

## Assessment of Knowledge, Attitude and Practice of Emergency Contraceptive Use among Female Students in Harar Preparatory Schools, Harari Regional State, Eastern Ethiopia

Anteneh Dagnachew\*

Adigrat University College of Health Sciences, Adigrat, Ethiopia

### Abstract

**Background:** Emergency contraceptives could prevent pregnancy after unprotected sexual intercourse, including coerced sex, as well as situation when no method is used or method failure or incorrect method use. This method has the potential to prevent up to 75% of unplanned pregnancies.

**Objective:** The aim of this study is to assess the level of Knowledge, attitude and practice of female students towards usage of ECPs in Harar preparatory schools, Harari regional state, eastern Ethiopia, 2013.

**Methods:** A descriptive cross-sectional study design will be conducted, to access knowledge, attitude & practice among female students towards usage of ECP on two preparatory schools (i.e. SOS and ABOKER) in harar from September to October, 2013. The stratified random sampling method will be employed with the sample size of (242) female students. These females are allocated to each study year and the size of the students in the sections. Simple random sampling method will be selected by lottery method. The data will be collected using confidential self-administrated questionnaires during one class session. And data was entered, processed and analyzed by using SPSS 20 window version.

**Results:** Among the participants (n=242), Majority(81.4%) of them had heard of EC, and the main source of information's were Mass media (44.7%) and School(31.6%) and when specifically asked the type of EC by name 55.8% answered IUCD, Majority of the respondents (71.9%) have favorable attitude towards EC use. 27.3% of the respondent had sexual intercourse at least once, of this 21.5% was unprotected sex. Among those who had sexual intercourse 24.8% had ever used EC, of this 7.4% become pregnant and all of them end up in abortion. In this study knowledge and attitude towards the use of EC had significant association with religion and residence with p-value 0.007 and 0.023 respectively.

**Conclusion and Recommendations:** The study has revealed that while overall awareness of EC is fair, actual knowledge of EC is very low among female students in Harar preparatory schools. It is highly recommended that intervention intended to combat maternal mortality through contraception usage need to be aware of such information specific to the target group.

**Keywords:** Emergency contraceptive; Female; Pregnancy; Population; Family planning

**Abbreviations:** AA: Addis Ababa; AAU: Addis Ababa University; AD: Advisor; EDHS: Ethiopia Demographic and Health Survey; FGAE: Family Guidance Association of Ethiopia; HIV: Human Immune Deficiency Virus; IUCD: Intra Uterine Contraceptive Device; KAP: Knowledge, Attitude and Practice; MOH: Ministry of Health; NGO: Non Governmental Organization; PI: Principal Investigators; STI: Sexually transmitted Infection; ECP: Emergency Contraceptive Pill

### Introduction

#### Background

Emergency contraceptive is safe method of Preventing pregnancy and has the potential to prevent up to 75% of Unplanned pregnancies. It can prevent pregnancy after Unprotected intercourses [1].

Albert Yuzpe first described the use of hormonal contraception regimen for post coital pregnancy prevention in 1972. Oral contraceptive pills have been used "Off label" for this purpose since that time. According to this approach the medication is taken in two doses. The first within 72 hours of unprotected intercourse and the second 12 hours after the first [2,3]. Oral contraceptive pills and IUCD are mainly used as an EC. When used Within 72 hours after sexual contact pills have the capacity to prevent Pregnancy by 75-85% and with the use of IUCD, unwanted pregnancy Can be prevented by as

much as 99%. This is especially significant for those young couples whose options are not to use a long-term regular Contraceptive methods and their sexual behavior is rather unplanned, Erratic and irregular [1].

Ethiopia is the second most populated country in Africa after Nigeria. Different strategies are being followed to increase the utilization of family planning method in order to control high fertility (4.8%) and Population growth rate (2.6%) in 2007. The pilot project done by FGAE in 2007 demonstrated that EC was popular among young people and showed the need to expand the services. Although this attempt was encouraging, there was no systematic and organized approach to address the wide spread unmet need for this method. As

\*Corresponding author: Anteneh Dangachew, Adigrat University College of Health Sciences, Adigrat, Ethiopia, Tel: (+251 9) 122 21996; Fax: (+251 9) 122 21996; E-mail: [meetanteneh1988@gmail.com](mailto:meetanteneh1988@gmail.com)

Received August 08, 2017; Accepted November 15, 2017; Published November 24, 2017

**Citation:** Dagnachew A (2017) Assessment of Knowledge, Attitude and Practice of Emergency Contraceptive Use among Female Students in Harar Preparatory Schools, Harari Regional State, Eastern Ethiopia. *Reprod Syst Sex Disord* 4: 215. doi:10.4172/2161-038X.1000215

**Copyright:** © 2017 Dagnachew A, This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

a result the MOH and its partners launched a new initiative which focuses on mainstreaming EC in to the public and NGO sector [4].

