



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

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## **Authors' contributions**

*This work was carried out in collaboration among all authors. Author ENO conceptualized and designed the study. Author IIE managed the literature search. Authors CAE, EAE and AKU participated in data collection. Author ENO managed data analysis. Author IIE wrote the first draft of the manuscript. All authors reviewed and approved the final manuscript.*

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## **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:** The study was conducted in public secondary schools in Abakaliki metropolis, Ebonyi Nigeria, for a duration of six months

**Methodology:** A two-stage sampling method was used to select 400 students from 6 out of 18 public secondary schools in Abakaliki metropolis. Information was obtained using a pre-tested

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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 contraceptives. The major sources of information were 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 the 400 respondents, a small proportion (8.5%) have ever used any method of contraception, and the male condom, was the most used method (82%). 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 were sexually active used any method of contraception. With school lectures as the main source of information on contraception, there is need for more comprehensive sexuality education to be included in the school curriculum.

*Keywords: Contraceptives; adolescents; Abakaliki; Ebonyi State; Nigeria.*

## 1. INTRODUCTION

### 1.1 Background

The reproductive choices made by young people have enormous impact on their health, schooling, employment and overall transition to adulthood [1]. Of major concern is the increasing complexity of the social, demographic and health implications 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 the early sexual activities, young people are predisposed to unplanned and unprotected sexual intercourse which leaves them vulnerable to sexually transmitted infections (STI), unwanted pregnancy, unsafe abortion and maternal death [1,3,4]. Contraceptive use can prevent unwanted pregnancies and unsafe abortions [3]. Also, contraceptives such as condom have been shown to protect against sexually transmitted infections including HIV/AIDS [5,6]. Contraceptive use has been found to promote gender equality, educational and socioeconomic empowerment [5], and lower health cost [7,8].

### 1.2 Problem Statement

Despite the enormous benefits, uptake of contraception services still remains low in Sub-Saharan Africa [5]. 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 not using any contraceptive method) is 65.6% [2]. The low uptake of contraception services has been linked to many factors in developing countries including religious misperceptions and negative social norms around premarital sex and pregnancy [9,10]. Other factors include non-availability of modern contraception services [11-13], and poor knowledge and access to youth-friendly sexual reproductive health services from health workers and teachers [14]. Contraceptive use and continuation over sustained periods of time is an important issue for young people. This is because they tend to have more limited access than older individuals, engage in more unpredictable and irregular sexual activity, and are less knowledgeable about contraception [15]. Unplanned pregnancies among young people therefore occur as the effectiveness of pregnancy prevention programs still remains below desired levels [16].

### 1.3 Justification

Despite the fact that universal access to contraceptive has been reported [7,8], 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 [7,8]. Studies have shown that success in preventing unwanted pregnancy depend not only on contraceptive use, but also on access to appropriate sexuality information and services [15]; hence the need to evaluate the sources of information on contraception. Availability of data enhances the effective implementation of formulated policies; yet, data on young peoples' contraceptive use in Ebonyi State appears to be scarce [17]. This study aimed to assess the use

of contraceptives 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 the south-east geo-political zone of Nigeria. Ebonyi State has 13 Local Government Areas, two of which 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 ( $\alpha$ ) 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 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 classes 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

### 3.1 Results

The mean age of respondents was  $17.4 \pm 2.3$  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).

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 1. Socio-demographic characteristics of respondents**

<b>Variable</b>	<b>Frequency (n=400)</b>	<b>Percent</b>
<b>Age of respondents</b>		
Mean±(SD)	17.4±2.3	
<b>Age of respondents in groups</b>		
< 18 years	263	65.8
≥18 years	137	34.3
<b>Class of study</b>		
Senior secondary two	221	55.3
Senior secondary three	179	44.7
<b>Sex</b>		
Male	194	48.5
Female	206	51.5
<b>Ethnicity</b>		
Igbo	385	96.3
Others**	15	2.8
<b>Religion</b>		
Christianity	395	98.8
Islam	5	1.3
<b>Educational attainment of Father</b>		
No formal education	23	5.8
Primary education	80	20.0
Secondary education	148	37.0
Tertiary education	149	37.3
<b>Educational attainment of Mother</b>		
No formal education	37	9.3
Primary education	83	20.8
Secondary education	124	31.0
Tertiary education	156	39.0
<b>Person you are living with</b>		
Parents	261	65.3
Relatives	107	26.8
Guardian	32	6.0

\*\* Hausa, Yoruba, minority tribes

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).

