

Contraceptive Use among Senior Secondary School Students in Abakaliki Metropolis, Ebonyi State, Nigeria

ABSTRACT

Aims: To determine the use of contraceptives among senior secondary school students in Abakaliki metropolis, Ebonyi State.

Study design: A cross-sectional study design was used.

Place and Duration of Study: Public secondary schools in Abakaliki metropolis, between

Methodology: A two-stage sampling method was used to select 400 students from six out of 18 public secondary schools in Abakaliki metropolis. Information was obtained using a pre-tested, interviewer administered questionnaire. Chi square test and multivariate logistic regression were used in the analysis and level of statistical significance was determined by p value of <0.05.

Results: The mean age of respondents was 17.4±2.3 years and majority (51.5%) were females. More than one fifth (21.5%) have been exposed to sexual intercourse. Majority of the respondents (61.8%) were aware of contraception. The major sources of information included school lessons (46.0%) and health workers (40.8%). The contraceptives mostly known included male condom (42.0%), female condom (22.3%) and natural methods (15.3%). Out of 400 respondents, a small proportion (8.5%) have ever used any method of contraception and the male condom, (82%) was the most used method. Logistic regression showed predictors of contraceptive use to include being <18 years (AOR=0.4; 95% CI: 0.2-0.9), being male (AOR=6.0, 95% CI: 2.0-17.7) and being in senior secondary three class (AOR=0.2, 95% CI: 0.1-0.6).

Conclusion: Only a small proportion of the respondents who are sexually active used any method of contraception. With school lectures as the main source of information on contraception, there is need for sexuality education to be part of school curriculum.

Keywords: Contraceptives, Adolescents, Abakaliki, Ebonyi state, Nigeria

1. INTRODUCTION

The reproductive choices made by young people have enormous impact on their health, schooling, employment prospects and overall transition to adulthood [1]. Of major concern to the society is the increasing complexity of the socio-economic, demographic and health consequences of sexuality and fertility behaviour of young people. There is decreasing age of menarche and early onset of sexual activity among young people [1]. The 2018 Demographic and Health Surveys conducted in Nigeria found that among women and men aged 15-19 years, 8.6% of women and 2.4% of men had sexual intercourse before the age of 15 years [2]. As a result of early onset of sexual activity, young people face early unplanned and unprotected sexual intercourse leaving them vulnerable to unwanted pregnancies, unsafe abortions and maternal mortalities [1,3,4]. Use of contraceptives can prevent unwanted pregnancies and unsafe abortions [3]. Also, some contraception methods such as condom usage could protect individuals from sexually transmitted infections (STIs) including HIV/AIDS [5,6]. Despite the enormous benefits, uptake of contraception services still remains low in Sub-

Saharan Africa [5]. According to estimates from demographic survey in Nigeria, current use of any method of contraceptive among sexually active unmarried women, aged 15 – 19 years is 28.3% [2]. The unmet need for family planning among sexually active unmarried women (i.e. have a desire to avoid or delay pregnancy, but are not using any contraceptive method) is 65.6% [2]. The low uptake of contraception services is blamed on many factors in developing countries including religious inclination, risk of misperceptions and negative social norms around premarital sexual activity and pregnancy [7,8]. Others include lack or poor access to adolescent / youth friendly services, non availability of modern contraception services [9-11] and poor adolescent sexual and reproductive health knowledge / skill of teachers and health workers [12].

Family planning through use of contraceptives have been found to promote gender equality and educational and socio-economic empowerment [5], lower health cost and improve health [13,14]. Notwithstanding the stated universal access to contraceptives, global monitoring has centered on women married or in-union; and groups with special needs such as sexually active unmarried young people are often left out [13,14]. Contraceptive continuation over sustained periods of time is not assured and discontinuation usually occurs. Discontinuation is a particularly important issue for young people because they tend to have more limited access than older individuals to contraception commodities, engage in more unpredictable and irregular sexual activity, and are probably less knowledgeable about effective contraceptive use [15]. Findings suggest that success in avoiding unwanted pregnancy often depends not only on the use of a contraceptive but also on access to education, information and health services [15]. Unplanned pregnancies among young people happen despite the best of contraceptive intentions as the effectiveness of young people pregnancy prevention programs remains below desired levels [16]. Also, studies that focused on young people's contraceptive use in Ebonyi State appear to be scarce [17]; and lack of adequate data hinder implementation of formulated policies. Hence, this study aimed to assess contraceptive use among secondary school students in Abakaliki metropolis, Nigeria.

