ORIGINAL ARTICLE

Sexual Behaviour and Patterns of Contraceptive Use among Students of Tertiary Institutions in Southern Nigeria

Eze GU[1], Obiebi IP[1], Akpofure HE[2]

[1]Department of Community Medicine, Delta State University Teaching Hospital, Oghara, Delta State
[2]Department of Obstetrics and Gynaecology, General Hospital, Ekpan, Delta State

Keywords:

Sexual behaviour, Contraception, Students, Tertiary institutions, Nigeria

ABSTRACT

Background: Proper contraception is a likely panacea to unsafe abortions often complicated by preventable deaths. This study identified sexual behaviours and associated patterns of contraceptive use among students of higher institutions in Delta State, Nigeria.

Methodology: This was a cross-sectional analytic study of 420 students recruited from two higher institutions. Data was collected with a pretested semi-structured questionnaire and analysed using SPSS 22 and winPEPI software solutions to identify significant associations.

Results: Respondents' mean age was 24.4 ± 4.3 years and majority (73.6%) had initiated sex. Mean age at sexual debut was 18.2 ± 4.1 years; it was lower in males than in females (17.6 ± 4.3 vs. 19.1 ± 3.6 years; $p = 0.001$). Two-fifths (40.5%) of those who were sexually active had sex within a week of the study; only 32% had been without sex above 4weeks. Having multiple sexual partners was more common among males, $p = 0.003$; and among those living off-campus, $p<0.001$. Of those who had initiated sex, self-reported use of contraception during the last episode of sex was 70.9%. Condoms, used by 65.3% during last sex were the most preferred and used appropriate method.

Conclusions: High risk sexual behaviour was common among respondents. Knowledge of, and practice of appropriate contraception needs to be improved among participants. Participants may benefit from health promotion activities on consistent use of scientifically proven contraceptive methods and safer sexual behaviour.

Correspondence to:
Dr. I. P. Obiebi
Department of Community Medicine
Delta State University Teaching Hospital
Oghara, Delta State.
Email: irikefewhite@gmail.com
Telephone: 08067315468

INTRODUCTION

Knowledge of contraceptives and their use is an important indicator of sexual health, especially among youths. Sexual behaviours and contraceptive use among youths not only vary across countries and regions, but also vary within a particular country.[1] Youths around the world especially young women experience a high risk of unplanned pregnancies and contracting HIV infection due to their limited knowledge of sexual and reproductive health. Sexual behaviours among youths such as having unprotected sexual intercourse with multiple partners, douching, taking hot drinks to prevent conception can lead to negative outcomes such as unintended pregnancies and the spread of

sexually transmitted infections (STIs).[2] Some young people, who engage in coitus lack adequate knowledge of contraception, are either unable to access family planning services, careless about it or like to experiment.[3] Regardless of the underlying factors, unintended pregnancies could create serious problems. Available data indicates that Nigeria currently has one of the highest maternal mortality rates in the world and a large proportion of these deaths are among young females aged 10-24 years.[4] It has been observed that over 10% of these maternal deaths are due to complications of unsafe abortions.[5]Abortion is usually a response to an unwanted pregnancy that could have been prevented by the use of an effective contraceptive method. The situation is further compounded by the persisting challenge of a high fertility rate of 5.5% and an annual growth rate of 3.2% in the face of a large population size of over 180 million persons.[6, 7]

Despite intense programmatic efforts by the Nigerian government and various agencies to reverse the trend, there is little evidence to suggest a systematic improvement in these indicators.[8] Till date, contraception has not been well consolidated in Nigeria, with evidence from recent NDHS data indicating that only 13.2 percent of sexually active Nigerian women currently practice effective contraception.[7] Use of contraceptives and the effectiveness of the method used to prevent pregnancy are the major factors affecting national pregnancy and birth rates and the ability of women to plan their pregnancies.[9] All these underscore the need for a true understanding of, and proper practice of contraception especially among young people in our environment. Although birth control methods have evolved over many centuries, there still exists in practice a mix of methods; some with clear scientific proof of effectiveness and others without sufficient

evidence to support their continued use. Correct birth control methods practised in our locale include: safe period/calendar method, use of condoms, exclusive breastfeeding, interrupting sex, tubal ligation, vasectomy, oral contraceptive pills, hormonal injections, and intra-uterine device.[10]

