A Comparative Assessment of Contraception Use Among Secondary School Students in Edo State, Nigeria

*[1-3]Obi, Andrew Ifeanyichukwu and [1-3]Ofili, Antionette Ngozi
Department of Community Health, University of Benin, Benin City, PMB 1154, Edo State[1]; Centre of Excellence for Reproductive Health Innovation, University of Benin, Benin City, PMB 1154, Edo State[2]; Department of Community Health, University of Benin Teaching Hospital, Benin City, PMB 1111, Edo State[3]

Corresponding Author: andrew.obi@cerhi.uniben.edu

ABSTRACT

Background: *Significant secondary sexual growth, hormonal, emotional, cognitive and behavioral changes occur during adolescence. Appropriate and consistent contraceptive use has potential for preventing unwanted pregnancies, reducing abortion and spread of sexually transmitted infections. This study assessed contraception use among secondary school students in Urban and Rural Communities in Edo State, to help raise awareness on need to curb the menace of teenage pregnancy and sexually transmitted infections.*

Methodology: *A comparative analytical cross-sectional study was conducted in Edo State, Nigeria, involving secondary school students in an Urban (n=480) and Rural LGA (n=399) respectively between January to April 2016. Pretested semi-structured interviewer administered questionnaires was utilized for data collection. Data was analyzed using SPSS version 21.0 statistical software, with level of statistical significance set at p<0.050 and 95% Confidence interval.*

Results: *The mean age of urban and rural students studied was 14.24 (± 1.79) years and 15.29 (± 2.61) years, respectively. Two hundred and ninety-three (61%) and 212(53.4%) of students studied in urban and rural communities respectively were sexually active (p=0.018) among which 191(39.7%) and 62(15.5%) of them used contraceptives (p<0.001). In relation to reasons for contraceptive non-usage 222 (76.8%) of respondents in the urban LGA attributed this to contraceptive side effects, 188(65.1%) Religious belief, 176 (61.9%) Cultural belief and 3(1%) reduced pleasure; furthermore 110(32.6%) of respondents in the rural communities attributed religious beliefs as main reason, followed by cultural belief 93(27.6%) and not knowing how to use it 1(0.3%) was the least reason given. Male condom 54(28.3%) and 53(85.5%) was the main form of contraceptive used by students in Urban and Rural LGA studied, with patent medicine store 98(51.3%) and 46(74.2%) reported as main source of commodity in both LGA respectively. Finally, sexual activity (p<0.001) and contraceptive use (p< 0.001) was significantly higher among younger respondents in urban community compared to the older in the rural community studied.*

Conclusion: *Gap was identified between high sexual activity and low contraceptive use among secondary school students. There is need to close this gap through health education guidance in schools and youth friendly centres from trained health personnel*

and teachers on appropriate and consistent use of contraceptives to help curb the risks of teenage pregnancies, unsafe abortions and reduce the spread of STIs. Students must be sensitized, empowered and encouraged to say 'NO' to premarital sex and focus on their studies.

Key Words: *Contraceptive, Edo state, Nigeria, Secondary School, Students, Use.*

INTRODUCTION

Adolescents constitute 18.0% of world population, with 88.0% of them living in developing countries.[1] In Nigeria, they constitute 20.1% of the population and occupy an important and strategic position for health and development initiatives.[2] Significant secondary sexual growth, hormonal, emotional, cognitive and behavioral changes occur during adolescence.[3] Appropriate and consistent contraceptive use has potential for preventing unwanted pregnancies, reducing abortion and spread of sexually transmitted infections (STIs).[4]

Research shows high rate of unprotected sexual activity with low contraceptive use among adolescents in Nigeria, this exposes them to risk for unwanted pregnancies, abortion and STIs with attendant consequences. Furthermore, high rate (17 million) of teenage pregnancy have also been reported among adolescents in low and middle-income countries.[5-7]

Globally, pregnancy complications and childbirth problems are the second leading cause of death among adolescent girls.[8] In 2014, 9.0% of adolescent deaths (16,000) in Africa were attributed to unsafe abortion.[9]

Consequences of teenage pregnancy are enormous and include; early school dropout, poor and reduced self-esteem and hampered social integration due to fear of rejection, victimization from family and significant others, loss of self-confidence, forced marriage, poor job training, gender based violence, vesico-vaginal fistulae from obstructed labour, STIs, suicidal ideation etc.[10-12]

This study assessed contraception use among secondary school students in Urban and Rural Communities in Edo State, Nigeria. This will help raise awareness on need to curb the menace of teenage pregnancy and sexually transmitted infections (STIs).

