

## Knowledge and Perception of Senior High School (SHS) Students about Emergency Contraceptive Use in the Garu and Tempene Districts

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### ABSTRACT

*The perception and knowledge people have about family planning health services are likely to affect the kinds of decisions they are likely to make about the service. The main purpose of the study was to assess the knowledge and perception of Senior High School students about emergency contraceptive use in the Garu and Tempene Districts. A descriptive (cross-sectional) survey design adopted. A questionnaire was administered to a sample of 248 students, who served as respondents. The sample was selected using the multistage sampling procedure. The data analyses were done using frequencies, percentages, mean and standard deviation and the independent sample t-test. The results showed that students had knowledge about emergency contraceptives. The results also, provided evidence that the students had negative perception about emergency contraceptive use. Furthermore, it was evident that male and female students had similar perception about emergency contraceptive use. It was recommended that the Ghana Health Service (GHS) should intensify their sex education as part of their health education programmes for students in the Senior High Schools.*

### Keywords

Emergency contraceptive, Perception, Senior High School.

### Introduction

Family planning is widely acknowledged as an important intervention towards achieving the Millennium Development Goals (MDGs) (now known as SDGs) four (4) and five (5) as it has proven to reduce maternal and child mortality. Family planning can prevent unwanted pregnancies and unsafe abortions. Some family planning methods such as condom usage can protect individuals from Sexually Transmitted Infections (STIs) including HIV/AIDS.

Emergency contraception (EC) refers to methods of contraception that reduce the likelihood of pregnancy after unprotected sexual intercourse. The techniques are intended for use after sexual intercourse when there is no contraception, regular contraception does not work or when a woman is sexually assaulted [1].

Teenage pregnancy is an important public health issue because they are associated with maternal, fetal, and neonatal adverse outcomes. Early sexual escapes and limited sexual physiology knowledge, limited use of Contraceptives, limited access to reproductive health information and limited control all contribute to the high rate of unintended pregnancy through their sex lives. Teenage girls who get pregnant are likely to drop out from school and teenage parents are unlikely to have the social and economic means to raise children [2]. Further, unintended pregnancy poses a major challenge to the reproductive health of young adults in developing countries. Research has shown that teenager perceptions of the advantages and disadvantages of pregnancy and contraception are significant predictors of pregnancy risk taking [3]. Globally, the focus of researchers on family planning services is mostly on women [4-9], with little or nothing said about teenagers who are mostly, in Senior High Schools, especially, in Ghana. One study by Hagan and Buxton [9] in the Central Region,

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found that the perception 31.5% of adolescents had the perception that contraceptives were only for adult married persons, whereas 43% thought that the process of acquiring contraceptives was often embarrassing. Adding to this Mohammed, Abdulai and Iddrisu [10] found that while EC awareness and knowledge among the students was relatively high, some students lacked detailed knowledge of the process, in particular the use of Intrauterine Device (IUD) as EC. The study revealed further that, the use of EC among students was poor. Similarly, their study found that EC facilitates promiscuous sexual conduct and that the use of EC is morally incorrect [10]. The authors hinted that the contraceptive use rate is poor, despite the high rate of sexual activity among adolescents. Therefore, before initiating sexual activity and disseminating information on family planning methods among the adolescent population in Ghana, vigorous advocacy on adolescent reproductive health is required. Meanwhile, it was observed that nearly 7 out of every 10 SHS girls of the Garu and Tempane districts test positive for pregnancy, though family planning services are readily available and accessible to them. It is therefore, important to seek an understanding of these teenagers' perceptions regarding family planning. Hence, the purpose of this study was to explore the perceptions of SHS students' perception of Emergency Contraceptive use in the Garu and Tempane Districts of the Upper East Region of Ghana.

### Research questions

Based on the objectives of the study, the following research questions were posed to guide the study:

1. What is the knowledge of SHS students about the use of emergency contraceptive in the Garu and Tempane Districts?
2. What is the perception of SHS students about the use of emergency contraceptive in the Garu and Tempane Districts?

