

Original Research Article

Contraceptive usage and associated factors among adolescents in the Kwahu South District of the Eastern Region of Ghana

Comment [u1]: Please rephrase your topic, Like: Contraceptive usage Status and its Associated Factors among Adolescents in Kwahu, Eastern Ghana

Abstract

Unwanted pregnancies account for roughly 30% of all pregnancies in Ghana. Availability of contraceptives and usage is essential to the realization of the Sustainable Development Goal (SDGs) 3.7 which calls for universal access to contraception for use to people of all ages by 2030. The study aims to assess the contraceptive usage and associated factors among adolescents in the Kwahu South District of the Eastern Region of Ghana.

The study was a descriptive cross-sectional survey. Adolescents were drawn using multistage sampling techniques. Data were collected with a structured questionnaire. Descriptive and inferential statistics were run and results were presented in tables and graphs. The statistically significant p-value was pegged at less than 0.05.

Almost all (97.9%) respondents have heard of contraceptives with the media being the common source of information (52.5%). The male condom (57.6%), oral pills (53.5%) and the female condom (46.9%) were the commonly known contraceptives. The majority (77.1%) knew where to get contraceptives. Common sources of contraceptives included the pharmacy (57.3%) and hospital (37.2%). Significant differences exist between usage of contraceptives and age ($p < 0.001$), religion ($p = 0.042$) and having a partner ($p < 0.001$). Age (18 years) (AOR= 3.01, 95%CI (1.17-7.73)) and having a partner (AOR= 0.05, 95%CI (0.02-0.14)) were positively associated with current contraceptive use.

Targeted public health interventions in the form of education and promotion are desirable to create awareness among adolescents who do not know about contraceptives and improve understanding of the safety of other contraceptive methods aside from male condoms and oral pills.

Keyword: Contraceptive usage, associated factors, adolescent,

Comment [u2]: Please add more Keywords.

29 Introduction

30 Preventing unwanted pregnancies, sexually transmitted illnesses, and unsafe abortions require improving
31 adolescent sexual and reproductive health.^{1,2} Contraception usage is unquestionably critical in the face of
32 these threats.³ The Adolescent birth rate has decreased globally, from 65 per 1000 women in 1990 to 47
33 per 1000 women in 2015.⁴ Despite this decrease, abortion-related complications and unwanted
34 pregnancies continue to increase.⁵ For example, in under-developed countries, over 16 million girls
35 within the ages 15 to 24 years and 2.5 million girls less than 16 years give birth each year, with a
36 predicted 21 million girls within the ages of 15 to 19 and about 2 million girls under 15 becoming
37 pregnant.^{6,7} Sub-Saharan Africa (SSA) and South-Central and Southeast Asia have the highest rates of
38 adolescent pregnancy in the world.^{6,8} For instance, in 2013, sub-Saharan Africa recorded the highest-
39 rated of adolescent pregnancy worldwide field field⁷. Despite increased contraceptive usage among
40 unmarried young African women within the ages, 15–24 years (from 23% in 1996–2000 to 33% in 2011–
41 2015),⁹ studies from numerous countries in the area have indicated that there remains considerable unmet
42 demand for contraception among adolescents in SSA.^{10–12} Two out of every five births among teenagers
43 in around 30 percent of all nations in SSA are unintended.¹³ Unwanted pregnancies account for roughly
44 30% of all pregnancies in Ghana, with teens (70%) having a much greater rate than adults.¹⁴ Adolescents
45 who get pregnant suffer a slew of physical, academic, and social implications, including societal rejection,
46 which usually manifests itself as stigma, discrimination, and social ostracization.¹⁵ Unwanted pregnancies
47 among young females lead to a high percentage of school dropouts and halt future growth. A study in
48 Chorkor, Ghana showed that about 86.0% of the 50 adolescent pregnant females had left school.¹⁶ The
49 majority of unintended pregnancies result in induced abortions^{17,18}, with a considerable percentage of
50 them carried out using cruel methods.

