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Afr. J. Biomed. Res. Vol. 22 (May, 2019); 135- 143

Research Article

Sexual Behaviour of In-school Rural Adolescents in Ogun State, Nigeria

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ABSTRACT

Adolescent sexual activities present health risks which can lead to negative reproductive health outcomes. This study assessed knowledge of, attitude to, sexual coercion experiences of, and confidence in adopting safer sex methods among in-school rural adolescents in Akute, Ogun State, Nigeria. This was a descriptive cross-sectional study (279 in-school adolescents ;108 males and 171 females). Knowledge attitude and practise questionnaire (Interviewer-administered) was used to assess socio-demographic characteristics, sexual coercion experiences and safer sex behaviour adopted. Frequencies was described and bivariate analysis between socio-demographic factors and adolescents' sexual behaviour was calculated at $p < 0.05$. Respondents mean age was 13 ± 2.4 years with majority being female. About 71% of the respondents who had prior sexual experience had an unplanned sexual debut and 64% have more than one sexual partner. About 84% of the respondents reported adopting abstinence as a safe method of sexual activity. About one-third learnt about sex from their peers and through social media. Gender, age, level of education, family type, place of residence and parents' occupation were significantly associated with respondent's sexual behaviour. It can be concluded from this study that at least one out of every four in-school adolescents in Akute, Ogun State is sexually active and most likely to engage in unsafe sexual practices.

Keywords: health risks, in-school adolescents, rural, sexual behaviour

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Received: January 2019; Accepted: April, 2019

Abstracted by:

Bioline International, African Journals online (AJOL), Index Copernicus, African Index Medicus (WHO), Excerpta medica (EMBASE), CAB Abstracts, SCOPUS, Global Health Abstracts, Asian Science Index, Index Veterinarius

INTRODUCTION

Adolescent sexual activity in sub-Saharan African countries is often described by a high level of premarital, frequent short-term and multiple sexual relationships combined with inconsistent, incorrect or non-use of contraceptives, especially condoms. Other defining features include their susceptibility to sexual violence, sexual exploitation, sexual coercion and abuse (Ajuwon, 2012; Odimegwu *et al.*, 2013; Taiwo *et al.*, 2017; Jayasinghe *et al.*, 2017). Adolescents are still faced with prevalent issues, such as proper sex education, inability to negotiate sexual decisions and poor assertiveness skills. Therefore, they are at high risk of contracting Human Immunodeficiency Virus (HIV) and other Sexually

Transmitted Infections (STIs). Adolescents with poor reproductive health knowledge are less to protect themselves from STIs, including HIV and unintended pregnancies (Marston *et al.*, 2013; Baussano *et al.*, 2017).

Some studies (Nasawa *et al.*, 2010; Akokuwebe *et al.*, 2015; Shrestha *et al.*, 2016) have revealed that adolescents are at risk of negative health consequences associated with early and unsafe sexual activities; and these consequences include infection with HIV, other STIs, abortion-related complications and unintended pregnancies. The sexual and reproductive health of adolescents are priorities in many developing countries, because high fertility transitions remain a concern and births to adolescents are increasing with its significant contributions to rapid population growth. Hence,

the reproductive health problems arising from risky sexual behaviour of in-school adolescents affect their physical health, as well as long-term emotional and social well-being (Marston *et al.*, 2013; Onybuchukwu *et al.*, 2015).

Premarital sexual intercourse among in-school adolescents increases health risks, leading to various sexual and reproductive health problems, including HIV/AIDS and other sexually transmitted infections (STIs), early motherhood, unwanted pregnancy, induced abortion, maternal mortality and other reproductive morbidity (Ajuwon, 2011; McLay, 2013; Akokuwebe *et al.*, 2015; Bankole *et al.*, 2015; Jayasinghe *et al.*, 2017). There are persuasive factors, such as early onset of first menstruation among females, early initiation of sexual debut through elusive compulsion by their partners (Fagbamigbe *et al.*, 2011; Eze, 2014; Ugoji, 2013), an extended socially-defined period of adolescence, globalization and modernization, as well as increased educational opportunities, increased proportion of sexually active unmarried adolescents, low and ineffective use of contraception, delayed age at marriage, and eroding of the traditional family values. All these have placed restraints on sexuality and have been documented in many studies as influential dynamics in Nigeria and elsewhere (Adeokun *et al.*, 2009; Osaikhuwuomwan *et al.*, 2013; Oke, 2016). In Nigeria, studies have shown growing rate of premarital sex and decline in age of sexual debut among adolescents (Bankole *et al.*, 2015; Nnebue *et al.*, 2016; Odimegwu *et al.*, 2018). Engaging in high-risk sexual behaviour without protection plays a major role in the upsurge of the prevalence of HIV/AIDS and other STIs in adolescents (Ajuwon, 2012; Adeomi *et al.*, 2014; Arulogun *et al.*, 2016).

In many parts of the world, adolescents' sexual behaviors remain poorly understood, especially in Africa countries, where sexual and reproductive health matters are difficult to discuss with adolescents (Olubunmi, 2011; Abiodun *et al.*, 2016). In Nigeria, a national health policy was developed to address Sexual and Reproductive Health (SRH) needs of adolescents, because of high burden of early risky sexual debut, unintended pregnancies, HIV/AIDS and other STIs among adolescents (Shivaram *et al.* 2011; Blum, 2016). Health programmes have been seen not to address adolescents' unmet needs or implemented along with school curriculum owing to social and cultural factors. Sexuality education has been a contentious argument, as parents are not free with their children to discuss sexuality matters, because culture and traditional beliefs inhibit such mediums (Asampong *et al.* 2013; Bankole *et al.* 2015; Abiodun *et al.*, 2016). This has accounted for adolescents' predisposition to all forms of STIs including HIV, unplanned pregnancies and unsafe abortion practices with associated complications (Asampong *et al.*, 2013; Bankole *et al.*, 2015; Blum, 2016).

