

# Sexual behaviour and contraceptive uptake among female adolescents (15-19 years): A cross-sectional study in Sagnarigu Municipality, Ghana

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## Abstract

*There are reports of low utilization of contraception among adolescent females in developing countries. However, research on sexual behaviour and contraceptive uptake among female adolescents is scarce in the Sagnarigu Municipality although the Municipality has a very high youthful population. The objective of the study was to assess the sexual behaviour and contraceptive uptake among adolescent females in Sagnarigu Municipality, Northern Region, Ghana. A cross-sectional study was adopted where 165 adolescent females (15-19 years) were randomly selected. The main tools for data collection were semi-structured questionnaires. For the data analysis, proportions of response variables were generated using statistical product and service solutions, version 24.0. The study revealed that among those who reported having sex in the past 12 months before the survey, over two-thirds of the participants have used at least one method of contraception. The results also showed that injectable was the leading form of contraception among both past and current users of contraceptive methods. Additionally, most of the respondents obtained their contraceptive methods from health facilities. We also established that avoidance of pregnancies was the main reason for using contraception. However, cultural beliefs, religion, fear of side effects were the reasons for non-use of contraceptives. The study further revealed that early initiation of sex among the participants was common. Nevertheless, some of the participants did not use contraceptives during sexual intercourse. The study recommended effective education on the types and uses of contraceptives among adolescents in the municipality.*

**Keywords:** adolescents, contraception, Sagnarigu Municipality, barriers to use, sexual activity, pregnancy.

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## **Introduction**

The use of modern contraceptive methods by sexually active youth in developing countries is still low, although their knowledge of the modern contraceptives is high (Agyemang et al., 2019; Ghana Statistical Service [GSS], 2018; Ghana Statistical Service, 2009; Stephenson et al., 2007; Yeboah & Appai, 2017). For instance, among sexually active adolescent girls (15–19 years) in Ghana, only 51.4 % use at least one method of modern contraception even though they have high (92.5 %-99.8%) knowledge of modern contraceptive methods (Ghana Statistical Service, 2009; Oppong et al., 2021).

There are various reasons for using contraceptives among adolescent girls. However, the most prominent is the avoidance of pregnancy (Yeboah & Appai, 2017), which is expected since a majority of these young women are economically and physiologically immature. Universal access to modern contraceptive options by all ages is required if governments are to achieve sustainable development goal 3.7 by 2030 (United Nations, 2016). However, inadequate access to modern contraceptives among adolescent girls is widespread in the sub-Saharan African region (Atuyambe et al., 2015; Enuameh et al., 2015; McCurdy et al., 2014). For instance, in about 30% of countries in the subregion, 40.0% of all births are unplanned among adolescent girls (Enuameh et al., 2015). The situation may be worst in Ghana because 70% of pregnancies among adolescent girls in the country are said to be unintended (Ameyaw, 2018). Several studies in Ghana have examined contraceptive use among adolescent girls. However, these studies were in the Southern part (Agyemang et al., 2019; Appiah et al., 2020; Boamah et al., 2014; Enuameh et al., 2015; Hall et al., 2018; Nyarko, 2015). Notwithstanding, findings from one nationwide survey revealed that the Northern region has the lowest prevalence (17%) of contraceptive use compared with the other regions in Ghana, where contraceptive prevalence ranged from 21-32% (Ghana Statistical Service (GSS), Ghana Health Service (GHS), 2018). In the same study, Northern region was reported to have the lowest prevalence of knowledge (96%) of modern contraceptives compared with the other regions in the country (99.2 -100%) (Ghana Statistical Service (GSS), Ghana Health Service (GHS), 2018). Geographically, Sagnarigu Municipality is within the Northern Region of Ghana. The Municipality has young women constituting a high proportion of the population structure (Ghana Statistical Service [GSS], 2010; Ghana Statistical Service, 2014a). Unlike the current literature (Ghana Statistical Service (GSS), Ghana Health Service (GHS), 2018), findings from this study would fill an important knowledge gap as it deals with the prevalence of sexual behaviour and contraceptive uptake among female adolescents (15-19 years) in the Sagnarigu Municipality, an area of research that has not received attention from scholars. Therefore, there is the need for further exploration of the nature of sexual behaviour and the perceived reasons for the use or non-use of modern contraceptives in the district to aid family planning education efforts in the Municipality.