2. METHODOLOGY

The study was carried out in Abakaliki metropolis of Ebonyi State which is one of the five states in south-east geo-political zone of Nigeria. Ebonyi state has 13 Local Government Areas of which two of them are located in the metropolis, namely Abakaliki and Ebonyi Local Government Areas. The inhabitants are mainly of Igbo ethnic nationality and are predominantly Christians. There are eighteen public secondary schools in Abakaliki metropolis of which six are co-educational. Four of the schools are for females only while the remaining are for males. The study was conducted in March 2018.

A cross-sectional design was employed for the study. The study population included students in public secondary schools in Abakaliki metropolis who were in senior secondary classes of two and three who gave their consent to participate in the study.

The minimum sample size for the study was determined by the formula used for simple proportions [18]. A sample size of 400 students was included in the study based on a type 1 error (α) of .05, a tolerable margin of error of .05 and the proportion of 39.7% [19]. This referred to the proportion of secondary school students that have ever used contraceptives among from a previous study.

The sample size formula for simple proportions was given as $n = \frac{z^2 pq}{d^2}$

Where:

n = the minimum sample size

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

P = the proportion of students of secondary school students that have ever used contraceptives from a previous study which was 39.7% [19].

q = 1-p

d = degree of accuracy desired which is set at .05

A two-stage sampling technique was used to select the respondents for inclusion in the study. In the first stage, a simple random sampling technique by balloting was used to select six of the eighteen public secondary schools in the metropolis. In the second stage, a systematic sampling technique was used to select the respondents. Each of the six selected schools contributed an average of eighty students for the study. In each of the selected schools, the number of students in senior secondary class two and three who were present on the day of data collection formed the sampling frame. By dividing this number by eighty, a sampling interval was obtained for each of the selected schools. The index student in each of the schools was selected by a simple random sampling technique by balloting.

A pre-tested semi-structured questionnaire which was developed by the researchers was used for the study. The questionnaire was pre-tested among forty students in two secondary schools in another local government area of the

state, (Afikpo north) not selected for the study. The questionnaire was interviewer administered. Six research assistants went trained on the use of the study tool by the researchers.

Data entry and analysis were done using IBM Statistical Package for Social Sciences, version 22.0. Frequency tables and cross-tabulations were generated. Chi square test of statistical significance and multivariate analysis using binary logistic regression were used in the analysis and the level of statistical significance was determined by a p value of $<.05$. In determining the predictors of contraceptive use, variables that had p value of $\leq .2$ on bivariate analysis were entered into the logistic regression model. The results were reported using adjusted odds ratios (AOR) and 95% confidence interval; and level of statistical significance was determined by a p value of $<.05$.

3. RESULTS AND DISCUSSION

RESULTS

The mean age of respondents was 17.4 ± 2.3 years and 263 (65.8%) were less than 18 years old, 206 (51.5%) were females and 261 (65.3%) lived with their parents while 32 (6.0%) lived with their guardians. (Table 1)

Table 1: Socio-demographic characteristics of respondents

Variable	Frequency (n=400)	Percent
Age of respondents		
Mean \pm (SD)	17.4 \pm 2.3	
Age of respondents in groups		
< 18 years	263	65.8
\geq 18 years	137	34.3
Class of study		
Senior secondary two	221	55.3
Senior secondary three	179	44.7
Sex		
Male	194	48.5
Female	206	51.5

Ethnicity

Igbo	385	96.3
Others**	15	2.8

Religion

Christianity	395	98.8
Islam	5	1.3

Educational attainment of Father

No formal education	23	5.8
Primary education	80	20.0
Secondary education	148	37.0
Tertiary education	149	37.3

Educational attainment of Mother

No formal education	37	9.3
Primary education	83	20.8
Secondary education	124	31.0
Tertiary education	156	39.0

Person you are living with

Parents	261	65.3
Relatives	107	26.8
Guardian	32	6.0

** Hausa, Yoruba, minority tribes

Majority of respondents, 247, (61.8%) were aware of contraception. The major sources of information for contraception included school lessons, 184, (46%), health workers, 163, (40.8%) and radio, 143, (36.8%). The male condom, 168, (42%) and female condom, 89, (22.3%) were the most known contraceptive methods. (Table 2)

Table 2: Awareness and knowledge of contraception among respondents

Variable	Frequency	Percent
	(n=400)	
Aware of contraception		
Yes	247	61.8
No	153	38.2
Source of information**		
School lessons	184	46.0
Health workers	163	40.8
Radio	143	36.8
Television	132	33.0
Parents	114	28.5
Internet	107	26.8
Newspaper	99	24.8
Friends	99	24.8
Church	56	14.0
Knowledge of methods**		
Male condom	168	42.0

Female condom	89	22.3
Natural method***	82	20.6
Injectable	51	12.8
Pill	43	10.8
IUCD	19	4.8
Implants	12	3.0