### Statement of the problem

Unwanted pregnancy and its outward consequences on physical and psychological well being of adolescent girls and young adult women is a problem. Unwanted pregnancy is one of the main factors for unsafe abortion. Every year on average about 210 million throughout the world became pregnant. About 40-50 million of those women result to abortion, 30 million of them are in developing countries. Of 40-50 million abortions performed annually in the world, 20 million are thought to be unsafe [5].

Since Ethiopia is one of the developing countries abortion is a major problem. In Ethiopia unsafe abortion accounts 54% of all direct obstetric death and most of those who die are poor, single, women under 20 years of age. According to EDHS 2005 the maternal mortality ratio was 673/100,000 live births [6]. Adolescents in Ethiopia also suffer from unwanted pregnancy and its complication. Out of ten sexually active students seven of them claimed to have been pregnant when they didn't wanted to be.

Despite increasing use of contraceptive methods, 2005 EDHS data indicated that unplanned pregnancies are common in Ethiopia. Overall 16% of births in the five years preceding the survey are not wanted and 19% are mistimed. One in three currently married women (34%) has unmet need for family planning. If all currently married women who say they want to space or limit the number of children where to use family planning, the contraception prevalence rate in Ethiopia would increase from 15% to 49% [6].

The practice of emergency contraception is almost inexistent in Ethiopia. Ethiopian's reproductive health needs assessment showed, there is little knowledge or information available about emergency contraceptives in Ethiopia. The major factor limiting the use of emergency contraceptive was inadequate information about effectiveness of emergency contraceptive, its available and unfavorable opinions about its safety [7].

Even though there is increased need for use of EC, still some women consider EC as abortifacient (24.7%), encourage promiscuity and sexual irresponsibility (33.3%) where as 42% approved the use of EC for management of rape victim [8].

Regardless of the cause, unwanted pregnancy and its negative consequence can be prevented by using contraception and emergency contraceptives [9].

### Significance of the study

Emergency contraceptive methods play a critical role in limiting unwanted pregnancies and ultimately in reducing maternal mortality and morbidity rates. Knowing about knowledge, attitude and practice towards emergency contraceptives among females will help local planners to design a better strategy and implementation program. This study will help for further studies to be conducted and for making possible recommendations.

### Literature Review

#### Knowledge about emergency contraceptive

Knowledge about family planning is an important step towards gaining access to and using a suitable contraceptive method in a timely and effective manner. Individuals who have adequate information

about available methods of contraception are better able to make choice about planning their pregnancies [8].

A study was done among Swedish women presenting for induced abortion, in 2007 most women (83%) were aware of emergency contraceptives and fewer (38%) know the recommended time for use and 54% had knowledge of the mode of action. The most common source of information about emergency contraceptive pills was media and friends [10].

Similar surveys were done in developing countries about knowledge of emergency contraception. For example, a survey conducted in Cameroon in 2001 on knowledge, attitude and practice on emergency contraception indicated that among 462 female respondents 63% reported that they have heard of emergency contraceptive pills, or morning after pills. 15.7% knows that as the first dose of emergency contraceptive could be taken up to 72 hours of unprotected sex [11].

In Ethiopia, in a cross-sectional study on KAP on emergency contraceptive in AAU in 2007 among a total of 774 students included in the study 43% of students said that they have heard about emergency contraceptive. The main source of information about emergency contraceptive where media and friends. When asked about specific type of emergency contraceptive, among those who have ever heard of emergency contraception 82.8% mentioned pills and 34.1% mentioned IUCDs. Of those who have heard about pills as an emergency contraceptive method 26.2% could tell the correct timing of administration of pills after unprotected sexual contact, while of the respondents who have heard about IUCDs only 8.7% could tell the correct timing of administration of IUCDs [1].