The respondents who were less than eighteen years old were about three time 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).

### 3.2 Discussion

#### 3.2.1 Awareness and knowledge of contraception

This study found that majority of respondents, 62% were aware of contraception. This finding is in line with a previous study conducted among senior secondary school students in India which reported similar high awareness rate [20]. The main source of information on contraception was school lessons (46%) followed by health workers (40%). This may be explained by the collaboration of Ministries of Health and Education in sensitization of students using health workers and the inclusion of sexuality education in school curriculum in Ebonyi State. The finding is consistent with the report of a study conducted among secondary school students in Onitsha, Nigeria [21] and in other developing countries:- Ghana [22], Botswana

[20] and Ethiopia [23]. 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]. Reasons attributed to this finding was that patent medicine vendors were more accessible and discreet in information and service provision; although likely to be accompanied with inaccurate information [8]. Parents was among the least source of information on contraception. This is worrisome as majority of the respondents live with their parents. Parents are regarded as primary socializers, who should appropriately educate their children on sexuality. However, our finding may be explained by the poor attitude towards contraception in developing countries due to religious and cultural norms [25]. Parents need to be sensitized on sexual and reproductive health

to enhance effective communication with their wards.

This study showed that knowledge of modern methods of contraception was generally low. Less than half of the respondents had knowledge of the commonest modern contraceptive method- the male condom, and less than 5% had knowledge of implant and intrauterine contraceptive device (IUCD) respectively. The low knowledge of contraception method recorded in this study compares with findings 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 school lessons was the major source of information it is likely that the information obtained was not comprehensive to adequately inform the

**Table 2. Awareness and knowledge of contraception among respondents**

Variable	Frequency (n=400)	Percent
<b>Aware of contraception</b>		
Yes	247	61.8
No	153	38.2
<b>Source of information**</b>		
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
<b>Knowledge of methods**</b>		
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

**Table 3. Use of methods of contraception among respondents**

Variable	Frequency (n=400)	Percent (%)
<b>Exposure to sexual intercourse</b>		
Yes	86	21.5
No	314	78.5
<b>Ever used contraceptive</b>		
Yes	34	8.5
No	366	91.5
<b>Method used</b>		
Male condom	29	85.3
Natural method	5	14.7

**Table 4. Factors affecting use of contraceptives among respondents**

Variable	Ever used contraceptive(n=400)		p value**	AOR (95%CI)***
	Yes N (%)	No N (%)		
<b>Age of respondents</b>				
<18 years	17 (6.5)	246 (93.5)	.04	0.4 (0.2- 0.9)
≥18 years	17 (12.4)	120 (87.6)		1
<b>Sex</b>				
Male	30 (15.5)	164 (84.5)	<.001	6.0 (2.0- 17.8)
Female	4 (1.9)	202 (98.1)		1
<b>Class of study</b>				
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
<b>Person living with</b>				
Parents	23 (8.8)	238 (91.2)	.76	NA****
Others*	11 (7.9)	128 (92.1)		
<b>Education of Father</b>				
Tertiary education	14 (9.4)	135 (90.6)	.63	NA****
Secondary education and less	20 (8.0)	231 (92.0)		
<b>Educational attainment of Mother</b>				
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

students. It may also be attributed to poor communication between school teachers and 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 education in schools.

### 3.2.2 Use of contraceptives

This study showed that 21.5% of the respondents were sexually active. This is high compared to the Nigeria demographic and health survey report that 8.6% of women and 2.4% of men aged 15-19 years were sexually active [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 contradicts this assertion- as majority of the respondents live with their parents who also had high educational level. Parents have the unique position to help young people develop right attitudes and behaviours towards sexuality. However, our finding can be explained by the fact that parents were not among the main sources of information.