The 2008 Nigerian Demographic and Health Survey (NDHS) findings revealed that women aged 15-19 years were highest among those who had engaged in higher risky sexual intercourse; while women aged 15-24 years had engaged in sexual intercourse with two or more sexual partners, and 6% of young men aged 15-24 years had initiated sexual activity before age 15. One of the consequences of adolescents' involvement in risky sexual behaviour is reproductive mortality and morbidity from STI/HIV, unwanted pregnancies

and unsafe abortion-related complications (Olugbenga-Bello *et al.*, 2009; Adeomi *et al.*, 2014). About one out of every five in-school girls have ever been pregnant and 60% of all abortions in Nigeria are attributed to adolescents (UNAIDS, 2011). Hospital-based studies have revealed that about 80% of Nigerian patients with abortion-related complications were adolescents and about one-third of women obtaining abortions were adolescents (Grimes *et al.*, 2006; Ikeako *et al.*, 2014).

In addition, a large proportion of the world population is made up of adolescents (Blum, 2016); more than 22% of Nigerians are adolescents and more than half of them dwell in rural communities (Abiodun *et al.*, 2016). Yet, their SRH needs have not been adequately addressed because of poor misconceptions about HIV/AIDS, early and unprotected sexual activities; which are still prevalent among rural adolescents. Therefore, this study was conducted to determine the knowledge of, attitude to, sexual coercion experiences of, and confidence in adopting safer sex methods among in-school rural adolescents in Akute, Ogun State, Nigeria. This was to create appropriate explicit awareness health programmes that will inform on the negative outcomes of sexual behaviour among adolescents in rural communities in Nigeria.

MATERIALS AND METHODS

Study Design, Population and Location

This was a descriptive cross-sectional study conducted among senior secondary school (SS 1 – 3, that is, grades 10 – 12 high school) students from two public schools in Akute, Ifo Local Government Area (LGA) of Ogun State, Nigeria. Akute is a rural community located in Ifo LGA of south-west of Nigeria. Akute has four government secondary schools.

Selection of Respondents

Adolescents aged between 10 and 19 years, as defined by WHO (2004) and UNAIDS (2004), were sampled from two secondary schools. In this study, an adolescent is any male or female between the ages of 10 and 19 (early adolescence is 10-14 years; and late adolescence is 15-19 years). Only two out of the four secondary schools were used for the research because the managements of the other two schools did not give permission to the researchers to carry out the research in their schools.

Data Collection Procedure

A pretested, semi-structured, interviewer-administered questionnaire was used to obtain data on socio-demographic characteristics, sexual coercion experiences and adopting safe sex behaviour among the respondents. Knowledge and attitude levels were assessed by using the WHO (2008) knowledge, attitude and practice (KAP) survey questions. Within the schools, stratified multi-stage sampling and systematic random techniques were employed among the different class strata to select the students, A sample size of 384 (for equal representation of both sexes) using the sample size formula of Lemeshow *et al.* (1990). However, some respondents recruited voluntarily opted out during the

informed consent session of the research, noting that the questions on sexual behaviour were too personal. Overall, 279 copies of the questionnaire were validated and suitable for statistical analysis.

Data Analysis

The data collected were coded and entered into a computer running Epi-Info 2002 software package and analysed appropriately, by using Statistical Package for Social Science (SPSS) version 21. Knowledge level had an overall score of 50 and categorized into three levels – poor (≤ 10), average (between 11 and 25) and high knowledge (≥ 26). Attitude was categorized as negative and positive, where negative attitude was operationalize as ‘attitude rejection’ towards premarital sex and positive attitude was ‘attitude acceptance’ towards premarital sex. Thus, level of attitude with a total score of 45 was grouped into two levels – negative (≤ 15) and positive attitude (≥ 16). Adopting safer sex behaviour was categorized as confident and unconfident. Descriptive statistics, such as mean with their standard, frequency and percentage, were employed as required. Chi-square test was used to compare differences between proportions at 5% level of significance ($p < 0.05$) with its odd ratios.

Ethical consideration

Ethical approval for the study was obtained from the Ogun State Local Government Ministry of Education and Health Institutional Review Board. Also, parents’ assent forms were given to parents through their children and wards to permit them to participate in the study. Informed consent forms were also administered to the students before enrolling them in the study. The school authorities and the respondents were assured of confidentiality in view of the intricacy and sensitivity of the questions contained in the questionnaire, such as age of first sexual debut, number of sexual partners, and type of sexual practices. The respondents were encouraged to answer the questions with utmost sincerity.

RESULTS

Socio-demographic Characteristics of the Respondents:

The mean age of the respondents was 13 ± 2.4 years. The majority (55.2%) of the respondents were within the age of 15 and above. Both sexes were fairly represented and most (61.3%) of them were female and Yoruba (60.9%); others (39.1%) were Igbo, Hausa, Bini, Urhobo, Isoko, Ijaw and Kwale. The majority (59.5%) of the respondents were Christians. Most (44.15) of the respondents were in the second level of the senior class; and a high proportion (66.7%) of them were from the monogamous family structure. More than seventy per cent of the respondents’ parents had secondary school education. A total of 45.5% of the respondents had parents whose major occupation was farming (Table 1).

Sources of open discussion relating to sexuality issues:

Most (70.0%) of the respondents had open discussions relating to sexuality issues with their parents. Only a few sexuality issues, such as menstruation (68.5%), bodily changes (60.0%)

and wet dreaming (40.0%) were discussed with their parents (Fig. 1).