A study conducted on 407 female college students in Arbaminch in 2010 showed that 33.9% of them had experienced sexual intercourse and almost all (97.3%) of these female students know at least one modern regular contraceptive method. Also 52% of those students who had experienced sexual intercourse had at one time been pregnant and 64% of them were below the age of 20. Half (51%) of those who had been pregnant reported that their pregnancy was unplanned. A total of 74.3% of unplanned pregnancies were terminated by induced abortion, of which 6.2% and 10.8% were conducted by themselves or by untrained abortionist, respectively [7]. A total of 42.5% of the respondents, in this study said that they have heard about emergency contraception. Also 31% mentioned mass media as their first source of information followed by family/friends (30%). Of those who had heard about emergency contraceptive, 26.4% correctly identified the timing of administration to be within 72 hours [7].

#### Attitude towards emergency contraception

A survey study conducted in Swedish women in 2002, among 591 women's 52% were positive to having ECP available over the country [11]. Similar study done among 205 university students in Jamaica showed that most students felt, emergency contraceptive where important option for women however some feared ECP might be over used [12,13].

A study on KAP of EC among university students in Cameroon, in 2007 conducted. According to this research, 69.9% either agreed or strongly agreed that they would use ECP in the future if need arose. While the result of the 30.1% either disagreed or strongly disagreed. Overall there was a positive attitude indicating strong tendency of use of EC in future [10].

A KAP study at AAU students in 2007 showed that 53% of students have positive attitude towards emergency contraception. Some of the

positive attitudes reported were emergency contraceptive protect women from unplanned pregnancy, protect women from unsafe and painful abortion, and a simple method to use [14]. About 17% of respondents had reported problems with emergency contraceptive. Some of the reasons include: it causes a health problem, unpleasant side effect, more STI and HIV infections due to non use of condom [1].

A study done on 407 female college students in Arbaminch in 2010, 50.1% of respondents showed a positive attitude towards emergency contraception. A positive attitude towards emergency contraception was higher among the age group of 20-24 years. The study also revealed that Muslims, catholics and Protestants were found to have a less favourable attitude towards emergency contraception than orthodox Christianity [7].

### Practice of emergency contraception

Different researchers in developed countries have done several studies to determine KAP towards emergency Contraception. A study done in Swedish women coming for Induced abortion (N=591) in 2002 revealed that 15 women used it to prevent this pregnancy [11]. Similar study done among 205 university students in Jamaica [10] showed 10% of them had used emergency contraceptive, most had emergency contraceptive pills for the first time.

According to study done in the Cameroon, in 2007, 7.4% reported that they or their partner had previously used "ECP"s. Of the female respondents 8.8% had reported history of children (aborted), from this 5.6% were previously ECP users and 92% were non user [10].

A study done in AAU female students in 2007 to assess KAP on emergency contraceptives (N=774), only 4.9% reported that they had used emergency contraceptive method previously [1]. Similar study done in Arbaminch in 2010 (N=407) showed female students who had previously used emergency contraceptive were 2.7%. All practices said that they used pills for the emergency contraceptive method and 54% reported that they used the method within 72 hours of unprotected sexual intercourse.

## Objective of the Study

### General objective

The overall purpose of this study is to assess knowledge, attitude and practice of emergency contraceptive use among female students in Harar preparatory schools (i.e Sos and Aboker), Harari regional state, Eastern Ethiopia 2013.

### Specific objective

- To assess knowledge of students about emergency contraception.
- To describe the attitudes of students towards emergency contraception.
- To determine the practice of emergency contraception among students.

## Methodology

### Study area and period

The Harari National regional state is situated in eastern part of Ethiopia which is 511 km far from the capital city of A.A. The total surface area is estimated around 304.5 km square which is the smallest region in Ethiopia. The region is surrounded by kombolcha and jarso in northern side, Gursum in North East and Haramaya in west side. According to recent adupts administrative structure Harar region is

divided in to 6 urban, 3 rural administrative woreda, 19 kebele and 17 farmer association. Based on the 2007 census conducted by central statistics agency, the Harari national regional state is populated by 183,344 people [15].

The study was conducted in two preparatory schools that are found in harar: these are Aboker and SOS preparatory schools. Aboker preparatory school was established in 1930. It formerly served as junior school, then it changed to preparatory school in 1998. Area of the school covers 24000 m<sup>2</sup>. It is located in kebele 11, Aboker woreda. The school contains total of 1140 students, of which 430 are females and 710 are male.

SOS contains total of 900 students, from Grade 1 to 12. From this the preparatory classes accommodate 145 preparatory students. Out of which 89 are females.

The study will be conducted in Harar preparatory schools from september 30 to October 5, 2013.

A descriptive cross-sectional study will be conducted to assess KAP of emergency contraceptive among female students in preparatory schools in Harar.