Globally, several studies have examined the determinants of low contraceptive usage among adolescents (Agyemang et al., 2019; Ghana Statistical Service, 2009; Yeboah & Appai, 2017). Nevertheless, finding a workable way that anyone can easily access and use contraceptives has been an albatross around the necks of policymakers, communities, and individuals (Pursell, 2007). The barriers that prevent adolescents from accessing and using these contraceptives are not clear. Therefore, African countries may have to intensify research to ascertain culturally specific determinants of low contraceptive use among adolescents if they are to formulate evidence-based reproductive health policies.

Additionally, the social, economic, and health benefits of contraceptive uptake have been reported (Ahmed et al., 2012; Bankole et al., 2007; Cates, 2010). For example, 30% and approximately 10% of maternal and child deaths are preventable globally every year with the effective use of family planning methods (Gomes et al., 2008). Moreover, the use of contraception lowers the rates of unwanted pregnancies and induced abortions (Cleland et al., 2006). Despite these benefits, there is a low use of modern contraceptive methods in less developed countries (Bankole et al., 2007). The consequences for the non-use of contraceptives among sexually active female adolescents are severe. The non-use of modern contraceptives among the sexually active women, especially the male and the female condoms may result in increased rates of

unplanned pregnancies, a high risk of sexually transmitted diseases, and unsafe abortions (Chandra-Mouli et al., 2014). The low use of contraceptives among adolescents may be due to their lack of knowledge of contraceptives, fear of side effects, poor school-based sexual education, religious beliefs, and a poor health worker attitude (Christofides et al., 2014; Ochako et al., 2015; Rios-Zertuche et al., 2017).

In Ghana, a previous study found that 14% of adolescents (15-19 years old) were already mothers or pregnant with their first child (Ghana Statistical Service, 2014b). In addition, results from previous studies suggest that there is a high level of teenage pregnancy in the Northern region, including the Sagnarigu Municipality (Adjei et al., 2014; Ghana Statistical Service [GSS], 2013). However, there are still unanswered questions on the patterns of sexual behaviour, perceptions about contraceptive use, and barriers to contraceptive use in the Sagnarigu Municipality. Hence, the study examined the sexual behaviour among female adolescents (15-19 years) and their perceived reasons for the use and non-use of modern contraceptives.

## **Methods and materials**

### **Study design and participant recruitment**

In this cross-sectional study, 165 adolescent females (15–19 years) who live within Sagnarigu Municipality, Ghana, were randomly selected. By this simple random sampling approach, all houses within the four sampled enumeration areas were numbered and 165 houses were randomly selected from a box. The four enumeration areas were coded E1, E2, E3 and E4. For the 165 houses sampled, 42, 46, 33 and 44, were drawn from E1, E2, E3 and E4, respectively. Sampled households with ineligible participants were replaced. Based on predefined criteria, potential participants aged 15-19 years were eligible to participate in the study. Also, residing within the Sagnarigu Municipality was a precondition for the inclusion into the study. However, we excluded adolescents who were married.

### **Data Collection**

The sociodemographic characteristics of respondents and potential barriers to contraceptive utilization were collected using a structured questionnaire administered through face-to-face interviews. The types of contraceptives ever used and those currently being used were also assessed. For this study, participation by potential participants was voluntary. Data were collected in March 2020.

### **Sample Size Determination**

The pre-defined confidence level for the study was 95% and a margin of error of 5%. From a standard protocol for estimating sample sizes for prevalence-based studies (Charan & Biswas, 2013), a total of 150 female adolescents were initially computed. However, to cater for a non-response, 10% of the 150 was added which finally resulted in a total sample size of 165 subjects.

### **Ethics approval and consent to participate**

Ethical clearance for the study was sought from the Ethical Review Committee of the University for Development Studies, Tamale, Ghana. Prior to the commencement of the study, both verbal and written consents were sought from participants.

## Data Analysis and Presentation

The data for this study were analyzed using IBM SPSS (Statistical Product for Sciences Solutions) version 24.0 IBM for windows. As the study was a prevalence-based survey, descriptive statistics was carried out, which comprised conducting frequencies and cross-tabulations for demographic characteristics of the respondents (age, gender, education, religious affiliation), sexual behaviour, and contraceptive uptake. The results were then presented in tables.