### Hypothesis

The following hypothesis were also tested to guide the study;

$H_0$ : There is no statistically significant difference in the perception of SHS students about the use of emergency contraceptive in the Garu and Tempane Districts based on gender.

$H_1$ : There is a statistically significant difference in the perception of SHS students about the use of emergency contraceptive in the Garu and Tempane Districts based on gender.

### Methods

#### Research Design

Every research is unique and therefore, research designs are developed to cater for the unique requirements of a study. Some researchers argue that in selecting a good research design, consideration should be whether the design does the job of providing reliable answers to the research questions [11]. According to Amedahe [12], "descriptive research is research which specifies the nature of a given phenomenon" (p. 50). Descriptive survey was considered appropriate for this study due to the potential making inferences on a population [13], as the SHS students, who selected were just parts of a larger number of SHS students in the districts. Creswell [14] asserts that the descriptive

survey involves collecting data in order to test hypotheses or to answer questions concerning the status of the subject of the study. In view of the above assertions, a questionnaire, as an instrument in descriptive research was used to collect data from the sample in order to answer the research questions posed and to make generalisation as well [15].

### Study Area

The study was conducted at two sister- districts in the Upper East Region, the Garu district and the Tempane districts of the Upper East Region. The Garu District forms part of the fifteen (15) Municipalities and Districts in the Upper East Region. The district is located in the south eastern corner of the Upper East Region of the Republic of Ghana with the administrative capital as Garu. It covers an area of 1,230 kilometres and lies on approximately latitude 10° 38'N and 11° 0'N and longitude 0° 06' E and 00° 23' E. T. It shares boundaries with, Bawku Municipal to the north, Binduri District to the North West, Pusiga District to north east, East Mamprusi Municipal to the southwest, Bunkpurugu Nyankpanduri District to southeast, Bawku West District to the west and the Republic of Togo to the east. The population of the district according to 2010 population and housing census stands at 130,003 with 62,025 males and 67,978 females. The district has one Senior High School.

The Tempane District, like the Garu District, is one of the 15 Municipalities and Districts in the Upper East Region. The Tempane District Assembly was carved out of the Garu-Tempane District Assembly. Created with Legislative Instrument (LI) 2352, the Tempane District Assembly has its capital as **Tempane**. Like the Garu district, the Tempane district has one Senior High School.

### Population

The target population of this study included the second-year students in the two public SHSs in the Garu and Tempane Districts. The population was 675. This comprised 121 from the Garu district and 554 from the Tempane district.

### Sampling Procedure

A sample consisted of a carefully selected unit that comprised all the categories of the population [16]. Based on the target population, an estimated sample size of 248 students was selected for the study [17]. In selecting the sample, the study made use of a multi-stage sampling procedure. The first stage involved the use of the proportionate stratified sampling technique in the selection of the number of students from the schools. This was necessary since the two schools varied in terms of their numerical strength and student's population. The second stage involved using the proportionate stratified sampling technique in selecting the respondents based on gender. Again, this was necessary because the various schools varied in terms of the numerical strength of the student population of males compared to female students. The third stage involved using the simple random sampling (lottery method) technique in selecting the specific students from each of the selected schools to serve as respondents.

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## Data Collection Instruments

A Questionnaire developed by Mohammed, Abdulai and Iddrisu [10] was adapted for the data collection. According to Sarantakos [16], the use of questionnaire for data collection affords greater assurance of confidentiality and anonymity to respondents. The items on the questionnaire were prepared based on the objectives of the study in order to elicit the needed information. The question consisted of two sections; section A and section B. The questionnaire was made of 14 positive items, which were closed-ended. The section A comprised of 9 items that focused on the background information of the respondent, as well as knowledge of emergency contraceptive use. The section B also, comprised 5 items that focused on perception of emergency contraceptive use. Items on this section were in the form of a three- point Likert-type scale, that involved Agree given a score of 3, Disagree, given a score of 1 and Not Sure given a score of 2. To ensure the content relatedness, the questionnaire was evaluated experts at the Department of Science Education for face validity. The necessary modifications and changes to the instrument suggested by my supervisor were made. Further, to achieve the reliability of the instrument, Cronbach alpha was used to estimate the internal consistency. Reliability reveals that when procedures of the study are repeated, the exact same results are expected [18]. A reliability test was carried out with the purpose of testing the consistency of the research instruments. For reliability of the instrument, a pilot-test of the instrument was carried out on SHS students in the Pusiga District.