Quantitative information is conducted by using closed ended question, and qualitative information is conducted using Focused group discussion on a group of students.

### Populations

**Source population:** All female students found in Harar preparatory schools during the study period (i.e from sep. 30 to Oct. 5, 2013).

**Study population:** Female students that will be included in the sample during data collection based on the sampling technique.

#### Inclusion and exclusion criteria:

**Inclusion criteria:**-Both regular and night female students in Harar preparatory schools will be included in the study

**Exclusion criteria:**Female students that are not fulfill the inclusion criteria and those of students who are seriously ill will be excluded.

**Study unit:** One female student who fill the self administer questionnaire.

#### Sampling technique and sample size determination:

**Sampling technique:** Stratified random sampling technique will be employed from each sections found in each school, and then the sample unit will be taken, from the total of 616 female students, using simple random sampling system. Then the required sample size will be selected by lottery method.

**Sample size determination:** The sample size is determined by using single population proportion formula through assumption of 95% confidence interval(CI), 5% margin of error, and prevalence of emergency contraceptive utilization as 53% from the research done in AAU [1].

Thus  $n = Z^2 pq/d^2$

$$n = Z^2 \frac{pq}{d^2} = (1.96)^2(0.53)(1-0.53) / (0.05)^2$$

$$n = 382.78 = 383 \text{ student}$$

Where : Z=1.96 with 95% of confidence interval

P= an estimated prevalence of emergency contraceptive utilization that was

Done in AAU female students (1) =53%

$q = 1 - p$

d = margin of sampling error tolerated (0.05)

n = the required sample size

Since  $n/N$  (finite population correction) is  $> 5\%$  or total population of the study is less than 10,000, the minimum sample size ( $n'$ ) will be obtained by the following formula.

$$n' = n \left/ \left( 1 + \frac{n}{N} \right) \right.$$

Where-  $n'$  = Corrected (minimum) sample size

n= determined sample size

N= Total female students in the school

$$n = \frac{383}{1 + 383 / 519} = 220 \text{ Students plus non respondent rate (10\%)}$$

is considered

Therefore, 242 female students will participate in the study proportionally to each of the two preparatory schools as follows:

$$= n' n / N$$

where =  $nI$  = Number of females from each institution

$n'$  = Corrected sample size

N = total female students in all institution

a. For Aboker preparatory school

$$n' n / N = 242 \times 430 / (519) = 200 \text{ Students}$$

b. For SOS preparatory school

$$n' n / N = 242 \times 89 / (519) = 42 \text{ students}$$

## Variables

**Dependent variables:** Knowledge, Attitude, Practice.

**Independent variables:** Age, Religion, Marital status, Residence, Year of students at the school, Source of information, Being sexually active.

## Data collection instrument

A structured questionnaire will be prepared depending on socio demographic characteristics, knowledge, attitude and practice of emergency contraceptive. And the qualitative data will be collected using Focused group discussion (i.e making different group of female students and discuss on different selected issues).

## Pre-test

Prior to data collection pretest of the questionnaire will be employed among 5% (10 students) of the study sample on nearby college. During pre test the sequence of the question, time of data collection will be taken accordingly.

## Data collection technique

The data will be collected using self administered questionnaires after collecting participants in to a certain hall and the data collectors will distribute the questionnaire to each participant.

## Data collectors

The data will be collected by PI with collaboration of 2 other medical interns and representatives of each class.

## Data processing and analysis

The data will be checked for incompleteness and internal inconsistency by cross checking and then will be cleaned, edited, tailed on master sheet and the data will be entered, processed and analysed by using SPSS 20 window version.

## Data quality control

The questionnaire will be pre tested on students not included in the study to verify clarity of instruments and to familiarize data collectors to the instrument necessary correction will be taken accordingly. The data collectors will be given one day training by PI on the instruments and method of data collection and the purpose of the study will be clearly explained. Then the investigators will supervise the data collectors during the procedure and they will check the collected data for completeness, accuracy, clarity and consistency throughout the data collection period. The questionnaires is prepared by English, because it is universal language and with the assumption of fair communication by this educational level.

## Ethical consideration

After approval of the proposal by our instructors (advisor) legal permission paper to carry out the study will be secured with the copy of proposal from Haramaya University College of health and medical science, school of medicine to the target site to obtain permission and start data collection. During data collection the purpose of study will be explained and the verbal consent will be obtained from the respondents. The respondents will be assured of confidentiality by excluding their name and they have the right to withdraw from the study at any time of they have any difficulty.