Table 1:

Socio-demographic Characteristics of the Respondents (n = 279)

Characteristics	n (%)
Age (years)	
10 – 14	125 (44.8)
15 – 19	154 (55.2)
Sex	
Male	108 (38.7)
Female	171 (61.3)
Class status	
SS 1	96 (34.4)
SS 2	123 (44.1)
SS 3	60 (21.5)
Religion	
Christianity	166 (59.5)
Islam	102 (36.6)
Traditional	11 (3.9)
Ethnicity	
Yoruba	170 (60.9)
Igbo	09 (3.2)
Hausa	37 (13.3)
Others	63 (22.6)
Place of residence	
Agricultural rural community	149 (53.4)
Industrial rural community	130 (46.6)
Family structure	
Monogamous	186 (66.7)
Polygamous	93 (33.3)
Father’s education	
None	19 (6.8)
Primary	27 (9.7)
Secondary	221 (79.2)
Tertiary	12 (4.3)
Mother’s education	
None	30 (10.8)
Primary	28 (10.0)
Secondary	207 (74.2)
Tertiary	14 (5.0)
Parents’ occupation	
Farming	127 (45.5)
Artisans (in industries)	82 (29.4)
Trading	70 (25.1)

Pattern of Sexually Active Respondents: As presented in Table 2, 48.0% of the respondents had prior sexual exposure and 68.5% of them were males. The first sexual intercourse of about 71% of them was not planned. Most of the methods of sexual activities practised by the respondents were unprotected; however, about 52% of them engaged in other types of sexual behaviour, such as touching/kissing (French kisses) and masturbation. About 64% of them reported to having more than one sexual partner in the last six months. A little above half (53.4%) of them reported that withdrawal method, emergency contraceptives and spermicides are the best methods of adopting safer sex. Unintended pregnancy (26.9%) and addiction to porn films (22.6%) were mostly reported by the respondents as the negative consequences of engaging in sexual behaviour (Table 2).

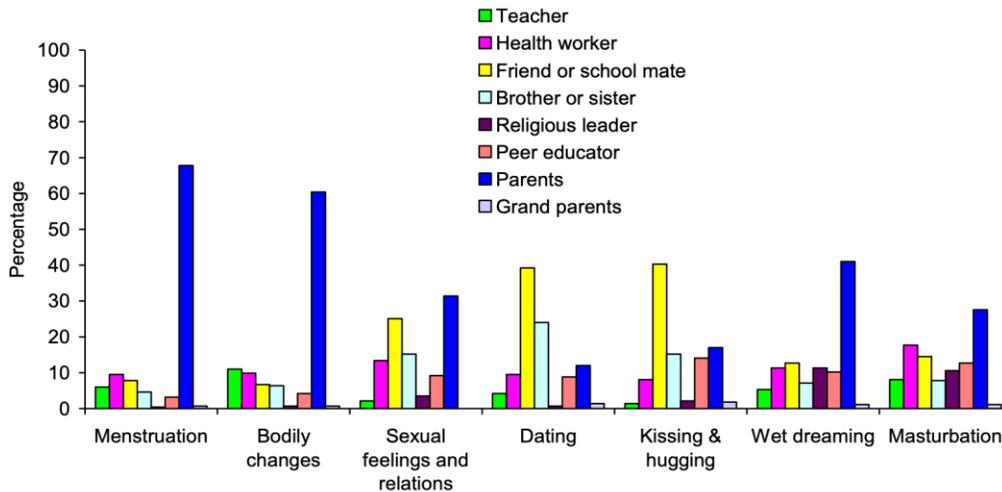


Figure 1: Open discussions on sexuality issues with 'significant others'

Table 2: Pattern of Sexually Active among Respondents

Variables	n	%
Prior sexual experience		
Yes	134	48.0
No	145	52.0
First sexual intercourse		
Planned	39	29.1
Unplanned	95	70.9
Engaged in sexual intercourse in the last six month (pre-survey)		
Yes	39	29.1
No	95	70.9
Frequent method of sex		
Vagina	64	47.8
Oral	46	34.3
Anal	24	17.9
Type of sexuality¹ behaviour engaged in		
Vagina sexual intercourse	64	22.9
Oral sex	46	16.5
Anal sex	24	8.6
Masturbation	68	24.4
Touching/kissing (French kisses ²)	77	27.6
Number of sexual partner in the last six months (pre-survey)		
One	48	35.8
Two	28	20.9
Three	23	17.2
> Three	35	26.1
Best Methods of adopting Safer Sex		
Male condoms	106	38.0
Female condoms	24	8.6
Withdrawal	86	30.8
Emergency Pills	38	13.6
Spermicides	25	9.0
Negative Consequences of engaging in Sexual Behaviour		
Poor academic performance	47	16.8
Unintended pregnancy	75	26.9
Lack of focus on education	38	13.6
Makes me feel more like an adult	25	9.0
Bad peer group influence	31	11.1
Addicted to watching porn films	63	22.6

¹ Sexuality is termed in this study as involvement or interest in sexual activity.

² French kisses means kiss with tongue inserted – A kiss in which one partner's tongue is inserted in the other partner's mouth.

Knowledge of sexuality and sexual behaviour: As presented in Figure 2, 55.9% of the respondents had an average knowledge of sexuality and sexual behaviour, which implies their engagement in pre-marital sexual relationships.

