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Original Research Article

The use of emergency contraception among female senior high students in the Ho municipality of the Volta Region, Ghana

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ABSTRACT

Background: Emergency contraception (EC) is one option for preventing unplanned pregnancy when it is available and properly used. Unsafe abortions are responsible for nearly one third of maternal deaths in sub-Saharan Africa and about quarter of unsafe abortions are among teenagers.

Methods: A quantitative descriptive cross-sectional study. Data was collected using a pretested questionnaire. 260 senior high students were selected using a systematic sampling method in the Volta Region, Ghana. Data were cleaned and entered into SPSS version 22 and analysed into descriptive statistics.

Results: Respondents acquired awareness about EC from friends (36.9%), family members (5.6%) and the mass media (41.6%). The required time for EC to be taken were stated as immediately after sex (57.9%), 24 hours after sex (1.2%) and (30.6%) did not know. 28.4% of participants indicated they would not use EC in the future as their faith was against it, 18.0% believed EC is ineffective and 24.9% consider it dangerous to their health. Reasons for use of EC included condom slipped (35.7%), inability to be on daily pill (33.7%), forced unprotected sex (8.2%) and miscalculation of the safe menstrual period (22.4%). There was a significant relationship between age and history of use of EC ($p=0.000$, $c^2=8.128$, $n=260$).

Conclusions: Strengthening education in Senior High Schools on sexual and reproductive health, with special emphasis on emergency contraceptives as a pregnancy preventive procedure will remain imperative to reducing the canker of maternal mortality attributed to adolescent abortions while improving understanding of the appropriate use of EC.

Keywords: Abortions, Emergency contraception, Pregnancy, Pills, Sex, Teenagers

INTRODUCTION

According to the World Health Organization (WHO) fact sheet 2016, "Emergency contraception (EC) is a type of

birth control device used to prevent unwanted pregnancies resulting from unintended sexual activities, contraceptive failure, rape or coerced unprotected sex". Emergency contraception pills and Copper-bearing

intrauterine devices are the main methods.¹ Three types of EC pills are available; combined oestrogen and progestin pills, progestin only pills, and oestrogen pills.¹ EC was thought to be effective only within 72 hours, but recent studies have confirmed it is effective for up to 120 hours. The intrauterine device (IUD) can be used safely for emergency contraception up to 5-7 days after unprotected intercourse.² The mechanisms of action of emergency contraceptives are: by inhibiting ovulation or preventing the implantation of the fertilized egg, however, will not terminate or interfere with a pregnancy once it's established. The rate of unintended pregnancy is higher in developing countries (57 per 1000 women between the ages of 15-44) as compared to the developed countries (42 per 1000 women between the ages of 15-44).³

EC is one option for preventing unplanned pregnancy when it is available and properly used.⁴ Noteworthy, about 46 million pregnancies (22% of the total pregnancies and 61% of the unplanned/unintended pregnancies) are aborted.⁵ In Africa, about one-quarter of unsafe abortions are among teenagers (aged 15 to 19), a higher proportion than in any other region of the world.⁷ In Ghana, 14% of women within the ages 15-19 start bearing children; and 39% of registered pregnant cases being between 10-24 years with 2.3% of reported pregnant cases result in abortions.⁸

In many low and middle-income countries, like Ghana, students resort to unsafe abortion due to lack of knowledge, access and utilization of EC4. ECs are the only methods that can be used within a short period of time to prevent unwanted pregnancy if used correctly and timely since most of the regular methods are used before or during sexual intercourse.⁹ In spite of this, some studies have revealed the limited knowledge of emergency contraception among female students.⁶

In Ghana, the median age at first intercourse among women is 18.4 years, more than two years lower than the median age at first marriage; 20.7 years.⁸ This makes more-young females in Ghana prone to teenage pregnancy and its intended consequences.¹⁰

In 2014, 23.2% and 11.2% of teenage pregnancies were recorded in Adaklu district and Ho municipality respectively predisposing these areas to problems like high perinatal deaths and low birth weight.^{8,11} Preventing adolescent pregnancy is a key strategy in improving maternal and infant outcomes yet little is known about this effective strategy (EC utilization) in the Ho municipality. Few studies have been conducted to assess senior high students' awareness and use of emergency contraception.

This study assessed the utilization of emergency contraceptive among female senior high students in the Ho municipality of Ghana.