## Limitation of the study

- Recall bias
- Social desirability bias
- Subjects may hide some information because of the sensitive nature of the problem.

## Dissemination plan

After completion, research result will be submitted to;

- Haramaya University College of health and medical science, school of medicine
- The preparatory schools where the study will be done
- Fund raising NGOs, if available

## Operational definitions

- **Abortion:** Termination of pregnancy before the fetus reaches 28 weeks of gestation.
- **Attitude:** Feeling of the people towards emergency contraceptive.
- **Contraceptive:** Device or method that prevents pregnancy.
- **Emergency contraceptive:** A drug or device used after unprotected sexual intercourse to prevent pregnancy.
- **Knowledgeable:** Individuals having information about emergency contraceptive.

- **Knowledge:** Familiarity with emergency contraceptives information gained by experience or exposure.
- **Negative attitude:** Feeling as the use of emergency contraceptive will encourage sexual promiscuity.
- **Not Knowledgeable:** Individuals who lacks information about emergency contraceptive.
- **Pills:** A medicine presented as a solid mass for swallow in oral contraceptive form.
- **Positive attitude:** Feeling about emergency contraceptive as a good method of protecting unwanted pregnancy.
- **Practice:** Engagement in sexual activities and utilization of emergency contraceptive.
- **Promiscuity:** Is when persons indiscriminately have a sexual relationship outside marriage or collaboration.
- **Rape:** Forceful sexual intercourse against the women's willing.
- **Unsafe abortion:** Abortion often conducted by lay people in non-sterile condition.
- **Unwanted pregnancy:** The pregnancy which occur unwillingly or unplanned.

## Result

Table 1 presents the background characteristics of respondents. It

Back ground Variables		Frequency	Percent (%)
Age	15-19 year	237	97.9
	20-24 year	5	2.1
	>25 year	0	0
	Total	242	100%
Marital status	Single	227	93.8
	Married	8	3.3
	Divorced	6	2.5
	Widowed	1	0.4
	Total	242	100%
Religion	Orthodox	128	52.9
	Muslim	70	28.9
	protestant	34	14
	Catholic	3	1.2
	Other	7	2.9
Ethnicity	Oromo	54	22.3
	Amhara	122	50.4
	Harari	33	13.6
	Tigre	15	6.2
	Somali	3	1.2
	Others	15	6.2
	Total	242	100%
Study year	10+1	110	45.5
	10+2	132	54.5
	Total	242	100%
Residence	Urban	184	76
	Rural	58	24
	Total	242	100%
Institution	Aboker	200	82.7
	SoS	42	17.3
	Total	242	100%

**Table 1:** Socio-demographic characteristics of the respondents (n=242), September 2013.

is seen that all the respondents are youth in the age of 15-24, where the majority (97.9%) was in the age group 15-19. About 76% of the respondents had urban background and the remaining smaller proportion have come from rural areas of the country. With regard to respondents' religion, 52.9% were Orthodox Christian followed by Muslim (28.9%), protestant (14%) and Catholic Christians (1.2%) (Table 1). Substantial numbers of respondents (93.8%) were never married while Married respondents accounted for 3.3% and the divorced and widowed accounts 2.5% and 0.4% respectively.

The distribution of respondents by year of study at school indicated that about 54.5% of them were Grade 10+1 and the rest (45.5%) were Grade 10+2.

Table 2 shows that about 81.4% of the respondents mentioned that they have ever heard of EC as a means of preventing unwanted pregnancy if used soon after unprotected sexual intercourse. To assess the level of actual knowledge of EC, a series of seven knowledge questions (on method identification, drug composition, Timeframe for effective use, time interval between doses) were asked for those who have ever heard of EC. And some questions were developed and supplemented by the authors from literature reviews.