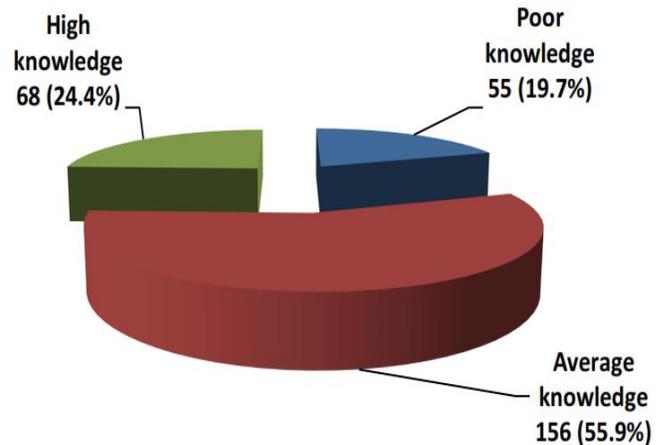


Figure 2: Knowledge of Sexuality and Sexual Behaviour among in-school rural adolescents

Attitude towards pre-marital sex relationship: More than 80.0% of the respondents claimed that adolescent males and females should not engaged in pre-marital sex, as shown in table 3. About 58% of the respondents claimed that adolescents should be given the opportunity to use contraceptives irrespective of their marital status. Most (87.8%) of the respondents asserted that adolescents should be provided with information about sexual and reproductive health services to address their unmet needs (Table 3).

Attitude towards pre-marital sex: The findings on negative attitude on pre-marital sex was self-reported. The level of negative attitude (attitude rejection) towards pre-marital sex observed was 79.6%.

Table 3:

Attitude towards Pre-marital Sex Relationships among in-school rural Adolescents (n = 279)

Variable	n	%
Adolescents female should have sex before she gets married		
Yes	33	11.8
No	246	88.2
Adolescent male should have sex before he gets married		
Yes	39	14.0
No	240	86.0
Adolescent female should get pregnant shortly before marriage		
Yes	73	26.2
No	206	73.8
Adolescents, single should be made to use any contraceptive		
Yes	163	58.4
No	116	41.6
Adolescents should be provided with sexual health information		
Yes	245	87.8
No	34	12.2

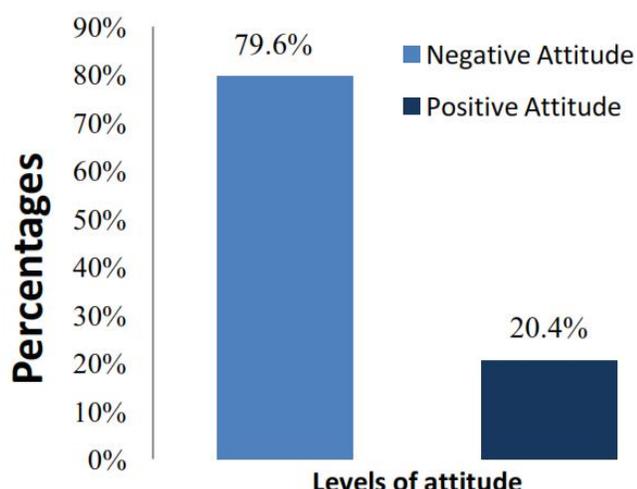


Figure 3:

In-school rural Adolescents' level of Attitude towards pre-marital sex

Table 4:

In-school Adolescents' Experiences of Sexual Coercion (n = 279)

Variable	n	%
Forcefully touching of body parts		
Yes	118	42.3
No	161	57.7
Lured to have sex		
Yes	37	13.3
No	242	86.7
Forcefully kissed against my wish		
Yes	68	24.4
No	211	75.6
Coerced to have sex for exchange of money/gifts		
Yes	11	3.9
No	268	96.1

Self-reported experiences of sexual coercion of the respondents:

As seen in Table 4, over 42% of the respondents reported forceful touching of body parts and 24.4% recounted forceful kissing against their wishes.

Adopting safe sex behaviour among in-school adolescents:

As evident in Table 5, 84.2% of the respondents were confident with discussing with their partners about abstinence, while about 77% were not confident of being faithful to one partner, and 30.5% can convince their partners to consistently and correctly use condoms.

Table 5:

Adopting safe sex behaviour among in-school adolescents (n = 279)

Variable	n	%
Discuss with partner to adopt abstinence		
Confident	235	84.2
Unconfident	44	15.8
Be faithful to one partner as a safer sex behaviour		
Confident	63	22.6
Unconfident	216	77.4
Convincing partner to consistently/correctly use condom		
Confident	85	30.5
Unconfident	194	69.5
Buying a condom from a patient vendor stores or shops		
Confident	116	41.6
Unconfident	163	58.4
Using condom each time for sexual intercourse/activity		
Confident	60	21.5
Unconfident	219	78.5
Decline when your partner request for sexual intercourse		
Confident	172	61.6
Unconfident	107	38.4
Request for safe sex measures from a health facility		
Confident	125	44.8
Unconfident	154	55.2

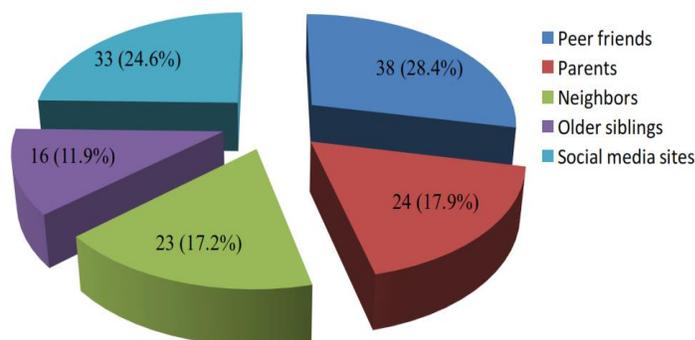


Fig. 4:

In-school adolescents' agents of first knowledge about Sex

Agents of first knowledge about sex

The agents through which the respondents first gathered knowledge about sex is presented in Fig. 4. Majorly, respondents first learnt about sex from their peer friends - 38 (28.4%), and at school and social media sites - 33 (24.6%).