METHODS

Study design

This was a descriptive cross-sectional study. Data was collected from respondents at a point in time and no follow up was required.

Study setting and population

Ho is the administrative capital of the Volta Region and plays host to many senior high schools. Senior high schools in the metropolis are of mixed and single sex institutions ranging from government, private, religious based, to community owned. All these institutions were listed and three were selected for the study based on simple random sampling. Sunrise Christian senior high school is a mixed school with a total population of 400 students. The Star senior high school is also a mixed school with a total population of 66 students with 42 being females and 24 males. The Sacred Heart Senior High School another a mixed school with a total population of 153 students with 89 of the students being females and 64 males.

Sample and sampling technique

A systematic sampling method was used to select 260 girls from the selected three senior high schools in the municipality.

In determining the sample size, Kish and Leslie formula was used. The formula is.

$$n = \frac{z^2 \times (P) \times (1-P)}{d^2} = \frac{(1.645)^2 \times (0.6) \times (0.4)}{(0.5)^2}$$

$$n = 259.78.16 \approx 260$$

Where: n=desired sample size Z=value for 90% confidence level and the value is expressed as 1.69 p=percentage picking as a choice (0.6). d=confidence interval, expressed as (0.05).

In each institution a sample fraction was calculated, girls sitting in their respective classes were selected based on the calculated sample fraction. Based on proportional allocation of 3:2:1, 160 female students were selected from Sunrise Christian senior high school, 70 female students from Sacred Heart senior high school and 30 female students from Star senior high school.

Data collection and analysis

A pretested questionnaire was used for data collection. The questionnaire was modified until it produced a Cronbach alpha coefficient of 0.791. Section "A" covered demographic and biographical information, "B" assessed knowledge of EC, section "C" contained items regarding attitudes as section "D" comprised of items that were

used to assess utilization of EC. The research questionnaire was self-administered, but in instances where students asked for assistance it was readily provided by the data collection assistants. Data was entered into Microsoft excel 2013 version, cleaned and transported to the statistical package for social sciences (SPSS) version 22 for analysis. The data were analysed in to descriptive statistics and chi square test of relationship (c2).

Ethical approval

The study was reviewed by the scientific review committee of the School of Nursing and Midwifery in the University of Health and Allied Sciences and ethical clearance was obtained from the institute of health research [UHAS - REC A.2 (121) 18-19] of the

University of Health and Allied Health Science following recommendation by the latter. Also, permission was obtained from the Director/ Manager of each school. The purpose and significance of the research were explained to the study participants.

RESULTS

The sample size for this study was 260 students drawn from second cycle institutions in the Ho municipality. The mean age of the study participants was 17 with a minimum of 14 and a maximum of 25. 92.1% were Christians and 7.9% were Muslims. With respect to residence, 74.2% students reported as boarders and 24.2% as day students. Respondents indicated they were in first year (25.8%) second year (48.4%) and third year (25.8%).

Table 1: Socio-demographic characteristics of senior high school female students.

Characteristics	Variable	Frequency	Percentage
Age in years	Below 15	3	1.1%
	15-20	236	93.7%
	21-25	13	5.2%
Location of residence	Ho municipality	143	56.7%
	Outside Ho municipality	109	43.2%
Religion	Christian	232	92.1%
	Muslim	20	7.9%
Level in school	One	65	25.8%
	Two	122	48.4%
	Three	65	25.8%
Presence of sexual partner	Never married	184	73.0%
	In a relationship	64	25.4%
	Ignored	4	1.6%
Residential Status in school	Residence	187	74.2%
	Non-residence	61	24.2%
	Ignored	4	1.6%
Source of pocket money	Parent	232	92.0%
	Boyfriend	6	2.4%
	Engage in other works	14	5.6%

The results from Table 2 showed that (98.8%) of senior high school students have heard of emergency contraception. The knowledge about emergency contraception was gotten from friends (36.9%), family members (5.6%) and from the mass media (41.6%). The study findings showed that 57.9% of Senior high students in the Ho municipality indicated that emergency contraception could be taken immediately after sex, 24 hours after sex (1.2%) and (30.6%) did not know the time period allowed for emergency contraceptives to be taken after sexual intercourse. Also, 57.1% of senior high students also showed that EC prevents unwanted pregnancies, while (5.6%) of them indicated that it induces abortion and (24.6%) said it prevents pregnancy

as well induce abortion. Senior high students showed that the emergency contraceptive can be obtained from a pharmacy (42.5%), hospital (25.3%), private clinic (16.7%). The perception of the effectiveness of EC pills for prevention of pregnancies, were that, its effective (51.1%), highly effective (25.3%), not effective (3.6%), while (17.1%) did not know the level of effectiveness.