Part of the reasons for the poor use of contraception in Nigeria include the persisting pronatalist culture of the people, religious doctrines which discourage the use of contraception, poor availability and distribution of contraceptives and the fear of the side effects of contraceptives amongst women.[11] In particular, the perception that contraception could lead to infertility later in life is one of the reasons that Nigerian women have always cited for not accepting effective contraception.[13] This affirms that many people are still oblivious of the various benefits of proper and consistent contraceptive use. With proper and continuous public enlightenment, contraceptive use among sexually active men and women could increase, and in turn bring about a significant decrease in incidence of STIs since proper use of barrier contraceptive methods is linked with a reduced risk for sexually transmitted infections including HIV.[13] Unawareness of contraceptives and sexually transmitted infections usually account for risky sexual behaviours among young people,[14] however single young adults with adequate knowledge of contraceptives still engage in indiscriminate sex.[15]

Poor contraceptive practices result in unwanted pregnancies which could lead to school drop-outs with a resultant economic dependence in the future both for young fathers and mothers. A study conducted in Nigeria indicates that more than 60% of women with an unplanned pregnancy are not using any form of contraception.[16] Contraceptive use today holds more importance than for just prevention of

pregnancy; and as new mind sets evolve towards sexual practices with their attendant risks, the need for youths to be abreast with facts about the use of contraceptives has become paramount. This study therefore sought to make a contribution to knowledge with the hope that it could stir up rigorous discourse on contraceptive usage by examining the level of awareness of contraceptive methods among students of two tertiary institutions in Delta State and how they practice contraception in relation to their sexual behaviour.

METHODOLOGY

This cross-sectional analytical study assessed sexual behaviours, perceptions and practice of contraception among 420 students of two tertiary institutions in Oghara, Delta State, Nigeria from September to November 2015. Participants were Medical and Nursing students of a university; and Engineering, Banking and Finance, Business Administration, Computer Sciences & Statistics students of a polytechnic whose campuses were in the same vicinity - all who willingly gave written consent were included in the study. Fisher's formula ($N = Z^2 P (1 – P)/d^2$)[17] was used to determine the minimum sample size by using a prevalence of 25.4% for contraceptive use from a previous study conducted among students of higher institutions in Ilorin, Nigeria.[11] A minimum sample size of 296 was obtained after adjusting for a population less than 10,000 (target population was 3,316) using the formula, $N_f = n/(1 + n/N)$ and anticipated non-response rate of 10%.[17] However, the number of participants eventually recruited exceeded the estimated sample size due to *cluster effect* as units/whole class clusters were used as *sampling units* and all consenting individuals in each clusters had to be recruited.

The two schools were chosen purposively as they were both public schools sufficiently close to each other to share the same social and environmental influences. Participants were recruited from each school using Stratified Cluster Sampling Method with proportionate allocation depending on the population of students in each level of study to obtain the desired sample size. Different academic levels (200-400 levels at the polytechnic, and 400 - 600 levels at the medical school) constituted strata. Whole classes or clinical posting units from each level (stratum) were selected by Simple Random Sampling and each selected class represented clusters. All consenting students within each cluster were interviewed.

The questionnaire was structured and original to the study. It was pre-tested among students of College of Education, Warri, Delta State to identify possible blind spots and ambiguities in the questions asked, and to eventually standardize the instrument to ensure reliability. After the pre-test, adjustments were made to fully validate the questionnaire before the survey proper. The questionnaires were self-administered. To provide clarity, reinforce confidentiality and ensure questionnaires were completely filled-in, before data collection, each class was given a pep talk to address the aim of the study and especially to address sensitive questions. Each student consented to being a participant by appending his/her signature to the consent form. A special sealed box termed the *anonymous box* was prepared and placed in front of each class being interviewed for confidential submission (each respondent privately submitted their questionnaire so that their specific responses would not be known to the researchers) of filled-in questionnaires.

Ethical clearance was obtained from the Health Research and Ethics Committee of the Delta State University Teaching Hospital, Oghara Delta State, before embarking on this

study. Questionnaires were checked for completeness, cleaned and data entered into the spread sheet of Statistical Package of Social Sciences (SPSS) version 22 for analysis. The windows Program for Epidemiologists (winPEPI) was used to further analyse extracted data. Level of awareness, availability and use of various contraceptive methods was expressed in frequencies and percentages, while means (with standard deviations) summarized respondents' age at sexual debut. Pearson's and likelihood ratio chi-square as well as Fisher's exact tests were applied to test association. Student t test for two independent samples was applied for testing mean difference in age at sexual debut between male and female sex. Odds ratio was applied to estimate magnitude of association between predictors, sexual behaviour and contraceptive use. A two-tailed *p-value* less than 0.05 was regarded as significant.