Also, others mentioned that they learnt it from eavesdropping from parents' discussion on sex with older family members - 24 (17.9%), neighbours living next door - 23 (17.2%), and older siblings - 16 (11.9%).

Socio-demographic factors associated with sexual behaviour.

As presented in Table 6, gender, age, level of education, family type, place of residence and parents' occupation were significantly associated with respondent's sexual behaviour.

Table 6:
Socio-demographic Factors with In-school Adolescents' Sexual Behaviour

Variables	Prior or Previous Sex		P-values
	Yes (%)	No (%)	
Gender			
Male	74 (68.5)	34 (31.5)	0.010*
Female	60 (35.1)	111 (64.9)	
Age			
10 – 14 years	52 (49.5)	53 (50.5)	<0.01*
15 – 19 years	82 (47.1)	92 (52.9)	
Class			
JS 1	40 (41.7)	56 (58.3)	0.02*
JS 2	65 (52.8)	58 (47.2)	
JS 3	29 (48.3)	31 (51.7)	
Family			
Monogamous	47 (25.3)	139 (74.7)	0.04*
Polygamous	87 (93.5)	06 (6.5)	
Place of Residence			
Agricultural rural community	107 (71.8)	42 (28.2)	<0.01*
Industrial rural community	27 (20.8)	103 (79.2)	
Religion			
Christianity	87 (52.4)	79 (47.6)	0.613
Islam	42 (41.2)	60 (58.8)	
Traditional	05 (45.5)	06 (54.5)	
Ethnicity			
Yoruba	98 (57.6)	72 (42.4)	0.310
Igbo	04 (44.4)	05 (55.6)	
Hausa	17 (45.9)	20 (54.1)	
Others	15 (23.8)	48 (76.2)	
Father's education			
None	11 (57.9)	08 (42.1)	<0.01*
Primary	15 (55.6)	12 (44.4)	
Secondary	101 (45.7)	120 (54.3)	
Tertiary	07 (58.3)	05 (41.7)	
Mother's education			
None	18 (60.0)	12 (40.0)	<0.01*
Primary	18 (64.3)	10 (35.7)	
Secondary	88 (42.5)	119 (57.5)	
Tertiary	10 (71.4)	04 (28.6)	
Parents' occupation			
Farming	86 (67.7)	41 (32.3)	0.120
Artisans (in industries)	18 (22.0)	64 (78.0)	
Trading	30 (42.9)	40 (57.1)	

Statistically significant at $p = 0.05^*$

DISCUSSION

Adolescent reproductive health issues have been of interest in the last decade due to the prevalence of HIV/AIDS

(Akokuwebe *et al.*, 2015). Researchers have made efforts in finding measures to curb the high prevalence of HIV/AIDS and other STIs among adolescents. The socio-demographic characteristics of in-school adolescents studied were comparable to previous findings in Nigeria (Ugoji, 2013; Amaugo *et al.*, 2014; Abiodun *et al.*, 2016). However, unlike other previous studies, most respondents in this study were from the monogamous family structure and more than half of their parents had secondary education (Olubunmi, 2011; Onyebuchukwu *et al.*, 2015). In this study, about 76 per cent had prior sexual experience, which is similar to the study by Okpani *et al.* (2000) in Port Harcourt, Nigeria, compared to earlier reports that indicated a lower proportion (Oladebo *et al.*, 2000; Morbason-Bello *et al.*, 2008). This can be explained by increased development and resettlement of influx of people from other municipal areas and connected with the poor socio-economic background of the native adolescents.

In-school adolescents who are sexually active had initial sexual exposure at about the same age in Ibadan, like their peers in Delta State, Ilorin and Port Harcourt (Okpani *et al.*, 2000; Ugoji, 2013; Oke, 2016). The male respondents were more sexually active than their female counterparts. However, they both initiated sexual activity at same age. This is similar to the findings from Sunmola *et al.* (2003) and Ugoji (2013). Early sexual debut has been associated with increased risk of cervical cancer (Plummer *et al.*, 2012; Jayasinghe *et al.*, 2017), viral infections such as HIV and human papilloma virus (Shrestha *et al.*, 2016; Baussano *et al.*, 2017), and bacterial infection (gonorrhoea, Chlamydia trachomatis) (Loza *et al.*, 2010; Newbern *et al.*, 2013). Studies have also showed that adolescent with earlier debut tend to have multiple sexual partners (Adefuye *et al.*, 2009; Naswa *et al.*, 2010; Arnold *et al.*, 2012; Marston *et al.*, 2013) and are vulnerable to abortion with complications that can lead to death.

At least, one out of every four in-school adolescents studied was sexually active and most likely to engage in unsafe sexual practices. This is consistent with studies conducted in many other Nigerian cities, which showed in-school adolescents to be sexually active (Fagbamigbe *et al.*, 2011; Nnebue *et al.*, 2016). Most of the sexually experienced respondents in this study admitted that their first sexual exposure was unplanned. This can account for the increased risk of adolescents to STIs and HIV, unintended teenage pregnancies and complications of abortions (Osaikhuwuomwan *et al.*, 2013; Bankole *et al.*, 2015). Most of the respondents, unlike those in other studies, had only one sexual partner (Okonta *et al.*, 2006; Morbason-Bello *et al.*, 2008). Besides, about half of the in-school adolescents in this study engaged in unprotected oral sex and unprotected anal sex. These two unprotected methods have been associated with increased risk of HIV infection and transmission of other STIs, compared with protected vaginal sex (Jenness *et al.*, 2011; McLay, 2013). This can be deduced from the findings that in-school adolescents are practising or engaging in both heterosexual and homosexual activities.