Describing the situation when EC should be used, respondents indicated when forced to have sex (27.4%), when a condom breaks or slip during sex (31.0%), when there is a miscalculation of the safe period during the menstrual cycle (25.8%) and when the woman fails to take the regular contraceptive pill (15.8%). Respondents

also believe the EC is very safe (44.8%), safe (36.5%), and unsafe (10.3%).

Regarding indication of willingness to use EC in Table 3, 46.8% were in the affirmative while 52.8% will not. Noteworthy, 71.4% of the students indicated that provision of EC to students will encourage promiscuity. Respondents (28.4%), indicated that they would not use

EC in the future because their religion was against its usage, (18.0%) thought the drug is not effective and (24.9%) believed it would be dangerous to their health.

The respondents said EC induced abortion (17.5%) while 33.3% suggested EC should be available over the counter without prescription. Senior high students indicated that repeated use of EC poses a health risk (50.4%).

Table 2: Knowledge of senior high students on the use of EC.

Characteristics	Variable	Frequency	Percentage
Ever discussed reproductive health issues	Yes	246	97.6%
	No	4	1.6%
	Unanswered	2	0.8%
Person discussed the reproductive issue with	Parent	57	22.6%
	Friend	158	62.7%
	Boyfriend	4	1.6%
	Another family member	23	9.1%
	Unanswered	10	4.0%
The issue regarding reproductive health discussed	About EC	154	61.1%
	Not about EC	98	38.9%
Awareness of EC	Yes	249	98.8%
	No	3	1.2%
First source of information on EC	TV	51	20.2%
	Radio	21	8.3%
	Newspaper	3	1.2%
	Internet webpage	30	11.9%
	Parent	10	4.0%
	Friends	93	36.9%
	Reproductive health club	7	2.7%
	Health care providers	14	5.6%
	Boyfriend	6	2.4%
	Other family members	14	5.6%
	Ignored	3	1.2%
	Common emergency contraceptive methods used	Combined oral pills	86
Postinor 2		131	24.1%
Sugar solution		26	4.7%
Cytotec		10	1.8%
Lemon		23	4.2%
IUD		76	14.0%
Quinine		2	0.4%
Lydia pills		141	26.0%
Do not know		44	8.1%
Herbal medicine		4	0.7%
Time frame to take a first dose of EC after sex	Immediately after sex	146	57.9%
	Within 12 hours	10	4.0%
	Within 24 hours	3	1.2%
	After a missed period	16	6.3%
	Do not know	77	30.6%
Effect of EC	Prevent pregnancy from occurring only	144	57.1%
	Induced abortion only	14	5.6%
	Prevent both pregnancy and induce abortions	62	24.6%
	Do not know	32	12.7%
Places to acquire EC	Hospital	64	25.3%

Characteristics	Variable	Frequency	Percentage
	Private clinic	42	16.7%
	Pharmacy	107	42.5%
	Do not know	39	15.5%
Effectiveness of EC pills in preventing pregnancy	Highly effective	71	28.2%
	Effective	129	51.1%
	Not effective	9	3.6%
	Do not know	43	17.1%
Situations to use EC	Forced to have sex	154	27.4%
	Condom breaks/slips	174	31.0%
	Miscalculation of calendar method	145	25.8%
	Missed pills	89	15.8%
Safeness of EC to a woman	Very safe	113	44.8%
	Safe	92	36.5%
	Unsafe	26	10.3%
	Do not know	21	8.3%

Table 3: Perception of emerge female senior high school students towards NCY contraceptive.

