) males and 2(1.6%) females knew Genital herpes as STIs while the rest did not.

Table 4 Awareness of preventive measures of STIs by methods among the respondents

	Male (%)		Female (%)	
	n = 119		n = 124	
	KP	KA	KP	KA
Condom use	117(98.3)	2(1.7)	120(96.8)	4(3.2)
Abstinence	119(100.0)	(0)	72(58.1)	52(41.9)
Faithfull to one uninfected partner	93(78.2)	26(21.8)	109(87.9)	15(12.1)
Avoid sex with CSW	108(90.8)	11(9.2)	88(71.0)	36(29.0)
Reduce no. of sexual partners	91(76.5)	28(23.5)	122(98.4)	2(1.6)
Delay sexual activities until after marriage.	79(66.4)	40(33.6)	97(78.2)	27(21.8)
Use of antibiotics before or after sex	112(94.1)	7 (5.9)	123(99.2)	1(0.8)

Key: KP = Knowledge present, KA =Knowledge absent

As shown in table 4, use of condom during sex was known method of preventing STI among 117(98.3%) male and 120(96.8%) female participants while abstinence was known by 119(100.0%) male and 72(58.1%) female participants respectively. Other known methods of prevention of STI and their frequencies among the participants were; Faithfulness to one uninfected partner -93(78.2%) males & 109(87.9%) females, avoidance of sex with CSW;108(90.8%) males & 88(71.0%) females; reduction of number of sexual partners;91(76.5%) males & 122(98.4%) females; delayed onset of sexual activities;79(66.4%) males and 97(78.2%) females while 112(94.1%) male and 123(99.2%) female participants believed that use of antibiotics tablets before or after sex can protect against STIs.

IV. Discussion

Nigeria, like in most developing countries, prevention and control of sexually transmitted infections (STI) among the adolescent group is of very low priority to the policy makers. As a result of this, many of these adolescents engage in risky sexual behaviours that increase their vulnerability of acquiring sexually transmitted diseases (STIs) with attendant health related complications. Lack of awareness of the problems of STIs, their complications and the reluctance of public health policy makers to deal with diseases associated with sexual behavior have all played a role in this neglect(13).However, factors that motivate young people to initiate and sustain sexual activities are varied but included poverty, peer influence and other societal variables.

The result of this study showed that almost 60% of the participants were either sexually initiated or active with slight female preponderances (51% versus 49%). This figure is higher than figures obtained in other Niger Delta cities such as 14.7% in Calabar(14), 25.7% in Port Harcourt (15) and 58.0% in Asaba(16). The high figure in our study may be due to the fact that Uyo the capital city of Akwa Ibom State being the highest producer of Crude oil in Nigeria also witness high commercial activities with a lot of immigrants settling in the city, in some cases without their spouses. High immigrant population build up has been shown to promote prostitution and commercial sex trade(10). The high level of sexual activities among adolescents obtained in this study, portents ill for the current drive at controlling the spread of STIs and HIV/AIDS in this sub region. With this trend it is doubtful if significant achievements would have been made in achieving Millennium Development Goal -6 which focuses on combating HIV/AIDS in particular in this region by the end of 2015. Another reason for high sexual activities among the adolescents in this region may be related to the level of poverty in one hand and decline in social values in the other hand. Poverty has been identified as a major cause of the sexual risk-taking behaviour that predisposes young people in Sub-Saharan Africa to sexually transmitted infections and diseases(17), including HIV/AIDS, as well as unplanned pregnancies. In most cases, sex in such instance is traded as a commodity for financial gains or other supports(18). Attitudes to sexual practices especially among the youths and adolescents have been of great concerns as the world battles with STI/HIV control(16). Many studies have reported high prevalence of STI/HIV among the youths and adolescents as a result of their un-mindful sexual exposures (19-21). It has been shown that Nigerian secondary school students are now becoming more sexually active at much earlier age than in time past(22). This implies that the number of vulnerable adolescents may indeed be astronomical with equally matched consequence of other reproductive health outcome including early unplanned pregnancy, school dropout and development of vesico-vaginal fistulae during or after complicated childbirth(23).