'Denial of reality' was observed in the respondents' attitudes towards pre-marital sex, whereas about half of them were sexually active in the last six months prior to the survey. Most of the respondents first learnt about sexual issues from their peer friends/school mates, and social media sites. Such

sources are not properly channelled in giving the right information on sexuality and reproductive issue to adolescents. Worse still, the parents and other school counsellors are not taking serious steps in incorporating adolescent sex education into the secondary school curriculum. One report indicated that parents are now having courage to discuss more sexual matters with their children than in the past (Asampong *et al.*, 2013). This is a good development, because they will be in a better position to guide their children against unsafe sexual practices.

It can be concluded from this study that at least one out of every four in-school adolescents in Akute, Ogun State is sexually active and most likely to engage in unsafe sexual practices. This makes them vulnerable to various medical complications, including HIV/AIDS, other STIs, and genital cancers. This study also showed that male students are more sexually active than their female counterparts. The denial of reality noticed may increase health risks of individuals that are prone to sexual relations and this calls for proper orientation and educating them on the health outcomes associated with pre-marital sex.

Safe sexual practices should be discussed with adolescents while abstinence and chastity should be advocated in schools. In addition, there should be promotion of youth-friendly forums in schools, where morality, abstinence, and contraception will be discussed, and other diversionary activities, like sports, debate, vocational training, and career development programmes will be encouraged. The responsibility for proper sexual awareness of the youth lies with governments at all levels, parents, and other stakeholders. They should embrace more interventions to address the unmet needs of sexual and reproductive health of adolescents. We recommend an intervention research aimed at providing necessary information on various ways of ensuring safer sexual practices using religious/community leaders amongst in-school adolescents in Ogun State, Nigeria. Efforts should be made by relevant stakeholders to provide rural adolescents with the required sexual and reproductive health information and services to meet their unmet needs.

Acknowledgements

Dr. Monica Ewomazino Akokuwebe acknowledges the support of the National Research Foundation Postdoctoral Fellowship and gratefully acknowledge the support of the Demography and Population Studies Programme, Schools of Public Health and Social Sciences, Faculties of Health Sciences and Humanities, University of the Witwatersrand, Johannesburg, South Africa. Writing of this manuscript was supported by the University of Ibadan Medical Education Partnership Initiative Junior Faculty Research Training Programme (UI-MEPI-J) project funded by Forgyarty International Center, National Institutes of Health (D43TW010140). The content is solely the responsibility of the authors and does not necessarily represents the official views of the funding organizations.

REFERENCES

Abiodun O., Abiodun O.O., Ani F. and Sotunsa O. (2016). Sexual and reproductive health knowledge and service utilization among in-school rural adolescents in Nigeria. *J AIDS Clin Res*; 7 (6): 1-8.

Addoh O., Sng E. and Loprinzi P.D. (2017). Safe sex self-efficacy and safe sex practice in a Southern United States College. *Health Promotion Perspectives*; 7(2): 74-79.

Adefuye A.S., Abiona T.C., Balogun J.A. and Lukobo-Durrell M. (2009). HIV sexual risk behaviors and perception of risk among college students: implications for planning interventions. *BMC Public Health*; 9: 281-294.

Adekun L.A., Ricketts O.L., Ajuwon A.J. and Ladipo O.A. (2009). Sexual and reproductive health knowledge, behaviour and education needs of in-school adolescents in Northern Nigeria. *Afr J Reprod Health*; 13 (4):37-49.

Adeomi A.A., Adeoye O.A., Adewole A., Isreal O. and Temitayo-Oboh A. (2014). Sexual risk behaviours among adolescents attending secondary schools in a Southwestern state in Nigeria. *J Behav Health*; 3 (3): 176-180.

Ajuwon A.J. (2011). Benefits of sexuality education for young people in Nigeria: understanding human sexuality seminar series 3. Africa Regional Sexuality Resource Centre; 2005.

Ajuwon A.J. (2012). Human Sexuality and Adolescent Sexual Behaviour. A textbook for GES 107 Reproductive Health, Sexually Transmitted Infections (STIs) & Human Immunodeficiency Virus (HIV). General Studies Programme, University of Ibadan.

Ajzen I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*; 50:179–211.

Ajzen I. and Fishbein M. (1980). Understanding attitudes and predicting social behaviour.

Akokuwebe M.E., Okunola R.A. and Falayi O.E. (2015). Youths and risky sexual behaviour: a KAP study on HIV/AIDS amongst University of Ibadan student. *European Journal of Social Sciences*; 49 (2): 140-152.

Amago L.G., Papadopoulos C., Ochieng B.M. and Ali N. (2014). The effectiveness of HIV/AIDS school-based sexual health education programmes in Nigeria: a systematic review. *Health Educ. Res.*; 29(4):633–648.

Armitage C.J. and Conner M. (2000). Social cognition models and health behaviour: A structured review. *Psychology and Health*; 15: 173-189.

Arnold R., Maticka-Tyndale E., Tenkorang E., Holland D., Gaspard A. and Luginaah I. (2012). Evaluation of school- and community-based HIV prevention interventions with junior secondary school students in Edo State, Nigeria. *Afr. J Reprod Health*; 16 (2):103–25.

Arulogun O.S., Ogbu I.A. and Dipeolu I.O. (2016). Influence of internet exposure on sexual behaviour of young persons in an urban district of Southwest Nigeria. *The pan Africa Medical Journal*; 25: 261.

Asampong E., Osafo J., Bingenheimer J.B. and Ahiadeke C. (2013). Adolescents and parents' perceptions of best time for sex and sexual communications from two communities in the Eastern and Volta Regions of Ghana: implications for HIV and AIDS education. *BMC Int Health Hum Rights*; 13 (40): 2-11.