Characteristics	Variable	Frequency	Percentage
Perception of provision of EC to students likely promote promiscuity	Yes	180	71.4%
	No	72	28.6%
Willingness to use or recommend EC	Yes	118	46.8%
	No	133	52.8%
	Ignored	1	0.4%
Reasons for not using EC	Religious reasons	96	28.4%
	Not effective	61	18.0%
	Dangerous to health	84	24.9%
	Regular contraceptive methods use	10	2.9%
	Partner opposition	28	8.3%
	Induced abortion	59	17.5%
EC should be available over the counter, without prescription	Yes	84	33.3%
	No	163	64.7%
	Ignored	5	2.0%
Repeated use of EC Poses a health risk.	Yes	127	50.4%
	No	53	21.0%
	Do not know	72	28.6%
EC possess effects on foetus	Yes	111	44.0%
	No	69	27.4%
	Do not know	72	28.6%
Men influence on EC use	Yes	157	62.3%
	No	95	37.7%

In Table 4, senior high students (57.1%) have a history of the use of emergency contraceptive pills. The various types used include Lydia pills (38.5%), postinor-2 (32.6%) and combined oral pills (8.7%). Senior high students indicated the EC should be used within 24 hours of unprotected sexual intercourse (33.7%), within 48 hours (3.6%), and within 72 hours (0.0%).

The reasons for use of the pills include condom slipped (35.7%), could not take contraceptive pills (33.7%), forced to have unprotected sex (8.2%) and miscalculation of the safe period (22.4%). The majority (85.0%) of

respondents agreed the EC methods are effective. The people who recommended the use of EC included friends (64.4%), sexual partner (23.1%) and health care provider (6.7%). The sources of EC method included pharmacy (92.9%) and health care facilities (7.1%). Respondents have used EC in the last year, more than once (21.8%), four times (36.4%) and three times (29.1%). The reasons for none use of EC include religious reasons (62.9%), lack of adequate information on the method (13.1%), consistent use of the calendar method (9.1%) and high cost of EC (2.3%). The relationship of the age distribution and the used of emergency contraception, as

in Table 5 determined through a chi square analysis. The results showed that below 15 years (66.6%), 15 to 20 years (65.7%) and all girls between 21 to 25 years reported to have ever used an emergency contraceptive ($p=0.000$, $c^2=8.128$, $n=260$).

Also, regarding the perception of safety of contraception against respondents ever used contraception, the results showed that, very safe (90%), safe (50%), unsafe (3.8%)

and do not know (23.8%) were the people who reported to have ever used and emergency contraception ($p=0.000$, $c^2=8.28$, $n=260$). In a cross tabulation of the use of presence of a sexual partner and the respondent indicating if they ever used and emergency contraception, the results showed that never married (43.8%), in a current relationship (92.2%) and all who ignored their relationship status reported to have ever used and emergency contraction ($p=0.001$, $c^2=13.385$, $n=260$).

Table 4: Utilization of EC among female senior high school students.

Characteristics	Variable	Frequency	Percentage
History of EC use	Yes	107	42.5%
	No	140	55.6%
	Ignored	5	1.9%
EC method used	Combined oral pills	9	8.7%
	Postinor-2	34	32.6%
	Lydia pills	40	38.5%
	Condom	21	20.2%
Duration prior to use after sexual intercourse.	Within 24 hours	84	90.3%
	Within 48 hours	9	9.7%
	Within 72 hours	0	0.0%
Reason for using EC at that time.	Miscalculation of safe period	22	22.4%
	Failed to use any contraception	33	33.7%
	Forced to have unprotected sex	8	8.2%
	Condom slipped/broken	35	35.7%
Method being effective	Yes	91	85.0%
	No	16	15.0%
Source of recommendation for EC use	Friend	67	64.4%
	Partner	24	23.1%
	Internet webpage	6	5.8%
	Health care provider	7	6.7%
Place service sort	Hospital	7	7.1%
	Pharmacy	91	92.9%
Used EC more than one occasion	Yes	55	21.8%
	No	182	72.2%
	Ignored	15	6.0%
Number of EC use within the last year	2x	2	3.6%
	3x	16	29.1%
	4x	20	36.4%
	5x	5	9.1%
	6x	3	5.4%
	7x	4	7.3%
	8x	5	9.1%
Reason for not using EC.	Use regular contraceptive correct	12	6.9%
	Use safe period correctly	16	9.1%
	Inadequate information on EC	23	13.1%
	No access to EC	10	5.7%
	Cost of EC- not affordable	4	2.3%
	Religious/moral reasons	110	62.9%
Challenges faced in getting EC.	Fear of stigma	98	57.6%
	Price involved	29	17.1%
	Lack of knowledge	43	25.3%

