

**ADDIS ABABA UNIVERSITY**

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**DEPARTMENT OF MIDWIFERY & NURSING**

**POST GRADUATE PROGRAM**

***ASSESSMENT OF KNOWLEDGE, ATTITUDE, AND PRACTICE TOWARDS  
EMERGENCY CONTRACEPTIVES AMONG FEMALE COLLEGE STUDENTS AT  
MEKELLE TOWN, TIGRAY REGION, ETHIOPIA, 2011.***

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This thesis by \_\_\_\_\_ is accepted in its present form by the board of examiners as satisfying thesis requirement for the degree of Masters of Science in Maternity and Reproductive health.

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## **ACRONYMS**

AAU= Addis Ababa university

Adj.OR = Adjusted odds ratio

COR= Crude odds ratio

EC= Emergency contraception

ECPs =Emergency contraceptive pills

ECs = Emergency contraceptives

EDHS= Ethiopian Demographic Health Survey

ESOG= Ethiopian Society of Obstetrics and Gynecologists

FGAE= Family Guidance Association of Ethiopia

FP= Family Planning

GBV=Gender based violence

IUCD= Intra Uterine Contraceptive Device

KAP= Knowledge, Attitude, & Practice

MDG= millennium development goal

MMR= Maternal Mortality Rate

MOH= Ministry of health

RH= Reproductive health

SDC= Skill development center

SD= Standard Deviation

SPSS=Statistical package for social science

TVET= Technical, vocational and educational training

WHO= World Health Organization

## **ABSTRACT**

**Background:** Death related to unintended pregnancy associated events is a series public health concern in Ethiopia. This is very common in young adolescents for whom life is full of adventure and temptation with very little knowledge about the consequences of their reckless activities. Emergency contraceptives are the only method that can be used within short time after sexual intercourse, offering a second chance to prevent unwanted pregnancy. Emergency contraceptive will have contribution in decreasing maternal mortality and morbidity due to unwanted Pregnancy & its sequel.

**Objectives:** To assess the knowledge, attitude and practice of emergency contraceptives among female college students at Mekelle town, Ethiopia.

**Methods:** An institutional based cross-sectional survey was conducted among 616 female college students at Mekelle town from January to May, 2011. Multistage sampling technique with Probabilities proportional to size was used. Data were analyzed by SPSS window version 16.0 soft ware package and presented using frequencies, percentages, crude odds Ratio, 95% Confidence Intervals and multiple logistic-regressions to adjust for possible confounding variables.

**Results:** Of the total respondents, 393(67.3%) of them replied that they have heard about emergency contraceptives. Among those who have ever heard of emergency contraceptives, 224 (57%) mentioned pills only, 9 (2.3%) mentioned intrauterine contraceptive devices (IUCDs) only and 154(39.2%) mentioned both pill & IUCDs. 263(45%) of the respondents were knowledgeable towards ECs, and about 271(46.4%) of the students had positive attitude towards emergency contraceptives.

Of the sexually active respondents 70(24.2%) only reported that they had used emergency contraceptive methods previously. Whereas, 219(75.8%) were not used emergency contraceptives; some of the reasons were lack of knowledge about ECs (42.9%); no desire to use (22.8%) and inaccessibility toward emergency contraceptives (16.4%).

**Conclusion:** The study indicated low level of knowledge; very low practice and majority showed negative attitude towards emergency contraceptives.

# 1. INTRODUCTION

## 1.1 Back ground

Modern family planning (FP) services in Ethiopia dates back to 1966, when the family guidance association of Ethiopia (FGAE) was established as non- governmental & non-profit organization to provide information, counseling & clinical services to families who voluntarily expressed their need and desire for spacing the birth of their children. The FP service was developed and strengthened when the MOH integrated family planning with maternal health in 1980. Use of high dose post coital estrogen began in the 1960s as a treatment for rape victims. The combined estrogen- progestin (yuzpe) regimen was initially described in 1974 by Albert Yuzpe, a Canadian physician. It was soon replaced to the high- dose estrogen approach [1, 2].