The commonest sexual practice among the respondents was peno-vaginal. This is similar to reports in other studies(22). More female than male respondents practiced anal sex, oral sex and same sex relationship. Anal and oral sex by adolescents in this study may actually be a planned experience. Further studies are necessary in order to explain their motives for this sexual experience. This could be due to the fact that they may be less able to negotiate and make decisions about the timing and conditions of sex with their partners since in most cases there are either cross-generational sexual relationships or coercive sex in exchange for money and gifts(24). In such instance therefore they may not be able to

negotiate safe sex practices with these older folks. STIs have been found to be more prevalent in young people who practice anal and same sex relationships (25-26). The results of this study highlight several key issues that merit further consideration by practitioners, teachers, parents, the community and peer educators. Since youth sexual behavior is interrelated, intertwined and influenced by a multitude of factors, intervention should target the individual, family and peer determinants rather than focusing on isolated individual behaviors (27). Although a numbers of adolescent girls may consent to sexual activities for various gains, many others are coerced or even raped by older males. Sadly enough due to harsh societal reaction to sexual issues in this region, many of them may prefer not to report such offences hence making it even more difficult to determine the actual burden of adolescents sexual issues in our environment. The reality must be admitted therefore that this group of young Nigerians composes a risk and reservoir for STIs/HIV infection spread in this endemic area. There is overwhelming evidence from studies in developed and developing countries acknowledging that addressing the sexual activity of adolescents and meeting their sexual health needs with targeted education and preventive care services can help in reducing risky sexual behaviours, HIV spread and other consequences (28)

An important finding is that despite non use of condom during sexual intercourse, as much as 37.1% of the female respondents and 4.2% of the male respondents had more than one sexual partner at the time of this study which translates into 21.0% of the 243 sexually active adolescents studied. This figure is however a little lower than 22.6% obtained by Etuk et al in Calabar(29). This may be due to the increasing cultural and religious restrictions in this region on use of all kinds of contraceptives because of its perceived promotion of sexual promiscuity and permissiveness (30). This implies that the adolescents may not boldly request for contraceptive device in a sales outlet for fear of being stigmatised. In line with these cultural views about contraceptive use in this region, principally, family planning services are directed at adults in stable marriage relationship to the serious disadvantage of the single adolescents (30).

This study also showed that the participants' knowledge about gonorrhoea, HIV and syphilis as sexually transmitted diseases was good. This is not unexpected. Gonorrhoea and syphilis for instance are among the earliest known STIs in the world although relatively uncommon today in most communities in Nigeria. HIV on the other hand remains a topical issue known to the young and the old as a pandemic threatening man's existence and hence their knowledge. However, their knowledge about other STIs including Chlamydia, HBV, HPV etc was unsatisfactory. Lack of knowledge among the respondents could result in avoidable sequelae. Good enough, these sequelae are preventable through healthy sexual practices. This finding further suggests the absence or ineffective targeted information plan by policy makers on adolescent's reproductive health matters.

A good number of the respondents had good knowledge about preventive methods for the STIs assessed. This included use of condom (male-98.3%, female-96.8%), abstinence (male-100.0%, female-58.1%), being faithful to one partner (male-78.2%, female-87.9%), avoidance of sex with CSW (male-90.8%, female-71.0%), reduction of number of sexual partners (male-76.5%, female-98.4%) and delay of sexual activities until after marriage (male-66.4%, female-78.2%). Worthy of note is the fact that as much as 41.9% of the female respondents did not know that abstinence could protect against STIs despite the widely promoted and generally acceptable benefits of abstinence in preventing pregnancy and sexually transmitted infections.

It was also found out that as much as 94.1 % of the male respondents and 99.2% of the female respondents believed that taking antibiotics before or after sexual outing can be used as a method of preventing STIs. This practice has a tendency of providing false security while engaging in risky sexual activities. No doubt, this practice is promoted by the fact that in Nigeria, there is no control of antibiotics availability, purchase and use/misuse (31-32). Studies have shown that in most cases such medication are likely to be low dose and inappropriate in terms of duration of use thereby providing no protection (33). This practice could cause development of resistance by disease-causing bacteria which invariably may promote persistence of sexually transmitted infections and its complications which could be life altering later in life.

Study Limitation

Like in most studies on sexuality, this study relied on the respondents' self-reports of their sexual experiences, behaviours, and hence information bias may resulted due to either under/or over-reporting of their true experiences. However, efforts were made to maintain privacy and confidentiality to ensure freedom of participation and response to questions to minimize this bias. Finally, the sampling technique used to select eligible participants from the selected schools may have affected the findings.

V. Conclusion

The study has shown that sexual activities and risky practices are high among the upper grade secondary school adolescents in a typical Niger Delta city of Nigeria. It also showed that the adolescents have good knowledge about common STIs and acceptable methods of preventing them as well as unacceptable method like use of antibiotics. There is need therefore to introduce and strengthen adolescent sexual health education and other broad-based interventions in the secondary school curriculum in this environment. This might play an important role not only in educating them about risky sexual practices but also in correcting some myths about sexual practices.

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