In Table 6, there was a significant association between the level of respondents in school and the perception of the effects of EC use ($p=0.001$, $c2=3.3904$, $n=260$). The response showed that majority of second year students (55.6%) indicated the EC prevents pregnancy, while only 20.8% chose this option with 23.6% of the third-year students. Also, majority of first years (42.9%) showed that EC only induce abortion. There was also a significant relationship of the level of education and the respondents' perception of the time to take and emergency

contraceptive pill after having a sexual intercourse ($p=0.002$, $c2=14.3435$, $n=260$). The results showed that first year students indicated that the pill can be taken immediately after sex (31.5%), within 12 hours of sex (50.0%), after a missed period (12.0%) and do not know when to take the pill (15.6%) while that of the third years showed that immediately after sex (15.8%), within 24 hours after sex (100%), after a missed period (56.3%) and do not know when to take the contraception after sex (39.0%).

Table 5: Relationship between ever used EC and some factors influencing the utilization of EC (n=260).

Factors		Use of EC		c2 and p value
		Never used	Ever used EC	
Age distribution	Below 15 years	1 (33.4%)	2 (66.6%)	c2=8.128 p=0.000
	15 to 20 years	81 (34.3%)	155 (65.7%)	
	21 to 25 years	0 (0%)	13 (5.2%)	
Perception of safety of EC	Very safe	14 (10%)	99 (90%)	c2=8.28 p=0.000
	Safe	46 (50%)	46 (50%)	
	Unsafe	25 (96.2%)	1 (3.8%)	
	Do not know	16 (76.2%)	5 (23.8%)	
Presence of sexual partner	Never married	105 (57%)	79 (43%)	c2=13.385 p=0.001
	In a relationship	5 (7.8%)	59 (92.2%)	
	Ignored	0 (0%)	4 (100%)	

Table 6: Relationship of the level of education and the perception of the use of emergency contraception (n=260).

Variables	Parity	One (65)	Two (122)	Three (65)	Total	c2, p-value
Association between level in school and perception of the effects of EC use	Prevent pregnancy from occurring only	30 (20.8%)	80 (55.6%)	34 (23.6%)	144	c2=3.3904 p=0.001
	Induced abortion only	6 (42.9%)	4 (28.6%)	4 (28.6%)	14	
	Prevent both pregnancy and induce abortions	19 (30.6%)	32 (51.6%)	11 (17.7%)	62	
	Do not know	10 (31.2%)	6 (18.8%)	16 (50.0%)	32	
Association of level of education and time to take the first dose of emergency contraception after sex	Immediately after sex	46 (31.5%)	77 (52.7%)	23 (15.8%)	146	c2=14.3435 p=0.002
	Within 12 hours	5 (50.0%)	0 (0.0%)	0 (0.0%)	10	
	Within 24 hours	0 (0.0%)	0 (0.0%)	3 (100.0%)	3	
	After a missed period	2 (12.5%)	5 (31.3%)	9 (56.3%)	16	
	Do not know	12 (15.6%)	35 (45.5%)	30 (39.0%)	77	

DISCUSSION

This study assessed the knowledge and utilization of emergency contraction among senior high students in the Ho municipality. The level of awareness among respondents regarding emergency contraception was 98.8%. The high level of awareness of the existence of emergency contraception is a good requisite for respondents to take action towards preventing pregnancy if there is a need. The level of awareness of emergency contraception has always been high in Ghana following heightened public education especially within this cadre. In Cape Coast 81% senior high school students indicated they had knowledge about emergency contraception.¹²

Emergency contraception may be necessary when an individual does not take the appropriate steps prior to intercourse to prevent pregnancy. Emergency contraception may be required when contraception is not available at the time intercourse occurs, or if the couple was not planning beforehand to have intercourse. EC can delay or prevent ovulation, impair formation of the corpus luteum or cause histological or biochemical changes within the endometrium thus preventing implantation.¹³ In this study, the level of awareness is however high compared to what was reported in a study conducted in Ethiopia by Tamire and Enqueselassie.¹⁴ In Seto Semero high school, Jimma Town, South West Ethiopia, where 40.5% of respondents reported that they