RESULTS

Socio-demographic characteristics of respondents

Among all respondents, males were by far the greater proportion, 263 (62.6%). The modal age group of students was 20 – 24 years, 231 (55.0%) and the mean age was 24.4 ± 4.3 years. Most of the students 399 (95.0%) were single; almost all of them, 413 (98.3%) professed Christianity; and a greater proportion of them 250 (59.5%) lived off-campus. While students from various related disciplines were somewhat of equal proportions; overall, students studying non-health related courses were three-fifths, 252 (60.0%) of all respondents. **(Table1)**

Sexual behavior of respondents

Almost three-quarters of all participants, 309 (73.6%) had ever had sex. There was no significant difference between males and females in terms of history of sexual exposure, *p = 0.910.* There was also no significant difference between them in terms of the time since their last episode of sex, *p*=0,151. However, sexual activity among males began significantly earlier than among females, *p=0.041;* and the mean age at sexual debut was significantly lower among males compared to females (17.58 ± 4.31 versus 19.10 ± 3.63 years; *p=0.001).* Early sexual debut was more prevalent among males as a little over a fifth of them, 41 (21.2%) had their sexual debut at or below age 15, while just over one-eight, 15 (12.9%) of females had had coitarche at that same age. The modal age group for male coitarche was 16-19 years, while it was above 20 years for females. The odds of males having more than one sexual partner was over twice that of females, *OR=2.07, p=0.003.* Two-fifths of all sexually active students, 125 (40.5%) had had sex not more than one week prior to study interview; this proportion was higher among males than females (43.5% versus 35.4%). Nearly a third of the sexually active, 99 (32.0%) had been without sex for over a month preceding the interview. (Table 2)

Predictors of sexual behaviour

Nearly half, of all sexually active students 149 (48.2%) have had more than one sexual partner. The odds of having ever had sex, and having more than one sexual partner were more than double for participants living off-campus, (*OR: 2.42, 2.48*). The odds of having ever had sex was also more than double among participants studying non-health related courses, (*OR: 2.13);* they also were more likely to keep more than one sexual partner, although this was not statistically significant, (OR: 1.59, CI: 0.97-2.63). (Table 3)

Respondents' awareness of specific and preferred contraceptive methods

Condoms were the most known, 159 (88.6%), and preferred 97 (31.4%) correct contraceptive method among the sexually active participants. Medical/Nursing students were quite familiar with all contraceptive methods,

70.2% - 94.6%) awareness; while among students of non-health courses, condoms, safe period, OCPs, depot injections, and interrupting sex were the most popular, in that order (22.2% - 84.5%). Quinine and termination of pregnancy was reported as correct contraceptive methods by participants: 17.9% and 6.0% among Medical/Nursing students, and 23.8% and 9.9% among non-health students, respectively.

The proportion of males that preferred condoms and OCPs was higher than compared to females: Condoms - 38.9% vs. 19.0%, OCPs 14.0% vs. 12.9%. Females' preference was higher for all other recommended contraceptive methods. Standing up quickly after sex, douching, and termination of pregnancy were not preferences for any female respondent. **(Tables 4)**

Patterns of contraceptive use among respondents

Nearly a third of the last episode of sex for all respondents, 90 (29.1%) was without deliberate contraception. Almost three-quarters of those with multiple sexual partners 108 (72.5%) used contraceptives during their last sexual episode; however, less than half of them, 67 (45.0%) consistently used contraceptives during every sexual act. The association between consistent use of contraceptives and having multiple sex partners was not significant (*p=0.916*). A higher proportion of males than females used contraceptives during their last act of sex, 72.0% versus 69% but this difference was not statistically significant; (*p = 0.567*). Almost three-quarters of on-campus dwellers, 79 (73.1%) and students studying health-related courses, 81(74.3%) used contraceptives during their last act of sex, and were generally more consistent with use of contraceptives; but these differences were also not statistically significant; *p>0.05. (*Table 5)

Among those who used contraceptives, condoms were the most used contraceptive method among all respondents, 143 (65.3%). About three-quarters of males, 104 (74.8%); and nearly four-fifths of students studying health related courses, 63 (77.8%) used condoms during their last episode of sex. Also, almost half of females, 39 (48.8%) used condoms during their last episode of sex.

Interrupting sex was the next most practiced method after condoms, 7.2% of males and 15.0% of females used it during last sexual episode. Other relatively common methods were Safe period (5.8/8.8%) and OCPs (3.6/6.3%) among males and females respectively. Quinine, which is not recommended, was used by a tenth of females at last sexual episode all of whom were studying non-health related courses. A total of 10 (7.2%) participants in non-health disciplines used quinine at their last sex, 5 (3.7%) quickly stood up after sex, 3 (2.2%) took hot drinks, while 4 (2.9%) douched. One participant from the health-related disciplines also douched after last sex. **(Table 6)**