51 According to the 2017 Ghana Maternal Health Survey (GMHS), 35.6 % of sexually active unmarried
52 women within 15 to 19 years and 48.8 % within 20 to 24 years, use contraception.¹⁹ Meeting the
53 contraceptive needs of teenagers was critical to reaching the Ghana Family Planning 2020 objective of
54 increasing contraceptive usage among sexually active single adolescents from 1.46 million in 2015 to
55 1.93 million in 2020.²⁰ This is also essential to the realization of the Sustainable Development Goal
56 (SDGs) 3.7 which calls for universal access to contraception for use to people of all ages by 2030. Most
57 young women with a history of pregnancy would have used contraception to avoid such pregnancies if
58 contraception had been available, according to Ghanaian studies.¹¹

59 The majority of contraceptive research is undertaken among all women of reproductive age (15–49
60 years), with no precise age stratification.^{21,22} Several research on contraception usage among adolescent
61 and young women have been conducted in Ghana.^{11,23–27} Other types of research on adolescent

62 contraceptives usage have used nationally representative data to investigate the factors of contraceptive
63 use.^{28,29} Most of these studies rely on nationally representative data primarily used data from previous
64 Ghana demographic and health surveys.^{27,29,30} Despite the overwhelming literature on contraceptive
65 usage in Ghana, no such studies have been conducted in the Kwahu South District of the Eastern Region
66 of Ghana. Understanding the contraceptives usages and associated factors in all Districts of Ghana is very
67 essential to inform a formidable policy to improve the accessibility and usage of contraceptives among
68 adolescents and all people at large. The aim of the study, therefore, was to assess the contraceptive usage
69 and associated factors among adolescents in the Kwahu South District of the Eastern Region of Ghana

70 **Methods**

71 **Research Design and Setting**

72 The study was a descriptive cross-sectional survey conducted between January and April 2018 among in-
73 school adolescents aged 15-19 years in the Kwahu South District of Ghana. The district shares common
74 boundaries with Kwahu East to the North, Asante-Akim South to the West, the Kwahu West Municipality
75 and East Akim District to the South and Fanteakwa District to the East. The district has a land size of
76 795.76 square kilometres, and lies between latitudes 6°35' N and 6° 45' N and longitude 0° 55' W and
77 0° 20' W.

78 **Study Population**

79 The study was conducted among in-school female adolescents aged 15-19 years in the Kwahu South
80 District.

81 **Sample Size and Sampling Procedure**

82 The sample size was estimated using the Snedecor and Cochran³¹ formula. Analyses of the 2003–2014
83 Ghana Demographic and Health Survey revealed that modern contraceptive usage among adolescents was
84 21.53%³². The sample size was then estimated at a 95% confidence level, and a 5% margin of error.
85 Using a 10% none response rate, the sample size was estimated at 288. The study participants were
86 recruited using a multistage sampling technique. At the first stage, four schools were selected randomly
87 without replacement. To arrive at the four schools, all schools were written on small pieces of paper.
88 Thereafter, four persons were called to select one paper at a time. The process was repeated until all four
89 schools were selected. The selected schools included Kwahu Ridge Senior High Technical School,
90 Bepong Senior High School, St. Paul's Senior High School and Mpraeso Senior High School. At the
91 second stage, using the enrollment of female students between ages 15-19 years as the sampling frame, a
92 systematic sampling technique was used to recruit eligible respondents.

Comment [u3]: How many schools are there and why did you select only four schools, what is the reason behind?

Comment [u4]: How many?

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94 **Data Collection Tools and Techniques**

95 A structured questionnaire containing closed-ended questions was constructed to assess the knowledge,
96 access, usage and enablers of contraceptive use, among respondents. The questionnaire was made up of
97 questions on knowledge, attitude and perception of contraception. The language that was used in the
98 administration of the questionnaire was English. Respondents were assembled in classrooms and the
99 purpose of the research was briefly clarified to the respondents. Respondents were assured of anonymity
100 and confidentiality. Each questionnaire took about 15 minutes to complete.

101 **Data Analysis**

102 The data was checked in and analysed by manual statistical method and SPSS (Statistical Package for
103 Social Sciences) version 21. The data were represented as tables and pie charts using SPSS and Microsoft
104 Excel (MS windows 2010 edition) illustrating the relationships of variables of interest. Microsoft Word
105 was used for typing the text. Chi-square analysis was done to reveal the association with contraceptive
106 usage. All significant variables were entered into the logistic regression model to identify predictors of
107 contraceptive usage among adolescent school girls in the Eastern Region. The statistically significant p-
108 value was pegged at less than 0.05.