METHODOLOGY

A comparative analytical cross-sectional study was conducted in Edo State, Nigeria, involving secondary school students in an Urban (Ovia North East) and Rural (Etsako West) LGA respectively between January and April 2016.The secondary school system in Edo State is categorized into day, boarding and a combination of day and boarding, the ownership is spread across the public and private sector. These schools are divided into Junior and Senior secondary division comprising junior secondary 1 to 3 and senior secondary 1 to 3 arms respectively.

The Urban LGA studied is characterized by the presence of a police station, hospitals, schools, good road network with commercial activities while the Rural LGA has limited social infrastructure and amenities in relation to schools and commercial activities. The urban survey was conducted in Army

Day Secondary school Isiohor quarters, Ovia North East LGA while the rural survey was carried out in Ugbenor secondary school students in Irepkai community, Etsako West LGA.

The desired sample size of 859 was determined using the formula[13] for comparing proportion with power factor of 0.842, using contraceptive prevalence from previous studies among secondary students from an urban study in Anambra State, Nigeria (72.9%)[14] and from a rural study in Osun, Nigeria (60.5%).[15] Stratified random sampling technique was utilized to recruit students present in class during the study using interviewer administered pretested semi-structured questionnaire to collect data from the students. The questionnaire was structured into sections addressing socio-demographic characteristics of respondents, awareness of contraceptives, sexual activity and contraceptive use and commodity used. Data collected was sorted for completeness, collated and analyzed using SPSS version 21.0 statistical software, with results presented as prose, frequency, percentages and charts. Quantitative variables such as age were expressed as means and standard deviation, while categorical variables was expressed as frequency and percentages. Chi-Square and Fisher's exact tests were used to analyze the association between socio-demographic variables, sexual activity and contraceptive use. The level of statistical significance was set at $p<0.050$.

Ethical approval for the study was obtained from the Head of Department, Community Health of the University of Benin, Benin City, Edo State. Permission was also obtained from the school principals from the urban and rural secondary schools surveyed before the study was carried out. Verbal assent was also obtained from the respondents prior to commencement of study and confidentiality of information obtained was assured by excluding names and secluding respondents during questioning.

RESULTS

The mean age of urban and rural students studied was 14.24 (± 1.79) years and 15.29 (± 2.61) years, respectively. Two hundred and eighty-nine (60.2%) and 211 (52.9%) of respondents in urban and rural communities studied were female, in relation to ethnic group of students Bini 243 (50.6%) and Etsako 394 (98.7%) were predominant among study participants respectively. Also, in relation to care givers of students studied, parents constituted 385(80.2%) and 338(84.7%) respectively. Three hundred and fifteen (65.6%) and 173(43.4%) of students in urban and rural communities respectively were aware of the term "contraceptives" ($p<0.001$) with the main source of information being television 281(73.6%) and friends 101 (26.4%) for urban students and Friends 75(39.7%), School 72 (38.1%) and the least being parents 3(1.6%). Although, 293(61%) and 212(53.4%) of students in urban and rural communities respectively were sexually active ($p=0.018$), 191(39.7%) and 62(15.5%) of them used contraceptives ($p<0.001$) (See Table 1).

Table 1. Contraceptive Awareness, Usage And Sexual Activity School Students

VARIABLE	URBAN (n=480)	RURAL (n=399)	TEST STATISTIC x^2	*P*
CONTRACEPTIVE AWARENESS				
YES	315(65.6)	173(43.4)	43.744	0.001
NO	165(34.4)	226(56.6)		
SEXUALLY ACTIVE				
YES	293(61.0)	212(53.1)	5.575	0.018
NO	187(39.0)	187(46.9)		
CONTRACEPTIVE USE				
YES	191(39.8)	62(15.5)	62.522	0.001
NO	289(60.2)	337(84.5)		

In relation to reasons for contraceptive non-usage 222 (76.8%) of respondents in the urban LGA attributed this to their side effects, 188(65.1%) Religious belief, 176 (61.9%) Cultural belief and 3(1%) reduced pleasure; furthermore, 110(32.6%) of respondents in the rural communities attributed religious beliefs as main reason, followed by cultural belief 93(27.6%) and not knowing how to use it 1(0.3%) was the least reason given (See Table 2).