had ever heard about emergency contraception methods. Poor user awareness and access, have hindered adolescents in learning and using Emergency contraception.¹⁴ Despite high rates of unprotected intercourse, only 8% of teenagers have used the emergency contraceptive pill in the USA in recent years.¹ Adolescent girls in Ghana had various sources where this information about emergency contraception pill was obtained. The sources of this information include friends (36.9%), television (20.2%), internet webpage (11.9%), radio (8.3%), reproductive health clubs (2.8%) and health care providers (5.6%). The most extensive source of knowledge is an asset to reproductive health care agencies to use diverse means of conveying information to target groups. In the Cape Coast metropolis Hagan reported knowledge about contraception was obtained from the media (60%) and peers (30%).¹² In Ethiopia among the same cadre of respondents, results showed that source of knowledge about EC was from television and radio (43.0%), hospital (21.0%), friends (18.0%), family (14.0%) and spouse (4.0%)⁴ Obi and Ozumba, 2008 reported that the lack of dependable information on EC was glaring as most respondents erroneously thought that some post coital traditional practices were effective modern EC. Even among those with knowledge about EC, there was some confusion about the recommended maximum length of time following intercourse that a woman could begin the regime.¹⁶ For most of them, the term 'morning after pill' implies that a woman must wait until the next morning (i.e. 12-24 hours) after intercourse to begin use. Only a few (3.4%) respondents knew of post coital intrauterine contraceptive device (IUCD) use.¹³

The results showed that 42.5% of senior high students in the Ho metropolis have had a history of EC use. The use of EC comes with inherent challenges and the use of alternative modern contraceptive methods to replace EC cannot be overemphasized. Nonetheless, there is a need to offer contraceptive services to young women who are intermittently sexually active in less stable types of relationships.¹⁵ As sexual activities among senior high students have been reported by the Ghana demographic and health survey, increasing knowledge and access to the use of this important service is necessary in reducing the high rate of maternal mortality that is associated with abortions, especially in this cadre of the population. Senior high students (46.8%) that had an awareness of EC were willing to use EC or recommend it to others when the need arises. This reinvigorates the fact that the use of the method is generally pervasive among African adolescents. In Ghana, emergency contraception is sold as an over the counter medications and sometimes by even unauthorized chemical sellers. The use as well as recommending others to use the emergency contraception is therefore a common practice among sexually active persons, for example, it was reported that 72.2% of engineering college girls either agreed or strongly agreed that they would use EC in the future if the need arises¹⁶. Reasons some respondents will not use or recommend the use of the emergency contraction include religious

reasons (28.4%), perceived as injurious to health (24.9%), method not effective (18.0%) and the belief that the method is an abortifacient (17.5%).

The use of emergency contraception has always been bedeviled with public perception of promiscuity. In this study, 72.4% of senior high school students indicated knowledge and use of emergency contraception is likely to encourage sexual promiscuity. The use of emergency contraception seeks to prevent pregnancy when the woman does not wish to be. Sexual intercourse does not usually in most instances occur without the consent of the women involved and the use of emergency contraception will help curtail the resultant repercussions of such sexual encounters. In a study of 400 primary school students, 49% of sexually active girls were reported to have had forced sex.¹⁷ The high sexual violence, lack of access to and low utilization of family planning services in developing countries contribute to the high rate of unintended pregnancies.¹⁸ The use of emergency contraception will remain useful this person who has had to receive non consenting and coerced sexual encounters. The use of emergency contraception, especially the hormonal method should only be done in an emergency situation. When a woman stands the risk of using this method repeatedly within a short period of time, the use of alternative contraceptive methods should be encouraged. Adolescent girls (50.4%) indicated that the continuous use of the emergency contraceptive poses a risk to their reproductive life.² Inherent in the use of the EC are major side effects. With respect to the increasing adolescent sexual activity and decreasing age at first sex in developing countries, the use of contraceptives to prevent unwanted pregnancy, unsafe abortion and minimize the risk of STIs transmission is especially important.¹⁹ Some senior high students (44.0%) believe that the fetus is at risk if one should use EC and it fails. With some misconceptions associated with this method of contraception, increasing public education, especially among adolescent is essential. Kebede, 2006 reported that among those who are aware of emergency contraception, its usage rate is very low since the information they have regarding the methods and the timing of emergency contraception was not sufficient.⁵