DISCUSSION

The respondents in this study had a mean age of 24.4 ± 4.3 years, with a modal age group of 20-24 years. This age group comprises young adults who may be prone to risky behaviour if not properly guided. Meanwhile, it is a critical period in life during which internalization of good and healthy norms is of utmost importance. The age range in this study is similar to that reported in a study among undergraduates of the University of Ghana to assess their perception of contraceptive.[18] Similar to a study in Ilorin, Kwara State, where 77.6% of respondents had ever had sex,[11]nearly three-quarters, (73.3%) of respondents in this study had ever had sex. Amongst the sexually active, two-fifths (40.5%) had had sex within a week prior to

Table 1: Socio-demographic characteristics of respondents

Variable	Categories	Frequency (n=420) n (%)
Sex	Male	263 (62.6)
	Female	157 (37.4)
Age groups (years)	< 20	23 (5.5)
	20 – 24	231 (55.0)
	25 – 29	136 (32.4)
	30 – 34	18 (4.3)
	≥ 35	12 (2.9)
	Mean ±SD	24.4 ± 4.3
Marital status	Single	399 (95.0)
	Cohabiting	17 (4.1)
	Married	3 (0.7)
	Widowed	1 (0.2)
Religion	Christianity	413 (98.3)
	Others*	7 (1.7)
Residence	On-Campus	170 (40.5)
	Off-Campus	250 (59.5)
Courses	Medicine	84 (20.0)
	Nursing	84 (20.0)
	Engineering	84 (20.0)
	Business admin/Banking finance	84 (20.0)
	Computer science/statistics	84 (20.0)

* Islam, African traditional religion, Free-thinker

Table 2: History of sexual activity among respondents

		Sex of Respondent Frequency (%)			
		Male	Female	Total	
Variable		n = 263	n = 157	n=420	*p-value*
Sexual exposure	Ever had sex	193 (73.4)	116 (73.9)	309 (73.6)	
	Never had sex	70 (26.6)	41 (26.1)	111 (26.4)	*0.910*
		OR = 0.97 (0.62 -1.53)			
		n = 193	n = 116	n=309	
Age at sexual debut (years)	≤ 15	41 (21.2)	15 (12.9)	56 (18.1)	
	16-19	86 (44.6)	46 (39.7)	132 (42.7)	0.041
	≥20	66 (34.2)	55 (47.4)	121 (39.2)	
	Mean ± SD	17.58±4.31	19.10 ± 3.63	18.15 ± 4.13	0.001
No of sexual partners	Multiple	106 (54.6)	43 (37.1)	149 (48.2)	
	One	87 (45.4)	73 (62.9)	160 (51.8)	0.003
		OR = 2.07 (1.29 - 3.31)			
Time since last sexual episode	≤1 week	84 (43.5)	41 (35.4)	125 (40.5)	
	≤1 month	47 (24.4)	28 (24.1)	75 (24.3)	0.151*
	>1 month	54 (28.0)	45 (38.8)	99 (32.0)	
	No Response	8 (4.1)	2 (1.7)	10 (3.2)	

*p value computation excludes non-responses

Table 3: Predictors of Sexual Behaviour among Respondents

		Sexual Practices Frequency (%)					
		Sexual Exposure			Sexual Partner(s)		
Variable		Ever had sex n=309	Never had sex n=111	Total n=420	Multiple partner n=149	One Partner n=160	Total n = 309
Place of domicile (On/Off campus)	Off	201 (80.8)	49 (19.2)	250 (100)	112 (56.0)	88 (44.0)	200 (100.0)
	On	108 (63.5)	62 (36.5)	170 (100)	37 (33.9)	72 (66.1)	109 (100.0)
		OR = 2.42 (1.51 – 3.86)			OR = 2.48 (1.49 – 4.15)		
Course of Study	Non-Health	201 (79.8)	51 (20.2)	252 (100)	105 (52.2)	96 (47.8)	201 (100.0)
	Health	108 (64.2)	60 (35.8)	168 (100)	44 (40.7)	64 (59.3)	108 (100.0)
		OR = 2.13 (1.34 – 3.40)			OR = 1.59 (0.97 – 2.63)		