## Results

Table 1 below shows the socio-demographic characteristics of the study respondents. Those who were 15 years formed the least proportion of the study sample, whereas the majority of the respondents were within 16-19 years old. The majority of the respondents had some form of formal education. However, the proportion of participants classified under informal education were 62(37.6%). The majority [139(84.2%)] of the respondents were of the Islamic faith. The study participants were predominantly [105(63.6%)] living in urban areas.

Table 1: Socio-Demographic Characteristics of Respondents (n = 165).

| Characteristics    | Category           | Frequency | Percent (%) |
|--------------------|--------------------|-----------|-------------|
| Age (years)        | 15                 | 17        | 10.3        |
|                    | 16                 | 30        | 18.2        |
|                    | 17                 | 28        | 17.0        |
|                    | 18                 | 41        | 24.8        |
|                    | 19                 | 49        | 29.7        |
|                    | Total              | 165       | 100.0       |
| Level of education | Primary            | 10        | 6.1         |
|                    | Junior High School | 50        | 30.3        |
|                    | Secondary          | 39        | 23.6        |
|                    | Tertiary           | 4         | 2.4         |
|                    | None               | 62        | 37.6        |
|                    | Total              | 165       | 100.0       |
| Religion           | Christianity       | 23        | 13.9        |
|                    | Islamic            | 139       | 84.2        |
|                    | Traditional        | 3         | 1.8         |
|                    | Total              | 165       | 100.0       |
| Place of residence | Rural              | 105       | 63.6        |
|                    | Urban              | 60        | 36.4        |
|                    | Total              | 165       | 100.0       |

Table 2 shows the sexual behaviour among female adolescents and contraceptive use among those who ever had sex in the past 12 months. Out of the 165 participants, 143(86.7%) ever had sex within the past 12 months before the survey (**Not shown in table 2**). However, out of 143(86.7%) who ever had sex within the past 12 months before the survey, 110 (66.7%) ever used at least one form of modern contraception. Further, among the respondents, the majority constituting 86(60.1%) had their first sexual intercourse at the age 15 (years) (Table 2).

Table 2: Age at first sexual activity and prevalence of at least one method of contraceptive use

| Contraceptive usage                                | Response | Frequency | %     |
|--|----------|-----------|-------|
| Age (years) at first sexual intercourse            | 15       | 86        | 60.1  |
|  | 16       | 42        | 29.4  |
|  | 17       | 10        | 7.0   |
|  | 18       | 3         | 2.1   |
|  | 19       | 2         | 1.4   |
|  | Total    | 143       | 100.0 |
| Has ever used at least one method of Contraceptive | Yes      | 110       | 76.9  |
|  | No       | 33        | 23.1  |
|  | Total    | 143       | 100.0 |

Table 3 shows contraceptive use among adolescents who had sex in the past 1-year preceding the survey. The injectable was the leading contraception method observed among the participants, representing 52(47.3%) and 48(43.6%), for the ever used and current users, respectively. Further, of all those who used at least one method of contraception, the leading reason for the use was to avoid pregnancy (49.1%).

Table 3: Contraceptive use among adolescents who had sex in the past 12 months preceding the survey

| Contraceptives use                 | Response                                 | Frequency | %     |
|------------------------------------|--|-----------|-------|
| Frequency of use of contraceptives | Every time                               | 52        | 31.5  |
|                                    | Once a while                             | 113       | 68.5  |
|                                    | Total                                    | 110       | 100.0 |
| Contraceptive method ever used     | Intrauterine Device                      | 38        | 34.5  |
|                                    | Injectable                               | 52        | 47.3  |
|                                    | Implants                                 | 4         | 3.6   |
|                                    | Pills                                    | 7         | 6.4   |
|                                    | Female condom                            | 5         | 4.5   |
|                                    | Male condom                              | 4         | 3.7   |
|                                    | Total                                    | 110       | 100.0 |
| Current contraceptive method       | Intrauterine Device                      | 30        | 27.3  |
|                                    | Injectable                               | 48        | 43.6  |
|                                    | Implants                                 | 10        | 9.1   |
|                                    | Pills                                    | 13        | 11.8  |
|                                    | Female condom                            | 4         | 3.6   |
|                                    | Male condom                              | 5         | 4.6   |
| Reasons for using contraceptive    | Total                                    | 110       | 100.0 |
|                                    | To avoid teenage pregnancy               | 54        | 49.1  |
|                                    | To prevent sexually transmitted diseases | 49        | 44.5  |
|                                    | To delay childbirth                      | 7         | 6.4   |
| Total                              | 110                                      | 100       |       |