Bandura A. (1997). Self-efficacy: The exercise of control. New York: Freeman.

Bankole A., Adewole I.F., Hussain R., Awolude O., Singh S. and Akinyemi J.O. (2015). The incidence of abortion in

- Nigeria. *International Perspectives on Sexual and Reproductive Health*; 41 (4): 170-181.
- Baussano L., Diaz M., Tully S., Munoz N., de Sanjose S., Bosch F.X. and Franceschi S. (2017).** Effect of age-difference between heterosexual partners on risk of cervical cancer and human papillomavirus infection. *Science Direct ELSEVIER Papillomavirus Research*; 3: 98-104.
- Blum R. (2016).** Risk and protective factors affecting adolescent reproductive health in developing countries. *World Health Organization*, 232.
- Conti-Ramsden G., Mok P.L.H., Pickles A. and Durkin K. (2013).** Adolescents with a history of specific language impairment (SLI): Strengths and difficulties in social, emotional and behavioural functioning. *Research in Developmental Disabilities*; 34: 4161-4169.
- Eze I.R. (2014).** Adolescents' attitude towards premarital sex. *Mediterranean Journal of Social Sciences*; 5 (10): 491-499.
- Fagbamigbe A.F., Adebowale A.S. and Olaniyan F.A. (2011). A comparative analysis of condom use among unmarried youths in rural community in Nigeria. *Public Health Research*; 1 (1): 8-16.
- Grimes D.A., Benson J., Singh S., Romero M., Ganatra B., Okonofua F.E. and Shah I.H. (2006).** Unsafe abortion: the preventable pandemic. *The Lancet Sexual Reproductive Health Series*; 4: 1-13.
- Hopf S.M. (2010).** Risk and resilience in children coping with parental divorce. *Dartmouth Undergraduate Journal of Science*. Retrieved from <http://dujs.dartmouth.edu/2010/05/risk-and-resilience-in-children-coping-with-parental-divorce/>
- Ikeako L.C., Onoh R., Ezegwui H.U. and Ezeonu P.O. (2014).** Pattern and outcome of induced abortion in Abakaliki, Southeast of Nigeria. *Ann Med Health Sci Res*; 4 (3): 442-446.
- Jayasinghe Y.L., Sasongko V., Lim R.W., Grover S.R., Tabrizi S.N., Moore E.E., Donath S. and Garland S.M. (2017).** The association between unwanted sexual experiences and early-onset cervical cancer and pre-cancer by age 25: a case-control study. *Journal of Women's Health*; 26 (7): 774-787.
- Jemmott L.S., Jemmott J.B. and McCaffree K. (2001a).** Making a difference: an abstinence-based approach to STDs, teen pregnancy and HIV/AIDS. New York, NY: Select Media Publications.
- Jemmott L.S., Jemmott J.B. and McCaffree K. (2001b).** Making proud choices: a safer sex approach to STDs, teen pregnancy and HIV/AIDS. New York, NY: Select Media Publications.
- Jeness S.M., Begier E.M., Neaigus A., Murrill C.S., Wendel T. and Hagan H. (2011).** Unprotected anal intercourse and sexually transmitted diseases in high-risk heterosexual women. *Am J Public Health*; 101 (4): 745-750.
- Lemeshow S., Hosmer D.W., Klar J. and Lwanga S.K. (1990).** Adequacy of sample size in health studies. Geneva: World Health Organization. 1-5.
- Loza O., Strathdee S.A., Martinez G.A., Lozada R., Ojeda V.D., Staines-Orozco H. and Patterson T. (2010).** Risk factors associated with Chlamydia and gonorrhoea infection among female sex workers in two Mexico-U.S. border cities. *Int J STD AIDS*; 21 (7): 460-465.
- Madsen M.F., Soren B.P.K., Fertner C., Busck A.G. and Jorgensen, G. (2010).** Urbanisation of rural areas: a case study from Jutland, Denmark, *Geografisk Tidsskrift/Danish. Journal of Geography*; 110 (1): 47-63.
- Marston M., Beguy D., Kabiru C. and Cleland J. (2013).** Predictors of Sexual Debut among Young Adolescents in Nairobi's Informal Settlements. *Int Perspect Sex Reprod Health*; 39 (1): 22-31.
- McLay D. (2013).** Update of Section 3, "Scientific research on the risk of the sexual transmission of HIV infection and on HIV as a chronic and manageable infection," in E. Mykhalovskiy, G. Betteridge and D. McLay, *HIV Non-Disclosure and the Criminal Law: Establishing Policy Options for Ontario*, August 2010. A report funded by the Ontario HIV Treatment Network.
- Morbason-bello I.O., Oladokun A., Enakpene C.A., Fabamwo A.O., Obisesan K.A. and Ojengbade O.A. (2008).** Sexual behaviour of in-school adolescents in Ibadan, South-west Nigeria; 12 (2): 89-97.
- Naswa S. and Marfatia Y.S. (2010).** Adolescent HIV/AIDS: issues and challenges. *Indian J Sex Transm Dis*; 31 (1): 1-10.
- National Population Commission (NPC) [Nigeria] and ICF Macro, (2008).** Nigeria Demographic and Health Survey 2009. Abuja, Nigeria: National Population Commission and ICF Macro. New Jersey: Prentice-Hall.
- Newbern E.C., Anschuetz G.L., Eberhart M.G., Salmon M.E., Brady K.A., De Los Reyes A., Baker J.M., Asbel L.E., Johnson C.C. and Schwarz D.F. (2013).** Adolescent sexually transmitted infections and risk for subsequent HIV. *Am J Public Health*; 103 (10): 1874-1881.
- Nnebue C.C., Chimah U.C., Duru C.B., Ilika A.L. and Lawoyin T.O. (2016).** Determinants of age at sexual initiation among Nigerian adolescents: a study of secondary school students in a military barracks in Nigeria. *American Journal of Medical Sciences and Medicine*; 4 (1): 1-7.
- Odimegwu C. and Adedini S.A. (2013).** Do family structure and poverty affect sexual risk behaviors of undergraduate students in Nigeria? *Afr J Reprod Health*; 17 (4): 137-149.
- Odimegwu C., Somefun O.D. and Chisumpa V.H. (2018).** Regional differences in positive sexual behaviour among youth in sub-Saharan Africa. *J. Biosoc. Sci.*; 1-19.
- Oke K. (2016).** Sexual behaviour of adolescents' hawkers in Ilorin Metropolis: the role of socio-demographic predictors. *British Journal of Education*; 4 (9): 15-27.
- Okonta P.I. and Oseji M.I. (2006).** Relationship between knowledge of HIV/AIDS and Sexual Behaviour among In-school Adolescents in Delta State, Nigeria. *Nigerian Journal of Clinical Practice*; 9 (1): 37-39.
- Okpani A.O.U. and Okpani J.U. (2000).** Sexual activity and contraceptive use among female adolescents: A report from Port Harcourt, Nigeria. In: *Africa Journal of Reproductive Health*; 4 (1): 41-47.
- Oladepo O. and Brieger W.R. (2000).** Sexual Attitudes and Behaviour of Male Secondary School Students in Rural and Urban areas of Oyo State. In: *Africa Journal of Reproductive Health*; 4 (2): 21-24.
- Olubunmi A.G. (2011).** Impact of family type on involvement of adolescents in pre-marital sex. *International Journal of Psychology and Counselling*; 3 (1): 15-19.