109 **Ethical Considerations**

110 Participation was voluntary and respondents had the liberty to withdraw at any point during the data
111 collection if felt uncomfortable. Our study had no risk to respondents. The study's rationale was carefully
112 explained to the respondents and their teachers including the heads of the schools. Teachers consented on
113 behalf of respondents who were 15 and 17 years. The study was guided by ethical principles in social
114 sciences ³³ and Helsinki declaration on ethical principles for medical research involving human subjects
115 ³⁴. Administrative permissions to undertake the study were sought from the School of Medical Sciences,
116 Kwame Nkrumah University of Science and Technology, District Director of Health Service, District
117 Director of Education and the heads of the senior high schools included in this study.

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123 **Results**124 **Sociodemographic Characteristics of Respondents**

Comment [u5]:

125 The study included 288 respondents between the ages of 15 and 19 years and a mean age of 17.3(±1.2).

126 Most of the respondents were 18 years (29.9%) and in their third year (43.8%). The majority of the

Comment [u6]: Please make clear

127 respondents were Christians (95.8%) (Table 1).

128 **Table 1. Sociodemographic Characteristics of Respondent**

Variable	Categories	Frequency (n= 288)	%
Ages	15 years	28	9.7
	16 years	55	19.2
	17 years	66	22.9
	18 years	86	29.9
	19 years	53	18.4
Class/Year	Year 1	70	24.3
	Year 2	92	31.9
	Year 3	126	43.8
Religion	Christianity	276	95.8
	Islam	11	3.9
	Traditionalist	1	0.3

Comment [u7]: 0.35, How important to report this?

129

130 **Knowledge on Contraceptive Use among Respondents**

131 About 97.9% of the respondents indicated that they have heard of contraceptives with the radio and
 132 television being the common source of information (52.5%). The male condom (57.6%), oral pills
 133 (53.5%) and the female condom (46.9%) were the commonly known contraceptives. The benefits of
 134 contraceptives according to respondents included prevention of pregnancy (84.7%) and sexually
 135 transmitted diseases (STDs) (37.2%). About 91.7% indicated that contraceptives have side effects with
 136 common side effects indicated by respondents change in body changes in the menstrual cycle (67.7%),
 137 body weight (55.2%) and mood (41.0%) (Table 2).

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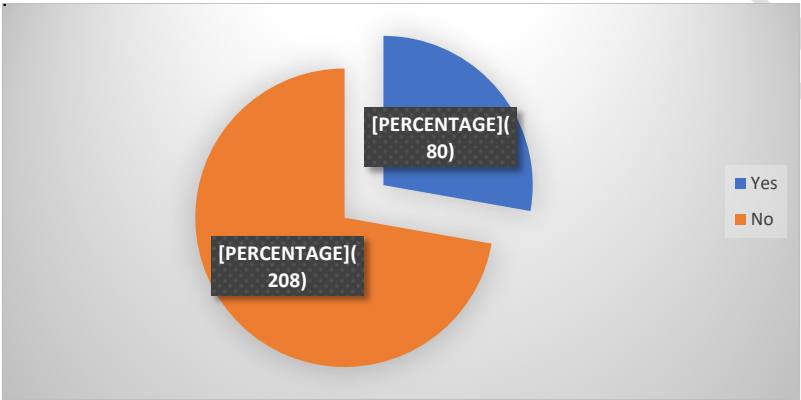
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140 **Table 2. Knowledge on Contraceptive Use among Respondents STDS; Sexually transmitted diseases,**
141 *TV; Television*

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143 **The utilization of Contraceptives among Respondents**

144 Contraceptive use was among 28.0% of the respondents compared to 72.0% of the respondents who
145 indicated no use of contraceptives (**Figure 1**).



146

147 **Figure 1; Prevalence of Contraceptive Use (Ever and Current Use)**

148 Common contraceptive method ever used included oral pills (n=38,47.5%), condoms (n=33,41.3%),
149 withdrawal method (n=5,6.2%) and IUD (n=4,5.0%). (**Figure 2**).