## Ethical Considerations

In the view of McNabb [19] there are four stages in research ethics, namely: planning, data gathering, processing and interpretation of data as well as the dissemination of results. The students had the opportunity to fill their questionnaires privately, in order to ensure confidentiality. Privacy, anonymity and confidentiality of all the respondents were ensured. Names of the respondents were not used or revealed throughout the research project. The discussion of the results was based on the trends that emerged from the data and not from any preconceived ideas. In addition, an introductory letter from the Department of Science Education and the Municipal Education Directorate was shown to the headmasters of the selected schools as a means of indicating to them the permission for the school and the students to participate in the study.

## Data Collection Procedure

A letter of introduction was collected from the Department of Science Education of the University of Cape Coast, to seek for permission from the headmasters of the two schools in the Garu and Tempene Districts. The researcher trained one research assistant to aid in the collection of the data. The questionnaire was administered to the respondents within a period of two weeks. All the students in the selected schools were met and discussed the purpose of the study with them.

## Data Processing and Analysis

The data was entered into statistical product for service solution (SPSS version 23) computer software. The data was sorted, coded

and cleaned for errors. Demographical variables of respondents were analysed using percentages and frequencies. Data on research question 1 was analysed using frequencies and percentages, data on research question 2 were analysed using Mean and Standard Deviation. Hypotheses 1 was tested using the independent samples t test. The independent samples t- test was used since the researcher was interested in finding the differences in perception about emergency contraceptive use between male and female SHS students.

## Results

### Demographic Results

Table 1 presents the information on the demographic information of the respondents. Majority (56%; n = 139) of the respondents were females.

**Table 1:** Results on the Demographics of the Respondents (n = 248).

Gender	Frequency	Percent (%)
Male	109	44
Female	139	56

Source: Field Data, 2021

**Research Question One:** What is the knowledge of SHS students about the use of emergency contraceptive in the Garu and Tempene Districts?

From the results in Table 2, show that 207 (83.5%) of the students reported that they have heard about emergency contraceptive (EC) before. This indicated that the majority of the students have agreed that EC existed. Also, from the results in Table 2, majority 197 (79.5%) of the students indicated that there are many ways to prevent pregnancy after unprotected sex. However, the results in Table 2 show that majority 206 (83%) of the students reported that emergency contraceptive is an early method for abortion. This implied that majority have a misunderstanding of the use of EC. This is because, EC are not meant for abortion.

The results in Table 3 show that 197 (79.5%) of the respondents reported that the last time they heard about emergency contraceptive is over three (3) years. This indicates that the students did not get regular information about EC. In addition, the results in Table 3 show that 173 (69.6%) of the students reported that they usually get information about EC from friends. This implied that majority of the students depended on their friends and peers for information about EC. This situation may pose danger to the students in terms of the use of the EC services, since the friends they depend on for information may not have sufficient knowledge on the EC services. When the students were asked, "When is it proper to use EC?" majority, 155 (62.5) reported that EC is used after unprotected sex. Again, from the same table, majority, 197 (79.5) of the students reported that the proper time for the use of EC is within 72 – 120 hours. This indicates that the students had knowledge on the proper time for the effective use of EC. When the students were asked when IUD is effective as an EC, majority 124 (50%) did not have any idea (Table 3).