Table 2: Contraceptive Use, Sources And Reasons For Non-Usage Among Secondary School Students

VARIABLE	URBAN	RURAL
CONTRACEPTIVE TYPE	**(n=191)**	**(n=62)**
Male condom	54(28.3)	53(85.5)
Female condom	22(11.7)	2(3.2)
Pills	3(1.6)	11(17.7)
Withdrawal	3(1.6)	8(12.9)
SOURCE		
Friends	30(15.7)	11(17.7)
Patent medicine store	98(51.3)	46(74.2)
Partner	46(24.1)	4(6.5)
REASONS FOR CONTRACEPTIVE NON-USAGE	**(n=289)**	**(n=337)**
Religious belief	189(65.1)	110(32.6)
Cultural belief	176(61.9)	93(27.6)
Cost	126(4.2)	3(0.9)
Ease of access	187(64.7)	13(3.9)
	25(8.7)	1(0.3)
Side effect	222(76.8)	4(1.2)
Partner refusal	88(30.4)	4(1.2)
Reduced pleasure	3(1.0)	8(2.4)

Male condom 54(28.3%) and 53(85.5%) was the main form of contraceptive used by students in the Urban and Rural LGA studied, also patent medicine store 98(51.3%) and 46(74.2%) was their main source of commodity in both LGA respectively

Table 3. Factors Associated With Sexual Activity Among Secondary School Students

VARIABLE	URBAN (n=293)	RURAL (n=212)	TEST STATISTIC x^2	*p*
AGE(YEARS)				
10-14	168(57.3)	57(26.9)	55.554	
15-19	124(42.3)	141(66.5)		
	1(0.3)	14(6.6)		
CLASS				
JSS 1	60(20.5)	25(11.8)	92.490	< 0.001
JSS 2	99(33.8)	26(12.3)		
JSS 3	46(15.7)	27(12.7)		
SSS 1	57(19.5)	38(17.9)		
SSS 2	25(8.5)	55(25.9)		
SSS 3	6(2.1)	41(19.3)		
SEX				
Male	124(42.3)	104(49.1)	2.253	0.133
Female	169(57.7)	108(50.9)		
RELIGION				
Christianity	286(97.6)	95(44.8)	186.743	<0.001
Islam	6(2.1)	116(54.7)		
African Traditional Religion	1(0.3)	1(0.5)		
CARE GIVER				
Parents	238(81.2)	182(85.8)	1.891	0.075
Relations	49(16.7)	30(14.2)		
Guardian	6(2.1)	0		

JSS: Junior Secondary School, SSS: Senior Secondary School; ATR: African Traditional Religion

Furthermore, in relation to sexual activity Table 3 shows that younger secondary students and those in junior secondary in the urban LGA had significantly higher sexual activity ($p<0.001$) compared to older students in rural community studied.

Finally, in relation to contraception use Table 4 shows that younger secondary students in the urban LGA reported significantly higher contraception use ($p<0.001$) compared to older students in rural community studied but in contrast the difference in contraception use was significantly higher among rural senior secondary school students than those in urban.

Table 4. Factors associated with contraceptive use among secondary school students

VARIABLE	URBAN (n=191)	RURAL (n=62)		*P*
AGE(YEARS)				
10-14	103(53.9)	5(8.1)	49.803	<0.001
15-19	86(45.0)	49(79.0)		
⩾ 20	2(1)	8(12.9)		
CLASS				
JSS 1	46(24.1)	0(0.0)	115.511	<0.001
JSS 2	63(33.0)	2(3.2)		
JSS 3	30(15.7)	3(4.8)		
SSS 1	30(15.7)	13(20.9)		
SSS 2	21(11.0)	22(35.5)		
SSS 3	1(0.5)	22(35.5)		
SEX				
Male	79(41.4)	35(56.5)	4.306	0.038
Female	112(58.6)	27(43.5)		
RELIGION				
Christian	186(97.4)	22(35.5)	124.350	<0.001
Islam	4(2.1)	39(62.9)		
ATR	1(0.5)	1(1.6)		
CARE GIVER				
Parents	145(75.9)	50(80.6)	1.858	0.395
Relative	41(21.5)	12(19.4)		
Guardian	5(2.6)	0(0.0)		

Note: JSS - Junior Secondary School, SSS: Senior Secondary School; ATR: African Traditional Religion

DISCUSSION

This study shows that urban secondary school students were significantly younger in their early teens compared to their rural counterparts who were more in their late teens. This is in contrast to findings from a study done in Port-Harcourt, Nigeria where the majority of the respondents studied were in their late teens[3]

This finding may be as a result of earlier school enrolment and educational exposure and opportunities available in urban communities compared to their rural counterparts. Late enrolment into schools may eventually lead to late entry into the labour market and this economic opportunity and contribution to development. About two-thirds of the respondents in the urban community were females compared to half in the rural community. This finding is similar to a study done in Ekpoma, Nigeria where most of the respondents in the urban community were females.[12]