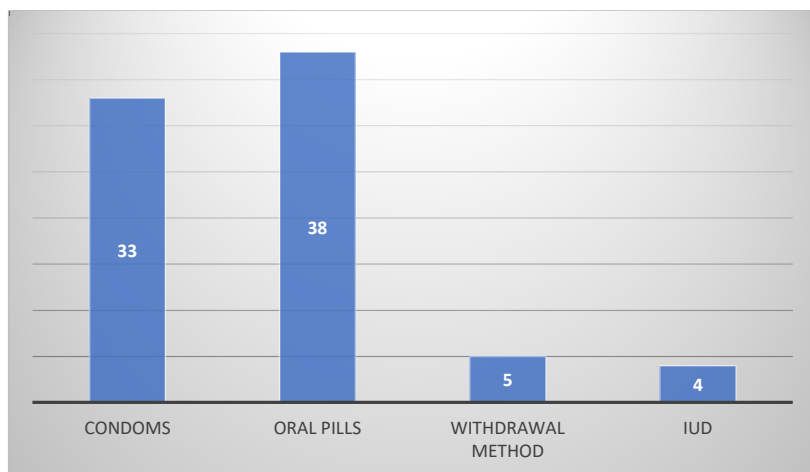


Figure 2. Common contraceptive use among ever and current users (IUD; Intrauterine device)

The current contraceptive user was 67.0% out of the crude prevalence of contraceptive use (**Figure 3**).

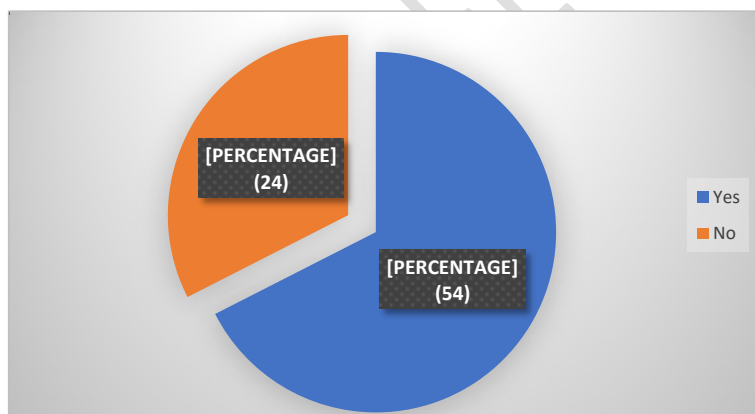


Figure 3. Current Contraceptive Use

Common contraceptive methods used among current users included oral pills (n=27, 48.2%), injectables (n=11, 19.6%) and condoms (n=10, 17.9%) (**Table 4**).

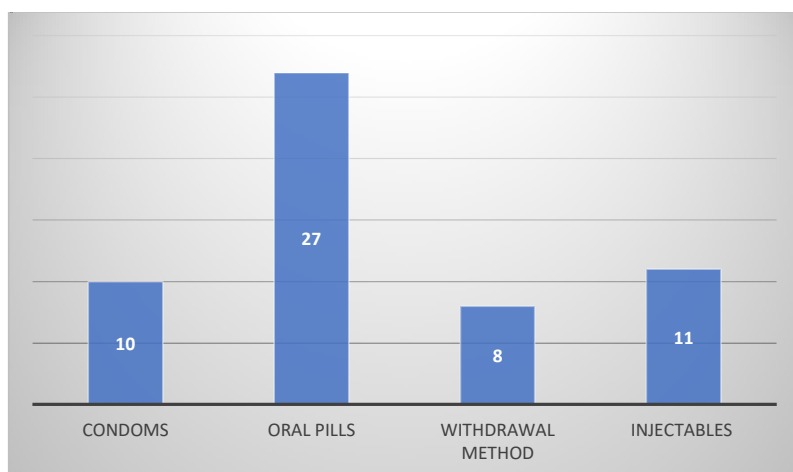


Figure 4. Common contraceptive use among current users

Accessibility to Contraceptives among Respondents

The majority of the respondents indicated knowledge of where to get contraceptives (77.1%). Common sources of contraceptives included the pharmacy (57.3%) and hospital (37.2%). The nearest distance to access the contraceptive service centre was ≤ 5 kilometres (47.3%). The male condom (47.6%) and oral pills (38.5%) were indicated as the most affordable contraceptives. Most of the respondents indicated spending between 5 and 29 minutes to access contraceptive service at a facility (31.6%) (Table 3).