**Table 2:** Results for the Dichotomous Analysis for Students Knowledge about EC ( $n=248$ ).

Statement	Yes n (%)	No n (%)
Have you heard of emergency contraceptive?	207 (83.5)	41 (16.5)
There are many ways to prevent pregnancy after unprotected sex.	197 (79.5)	51(20.5)
Is emergency contraceptive an early method for abortion?	206 (83)	32 (17)

**Table 3:** Results for the Dichotomous Analysis for Students Knowledge about EC ( $n=248$ ).

Item	Frequency	Percentage
<b>When did you last hear about EC?</b>		
Less than 6 months ago	3	1.0
Less than 6 months ago	48	19.5
Less than 6 months ago	197	79.5
<b>Where do you usually get information about EC from?</b>		
Friends	173	69.6
Family members	5	1.8
Media	70	28.6
<b>What is the right time to use EC?</b>		
After unprotected sex	155	62.5
To avoid unwanted pregnancy	93	37.5
<b>What time is it proper to use EC?</b>		
Within 72-120 hours	197	79.5
More than 120 hours	49	19.6
Don't know	2	.9
<b>When is an IUD effective as an EC?</b>		
Only within 72 hours	49	19.6
Within 5 days	75	30.4
Don't know	124	50

### Research Question Two

What is the perception of SHS students about the use of emergency contraceptive in the Garu and Tempene Districts?

This research question sought to find out adolescents' perception about the emergency contraceptive use. In addressing this research questions, the students were given a three-point Likert-type scale items to respond to. The scoring of items was based on the three-point Likert scale of measurement ranging from "Agree" (scored 3), "Not Sure" (scored 2) and "Disagree" (scored 1). In the analysis, means provides the summary of the responses from students and the standard deviation indicates whether students' responses were clustered to the mean score or dispersed. A middle-point value of 2.0 was used as baseline for comparison such that mean values above 2.0 indicated that most of the respondents had positive perception about the emergency contraceptive use whereas mean values below 2.0 indicated that most of the respondents had negative perception. Results on the analysis are presented in Table 3.

The results from Table 4, show that respondents had a negative perception about emergency contraceptive use ( $MM = 1.53$ ,  $SD = .68$ ) in the Garu and Tempene Districts. This is evident in the mean value of 1.53, which is below the middle point value of 2.0. Specifically, the students disagreed that it is morally wrong to

use EC ( $M = 1.18$ ,  $SD = .41$ ). In addition, they disagreed that EC encourages sexual immorality ( $M = 1.70$ ,  $SD = .96$ ). Interestingly, the respondents disagreed that EC should be available everywhere ( $M = 1.52$ ,  $SD = .50$ ). Again, the respondents denied that EC is one way of causing abortion ( $M = 1.90$ ,  $SD = .70$ ). The respondents further denied that it is easy to get EC ( $M = 1.53$ ,  $SD = .76$ ). This statement suggests that while the students may have knowledge about EC services, it appears access to such services in the Garu and Tempene Districts is problematic.

**Table 4:** Results for Students Perception about Emergency Contraceptive Use ( $n=248$ ).

Statement	Mean	Std. D
It is morally wrong to use EC	1.18	.41
EC encourages sexual immorality	1.70	.96
Adolescents who are not married can use EC	1.35	.76
EC should be available everywhere	1.52	.50
EC is one way of causing abortion	1.90	.70
It is easy to get EC	1.53	.76
Overall Mean (MM)	1.53	.68

Source: Field Data, 2021

### Research Hypothesis One

There is a statistically significant difference in the perception of SHS students about the use of emergency contraceptive in the Garu and Tempene Districts based on gender.

The objective of testing this hypothesis was to establish gender differences in perception of emergency contraceptive use among adolescents in Garu and Tempene Districts. The independent samples t-test was used to analyse the data that were collected on this hypothesis. Before performing the test, normality test and the homogeneity of variance assumptions were certified as preliminary test. The results of the normality showed that the data on the outcome variable (perception of EC use) were normally distributed. This is evident in the similarity of the Mean (9.17) and Median (10.00) of the data. Besides the mean and the median, an inspection of the normal Q-Q Plot showed revealed that almost all the data points clustering around the line, indicating that the normally assumption is met (See Appendix A).

The equal variances assumption was also tested to find out if the variances between the groups were the same. The results from the Levene's test for equality of variances revealed that the equality of variance assumption was not violated ( $F= 093$ ,  $p=.338$ ). Summary of the results of the analysis are presented in Table 5.

The independent samples t-test was evaluated using 0.05 alpha level. Results from the analysis, as captured in Table 5, show that differences in perception about emergency contraceptive use between male and female students is not statically significant,  $t(110) = .530$ ,  $p = .597$ . This indicated that male and female students in the Garu and Tempene Districts had the same perception about the use of emergency contraceptives.