Emergency Contraception (EC) refers to a group of birth control modalities that, when used after an unprotected intercourse or contraceptive failure within defined time limits; can prevent an unwanted pregnancy [2]. EC has different terminologies like: morning after pill, post coital contraception, and second chance [3]. There are two types of emergency contraception: hormonal methods (pills) and the insertion of intrauterine device (IUD). Hormonal emergency contraception pill consists of: i) Combined oral contraceptive pills: taken within 72 hours of unprotected intercourse and then 12 hours later. ii) Progesterone only pills: one pill should be taken as the first dose as soon as convenient, but not later than 3 days (72 hours) after unprotected intercourse to be followed by another one pill 12 hours later. Another, method of emergency contraception/ Post coital insertion of a copper-releasing IUD was 1<sup>st</sup> reported in 1976. This involves insertion of a copper intrauterine contraceptive device (IUD) into the uterus. It is most appropriate for women in stable

relationships who wish to retain the IUD for long-term contraception and who meet the screening requirements for regular IUD use [4, 5].

Oral contraceptive pills and intrauterine contraceptive devices (IUCDs) are mainly used as safe and effective post coital contraceptive methods. When used within 72 hours after sexual contact, pills have the capacity to prevent or reduce the risk of an unintended Pregnancy by 75-85% and with the use of IUCDs unwanted pregnancy can be prevented by as much as 99%. This is especially significant for those young couples that opt not to use a long-term regular contraceptive method and their sexual behavior is rather unplanned, erratic and irregular [6, 7].

The mechanism actions of emergency contraceptives are: by inhibiting ovulation or preventing the implantation of fertilized egg, however will not terminate or interfere with a pregnancy once it established [3]. International organizations, including the WHO, have recognized that access to contraceptive services constitutes a human right & is fundamental to reproductive and sexual health [8]. In addition, the national laws and health norms in many countries increasingly support this right. The international Planned Parenthood federation charter on sexual and reproductive rights includes the right to choose whether/ not to marry, plan a family and the right to decide whether and when to have children; however, limited access to contraceptive methods hampers the ability of many women to exercise these rights [9].

Emergency Contraception is largely underutilized worldwide and has been referred to as one of the best kept secrets in Reproductive Health (RH) [10]. It can reduce the number of unwanted pregnancies and is unique in that it is the only immediate option left for

somebody who has had unprotected intercourse and is not ready for a pregnancy. For many women, emergency contraception (EC) offers a final opportunity to prevent unwanted pregnancy after they have had unprotected sexual intercourse, have experienced a contraceptive failure, have remembered too late that they have forgotten to take their birth control pills, or have been forced to have sex against their will (rape). [2, 11]

## **1.2 Statement of the problem**

Unplanned pregnancies among young women are a worldwide problem with social and economic repercussions for the unprepared young individual [12]. A critical challenge in the global effort to reduce maternal mortality is the persistence of unsafe abortion as a result of unwanted pregnancy, which accounts for 13% of Pregnancy related deaths worldwide [13].

In many low income countries, the lack of knowledge about and access to EC may result in women resorting to unsafe abortions, which contribute significantly to maternal morbidity and mortality [11]. Each year, about 210 million women around the world become pregnant. Among them, about 75 million pregnancies (36%) are unplanned and/or unwanted. And globally, more than 20 million women experience ill health as a result of pregnancy each year [14, 15]. It is estimated that between 8 and 30 million pregnancies each year result from contraceptive failure either due to inconsistent or incorrect use of contraceptive methods or failure of the method itself [16]. Research studies conducted in the USA have reported that higher rates of unintended pregnancy occur among college-age women, with 60% of pregnancies among 20-24 years old being unintended. The percentage of unintended pregnancy is even higher among 18-19-year-old females (79%) [17]. Unintended pregnancy poses a major challenge to the reproductive health of young adults especially in developing countries. High rates of unintended pregnancy are associated with higher incidences of abortion, & specifically unsafe abortions, which further place women at risk of death and disability.