OR: odds ratio

Table 4: Awareness of contraceptives* and preferred methods of contraception

	Contraceptives Frequency (%)					
	Awareness of Specific types			Preferred Method		
Variable	Health (n = 168)	Non-Health (n = 252)	Total n=420	Male (n=193)	Female (n=116)	Total n=309
Correct methods of contraception						
Condoms@	159 (94.6)	213 (84.5)	372 (88.6)	75 (38.9)	22 (19.0)	97 (31.4)
Safe Period	159 (94.6)	152 (60.3)	311 (74.0)	16 (8.3)	20 (17.2)	36 (11.7)
OCPs	158 (94.0)	129 (51.2)	287 (68.3)	27 (14.0)	15 (12.9)	42 (13.6)
IUDs	141 (83.9)	18 (7.1)	159 (37.9)	2 (1.0)	4 (3.4)	6 (1.9)
Vasectomy	129 (76.8)	18 (7.1)	147 (35.0)	2 (1.0)	3 (2.6)	5 (1.6)
EBF	128 (76.2)	10 (4.0)	138 (32.9)	---	---	---
Interrupting sex	126 (75.0)	56 (22.2)	282 (67.1)	6 (3.1)	5 (4.3)	11 (3.6)
BTL	122 (72.6)	20 (7.9)	142 (33.8)	---	---	---
Body temperature	118 (70.2)	20 (7.9)	138 (32.9)	1(0.5)	1(0.9)	2 (0.6)
Depot injections	107 (63.7)	74 (29.4)	181 (43.1)	4 (2.1)	10 (8.6)	14 (4.5)
Wrong methods of contraception classified as correct						
Quinine	30 (17.9)	60 (23.8)	90 (21.4)	2 (1.0)	6 (5.2)	8 (2.6)
Douching	17 (10.1)	21 (8.3)	38 (9.0)	3 (1.6)	0 (0.0	3 (1.0)
Stand quickly after sex	13 (7.7)	36 (14.3)	49 (11.7)	3 (1.6)	0 (0.0)	3 (1.0)
Termination of Pregnancy	10 (6.0)	25 (9.9)	35 (8.3)	1 (0.5)	0 (0.0)	1 (0.3)
Hot drinks	3 (1.8)	32 (12.7)	35 (8.3)	1 (0.5)	3 (2.6)	4 (1.3)
Nonresponse	---	---	---	50 (25.9)	27 (23.3)	77 (24.9)

*Multiple responses

Table 5: Pattern of Contraceptive Use among Respondents

		Contraceptive Use Frequency (%)				
		During Last Sex		During All Sex		
		Yes[a]	No	Yes[b]	No	Total
Variable		n=219	n=90	n=138	n=171	n = 309
Multiple sexual partner	**Yes**	108 (72.5)	41 (37.5)	67 (45.0)	82 (55.0)	149 (100.0)
	No	111 (69.4)	49 (30.6)	71 (44.4)	89 (55.6)	160 (100.0)
		X^2=0.361, p= 0.548		X^2=0010, p= 0.916		
Sex of respondent	**Male**	139 (72.0)	54 (28.0)	89 (46.1)	104 (53.9)	193 (100.0)
	Female	80 (69.0)	36 (31.0)	49 (42.2)	67 (57.8)	116 (100.0)
		X^2= 0.328, p = 0.567		X^2= 0.330, p=0.565		
Place of domicile	**On campus**	79 (73.1)	29 (26.9)	54 (50.0)	54(50.0)	108 (100.0)
	Off campus	140 (69.7)	61 (30.3)	84 (41.8)	117 (58.2)	201 (100.0)
		X^2= 0.416, p = 0.519		X^2= 1.421, p= 0.233		
Course of study	**Health**	81(74.3)	28 (25.7)	54 (48.6)	57 (51.4)	111 (100.0)
	Non-health	138 (69.0)	62 (31.0)	84 (42.4)	114 (57.6)	198 (100.0)
		X^2=0.964, p=0.326		X^2= 0.949, p=0.330		

[a]70.8% of respondents used contraceptives during their last sexual act;

[b]44.3% of respondents consistently used contraceptives during every sexual act

Table 6: Contraceptives methods used during last sexual episode

	Contraceptives Frequency (%)					
	Method used during last sex					
Variable	Health (n = 81)	Non-Health (n = 138)	Total n=219	Male (n = 139)	Female (n = 80)	Total n=219
Correct methods of contraception used during last sex						
Condoms@	63 (77.8)	80 (58.0)	143 (65.3)	104 (74.8)	39 (48.8)	143 (65.3)
Interrupting sex	5 (6.2)	17 (12.3)	22 (10.0)	10 (7.2)	12 (15.0)	22 (10.0)
Safe Period	5 (6.2)	10 (7.2)	15 (6.8)	8 (5.8)	7 (8.8)	15 (6.8)
OCPs	5 (6.2)	5 (3.6)	10 (4.6)	5 (3.6)	5 (6.3)	10 (4.6)
Depot injections	1 (1.2)	1 (0.7)	2 (0.9)	1 (0.7)	1 (1.3)	2 (0.9)
IUDs	1 (1.2)	0 (0.0)	1 (0.5)	0 (0.0)	1 (1.3)	1 (0.5)
Body temperature	0 (0.0)	1 (0.7)	1 (0.5)	1 (0.7)	0 (0.0)	1 (0.5)
Wrong methods of contraception used during last sex						
Quinine	0 (0.0)	10 (7.2)	10 (4.6)	2 (1.4)	8 (10.0)	10 (4.6)
Stand quickly after sex	0 (0.0)	5 (3.6)	5 (2.3)	3 (2.2)	2 (2.5)	5 (2.3)
Hot drinks	0 (0.0)	3 (2.1)	3 (1.4)	1 (0.7)	2 (2.5)	3 (1.4)
Douching	1 (1.2)	4 (2.9)	5 (2.3)	3 (2.1)	2 (2.5)	5 (2.3)
Non response	0 (0.0)	2 (1.4)	2 (0.9)	1 (0.7)	1 (1.3)	2 (0.9)