Table 3. Accessibility to Contraceptives among Respondents

Variables	Categories	Frequencies	%
Know where to get contraceptives services	Yes	222	77.1
	No	63	22.9
Where to get pharmacy (Multiple response)	Pharmacy	165	57.3
	Hospital	107	37.2
	Family planning centre	54	18.8
	Friends	28	9.7
	Family	15	5.2
How far is the nearest contraceptive service centre (km)	≤ 5	136	47.3
	6-10	71	24.6

Which contraceptive is affordable	Don't know	91	28.1
	Oral pills	111	38.5
	Injectable	17	5.9
	Spermicide	10	3.5
	Implants	7	2.4
	Rhythm	12	4.2
	Female sterilization	11	3.8
	IUD	9	3.1
	Male condoms	137	47.6
	Female condoms	90	31.3
	Withdrawal	25	8.7
	Male sterilization	7	2.4
Time spent in accessing contraceptive methods at a facility/center	5 to 29 minutes	91	31.6
	30-59 minutes	32	11.1
	1- 2 hours	29	10.1
	Don't know	136	47.2

172 Km; kilometre, IUD; *Intrauterine device*

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174 Enablers of Contraceptive Use among Respondents

175 Most of the respondents indicated having a partner (46.9%) of which 38.5% favour the use of
 176 contraceptives. The majority of the respondents indicated religion does support contraceptive use (78.5%)
 177 with more than half (52.4%) indicating that contraceptives should be made available at the senior high
 178 school (SHS) students. Among the reasons to make contraceptives available to SHS students includes;
 179 prevention of unwanted pregnancy (45.1%), sexually transmitted diseases (29.5%) and school dropout
 180 (24.7%). Most of the respondents indicated that contraceptives should be made available to teenagers
 181 from age 18 years and above (69.8%) (**Table 4**).

182 **Table 4. Enablers of Contraceptive Use among Respondents**

Variables	Categories	Frequency	%
Do you have a partner	Yes	135	46.9
	No	153	53.1
Partner in favor of contraceptive use (n=135)	Yes	52	38.5
	No	83	61.5
Partner perception affects contraceptive use (n=52)	Absolutely	13	25
	Much	15	28.9
	Slightly	5	9.6
	Not at all	19	36.5
Religion support contraceptive usage	Yes	62	21.5

	No	226	78.5
Should contraceptives be made available to SHS students	Yes	151	52.4
	No	137	47.6
Reasons contraceptives should be made available to students (Multiple Response)			
Prevent STDs		85	29.5
Prevent unwanted pregnancy		130	45.1
They are sexually active		40	13.9
To discourage school dropout		71	24.7
Discourage risky sexual life styles		52	18.1
Allow student focused on education		67	23.3
Age at which contraceptives be available to teenagers			
	13 years and above	71	24.7
	18 years and above	201	69.8
	Don't know	16	5.5

STDS; Sexually transmitted diseases; SHS; Senior High School

Association and Predictors of Contraceptive Use among Respondents

We performed a Chi-square test and logistic regression analysis to determine the level of association between independent and dependent variables and predict factors for contraceptive use. The Chi-square test showed significant differences between age ($p < 0.001$, $X^2 = 20.2$), religion ($p = 0.042$, $X^2 = 6.3$) and having a partner ($p < 0.000$, $X^2 = 215.6$). With the logistic regression, we found that age 18 years (AOR= 3.01, 95%CI (1.17-7.73), $p = 0.02$) and having a partner (AOR= 0.05, 95%CI (0.02-0.14), $p < 0.001$) were positively associated with current contraceptive use (Table 5).

Comment [u8]: Please interpret correctly the result obtained from the binary logistic regression model by comparing it with reference category.