The study showed that contraceptive use was low (8.5%). Similar low contraceptive use was noted in other studies among secondary school students where 5% was reported 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 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 [11, 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 [11-13].

### 3.2.3 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 below 18 years. 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 on types, importance and use of contraceptives compared to younger ones. 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 [9,31].

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 role. 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 difficulty 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 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 [9,11,30,34]. Higher educational exposure might have lost its positive effect in this study because those in lower educational class may likely be naive in sexual negotiation skills and less assertive of their sexual rights. There is therefore higher tendency that they will be influenced into engaging in sexual activities with consequent, contraceptive use. Intensive programmes on sexual rights and sexual negotiation skills should be implemented early for students. This will equip them to make informed decisions about their health.

## 4. CONCLUSION

This study showed that awareness rate was high; yet small proportion of the respondents had knowledge of modern methods of contraception. The proportion that used any method of contraception was low, notwithstanding that high proportion of the respondents were sexually active. As school lectures was the main source of information on contraception, there is need for inclusion of comprehensive sexual and reproductive health education in school curriculum including sexual rights and negotiation skills. Parents and church leaders should be sensitized on sexual reproductive health to enable them effectively communicate sexuality including contraceptive use to their wards. This would promote the right attitude and behavior towards sexuality and contraception among young people.

## 5. 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.

## CONSENT

As per international standard or university standard, students' written consent has been collected and preserved by the author(s).

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## COMPETING INTERESTS

Authors have declared that no competing interests exist.

## REFERENCES

1. Park K. Park's textbook of preventive and social medicine. 22nd ed. Jabalpur: Bhanot Publishers. 2013;441-79.
2. National Population Commission, Nigeria TDPI, Rockville, Maryland U. Nigeria Demographic and Health Survey. In: National Population Commission. 2018; 373.
3. Hindin M, Tuncalp O, Gerdtz C, Gipson J, Say L. Monitoring adolescent sexual and reproductive health. *Bull World Health Organ*. 2016;94(3):157–232.
4. Morris J, Rushwan H. Adolescent sexual and reproductive health: The global challenges. *Int J Gynaecol Obstet*. 2015; 131(S1):S40– S42.
5. Eliason S, Baiden F, Quansah-Asare G, Graham-Hayfron Y, Bonsu D, Phillips J, et al. Factors influencing the intention of women in rural Ghana to adopt postpartum family planning. *Reprod Health*. 2013; 10(1).
6. Cates W, Burris H. The Global roadmap to universal access to family planning: From cairo to kampala. *African Journal of Reproductive Health. Women's Health and Action Research Center*. 2010;14:329-1603.
7. Chandra-Mouli V, Mc Carraher D, Phillips S, Williamson N, Hainsworth G. Contraception for adolescents in low and middle countries: Needs, barriers, and access. *Reprod Health*. 2014;11(21):1–8.
8. Greene M, Merrick T. The case for investing in research to increase access to and use of contraception among adolescents. *Seattle Alliance Reprod Matern Newborn Heal*. 2015;1–80.
9. Marrone G, Abdul-rahman L, Coninck Z De, Johansson A. Predictors of contraceptive use among female adolescents in Ghana. *African Jour of reproductive health*. 2014;18(1):102–109.
10. Adeboyejo A, Oyewale I. The home environment and adolescents' sexuality and reproductive behaviour in Ondo town, Nigeria. *Am J Sustain Cities Soc*. 2011; 5(1):73.
11. Malini B, Narayanan E. Unmet need for family planning among married women of reproductive age group in urban Tamil Nadu. *J Family Community Med*. 2014; 21(1):53–5.
12. Kirby D, Ph D, Associates ETR. Sex education: Access and impact on sexual behavior of young people based in part on the reports. New York Expert Gr Meet Adolesc Youth, Dev United Nations, Popul Div Dep Econ Soc Aff; 2011.
13. Chandra-mouli V, Mccarraher DR, Phillips SJ, Williamson NE. Contraception for adolescents: Social, clinical and service delivery considerations. *Contraception for adolescents in low and middle income countries: needs, barriers, and access*. *Reprod Health*. 2014;11(1):1–8.
14. Subedi R, Jahan I, Baatsen P. Factors influencing modern contraceptive use among adolescents in Nepal. *J Nepal Health Res Counc*. 2018;16(3):251–6.
15. Gurr B. Reproductive justice: The politics of health care for native American women. *Reproduct Justice*. 2014;1–200
16. Sheeder J, Tocce K, Stevens-Simon C. Reasons for ineffective contraceptive use antedating adolescent pregnancies part 1: An indicator of gaps in family planning services. *Matern Child Health J*. 2009;13 (3):295–305.
17. Hindin M, Kalamar A. Country-specific data on the contraceptive needs of adolescents. *Bull World Health Organ*. 2017;95(3):166.
18. Ibrahim T. Research methodology and dissertation writing for health and allied health professionals. *Cress Global Link Limited*. 2009;75
19. Obi AI, Ofili AN. A comparative assessment of contraceptive use among secondary school students in Edo state, Nigeria. *Niger Heal J*. 2018;18(1):23–33.
20. Benjamin AI, Panda P, Singh Shavinder, Bhatia AS. Knowledge and attitude of senior secondary school students of ludhiana regarding population control & contraception. *Indian Journal of Community Medicine*. 2001;26(4):10-12.
21. Udigwe IB, Adogu PO, Nwabueze AS, Adinma ED, Ubajaka CF, Onwasigwe C. Factors influencing sexual behavior among female adolescents in Onitsha, Nigeria. *Open J Obstet Gynecol*. 2014;04(16):987–95.