interview, and only less than a third had been without sex for a month or over. These statistics indicate a high level of sexual activity among these students, and as such a very good knowledge of contraceptives would be invaluable to their sexual health and wellbeing. A likely underlying factor for the frequency of sexual relations observed among these students was their residing outside school premises as about three-fifths of them lived off-campus and had adequate space and privacy to be involved sexually with other persons. This is substantiated by the fact that more off-campus dwellers had multiple sexual partners. Consequently, participants, especially the females may be subjecting themselves to a higher risk of diseases such as HIV and cervical cancer for which early onset of sex and multiple sexual partners are known risk factors.[19]

The mean age at sexual debut was lower among males than females. This finding is contrary to popular local beliefs and research findings,[20] nonetheless it is also recorded by some local researchers.[21] Early sexual exposure portends repeated episodes of sexually transmitted infections (STIs) as the chances of unstable relationships and hence frequent changes of partners is high.[22] A similar study among university students in China reported a similar mean age at sexual debut of 18years;[22] however a lower age of 16.4 years was reported among youths attending an STI clinic in Tanzania.[23] This is not surprising for an STI clinic, as their early age at coitarche puts them at a disadvantage in negotiating sex, and thus at a higher risk of sexual exploitation. The lower mean age at sexual initiation among males in this study could equally be an indication of illicit sexual activities involving older females. A study in the US by Child Trends, Washington DC on sexual trends among teenagers, had shown that being of the black race and not living with

one's biological parents are predictors among male teenagers of having first sex with an older female.[24]

Nearly half of all sexually active participants had had sex with more than one partner. Males and participants of non-health related disciplines were more prone to this. Related studies have documented risky sexual behaviour among male adolescents,[22, 25] more of whom have several sexual partners,[23] and initiate sex earlier than their female counterparts.[26] These indicate that the sexual behaviour of young males is quite ominous with implications of increased risk of contracting STIs if they do not have proper knowledge of contraceptives – especially condoms. Perhaps engaging them in health promoting activities would be a worthwhile undertaking to stem this tide. However, the reason why more participants of non-health related disciplines had several sexual partners is not immediately evident, but it may be assumed that their access to information on healthy sexual behaviour was limited. A study in the US on the impact of religiosity on health had identified an inverse relationship between access to sex education including abstinence, and the odds of having more than one sexual partner among adolescents and young adults.[27]

Participants of health-related disciplines identified correct methods of contraception significantly better than their counterparts of non-health related disciplines. The difference in general level of awareness of right and wrong methods between them was significant in favour of the former. This is not unexpected as medical and nursing students would regularly have access to health information from lectures, textbooks and clinical training. Condom was the most frequently identified correct method of contraception, while among the wrong methods; ingestion of quinine was the most frequently identified by all

participants. Condoms, more than birth control pills and calendar methods, were the most common among contraceptives used. The higher rate of condom use in this study is comparable to that reported from a previous study in Brazil where only male condoms were used.[28] This may be explained by the fact that information on contraceptives especially male condom is commonplace and the respondents are in a setting where they have access to information from the media or elsewhere. The above assertion is made more plausible by findings from a similar study where exposure to information from media was shown to have a strong positive influence on the use of contraceptive among young people in Nigeria.[29]

Students of non-health related courses identified condoms, oral contraceptive pills and safe periods as correct contraceptive methods quite well. However there may still be a need to strengthen their knowledge along these lines. They would need to be warned about the shortfalls of interrupting sex as a method of contraception as it was the second most used method. The least used amongst the correct contraceptives was body temperature which requires the user to be knowledgeable, sensitive and calculative; thus only highly self-motivated people in stable sexual relationships may rely on this method for contraception. It is quite likely that the only user of that method in this study did not use it correctly. It is worrisome that quite a few participants in this study used inappropriate contraceptive methods like Quinine, hot drinks, douching, and quickly standing up after sex – including students of health-related courses. This unpromising observation further reinforces the fact that some of the participants engage in unhealthy sexual and reproductive health practices which may put them at risk of complications, ill-health and, even death.