- Olugbenga-Bello A.I., Adebimpe O.W. and Abodunrin O.L. (2009).** Sexual risk behaviour among in-school adolescents in public secondary schools in a Southwestern City in Nigeria. *Int J health Res*; 2: 243-252.
- Omorodion F., Akpede E., Maticka-Tyndale E., Agbontean-Eghafona K., Onokerhoraye A. and Team H.R. (2012).** The use of National Youth Service Corp members to build AIDS competent communities in rural Edo State Nigeria. *Afr. J Reprod. Health*; 16 (2):71–86.
- Onyebuchukwu I.J., Sholar M.A. and Emerenwa A.B. (2015).** Age, Gender, Religiosity and Family Factors on Sexual Attitude and Behaviour of University of Ibadan Undergraduate Students. *Research on Humanities and Social Sciences*; 5 (6): 130-136.
- Osaikhuwuomwan J.A. and Osemwenkha A.P. (2013).** Adolescents' Perspective regarding Adolescent Pregnancy, Sexuality and Contraception. *Asian Pacific Journal of Reproduction*; 2 (1): 58-62.
- Plummer M., Peto J. and Franceschi S., on behalf of the International Collaboration of Epidemiological Studies of Cervical Cancer, (2012).** Time since First Sexual Intercourse and the Risk of Cervical Cancer. *Int J Cancer*; 130 (11): 2638-2644.
- Shivaram K., Nandini C. and Malleshappa K. (2011).** Knowledge and attitude about reproductive health among rural adolescent girls in Kuppam Mandal: an intervention study. *Biomed Res*; 22: 305-310.
- Shrestha R., Karki P. and Copenhaver M. (2016).** Early Sexual Debut: A Risk factor for STIs/HIV Acquisition among a Nationally Representative Sample of Adults in Nepal. *J Community Health*; 4 (1): 70-77.
- Simon K. (2016).** Practitioner's Guide: Qualitative and Quantitative Approaches to Rule of Law Research. INPROL – International Network to Promote the Rule of Law. Pp. 1-58.
- Sunmola A. M., Dipeolu M., Babalola S. S. and Out A. D. (2003).** Reproductive, sexual and contraceptive behaviour of adolescents in Niger State, Nigeria. *African Journal of Reproductive health*; 7 (11): 37-48.
- Taiwo P.A., Bamidele B.R. and Agbana R.D. (2017).** Knowledge and effect of sex education on adolescents sexual and reproductive health in Oyo State, Nigeria. *Developing Country Studies*; 7 (9): 72-82.
- Thompson C.B. (2009).** Descriptive data analysis: basics of research part 13. *Air Medical Journal Associates*; 28 (2): 56-59.
- Tietjen A. and Jorgensen G. (2018):** There is more to it than meets the eye: strategic design in the context of rural decline. *Transactions of the Association of European Schools of Planning*, 2: 9-31.
- Ugoji F.N. (2013).** Determinants of risky sexual behaviours among secondary school students in Delta State Nigeria. *International Journal of Adolescence and Youth*; 19 (3): 1-6.
- United Nations Programme on HIV and AIDS (UNAIDS), (2004).** United Nations Joint Programme on HIV/AIDS, Seen but Not Heard: Very long adolescents aged 10-14 years. UNAIDS, Geneva; 24: 7.
- United Nations Programme on HIV and AIDS (UNAIDS), (2011).** Join United Nations Programme on HIV/AIDS. Global Report: UNAIDS Report on the Global AIDS Epidemic.
- Woodyard C.D. and Hallam J.S. (2010).** Differences in college student typical drinking and celebration drinking. *J Am Coll Health*; 58 (6): 533-538.
- World Health Organization (WHO), (2004).** Adolescent Pregnancy: Issues in adolescent health and development. Department of child and adolescent health development and department of reproductive health and research, World Health Organization, Geneva. p. 5.
- World Health Organization (WHO), (2008).** Advocacy, communication and social mobilization for TB control: a guide to developing knowledge, attitude and practice surveys. Pp. 49-60.