Each year, an estimated 19 million unsafe abortion occurs in the developing world, and around 70,000 women die from abortion –related causes where abortion is often legally restricted and maternal care services are lacking. In addition to those who die from unsafe abortions, tens of thousands suffer from chronic and sometimes irreversible health consequences, including infertility [13, 18].

Unsafe abortion is often the only option available to women who wish to terminate a Pregnancy in countries where abortion is illegal /legally restricted, or where significant access barriers exist including lack of access, Knowledge or awareness and use of emergency contraception. By expanding number of family planning's and increasing awareness's especially towards EC options available to women is a critical part of increasing contraceptive coverage, decreasing unintended pregnancies and reducing maternal morbidity and mortality around the globe [19]. Emergency contraception (EC) is an important contraceptive option in both developed and developing country settings. It is the only form of hormonal contraception that can reduce the risk of pregnancy after unprotected intercourse or when a planned contraceptive method fails; increasing the availability and promotion of EC has the potential to reduce the incidence of unintended pregnancies if used when the need arises and in turn reduce associated social and healthcare costs [20].

Lack of use or access to contraceptives is a major cause of unwanted Pregnancy. More than half of all women in the developing world are at risk because they are using a traditional method with high failure rates; or they are using a reversible method that requires regular re supply; or they are

using no method at all. Since no contraceptive work perfectly every time even wide spread modern contraceptive use will not completely eliminate the need for recourse to abortion [21].

Emergency contraception (EC) as a backup method is new in Ethiopia. Various reports show that there is little knowledge and information available about EC in the country [22]. Unsafe abortion as a result of unplanned/unwanted pregnancy is one of the leading causes of maternal mortality and morbidity in Ethiopia. Ethiopia has a high incidence of unwanted pregnancies and unsafe/septic abortions, particularly among adolescents. Several studies in the country have revealed that women who tend to undergo induced abortion are below the age of 30 years and are literate; many of whom being above the secondary educational level. Reasons for such huge numbers of unintended pregnancies in Ethiopia include a low rate of contraceptive use, method failure, and high unmet need for contraceptives [3].

In Ethiopia according to the survey conducted in 2000 by ESOG in nine administrative regions, 25.6 percent of 1075 abortion cases were induced abortions. Among them, 58 percent of the cases were in the age range 20-29 years. Of those pregnancies ended in abortion 60 percent were unplanned 50 percent were unwanted [21]. Adolescent women face a high risk of unintended pregnancies and unsafe abortion, with devastating consequences for their lives and health [22].

According to the EDHS 2005, Ethiopia has one of the highest maternal mortality ratios in the world, estimated at 673 deaths per 100,000 live births. And in Ethiopia about 25,000 women die every year due to pregnancy and child birth complications, and several studies indicate that unsafe abortion may account for up to 25-35% of the maternal deaths in Ethiopia. Unplanned pregnancies are the result of various factors, including a lack of

knowledge about menstruation and pregnancy, a lack of access to and knowledge about how to use contraceptives, difficulties in using contraceptives because of partner's or family objections; contraceptive failure and sexual assault [23].

Wider use of EC could prevent a substantial proportion of the millions of unplanned pregnancies that occur every year. Safe and effective hormonal preparations are available that can prevent a pregnancy by inhibiting ovulation, altering the ability of sperm to fertilize an ovum or inhibiting implantation in the womb [24, 25]. Hence, this study was relevant to explore the knowledge, attitude and practices of emergency contraception by female students at different governmental and private college institutions in Mekelle town.