This finding is very encouraging signifying an increase in school enrolment for the girl child and a good drive to actualizing SDG 5, but the significant lower proportion of female students in rural secondary school brings to the fore the disparity and gap in educational opportunity available across community divide in Edo State and by extension Nigeria which needs to be addressed. This disparity may be due to less priority on female education with more emphasis on farming and trade in rural setting compared to urban. This may pose some challenge in their contribution to societal development and hinder sustainable development goal (SDG) 5 which aims to achieve inclusive and equitable quality education.

Greater than two-third of respondents in the urban area were in junior secondary school compared to more than two-fifth of those in the rural community. This is in contrast to finding from a study carried out in Nsukka, Nigeria, which showed that about three-fifth of students in the urban area were in senior secondary school.[16]

This finding is suggestive of higher student replacement in urban setting compared to rural counterparts which may be due to urban-rural drift of senior secondary school students for senior school certificate examination (SSCE) due to presumed belief that rural location will have lax scrutiny on examination procedures than urban areas, also it could be due to common knowledge that urban school have more teaching staff who are better trained to teach and mentor students in urban schools compared to rural.

The study revealed that most of the respondents in both communities lived with their parents. The result is similar to that of a study done in 2009 in Port-Harcourt Nigeria which showed that a higher proportion of the respondents lived with their parents.[3] This finding could be attributed to the increasing need for parental guidance in the upbringing of their children. In this way the society will have better behaved adolescents who will make positive impact in societal development. Although, awareness of the term contraceptive was significantly higher in the urban school compared to the rural, this was generally poor among students studied. This is in contrast to a study done in Port Harcourt, Nigeria where more than half of the respondents had good knowledge of

contraception[17]. This may be due to their religious belief, poor sex education in families and little or no emphasis on sex education in schools. This poor knowledge of contraception may increase the risks of transmission of STIs, teenage pregnancies and unsafe abortions. This is even more worrisome since the students reported high engagement in sexual activity.

The study identified that students in urban secondary schools were more sexually active compared to their counterparts in the rural school. This finding is similar to a study carried out in Port Harcourt, Nigeria which revealed that most of the students in urban area were sexually activity.[3] The high sexual activity identified may be due to deterioration of societal norms and values, poor parental control, peer pressure and exposure to pornography through social media platforms and internet access on their mobile devices. Furthermore, sexually activity progressively increased among students in senior secondary classes in the rural community compared to their urban counterparts. This is in keeping to findings from a study done in Port-Harcourt in which more senior students reported to be sexually active compared to the junior students. [3]The reason for this finding could be due to increasing age and sexual development seen among students in senior classes.

In relation contraceptive use which was low among students studied compared to their sexual activity, it was observed to be significantly higher among older rural secondary school students compared to the younger students in urban school studied. This is in contrast to a study done in Port Harcourt, which showed contraceptives use in the junior classes was more compared to the senior classes.[17] This is suggestive that the older students in rural setting are older and could have better protective sex negotiation than the younger more vulnerable teenagers who may be more naïve and lack such negotiation skill. This can further endanger them to health risk of unwanted pregnancy, unsafe abortion, sexually transmitted infection and death in extreme cases.

Condom was reported in this study as the most common contraceptive used by students in both communities studied. This is similar to a study done in Anambra State in 2010 where condom was the commonest contraceptive used by the students.[18] This may be due to public campaigns, condom advertisement, reduced technicalities required for usage, easy accessibility and low cost, in addition to its added advantage in reducing the risk of teenage pregnancy, spread of Sexually Transmitted Infections (STIs) [19-20]

More than half of the sexually active respondents in the urban and almost two-third of those in the rural areas that used contraceptives obtained them from patent medicine stores. This finding is similar to a study done in Lagos that identified patent medicine stores as main source of contraceptive used. [21]

This finding may be due to the fact that adolescents in these areas may not readily visit health facilities providing contraceptive services, which may not be available.

Teenagers view health facility providing contraceptive services and commodities as unfriendly and can be too judgmental for them and thus shy away from them even when the need arises, this assumption and concerns of this vulnerable group needs to be addressed through the establishment of youth friendly centers were adolescents can comfortably and readily access contraceptive counseling and commodities without any fear of discrimination.