Table 5. Association and Predictors of Contraceptive Use among Respondents

Variable	Category	Current use contraceptive		p-value, (X ²)	AOR	95% CI	P value
		Yes (%)	No (%)				
Ages (years)				0.000 (20.2)			
	15	4(14.2)	24(85.7)		1.51	0.22-10.25	0.67
	16	2(3.6)	53(96.4)		0.28	0.04-1.90	0.19
	17	9(13.6)	57(86.4)		Ref		
	18	27(31.4)	59(68.6)		3.01	1.17-7.73	0.02*
	19	14(26.4)	39(73.6)		1.73	0.61-4.92	0.30
Class				0.071 (6.3)			
	SHS1	7(10.0)	63(90.0)		Ref		
	SHS2	21(22.8)	71(77.2)		0.91	0.20-4.18	0.90
	SHS3	28(22.2)	98(77.8)		0.78	0.17-7.73	0.76
Religion				0.042, (6.3)			
	Christianity	51(18.5)	225(81.5)		Ref		
	Islam	4(36.4)	7(63.6)		2.1	0.45-9.74	0.34
	Traditionalist	1(100.0)	0(0.0)		1		
Have a partner				0.000, (215.6)			
	Yes	52(38.5)	83(61.5)		Ref		
	No	3(2.0)	150(98.0)		0.05	0.02-0.14	0.000*

Ref; *Reference*, * positively associated

Discussion

Our study assessed contraceptive usage and associated factors among female adolescents. Overall, a significant number of the respondents have heard of contraceptives with the television and radio as the main source of information. These findings are promising; however, more is still needed to make persons unaware of contraceptives in our study and studies described elsewhere ^{26,27,35} to achieve women empowerment by 2030. Like with other studies ^{3,27}, the male condom is the common contraceptive known by several populations, including adolescents. Though the finding is important as it is the only contraceptive that has a dual function- prevention of unwanted pregnancies and sexually transmitted infections. It raises the need to educate the population, especially among married persons on other contraceptive methods that are important for family planning purposes. In educating the masses, including in-school adolescent females, the importance of contraceptives such as prevention of pregnancies and STDs as indicated by our respondents and studies elsewhere ³⁶⁻³⁸ should be highlighted. This has the potential to increase confidence in contraceptives among the public including adolescents who are often prone to teenage pregnancies other sexual reproductive health challenges. The fear of side effects coupled with misconceptions ^{39,40} has been a major challenge to contraceptive use. Family planning service providers should address issues of misconceptions during the provision of contraceptives to potential clients and educate the public in general. Again, pharmaceutical industries should consider concerns of side effects during the design of contraceptives to minimize or reduce cases of side effects.

Consistent with other studies among adolescents ^{37,39}, our study reported substantial contraceptive use. However, we noted significant disuse, comparing ever users and current users of contraceptives. It raises a need to understand the determinants of the disuse of contraceptives among populations, which is beyond the scope of this study. It appears access to contraceptives by the respondents was not a challenge as the majority indicated knowledge of where to get contraceptives including the pharmacy and hospital. Similarly, most respondents indicated the affordability of some contraceptives, including the male condom and oral pills. This could reflect Ghana's efforts in addressing the unmet needs of family planning. According to Lasong et al. ⁴¹, the wealth index of women is a key determinant of contraceptive use. Therefore, making contraceptive affordable and or relatively free among the population, especially among women, increase their use. Another important finding of our study is the indication of one's partner supporting the use of contraceptives. The promotion of contraceptives should be targeted at both females and males as one's perception could influence the other.

Unlike the finding of Ajmal et al. ⁴² majority of our respondents asserted that religion does support contraceptive use. It is therefore important to engage religious heads in the formulation of policies on family planning including contraception. Our respondents indicated that contraceptives should be made available to senior high school students. This, we believe is a good call considering reports of teenage

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pregnancies among in-school adolescents in Ghana. Making contraceptives available to students at the senior high school level would help reduce tendencies of teenage pregnancy and its attending consequences. To advocate for contraceptives among senior high school students, our respondents gave reasons including prevention of unwanted pregnancy sexually transmitted diseases and school dropout. These reasons re-emphasize the importance of contraceptives in girls and women empowerment ^{43,44}.

Study limitation

The study was conducted among adolescent schoolgirls as such the generalizations of the findings ought to be done with extreme caution. The responses are self-reported and this could be wrong as the questionnaire did not allow for follow-up.

Conclusion

Overall, the majority of our respondents have heard of contraceptives. The male condom and oral pills are the most known contraceptives. Prevalence of contraceptive use was relatively significant coupled with a good number of participants disusing contraceptives. Most of the respondents indicated knowledge of where to get contraceptives and having a partner who supports contraceptive use. Targeted public health interventions in the form of education and promotion are desirable to create awareness among adolescents who do not know about contraceptives and improve understanding of the safety of other contraceptive methods aside from male condoms and oral pills.

Data Availability

The data would be made available upon request via the corresponding author.

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