22. Elvis J, Corresponding H, Buxton C. Contraceptive knowledge, perceptions and use among Adolescents in Selected Senior High Schools in the Central Region of Ghana. 2012;3(2):170–80.
23. Katama SK, Hibstu DT. Knowledge, attitude and practice of contraceptive use among female students of Dilla secondary and preparatory school, Dilla town, South Ethiopia, 2014. *Healthc Low-resource Settings*. 2016;4(1).
24. Abeboyejo AT, Omotayo OM. Geo-spatial analysis of adolescents' access to and use of contraceptives in Osun State, Nigeria. *African Popul Stud*. 2016;32(2):2848–64.
25. Odimegwu C, Somefun OD. Ethnicity, gender and risky sexual behaviour among Nigeria youth: An alternative explanation. *Reprod Health [Internet]*. 2017;14(1):1–15.
26. National Population Commission. Nigeria Demographic and Health Survey 2013. *Natl Popul Comm*. 2014;56.
27. Tayo A, Akinola O, Babatunde A, Adewunmi A, Osinusi D, Shittu L. Contraceptive knowledge and usage amongst female secondary school students in Lagos Southwest Nigeria. 2011;3:34–7.
28. Ossai EN, Nwonwu EU, Agu PA. Determinants of contraceptive use among women attending antenatal care at Federal Teaching Hospital Abakaliki, Nigeria. *Niger J Med*. 2018;168–79.
29. Moyo S, Rusinga O. Contraceptives adolescents' knowledge, attitudes and practices. A case study of Rural Mhondoro-Ngezi District, Zimbabwe. 2017; 21:49–63.
30. Nyarko SH. Prevalence and correlates of contraceptive use among female adolescents in Ghana. *BMC Womens Health*. 2015;15(1):4–9.
31. Cates W, Karim QA, El-Sadr W, Haffner DW, Kalema-Zikusoka G, Rogo K, et al. Family planning and the millennium development goals. *Science*. 2010; 329(5999):1603.
32. Chimbindi NZ, McGrath N, Herbst K, San Tint K, Newell M-L. Socio-demographic determinants of condom use among sexually active young adults in Rural KwaZulu-Natal, South Africa. *Open AIDS J*. 2010;4(1):88–95.
33. Hindin MJ, Fatusi AO. Adolescent sexual and reproductive health in developing countries: An overview of trends and interventions. *Int Fam Plan Perspect*. 2009;35(2):58–62.
34. Apanga PA, Adam MA. Factors influencing the uptake of family planning services in the Talensi district, Ghana. *Pan Afr Med J*. 2015;20:1–9.

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