CONCLUSION

Gaps were identified between high sexual activity among secondary school students and their low contraceptive use in this study. There is need to close this gap through health education guidance from trained minders in youth friendly centres on appropriate and consistent use of contraceptive by this risk group to help curb risks for teenage pregnancies, unsafe abortions and reduce the spread of STIs. Female students must be empowered and encouraged to say 'NO' to premarital sex and the males on the importance and need to "zip up" and face their studies while engaging in constructive activities. But when this fails secondary school students, teenagers and by extension young persons must learn to negotiate and insist on safe sex.

REFERENCES

1. UNFPA. State of the World Population Report,2014. Available from: http://www.unfpa.org/sites/default/files/pub-pdf/EN-SWOP14=Report-Final-web.pdf (cited 1 April 2015).
2. National population commission (NPopC) [Nigeria] and ICF international. Nigeria demographic and health survey. Abuja, Nigeria; National Population Commission and ICF international.2013
3. Okpani AOU. Sexual activities and contraceptive use among female adolescents from Port-Harcourt. Nigeria, African Journal of Reproductive Health.2000; 4(1): 40-7.
4. Gama N. The effects of unplanned pregnancy on female student of the University of Zulu land. A Dissertation submitted in Partial Fulfilment of the requirements for the Master's degree in (community work) in the Social Work Department (Faculty of Arts) at the University of Zululand, 2008
5. Aziken ME, Patrick IO, Ande A. International family planning perspectives.2003; 29(2):84-7.
6. Ogbuji. Knowledge about HIV/AIDS and sexual practice. Afr J Med.Sci.2005; 34 (1): 25-31.
7. World Health Organization. Preventing unsafe abortion Fact sheet no.388.2015 [cited 2016 April 07] Available: http//www.who.int/mediacentre/factsheets/fs388/en/.
8. World Health Organization. Adolescent pregnancy Fact sheet no.364.2014[cited2016April07] Available: http//www.who.int/mediacentre/factsheets/fs3
9. Guttmacher Institute. Factsheet on Abortion in Africa.2015[cited 2016 May 09] Available at https://www.guttmacher.org/fact-sheet/facts-abortion-Africa.
10. Centre for Disease Control and Prevention. Sexually Transmitted

Disease Surveillance (online). 2014 [cited 2016 May 10] Available at: http://www.cdc.gov/std/stat13/adol.html
11. The Alan Guttmacher Institute and UNFPA. Adding it up: The Benefits of Investing in Sexual and Health care. Washington, D.C.200464/en.
12. Idonije BO, Oluba OM, Otamere HO. 'A study of knowledge; attitude and practice of contraception among secondary school students in Ekpoma, Nigeria'. JPCS.2011; 2: 22 – 7.
13. Bonita R, Beaglehole R, Kjellstrom, T. Basic Epidemiology 2nd edition. World Health Organisation.2006; 2(1):80
14. Adogu P, Udigwe I, Nwabueze A, Adinma E, Udigwe G, Onwuasoigwe C, Ubajaka C. 'Factors Influencing Sexual Behaviour among Female Adolescents in Onitsha'. Open Journal of Obstetrics and Gynaecology.2014;4: 987-95.
15. Adedayo OS, Adesegun OF, Donatus S, Olaniyan AB. Condom Use: Prevalence among Rural and Urban Sexually Active Adolescents in Osun state, Nigeria. Science Journal of Public Health.2014; 2(4): 270-74.
16. Ugwuanyi JN. Effects of peer education on awareness and attitude towards HIV and AIDS among in school adolescents.Nsukka education zone.2015
17. Anochie I, Ikpeme E.The knowledge, attitude and use of contraception among secondary school girls in Port Harcourt. Nigerian Journal of Medicine: Journal of the National Association of Resident Doctors of Nigeria.2003; 12(4): 217-220.
18. Duru CB, Ubajaka C, Nnebue CC, Ifeadike CO, Okoro OP. Sexual behaviour and practices among secondary school adolescents in Anambra, Nigeria. Afrimedic Journal.2010;1(2):22-7.
19. Obi AI, Labiran A. Contraceptive usage: Knowledge, Attitude and associated factors among women of reproductive age attending a health facility in Benin City, Edo State British Journal of Medicine and Medical Research. 2015; 9(7):1-13.
20. Kann L,McManus T,Harris WA. Youth Risk Behaviour Surveillance- United States, 2015. MMWR Sureveill Summ 2016; 65 (6):1-174.
21. Chimah U, Lawoyin T, Nnebue C. Contraceptive knowledge and practice among senior secondary school students in military barracks in Nigeria. Nigeria Journal of clinical practice.2016;19 (2):182-88.