No.	Variables	Frequency	Percentage (%)	
1	Have you ever heard about emergency contraceptive?	Yes	197	81.4
		No	45	18.6
		Total	242	100
2	Source of information	Mass media	89	44.7
		Health Personnel	18	9
		Family or friends	27	13.6
		School	62	31.2
		Other(specify)	3	1.5
Total	199	100		
3	Which type of emergency contraceptive do you know?	Microgen	2	0.8
		Leofemenal	9	3.7
		Levengestrol	5	2.1
		IUCD/loop	135	55.8
		Other(specify)	4	1.7
		I don't know	87	81.4
Total	242	100		
4	Recommended dose of Emergency contraceptive pills	One	18	7.4
		Two	20	8.3
		Three	6	2.5
		I don't know	197	81.4
		Total	242	100
5	Recommended time Emergency Contraceptive pills after unsafe sex	Within 24 hours	16	6.6
		Within 48 hours	13	5.4
		Within 72 hours	70	28.9
		After a missed period	13	5.4
		I don't know	130	53.7
		Total	242	100
6	Recommended number of hours apart between the doses of pills	12 hours	43	17.8
		24 hours	21	8.7
		>24 hours	5	2.1
		I don't know	173	71.5
		Total	242	100
7	Knowledge of EC	Poor knowledge	-	37.6
		Fair knowledge	-	40.5
		Good knowledge	-	21.9

**Table 2:** Knowledge of Emergency contraception among female students in preparatory schools in Harar town, Harari regional state, Eastern Ethiopia, September 2013.

To generate the summarized level of knowledge, response on each question was first scored, tallied and then the total of each respondent score ranged from 0-7 (0%-100%). Cumulated/total score was calculated and then respondents were classified as; poor, fair, and good with respect to their level of EC knowledge. Hence, respondents who scored 0-2 out of 7 questions were considered as “Poor knowledge”, who score 3-5 out of 7 questions as “Fair knowledge”, and >5 out of 7 questions as “Good knowledge”. Similar procedures were followed by Atsede (2007) and Wondimu (2008) [16,17].

Based on the summary index, only 21.9% had good knowledge of EC. The most frequently mentioned source of information about EC was Mass media (44.7%), followed by School (31.2%) and family/friends (13.6%).

Five attitude indicators/items of EC were asked to determine the overall attitudes of the respondents toward EC. Two positive and three negative items were included to maintain the balance of responses [18]. The five items were answered as “Strongly agree”, “agree”, “Disagree” or “strongly disagree”. For positively worded statements, those who selected “Strongly agree” or “agree” were regarded as having positive attitude and those who choose “Disagree” or “strongly disagree” were considered as having negative attitude. Conversely, for negatively worded statements, those who selected ‘disagree’ or “strongly disagree” were clustered as having positive outlook whereas those who said ‘agree’ or “strongly agree” were categorized as having negative attitude.

The responses on each attitudinal items was scored, tallied, and then the total of each respondent score was made to range between 0-5 (0-100%). A score of >3 out of 5 questions was considered as “favorable attitude” whereas those scored 0-2 out of 5 questions were thought of as having “unfavorable attitude”. Similar procedure was followed by previous researchers (Atsede, 2007; Wondimu, 2008).

The summarized attitudinal index indicates that 71.9% of the respondents who had ever heard of EC had favorable attitude toward EC (Table 3).

Table 4 presents respondents’ sexual experience, family planning knowledge and practices. Respondents were asked whether they ever had sexual intercourse. Among the total respondents who were asked about sexual intercourse, 66 (27.3%) of them had sexual intercourse at least once.

As indicated in Table 4, out of the total sexually experienced respondents, 7.4% reported ever experiencing pregnancy. Some female respondents have reported experiencing induced abortion due to unwanted pregnancy. From the total number of ever had pregnancy, All of them experienced induced abortion.

As shown in Table 5 below, Religion and residency have significant

No.	Variables	Frequency	Percentage (%)	
1	Have you started sexual intercourse	Yes	66	27.3
		No	176	72.7
		Total	242	100
2	Was the intercourse unprotected	Yes	52	21.5
		No	190	78.5
		Total	242	100
3	Have you ever used emergency contraceptive	Yes	60	24.8
		No	182	75.2
		Total	242	100
4	Frequency of using emergency contraceptive in the past	One	27	44.3
		Two	9	14.8
		Three or more	25	31
		Total	61	90.1
5	Have you ever been pregnant	Yes	18	7.4
		No	224	92.6
		Total	242	100
6	Have you ever had induced abortion	Yes	18	7.4
		No	224	92.6
		Total	242	100
7	Was the abortion performed in health institution	Yes	12	66.7
		No	6	33.3
		Total	18	100

Table 4: Practice of Emergency contraception among female students in preparatory schools in Harar Town, Harari regional state, Eastern Ethiopia, September 2013.

Sr. No.	Variables	P-Value		
		Knowledge	Attitude	Practice
1	Age	0.661	0.958	0.025
2	Marital status	0.086	0.133	0.016
3	Religion	0.007	0.315	0.871
4	Ethnicity	0.565	0.832	0.546
5	Learning institution	0.500	0.736	0.244
6	Study year	0.668	0.845	0.656
7	Residence	0.023	0.665	0.941
8	Month income	0.955	0.019	0.001

Table 5: Association of knowledge, Attitude and practice towards Emergency contraception among female students in Harar preparatory schools.