### **1.3. Significance of the study**

This study is needed because Emergency contraceptives play a vital role in preventing unwanted pregnancies, induced abortions and would serve as a backup to other family planning methods. It also helps for those female college students to have knowledge about ECs from being interrupted their education as a result of unwanted pregnancy. Research on the awareness of EC among college students may help to inform policy makers and education planners in Ethiopia. Unfortunately, no tangible research has been conducted in this area among the college students in the town. This study is assumed to provide baseline data for policy makers and education planners in developing appropriate evidence-based strategies and curricula in school/college to prevent unintended pregnancy and will have a great role for nursing and midwifery in achieving the MDG5 by reducing the morbidity & mortality of Ethiopian women particularly the youth age group as a result of unsafe abortion.

## **2. LITERATURE REVIEW**

### **2.1 Knowledge, attitude and practice of ECs**

Unprotected intercourse can occur when there is coerced/ unplanned sex & when barrier methods break or dislodged or when other contraceptives are improperly used. EC prevents pregnancies. [24]. The potential of EC to prevent unwanted pregnancies and its utilization in developed countries has been well documented, However in vast majority of developing countries including Ethiopia the potential clients' service providers and the services status is not well documented. Regarding the knowledge that help the women to decide whether to use or not about EC there is a wide gap between developed & Non-developed nations even between nations of different area. Different studies showed non developed nation have very low awareness where as developed have higher awareness. Among six different studies in Ethiopia from 24-85.5% had heard about Emergency contraceptive, from the six knowledge assessment studies, four studies had less than 50% awareness and only two studies in Bahirdar and Jimma University had 83.5%and 53% awareness respectively. Other studies from other countries had relatively had more awareness. For instances, studies in san Francisco 89%, Katmandu - Nepal 68%.[21, 26]

A study done on Knowledge and practice of emergency contraception among female undergraduates in the University of Lagos, Nigeria, revealed that 67.8% of the respondents reported knowing about emergency contraception. More than half (56.1%) were sexually active and of this group, 96.8% had ever practiced contraception with only 33.9% having ever practiced emergency contraception. However, only 37.8% and 36.3% of respondents who had reported knowing about emergency contraception knew the correct time frame for effective use, and correctly identified emergency contraceptives

respectively. Among those who were aware of, and had used emergency contraception, 34.1% obtained their information from health care providers, while the larger majority obtained from friends. Knowledge and practice of emergency contraception was directly related to age, level of study, medical education, marital status, sexual activity, previous history of use of contraceptives and previous history of induced abortion. [24, 27]. Other similar Studies conducted on knowledge, attitude and practice towards Emergency Contraception and Fertility awareness among University Students in Kampala, Uganda, Makerere University showed that the mean age of the participants was 21 years. Less than half (45.1%) had ever heard about emergency contraceptive pills (ECPs). The most common sources of information about EC were friends (34%), media (24.8%) and schools (19.4%). The ever pregnancy rate was 3.4 percent and 42 percent were in a steady relationship of three or more months. The contraceptive ever-use rate was 14.5 percent. Among the users, the most common methods were condoms (48.9%) and withdrawal (23.4%). Emergency contraceptive pills had been used by seven students. Forty two percent did not know the time interval within which ECPs can work and one third thought it would interrupt an ongoing pregnancy. Thirty five percent did not know when in the menstrual cycle they were likely to conceive. The majority of the students were against over the counter (OTC) availability of EC because of fear of misuse. [10, 28]

Other research conducted among Jimma university community high school students showed that, 64% of respondents heard about Emergency contraceptive where as studies among client seeking abortion at clinic had low awareness about Emergency contraception, which is only 13.5-14% of all the respondents heard about it [3].

Reduction in unplanned pregnancies leads to lower abortion rates. It has been estimated that 43% of decline in abortions that took place between 1994 & 2000 in the United States was due to the increased availability of emergency Contraception. [29]

Studies conducted in Addis Ababa University and Unity University College showed that 43.5% of the students said that they have heard about emergency contraceptives. When asked about specific types of emergency contraceptives, among those who have ever heard of emergency contraceptives, 82.8% mentioned pills and 34.1% mentioned intrauterine contraceptive devices (IUCDs). About 53% of the students had positive attitude towards emergency contraceptives and only 4.9% respondents reported that they had used emergency contraceptive methods previously [7].