Table 4 shows the participants' perception of contraception uptake. In the study, 43.0% of the respondents preferred injectable for future use. Also, 68.5% of participants believed that all sexually active persons can

*Sexual behaviour and contraceptive uptake among female adolescents (15-19 years).*

use contraceptives. Additionally, majority (54.5%) of the participants think that hospitals/clinics are the sources from which people should obtain contraceptives.

Table 4: Participants' perception on contraception uptake.

| Contraceptive use                                 | Response                    | Frequency | %     |
|---|-----------------------------|-----------|-------|
| Contraceptive method willing to use in the future | Intrauterine Device         | 47        | 28.5  |
|   | Injectable                  | 71        | 43.0  |
|   | Implants                    | 19        | 11.5  |
|   | Pills                       | 21        | 12.7  |
|   | Female condom               | 5         | 3.0   |
|   | Male condom                 | 2         | 1.2   |
|   | Total                       | 165       | 100.0 |
| Who in your opinion should use contraception?     | Married couples only        | 42        | 25.5  |
|   | All sexually active persons | 113       | 68.5  |
|   | Adults only                 | 10        | 6.1   |
|   | Total                       | 165       | 100.0 |
| Source of contraceptives                          | Hospital/Clinic             | 90        | 54.5  |
|   | Pharmacy/Drug store         | 53        | 32.1  |
|   | Health provider             | 19        | 11.5  |
|   | Family planning clinic      | 3         | 1.8   |
|   | Total                       | 165       | 100.0 |
| Duration of modern contraceptive use              | Less than one year          | 80        | 48.5  |
|   | One to two years            | 66        | 40.0  |
|   | Three to five years         | 13        | 7.9   |
|   | Six to Ten years            | 6         | 3.6   |
|   | Total                       | 165       | 100.0 |

Table 5 below shows perceived barriers to contraceptives use among the study participants. Of all the participants, 43.0% of them affirmed that their non-use of contraceptives was due to religious reasons. In this study, over 50% of the respondents confirmed that long distance to acquisition sites of contraceptives was a barrier to their usage. In addition, the poor attitude of the contraceptive providers was a barrier [99(60.0%)] to its utilization. Also, more than 60% of the participants did not use contraceptives because of the fear of their side effects. The findings also showed that some 89(53.9%) of the participants refused to use contraceptives because they lack adequate knowledge. Moreover, 47.9 % of the participants agreed that cultural and traditional beliefs deter them from using contraceptives.

Table 5: Perceived barriers to contraception use among study participants

| Perceived barriers to contraceptive use                  | Response          | Frequency | %     |
|--|-------------------|-----------|-------|
| Religious beliefs  | Strongly disagree | 64        | 38.8  |
|  | Disagree          | 29        | 17.6  |
|  | Neutral           | 1         | 0.6   |
|  | Agree             | 35        | 21.2  |
|  | Strongly agree    | 36        | 21.8  |
|  | Total             | 165       | 100.0 |
| Distance to acquisition of Contraceptives                | Strongly disagree | 17        | 10.3  |
|  | Disagree          | 29        | 17.6  |
|  | Neutral           | 7         | 4.2   |
|  | Agree             | 27        | 16.4  |
|  | Strongly agree    | 85        | 51.5  |
|  | Total             | 165       | 100.0 |
| Poor attitude of the contraceptive providers             | Strongly disagree | 18        | 10.9  |
|  | Disagree          | 16        | 9.7   |
|  | Neutral           | 8         | 4.8   |
|  | Agree             | 24        | 14.5  |
|  | Strongly agree    | 99        | 60.0  |
|  | Total             | 165       | 100.0 |
| Partner or family members opposed to using contraceptive | Strongly disagree | 31        | 18.8  |
|  | Disagree          | 23        | 13.9  |
|  | Neutral           | 17        | 10.3  |
|  | Agree             | 35        | 21.2  |
|  | Strongly agree    | 59        | 35.8  |
|  | Total             | 165       | 100.0 |
| Fear of side effects of contraceptive                    | Strongly disagree | 16        | 9.7   |
|  | Disagree          | 13        | 7.9   |
|  | Neutral           | 5         | 3.0   |
|  | Agree             | 25        | 15.2  |
|  | Strongly agree    | 106       | 64.2  |
|  | Total             | 165       | 100.0 |