Attitude indicator	Strongly agree	Agree	Disagree	Strongly disagree	Total
EC prevent pregnancy from unprotected S.I	50(20.7%)	137(56.6%)	32(13.2%)	23(9.5%)	242(100%)
Easy access to EC encourage promiscuity	29(12%)	100(41.3%)	81(33.5%)	32(13.2%)	242(100%)
If men know their partner used EC,they willn't be more likely to use condom	32(13.2%)	83(34.3%)	85(35.1%)	42(17.4%)	242(100%)
Women don't use long term contraception if they know presence of EC	12(5%)	79(32.6%)	105(43.4%)	46(19%)	242(100%)
I will recommend EC to a friend	31(12.8%)	115(47.5%)	63(26%)	33(13.6%)	242(100%)
Attitude towards EC	Percentage (%)				
Favourable	71.9				
Unfavourable	28.1				

Table 3: Distribution of respondents by attitude towards emergency contraception (n=242).

association with Knowledge towards EC. Monthly income have significant association with attitude towards EC. On the other hand Age, Marital status and monthly income have significant association with sexual experience, with P-value <0.05.

## Discussion

The study has aimed at examining the level of knowledge and attitudes towards EC among female students in Harar preparatory schools. The finding has revealed that 81.4% of the respondents have heard about EC. However, their actual level of knowledge of EC is generally low (21.9%): Though the level of knowledge is comparable to a study conducted in Jimma University (22.8%), it is lower than those conducted in Bahir Dar University (34.8%) and Addis Ababa university (43.5%) [16,19]. It is even much lower compared to the studies conducted among universities in other African countries such as Jamaica (84%), Nigeria (58%), and Cameroon (63%), all documented a rate greater than 50% [20-22].

The summarized figure for attitude towards EC indicated that 71.9% of the respondents who have ever heard of EC had favorable attitude toward EC. This figure is better than studies conducted in Addis Ababa University (53%), and Hawassa post-secondary female students (65.6%) [16,17,19]. The findings of the study have shown that about 27.3% of the respondents had sexual intercourse with mean and median age of 18.12 and 18 respectively. The median age of this study is greater by two years than the national survey result of EDHS, (2005) which was 16.1 years [23]. By using multinomial logistic regression analysis between knowledge and selected predictors shows: Religion and Residency have significant association with Knowledge of EC with p-value=0.007 and 0.023 respectively. on the other hand monthly income have significant association with attitude towards EC with p-value=0.020. Age, marital status and monthly income have significant association with sexual experience with p-value =0.025,0.016 and 0.01 respectively. There is positive relationship between age of the respondents and knowledge of EC. Another related predictor, Study year, has also influenced knowledge of EC in similar manner. This may hold true since there is a possibility for female students engaging in more sexual as they get older. The result is consistent with similar studies conducted in other universities [16,17]. Knowledge of EC is also affected by previous place of residence. As expected, respondents with rural background are less likely to know EC compared to those having urban background. In a situation where use of any modern family planning is less than 10% in most areas of the rural Ethiopia [23], it is likely that female students with rural background know little about such rarely available contraception. Similarly, the result is consistent with the study conducted at Bahir Dar University [16]. Religion was found to be statistically significant factor that affect respondents' knowledge and attitude toward EC. Higher knowledge and favorableattitudetowardsECwereobservedamongOrthodoxChristians (28.9%) followed by protestant (17.65%) and Muslims (14.29%). This may be either due to occasional teachings at different programs at the religious institution or may be confounded by other variables. Finally, it is worth mentioning one of the weaknesses of this study: Due to the very sensitive nature of the subject, some respondents did not want to respond to some of the questions, and hence, have returned incomplete and blank questionnaire while few refused to return the questionnaire at all. Due to this, expected responses for some key variables such as sex experience, contraceptive use, pregnancy history, and existence of unwanted pregnancy might have been affected.