***multiple responses encouraged *** calendar rhythm method, cervical mucus examination*

Less than a quarter, 86, (21.5%) of the respondents were sexually active, only 34, (8.5%) have ever used any method of contraception. The methods used by the respondents included male condom, 29, (85.3%) and natural method, 14.7%, (5). (Table 3)

Table 3: Use of methods of contraception among respondents

Variable	Frequency (n=400)	Percent (%)
Exposure to sexual intercourse n=400		
Yes	86	21.5
No	314	78.5
Ever used contraceptive		
Yes	34	8.5
No	366	91.5
Method used n=34		

Male condom	29	85.3
Natural method	5	14.7

The respondents who were less than eighteen years old were about three times less likely to have ever used a method of contraception when compared with those who were 18 years and above. (AOR=0.4; 95%CI: 0.2-0.9). The respondents who were males were six times more likely to have used any method of contraception when compared with females. (AOR=6.0; 95%CI: 2.0-17.8). Also, the respondents who were in senior secondary class three were five times less likely to have ever used a contraceptive method when compared with those in senior secondary class two. (AOR=0.2; 95%CI: 0.1-0.7). (Table 4)

Table 4: Factors affecting use of contraceptives among respondents

Variable	Ever used contraceptive (n=400)		p value**	AOR (95%CI)**
	Yes N (%)	No N (%)		
Age of respondents				
<18 years	17 (6.5)	246 (93.5)	.04	0.4 (0.2- 0.9)
≥18 years	17 (12.4)	120 (87.6)		1
Sex				
Male	30 (15.5)	164 (84.5)	<.001	6.0 (2.0- 17.8)
Female	4 (1.9)	202 (98.1)		1
Class of study				
Senior secondary class 3	4 (2.2)	175 (97.8)	<.001	0.2 (0.1- 0.7)
Senior secondary class 2	30 (13.6)	191 (86.4)		1
Person living with				
Parents	23 (8.8)	238 (91.2)	.76	NA****
Others*	11 (7.9)	128 (92.1)		

Education of Father

Tertiary education	14 (9.4)	135 (90.6)	.63	NA****
Secondary education and less	20 (8.0)	231 (92.0)		

Educational attainment of**Mother**

Tertiary education	14 (9.0)	142 (91.0)	.79	NA****
Secondary education and less	20 (8.2)	224 (91.8)		

*family/relations/guardian **p value on bivariate analysis

Adjusted odds ratio, 95% confidence interval * not applicable

DISCUSSION**Awareness and knowledge of contraception**

This study found that majority of respondents, 62% were aware of contraception. This is at variance with a previous study conducted among university students in Botswana which reported 100% awareness rate [20]. The higher awareness among respondents in the Botswana's study may be attributed to the higher educational attainment and consequent higher exposure to information among the group.

The main source of information regarding contraceptives was school lessons (46%) followed by health workers (40%). The finding is consistent with reports of some studies among secondary school students in Onitsha, Nigeria [21] and in other developing countries; Ghana[22], Botswana [20] and Ethiopia [23]. This may be the outcome of the collaboration between Ministries of Health and Education in creating awareness / sensitization in schools using health workers and inclusion of sexuality education in school curriculum in Ebonyi State. However, contrary to our finding, a study among adolescents in Osun state, Nigeria reported that the most common source of information on contraception was chemist shops [24]. Possible reason for this finding may be that patent medicine vendors are often more accessible and discreet in information and service provision. However, this may likely be accompanied by inaccurate information which may be dangerous to health [14]. Church and parents were among the least sources of information on contraception in this study notwithstanding that majority of the respondents lived with their parents. This may be explained by the poor attitude towards contraception in developing countries due to religious and cultural norms [25]. Religious leaders and parents need to be sensitized on adolescent sexual and reproductive health to enhance dissemination of appropriate sexuality information including abstinence and inculcating good values.

This study showed that knowledge of modern methods of contraception was generally low. Less than half of the respondents knew the commonest contraceptive method, the male condom and less than 5% knew about implant and IUCD respectively. The low knowledge of contraception method recorded in this study compares with findings reported among students in Nigeria [8] and Ghana [22] where low proportion of respondents had knowledge of modern methods of contraception. With the low knowledge, and giving that majority of the respondents received information on contraception from school lessons, it is unlikely that the information obtained was comprehensive enough to adequately inform the students. It may also be attributed to poor communication of school teachers with students, as sexuality including contraception is often considered too sensitive a topic to discuss [25]. It is therefore imperative to include or strengthen comprehensive sexual and reproductive health in schools.

Use of methods of contraception

This study showed that 21.5% of the respondents were sexually active. This is high and contrary to the current Nigeria demographic and health survey report that 8.6% of women and 2.4% of men aged 15-19 years had sexual intercourse before age 15 years [2]. Studies have shown that adolescents are less likely to engage in risky sexual behaviour when they reside with their parents and when the parents have high level of education [26]. The high sexual activity reported in this study is worrisome as it contradicts this assertion- as majority of the respondents lived with their parents who also had high educational level. Parents are the primary socializers of their children. They are in unique position to help adolescents have responsible attitudes and healthy sexual habits towards sex. However, our finding can be explained by the fact that parents were not among the main sources of information on contraception.