Table 5 Continued: Perceived barriers to contraception use among study participants

| Perceived barriers to contraceptive use       | Response                        | Frequency | %     |      |
|---|---------------------------------|-----------|-------|------|
| Lack of acknowledge of contraceptive          | Strongly disagree               | 15        | 9.1   |      |
|   | Disagree                        | 20        | 12.1  |      |
|   | Neutral                         | 14        | 8.5   |      |
|   | Agree                           | 27        | 16.4  |      |
|   | Strongly agree                  | 89        | 53.9  |      |
|   | Total                           | 165       | 100.0 |      |
| Infrequent sex                                | Strongly disagree               | 22        | 13.3  |      |
|   | Disagree                        | 28        | 17.0  |      |
|   | Neutral                         | 45        | 27.3  |      |
|   | Agree                           | 16        | 9.7   |      |
|   | Strongly agree                  | 54        | 32.7  |      |
|   | Total                           | 165       | 100.0 |      |
| Hard to get preferred methods                 | Strongly disagree               | 52        | 31.5  |      |
|   | Disagree                        | 21        | 12.7  |      |
|   | Neutral                         | 6         | 3.6   |      |
|   | Agree                           | 29        | 17.6  |      |
|   | Strongly agree                  | 57        | 34.5  |      |
|   | Total                           | 165       | 100.0 |      |
| Contraceptive method too costly               | Strongly disagree               | 55        | 33.3  |      |
|   | Disagree                        | 22        | 13.3  |      |
|   | Neutral                         | 3         | 1.8   |      |
|   | Agree                           | 22        | 13.3  |      |
|   | Strongly agree                  | 63        | 38.2  |      |
|   | Total                           | 165       | 100.0 |      |
| Lack of counselling about contraceptive usage | Disagree                        | 26        | 15.8  |      |
|   | Neutral                         | 17        | 10.2  |      |
|   | Agree                           | 122       | 74.0  |      |
|   | Total                           | 165       | 100.0 |      |
|   | Cultural or Traditional beliefs | Disagree  | 75    | 45.4 |
|   |                                 | Neutral   | 11    | 6.7  |
| Agree   |                                 | 79        | 47.9  |      |
| Total   |                                 | 165       | 100.0 |      |

## Discussion

In this cross-sectional study, the main objective was to assess the sexual behaviour and sociodemographic variables associated with contraceptive uptake among female adolescents (15-19 years). It was revealed that the injectable was the leading contraceptive method used by participants in the study. It was established that hospitals were the most popular sources of contraception acquisition by the participants. The findings showed that the majority of the respondents used contraceptives to avoid conception. However, the barriers to the use of contraceptives included the fear of their side effects, religious beliefs, long-distance to



contraceptive acquisition centers, a feeling of bad attitude from health providers, lack of adequate knowledge on contraceptive methods, and cultural beliefs.

The findings revealed that some participants had their first sexual intercourse at age 15 years. The issue of adolescents engaging in sexual activities within their teens (15-19 years) has been previously reported in the country (Abdul-Rahman et al., 2011; O. Asante et al., 2018; Yidana et al., 2015) and sometimes even at age 14 or less in other countries (Donenberg et al., 2003). In Ghana, the observation that female adolescents engage in sexual activities and their lack of knowledge about contraception ought to further raise interest among the major stakeholders on the need to intensify education on the use of contraceptives in these young population groups. This is partly because such adolescents may not be economically and physiologically ready for childbearing.

Out of the 143 (86.7%) respondents who said they had sex in the 12 months preceding the survey, the majority of them reported they used contraceptives, which suggests a high prevalence of contraception uptake in the study area. Similarly, a previous study in some communities in Northern Ghana found a high prevalence of contraception among adolescents (Yidana et al., 2015). This high prevalence as observed in this study may be due to the several efforts made by the Ghana Government to increase access and use of contraceptive services in the country (Abdul-Rahman et al., 2011). Despite the high prevalence of contraception use established in this current study and a previous report (Yidana et al., 2015) in Northern Ghana, other studies found a lower prevalence of contraceptive utilization in the country (Agyemang et al., 2019; Apanga & Adam, 2015). The disparity in the findings of different study areas may be attributable to the different characteristics of the participants and the different contexts.