Self-reported utilisation rate of contraceptives among the sexually active participants in this study is higher than the national contraceptive prevalence rate of 13.2% reported by the National Demographic and Health Survey of 2013.[7] However not all of them used contraceptives during every act of sex, and less than half (45%) of them consistently used contraceptives. Majority, (70.9%) of the sexually active participants used contraception during their last sexual intercourse. This value contrasts those from a previous study in Calabar, where only 54.8% used contraceptives during their last sexual act[30] and another study in Ilorin in 2009 where only 25.4% had ever used contraceptives.[11] The higher prevalence of contraceptive use in this study could be due to the higher level of education of the respondents in this study; however it is worthy of note that not all participants used appropriate methods.

In this study, condom use was clearly more consistent among males. However, a similar study which explored sexual behaviour and contraceptive use among student nurses in Maiduguri did not establish a definite relationship between contraceptive use and sex.[31] Majority (72.5%) of the participants with multiple sexual partners claimed they used a contraceptive during their last sexual episode – it was most times condoms. They would therefore benefit from this common but highly effective barrier method which not only prevents pregnancy but also protects against the transmission of many deadly infectious diseases when consistently and correctly used. Similar levels of condom use (70%) have also been reported among students in South Africa.[32] This may be due to the fact that condoms are readily available, affordable, safe and easy to use - a fact corroborated by a report from a study carried out in Calabar where condoms were also the commonest contraceptive used, and the main reasons for

use were effectiveness and safety.[12] Thus the predominance of condom as the preferred contraceptive in this study is very valuable.

However, people opine that use of barrier methods of contraception, especially condoms, tend to reduce the spontaneity of sex, and this consequently impedes condom use even when available. It is not surprising that students of non-health related disciplines were more likely to use wrong methods for contraception. Future enlightenment campaigns on this subject should focus appropriately on this group of people.

Conclusion

Gender differences in coital initiation were substantial and earlier for males. Self-reported utilization rate of contraceptives during last sexual act was higher than the national average. Condoms were the most preferred, most available and most used method of contraception. However, a significant proportion of the students used inappropriate methods for contraception. Involvement in risky sexual activities such as having multiple sexual partners, and unprotected sex was high.

Recommendation

Health promotion activities on consistent use of scientifically proven contraceptive methods and the need for participants to modify their sexual behaviour are highly recommended.

REFERENCES

1. Bankole A, Biddlecom A, Singh S, Guiella G, Zulu E. Sexual behaviour, knowledge and information sources of very young adolescents in four sub-Saharan African countries. Afr J Reprod Health. 2007; 11(3): 28-43.

2. Rondini S, Krugu JK. Knowledge , Attitude and Practices Study on Reproductive Health Among Secondary School Students in Bolgatanga , Upper East Region , Ghana. Afr J Reprod Health. 2009; 13(4): 51-66.

3. Aji J, Aji MO, Ifeadike CO, Emelumadu OF, Ubajaka C, Nwabueze SA, et al. Adolescent Sexual Behaviour and Practices in Nigeria : A Twelve Year Review. Afrimedic J. 2013; 4(1): 10-16.

4. Omo-Aghoja L, Abe E. Assessment of Knowledge, Practice and Perception of Emergency Contraception Among Nursing and Midwifery Students in Benin. Trop J Obs Gynaecol. 2008; 517-518.

5. Gharoro EP, Onakewhor JUE. Changing trends in maternal mortality in a developing country. Niger J Clin Pract. 2008; 11(June): 111-120.

6. National Population Commission. Nigeria's population now 182 million - NPC. http:// www.population.gov. ng. Accessed May 22, 2017.

7. National Population Commission (NPC) [Nigeria] and ICF International. Nigeria Demographic and Health Survey 2013. Abuja, Nigeria, and Rockville, Maryland, USA: NPC and ICF International; 2014. http//: www.population.gov.ng/ndhs-data.

8. Sedgh G, Bankole A, Oye-Adeniran B, Adewole IF, Singh S HR. Unwanted pregnancy and associated factors among Nigerian women. Int Fam Plann Perspect. 2006; 32(4): 175-184.

9. Haffey J, Gribble J. Reproductive Health in Sub-Saharan Africa. Popul Ref Bur. 2008; 1-3. www.prb.org.

10. Nwachukwu I, Obasi OO. Use of Modern Birth Control Methods among Rural Communities in Imo State Nigeria. Afr J Reprod Health. 2008;

12(1): 101-108.