The study showed that contraceptive use among the population studied was low; only 8.5% used contraceptive. Similar low contraceptive use was found in other studies among secondary school students which reported 5% in Lagos [27],

18% in Ghana [22] and 15.7% in Ethiopia [23]. The low use of contraceptives could be explained by the poor knowledge of contraception methods among the respondents. It is also possible that the information obtained by respondents were not adequate to enable them make informed sexual decisions regarding use of contraceptives.

This study showed that male condom is the most commonly used method of contraception (85.3%). The predominant use of male condom noted in this study agrees with what was reported among students in Nigeria [27, 28] in Zimbabwe [29] and in Botswana [18]. The use of male condom by majority of the respondents may be attributed to its accessibility, availability, convenience, ease of use and cheaper cost [9, 27]. However, contrary to our finding, an earlier study among female adolescent students in Ethiopia reported pills as the commonly used contraceptive [23]. The preference of pills could be explained by the female population studied, who may have oral pills as the more available and accessible contraceptive; even more than the female condom. Although there are suggestions that young women at the onset of sexual activity are learning to use contraceptives to prevent unplanned pregnancies, barriers to the use of female contraceptive methods such as female condom, pills and implants abound including non-availability, high cost, side effects, non-popularity and lack of knowledge [9-11].

Factors affecting use of contraceptives

The study found that age influenced contraceptive use, those aged 18 years and above showed two-fold more likelihood of using contraceptives than those younger. This is comparable to the finding of a study among adolescents in Ghana [30] which reported that older adolescents were three times more likely to use contraceptives than younger ones. Perhaps, this is because older students may be more enlightened in terms of contraceptive types and importance of contraceptive use compared to younger ones who may comparatively be naïve. Besides, the older ones are likely to be more matured, sexually active and economically empowered to afford contraception services. However, this finding is at variance with other reported studies, where it was found that age was not associated with condom use at first sex and with consistent condom use [7, 31].

This study also revealed that men were more likely to use contraceptives than females. Males had a six-fold increased likelihood to use contraceptives compared to females; consistent with other studies conducted in Nigeria [25] and in South Africa [32]. The result could be explained by the fact that male condoms (which was the predominantly known and used contraceptive in this study) are male-determined method. In addition, more accessibility and availability of male condom may have also played some roles. This finding supports the patriarchal relationship which is viewed as social norm in Nigeria [25]. It is usually the man who determines whether or not a condom is used and when it is used. Also, women's difficulties in negotiating male condom use with partners remain a barrier to successful use of condoms. Some studies support the belief of gender norms that men's sexual desires are 'irrepressible', and the culturally defined gender roles that differentiate female sexuality from that of males including position of power and authority [25,33]. Hence, more tendencies of men to engage in sexual intercourse and consequently have control over the use of contraceptives than women.

This study showed that contraceptive use increased significantly with a decrease in educational class. Thus, students in lower educational class (Senior Secondary 2) had a five-fold more likelihood of using contraceptives when compared with those in Senior Secondary 3 class. This finding is at variance with other studies that revealed that those with higher education tend to be better informed about contraception services and are more likely to use the service than their peers with lower education [7, 9, 30, 34]. Higher educational exposure might have lost its positive effect in this study because those with lower educational exposure may be younger, less assertive of their sexual rights and naïve in sexual negotiation skill. Hence, the tendency that they will be more influenced into sexual activities and consequently, use of contraceptives. There is therefore need for programmes on sexual rights and sexual negotiation skills targeting young people to be developed and implemented.

Limitation: This study is not without some limitations. Response bias may have occurred from the self-reported data collected which is common in sensitive topics like sexual behaviour. However, participants were assured of confidentiality to address the problem. The conclusions from this study were drawn from a sample representing public secondary school students in Ebonyi State which might not be generalizable for students all over Nigeria. However, this study provides a valuable insight about awareness, knowledge of methods and use of contraceptives among senior secondary school students. Further research may be required to establish these findings on a national level.

4. CONCLUSION

This study showed high awareness of contraception among the respondents. However, only a small proportion of the sample studied used any method of contraception, notwithstanding that many were sexually active. With school lectures as the main source of information on contraception, there is need for inclusion / strengthening of comprehensive sexual and reproductive health including sexual rights and sexual negotiation skills in school curriculum. Parents and church

leader should impact positive values and healthful sexual behaviours in their wards. This will create the right sexual attitude and behavior towards contraception among the students.

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