In this study, the use of injectable was the leading form of contraception among the participants. Conversely, in the Southern belt of the country, the use of injectable was found to be low (Agyemang et al., 2019; Boamah et al., 2014). Moreover, in the current study, the leading source from which the respondents obtained contraceptives was the health facility. Similarly, an analysis of the Ghana demographic and health data showed that access to the health facility was a determinant of the high uptake of contraception among female adolescents in the country (Nyarko, 2015). Also, in a previous study in the Republic of Congo, the authors found that the health facility was the primary source from which the respondents obtained contraceptives (Casey et al., 2020). The findings of this study showed that avoidance of pregnancy was the main reason for the use of contraceptives. In line with this finding, other previous observational studies found similar results (Apanga & Adam, 2015; Yidana et al., 2015).

However, the reasons for the non-use of contraceptives as revealed in this work were diverse. For instance, the fear of side effects was a factor for the non-use of contraceptives in this study. Surprisingly, the fear of side effects of contraceptive usage appears to be a global concern among females even in advanced countries such as the United States of America (Chernick et al., 2015). Furthermore, in Ghana (Agyemang et al., 2019), Congo (Muanda et al., 2016), and Nigeria (Asekun-Olarinmoye et al., 2013), results from a review of observational studies, reported the fear of side effects as a barrier to contraceptive uptake (Campbell et al., 2006). These observations further emphasized the need for effective education to reduce hesitancy among the sexually active adolescent girls to the use of contraceptives.

In this study, the majority of the respondents agreed strongly that their cultural practices and religious beliefs do not accept the use of contraceptives. In line with this observation, earlier cross-sectional studies found similar results (Agyemang et al., 2019; Marrone et al., 2014; Odimegwu, 2005; Sahu & Hutter, 2012). Although it is difficult to disentangle religion and cultural beliefs from science, it may be significant for health authorities to engage the community and religious leaders on the need for reproductive health education.

We further observed that, another leading barrier to contraceptive usage among the respondents was the distances they had to travel to obtain contraceptives. As previously reported from Haiti (Ivers, 2011; Wang & Mallick, 2020), Malawi (Skiles et al., 2015), and Ethiopia (Shiferaw et al., 2017), long-distance was a

key determinant of low contraceptive usage. In addition, the feeling of a bad attitude from health service providers was considered by the participants as a barrier to the use of contraceptives. This finding is in agreement with the results of a previously published study (Karavus et al., 2004), in which, family planning service providers impede contraceptive use among females due to attitudinal problems. Moreover, in the current study, a lack of adequate knowledge of modern contraceptive methods was a factor for the non-use among the participants. In line with the present results, a previous study in Northern Ghana also revealed a direct correlation between knowledge and contraceptive utilization (Yidana et al., 2015).

In view of the data presented in the above, effective education on the types and use of contraceptives among adolescents in the municipality is required. The study has both strengths and limitations. To the best of our knowledge, this was the first study to report on the prevalence of sexual behaviour and contraceptive uptake among female adolescents (15-19 years) in the Sagnarigu Municipality. However, this was a prevalence based cross-sectional study hence, we did not assess explanatory factors for the prevalence and the use or non-use of modern contraceptives. Additionally, the sample size was also relatively small and may not be adequate for certain types of statistical analysis.

## **Conclusions**

The study set out to assess the sexual behaviour and contraceptive uptake among female adolescents (15-19 years) in the Sagnarigu municipality of Northern Region, Ghana. It was revealed that the need to avoid pregnancy was the main factor that promotes the use of contraceptives among the participants. Although the use of contraception methods was high among the respondents, the fear of side effects, inadequate knowledge on contraceptive methods, religious and cultural beliefs as well as the bad attitude of contraceptive providers served as barriers to contraceptive uptake. The findings may be useful in designing health education policies for the promotion of contraceptive access and utilization among adolescent females in the Sagnarigu Municipality in Northern Ghana.

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