11. Abiodun OM, Balogun OR. Sexual activity and contraceptive use among young female students of tertiary educational institutions in Ilorin, Nigeria. Contraception. 2009; 70(2): 146-149.

12. Ozumba BC. Emergency contraceptive knowledge and practice among unmarried women in Enugu, southeast Nigeria. Niger J Clin Pract. 2008; 11(4): 296-299.

13. Jemmott JB, Jemmott LS, Fong JT, Morales KH. Effectiveness of an HIV/STD Risk-Reduction Intervention for Adolescents When implemented by Community-Based Organisations: A Cluster-Randomized Controlled Trial. Am J Public Health. 2010; 100(4): 730-736.

14. Wouhabe M. Sexual behaviour, knowledge and awareness of related reproductive health isuuess among youth in Ethiopia. Afr J Reprod Health. 2007; 11(1): 14-21.

15. Sohn A, Chun SS. Gender Differences in Sexual Behaviour and Condom among Korean Youths. Asian Pacific J Public Health. 2007; 19(2): 45-52.

16. Monjok E, Smesny A, Ekabua JE, Essien EJ. Contraceptive practices in Nigeria: Literature review and recommendation for future policy decisions. Open Access J Contracept. 2010; 1: 9-22.

17. Bonita R, Beaglehole R, Kjellstrom T. Basic Epidermiology. 2nd ed. Geneva: WHO press; 2006.

18. Appiah-Agyekum NN, Kayi EA. Students' Perceptions of Contraceptives in University of Ghana. J Fam Reprod Health. 2013; 791: 39-44.

19. Lucia ASL, Carmita HNA. Age at Time of Initial Sexual Intercourse and Health of Adolescent Girls. J Paed Adolesecent Gynaecol. 2016; 29(5): 417-423.

20. Okafor II, Obi SN. Sexual risk behaviour among undergraduates in Enugu, Nigeria. J Obstet Gynaecol. 2009; 25(6): 592-595.

21. Sofowora R, Salako AA, Iyaniwura CA, Jeminusi OA. Sexual Behaviour, Contraception and Fertility among in-school Adolescents in Ikenne Local Government, South-Western Nigeria. Niger J Clin Pract. 2006; 9(1): 26-36.

22. Ma Q, Ono-Kihara M, Cong L, Xu G, Pan X, Zamani S. Early initiation of sexual activity: a risk factor for sexually transmiited diseases, HIV infection, and unwanted pregnancy among university students in China. BMC Public Health. 2009; 9: 111.

23. Urassa W, Moshiro G, Chalamiilla G, Mhalu F, Sandstrom E. Risky sexual practices among youth attending a sexually transmitted infection clinic in Dar es Salaam, Tanzania. BMC Public Health. 2008; 8: 159.

24. Manlove J, Terry-Humen E, Ikramullah E. Young teenagers and older sexual partners: correlates and consequences for males and females. Perspect Sex Reprod Health. 2006; 38(4): 197-207.

25. Omoteso BA. A Study of the Sexual Behaviour of University Undergraduate Students in Southwestern Nigeria. J Soc Sci. 2006; 12(2): 129-133.

26. Salako AA, Iyaniwura CA, Jeminusi OA, Sofowora R. Sexual Behaviour, Contraception and Fertility among In-school Adlescents in Ikenne Local Government, South-Western Nigeria.

Niger J Clin Pract. 2006; 9(1): 26-36.

27. Haglund, A Kristin, Fehring JR. The association of Religiosity, Sexual Education, and Parental Factors with Risky Sexual Behaviours among Adolescents and Young Adults. Reli Health. 2010; 49: 460.

28. Figueiredo R, Segri NJ. Use of Male Condoms among Adolescents with Free Access at Emergency Contraception - Study among Students from the Public Education System of the Sao Paulo , Brazil. World J AIDS. 2014; 4: 178-186.

29. Bajoga UA, Atagame KL, Okigbo CC. Media Influence on Sexual Activity and Contraceptive Use : A Cross Sectional Survey among Young Women in Urban Nigeria Data and Sample. Afr J Reprod Health. 2015; 19(3): 100-110.

30. Ndifon WO, Ogaji DST, Etuk SJ. Sexuality, Contraception And Unintended Pregnancy Among Female Nursing Student In Calabar Nigeria. Benin J post Grad Med, 2006; 8(1): 19-21.

31. Aliyu U, Mbursa A. Sexual Behaviour and Contraceptive Use among Student Nurses, School of Nursing, University of Maiduguri, Borno State. Niger Guid Couns. 2007; 12(1): 129-139.

32. Pengpid S, Peltzer K. Dual Protection, Contraceptive Use and HIV Risk among a sample of South African Male and Female Students. Gend Behav. 2008; 6(2): 1858-1869.