Adolescent girls showed high knowledge of the various contraceptive methods. The methods commonly used include emergency contraceptive pills (Lydia pills) (38.5%), postinor-2 (32.6%) and combined oral pills (8.7%). The knowledge on variety of EC available gives respondents an option to choose from. Also, 36.1% respondents believed easy accessibility of EC at the pharmacy and easiness of use of emergency contraceptive pills are the reason for its patronage. In contrast, IUDs needs trained health care professionals to be administered and this is only provided at healthcare institutions. A cross-sectional study done on 561 female students of Mekelle University of Northern Ethiopia, showed that 44.7% of the total respondents had ever heard of emergency contraception. 88.04% of them had ever heard

of EC mentioned pills, 3.18% intrauterine device (IUD) and the remainder 8.76% mentioned injection and implant.¹⁴ The level of perception of the effectiveness of the contraception methods was shown to be 85%. The use of modern emergency contraception was found to be common as respondents used it up to thrice (29.1%) and four times (36.4%). Female students in Mizan-Tepi University, South West Ethiopia showed that only 36.2% had ever used EC.²⁰ Having adequate information on the appropriate use of the emergency contraceptive pill is central to the efficacy and mitigating undesirable effects following inappropriate use. People, and especially adolescents must be given this essential information to improve on the gains made through family planning.

On the role of a relationship to the use of emergency contraception, the results showed that married (43.8%), in a current relationship (92.2%) and all who ignored their relationship status reported to have ever used and emergency contraction ($p=0.001$, $c^2=13.385$, $n=260$). The majority of senior high students in a current relationship are actively using the emergency contraction. This continues use even though may prevent them from having pregnancy can have a dire consequence on their overall reproductive health. Opposition to the use of emergency contraception by unmarried women has been because of the belief that it has some adverse health effect (12.1%), induces abortion 13.4% in the future and for religious reasons (7%) while 67% favored the use of EC by unmarried women.¹³ Opposition to the use of EC by unmarried women is because of the belief that it has some health effect ($n=72$), induces abortion ($n=80$) and for religious reasons ($n=42$). Obi and Ozumba, 2008 concluded that the unmarried women's knowledge of EC, its availability and use is limited due to insufficient information, poor education, inaccessibility and service provider's attitude.¹³ There was also a significant relationship of the level of education and the respondents' perception of the time to take and emergency contraceptive pill after having a sexual intercourse ($p=0.002$, $c^2=14.3435$, $n=260$). The role of education in the use of EC has been documented by Fernandes, D'souza, and Karkada, indicated that there was a significant association ($p=0.002$) between education and knowledge regarding emergency contraception.²¹ Only one selected variable like education showed (likelihood ratio, $c^2=12.934$, $p=0.002$).²¹ There was a significant association between the level of respondents in school and the perception of the effects of EC use ($p=0.001$, $c^2=3.3904$, $n=260$). This depicts that the higher one got in school or older the likelihood of use of EC increase. Yidana, Ziblim, Azongo, and Abass, 2015 found that older female adolescents were more than three times likely to practice contraceptive use than younger female adolescents. Perhaps, this is because older female adolescents are more mature and enlightened in terms of available contraceptive types and the importance of contraceptive use, compared to younger female adolescents who may be comparatively naive in terms of contraception.²²

Marital status also had significant relationship with contraceptive use among female adolescents. Consequently, contraceptive use was more likely among adolescents who were married or living together than among those who were not married ($p=0.001$, $c^2=13.385$, $n=260$). This confirms findings of a study conducted by Clemens and Madise which found a significant relationship between marital status and contraceptive use in Ghana.²³ On the contrary, studies including Nketiah-Amponsah, Arthur, Abuosi, and Okech, Wawire, Mburu, found no significant relationship between marital status and use of contraceptives among females.^{24,25}

CONCLUSION

There is the need to avail accurate information to female senior high school students on emergency contraceptive methods. Strengthening education in senior high schools on sexual and reproductive health, with special emphasis on emergency contraceptives as a pregnancy preventive procedure will remain imperative to reducing the menace of maternal mortality attributed to adolescent abortions. The role of parents in adolescent reproductive health is central in supporting girls to make informed decisions about their reproductive health including the emergency contraceptive use. Also, specific policies should guide clinical nurse/midwife on issues such as non-judgmental attitude towards sexually active female senior high students and facilitating students' access to emergency contraceptive services while making available other sexual reproductive health options. Education on awareness of EC products through mass media, particularly laying more emphasis on the frequency of use and time limit to take emergency contraceptive after unprotected sexual intercourse would be more crucial in reducing the risk associated with unwarranted and overuse of these services.

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