**Table 5:** Gender Differences in Perception about the Use of Emergency Contraceptives ( $n=248$ ).

Gender	N	Mean	SD	df	t-value	p-value
Male	49	9.31	2.58	110	.530	.597
Female	63	9.06	2.56			

Source: Field Data, 2021

## Discussion

### Knowledge of SHS Students about Emergency Contraceptive Use

Research question one sought to find out SHS students' knowledge about emergency contraceptive use in the Garu and Tempene Districts. From the data analysis, result indicates that the SHS students in the Garu and Tempene Districts have knowledge about emergency contraceptives services. For example, majority of the students indicated that they have heard of emergency contraceptive and agreed that there are many ways to prevent pregnancy after unprotected sex. This result corroborate several previous study findings in literature. For instance, Bello, et al. [6] in their study concluded that female undergraduates of the University of Ibadan had high knowledge level of emergency contraceptive methods. Again, Aeri and Passi [20] findings support the result of this study that knowledge of contraceptives among women is high, albeit the usage was very low.

However, the result of this study is not in conformity with the findings of Aeri and Passi [20], that lack of knowledge regarding the appropriate methods of contraception, their side-effects (if any), and the authentic source of obtaining also emerged as the hindering factors. The result also, disagree with the findings of Appiah-Agyekum and Kayi [21], who reported that University of Ghana students had little knowledge on contraceptives.

### SHS Students' Perception about the use of Emergency Contraceptives

Research question two sought to find out SHS students' perception about emergency contraceptive use in the Garu and Tempene Districts. From the data analysis, result indicates that the SHS students in the Garu and Tempene Districts had a negative perception about emergency contraceptive use ( $MM = 1.53$ ,  $SD = .68$ ). The result of this study is in consonance with the assertion by Pauline, Migosi and Mwanja (2013), that senior secondary school students had a negative perception about condom use. In addition, the study results confirm the findings of a study by Al Sheeha [22] that most women and their husbands showed acceptance to the use of contraceptives for birth spacing.

However, the result of this study is in consonance with the assertion by Hagan and Buxton [9] that 32% of Senior High School students in the Central Region of Ghana thought that contraceptives are for only adult married persons.

### Differences in the Perception of SHS Students about the Use of Emergency Contraceptive Based on Gender

The objective of testing this hypothesis was to establish gender differences in perception of emergency contraceptive use among

adolescents in Garu and Tempene Districts. The results from the analysis showed that show that differences in perception about emergency contraceptive use between male and female students is not statically significant. The results of this study seem to be variance with some previous studies. For example, the result of this study does not support the findings of Grindlay, Dako-Gyeke, Ngo, Gobah, Reiger and Blanchard [23] that nearly half of all females (45%) reported their last pregnancy was unintended, and 63% of females and 58% of males felt at risk for future unintended pregnancy.

## Conclusions

From the results, it can be concluded that students had adequate knowledge about emergency contraceptive use. This could be due to regular media discussion about contraceptives. It can also be concluded that students although have knowledge about emergency contraceptives, they had unfavourable perception about the use of the contraceptives. Based on the results of the study, the following are recommended: The Ghana Health Service (GHS) should intensify their sex education as part of their health education programmes for students in the Senior High Schools, the media, especially, the radio stations and the television stations should continue to partner the Ghana Health Service (GHS), by providing them with more platform to carry sensitisation on emergency contraceptive use, the heads of Senior High Schools should continue to encourage the school guidance and counsellors to collaborate with the Ghana Health Service (GHS) personnel to organise for family planning services, especially, emergency contraceptive services workshops for the students and future study of this nature is recommended to assess the cultural, religious and economic factors the influence the use emergency contraceptives.

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## Authors' contributions

CA and OP were responsible for the conception, design, data collection, data analysis, interpretation, and write-up. All authors read the final manuscript. ROD was involved in the design, interpretation of the data, write-up and in the preparation of the draft manuscript. All authors read the final manuscript.

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## APPENDIX A

### Normality Test for Students' Perception