## Conclusion and Recommendations

The study has revealed that while overall awareness of EC is fair, actual knowledge of EC is very low (21.9%) among female students in Harar preparatory schools. Among those who have ever heard of EC, 71.9% of them have favorable attitude toward EC. The present study has also documented that knowledge and attitudes of female preparatory students are affected by a range of personal characteristics including; age, grade level, religion, residency and the like. Finally, given the high rate of sexual activity and unwanted pregnancies reported, the author calls for concerned bodies to take some important measures such as; provision of continuous sex education, guidance and counseling services making focus of attentions to preparatory schools and increasing easy accessibility of the EC and other preventive methods to the users. It is worth noting that the health extension workers can play important roles by percolating the knowledge of EC deep down in the student community through individual counseling when female students visit the clinic. To change attitude towards EC and further increase the level of awareness and usage, collaborated health education and similar studies among health and Media workers are highly recommended. A separate study to assess the level and the type of forced sexual intercourse is also recommended. According to this study, I would like to recommend to Ministry Of Health and Harari Health Beaurto to coordinate Health Extension Workers to teach the students about EC to improve knowledge and attitude towards EC.

## References

1. Wegene T, Fikre E (2007) Knowledge, attitude and practice on emergency contraceptive among female university students in Addis Ababa, Ethiopia. *Journal of health development* 21: 112-114.
2. Stephanie AS (1993-2003) History and social issues of birth control. Microsoft corporation.
3. Network family health international (2001) Emergency contraceptive pills 21: 18-19.
4. Dawit A (2007) Emergency contraceptive in Addis Ababa: Practice of service provider. National Research Foundation: 3-7.
5. World Health Organization, Reproductive health. Biennial rapport. 2000-2001: 8-13.
6. Ethiopia Demographic and Health Survey (2005) Addis Ababa: 57-65.
7. Alamitu W (2010) Knowledge, attitude and practice on emergency contraceptive among Female college students in Arbaminch, Ethiopia. *Harar bulletin of health sciences*.
8. Kassahun T (2004) Assessment of knowledge, attitude and practice towards emergency Contraceptive among female undergraduates student in Jimma University. *Health Science students' research*.
9. Family health international pills (2001).
10. Aneblom G, Laesson M, Odland V, tyden T (2002) Knowledge, attitude and practice towards emergency Contraceptive pills among Swedish women's presenting for induced abortion. *Int J Obstet Gynaecol* 109: 55-60.
11. Okonofua F (2004) Unsafe abortion in Africa. *African Journal of Reproductive Health*.
12. Sorhinds A, Becker D, Fletcher H, Garcia HG (2002) Survey of Knowledge, attitude and practice on emergency Contraception among University students in Kingston, Jamaica. *Contraception* 66: 261-268.
13. Gichagi PB, Karanja G, Kigondo CS, Fonck K, Temmerman M (1999) Knowledge, attitude and practice regarding emergency Contraceptive among nurses and nursing students in Nairobi, Kenya. *Africa journal of Health* 59: 253-256.
14. Robert C, Moodily J, Esterhuizen T (2004) Knowledge and practice of emergency contraception among tertiary students in Durban South Africa. *J Obstet Gynaecol* 24: 441-445.

15. Central statistical authority: Demographic and health related survey (2001). Addis Ababa.
16. Atsede D (2007) Emergency contraceptive: Knowledge, attitudes, and practices (KAP) among Bahir Dar University female students. Addis Ababa. Unpublished Master's Thesis.
17. Wondimu B (2008) Emergency contraceptive: Post-secondary school female students' and service providers' perspective: The case of Awassa town. Addis Ababa. Unpublished Master Thesis.
18. Ministry of Health (2005/2006) Health and Health related indicators, Planning and Program department, Addis Ababa, Ethiopia.
19. Tamire W, Enqueselassie F (2007) Knowledge, attitude, and practice of emergency contraception among female university students in Addis Ababa, Ethiopia. *Ethiopian J Health Dev* 21: 111-116.
20. Eugene JK, Pius N, Nelson F, Charles SW, Luc K, et al. (2007) A survey of knowledge, attitudes and practice of emergency contraception among university students in Cameroon. *BMC Emerg Med* 7:7.
21. Akani C, Enyindah C, Babatunde S (2008) Emergency contraception: Knowledge and perception of female undergraduates in the Niger Delta of Nigeria. *Ghana Med J* 42: 68-70.
22. Sorhaindo A, Davida B, Horace F, Sandra GG (2002) Emergency contraception among university students in Kingston, Jamaica: A survey of knowledge, attitudes, and practices. *Contraception* 66: 261-268.
23. CSA (Ethiopia), ORC Macro (2006) Reported on 2005 Ethiopian demographic and health survey Addis Ababa, Ethiopia and Calverton, Maryland, USA.