Study conducted in Jimma University, Southwest Ethiopia, among graduating female students indicates that 41.9% were ever heard of Emergency Contraceptive; only 6.8% used the method. The common sources of information were friends 36.5%, radio 22.8% and television 12.3%. 71.2% agreed to use Emergency Contraceptive when they practice unintended sexual intercourse. [30]

Similar other research conducted at Gondar University students indicated that 24.0 % thought that there are methods that can be used to prevent pregnancy when a woman had unprotected sex. Overall, 18.8% knew the correct methods of emergency contraception (pill or IUCD). Of those who mentioned pill as the only method of emergency contraception, 73.3% said the pill should be used within 72 hours after unprotected sex. Only one student used pill as emergency contraceptive. Students in the health field have 6.8 times higher knowledge on emergency contraception compared to students of FBE. Generally, there was an increasing trend in the knowledge of students when their age and

year of study increases. Married or divorced students had 3.36 times higher knowledge when compared with never married students. [31, 32]

Most previous studies showed that awareness of female student's in higher institution related to regular contraceptive vary from 86-96.5%. It was relatively good in different Ethiopian higher institutions, for instance study in Bahirdar 96.5% of students heard about regular contraception, 86% in Asella. The most common knowledge method were OCP, inject able contraception, condom followed by long term contraception (IUD). [29, 33]

A study indicated that EC users were primary unmarried women between the ages of 20-24 although male partner were increasingly involved in EC decision making and procurement. The most common reason for non- user of EC were lack of information about the existing of EC, fear of side effects, unavailability of the service, partner disagreement, religious and culture, knowledge about the source and fear of going to take the service.[34, 35]

Another study was done in Oremia region South west shewa zone Wolliso town on assessment of knowledge & practice of EC among female college students showed that 30.1% were sexually active. Of them 39.8% were raped, 26.8% exposed to unintended pregnancy & 15.8% ever used contraceptive. 45.4% had heard about EC & the most cited source of information was health worker followed by mass media and peer discussion. Out of those who had heard EC 89% knew where EC could be found, 47.1% correctly identified the recommended time of EC use. And only 4.2% had ever used ECs. [3, 36]

## **2.2 Gender based violence in college students**

GBV is physical, mental or social abuse (including sexual violence) and act, attempted or threatened, done with some type of force, manipulation, or coercion & without the informed consent of the affected person/ survivor. Forms of gender based violence (GBV) include sexual violence, sexual abuse, sexual harassment, sexual exploitation, early or forced marriage, discrimination and female genital cutting. In a qualitative study by consortium of RH association (CORHA) in four universities in Ethiopia, female university students had reported they were harassed & raped both in and outside the university compasses.

In a school based survey among high school students in Addis Ababa & west Shoa prevalence of completed & attempted rape was 5% and 10% respectively. In similar study among high school students in Debark, North- west Ethiopia, sexual violence was reported by 65.3% of respondents. [17] Similar study done in Mekelle town female college students showed that 35% of study participants had sexual experiences with the mean age of  $18.8 \pm 2.7$ , of which 37% of them their first sex were without their consent (raped). Among the respondents life time prevalence of any form of sexual violence was reported by 45.4%. Whereas attempted rape & sexual harassment were reported 33.7% and 35.4% in life time respectively. [37]

## **2.3 Importance of EC for youth**

Emergency contraception involves methods of contraception used for preventing a pregnancy after unplanned or unprotected sexual intercourse. The concept appears appropriate for adolescents and students in higher institutions or those in vocational training who are engaged in sporadic and occasional sexual intercourse's. The need for

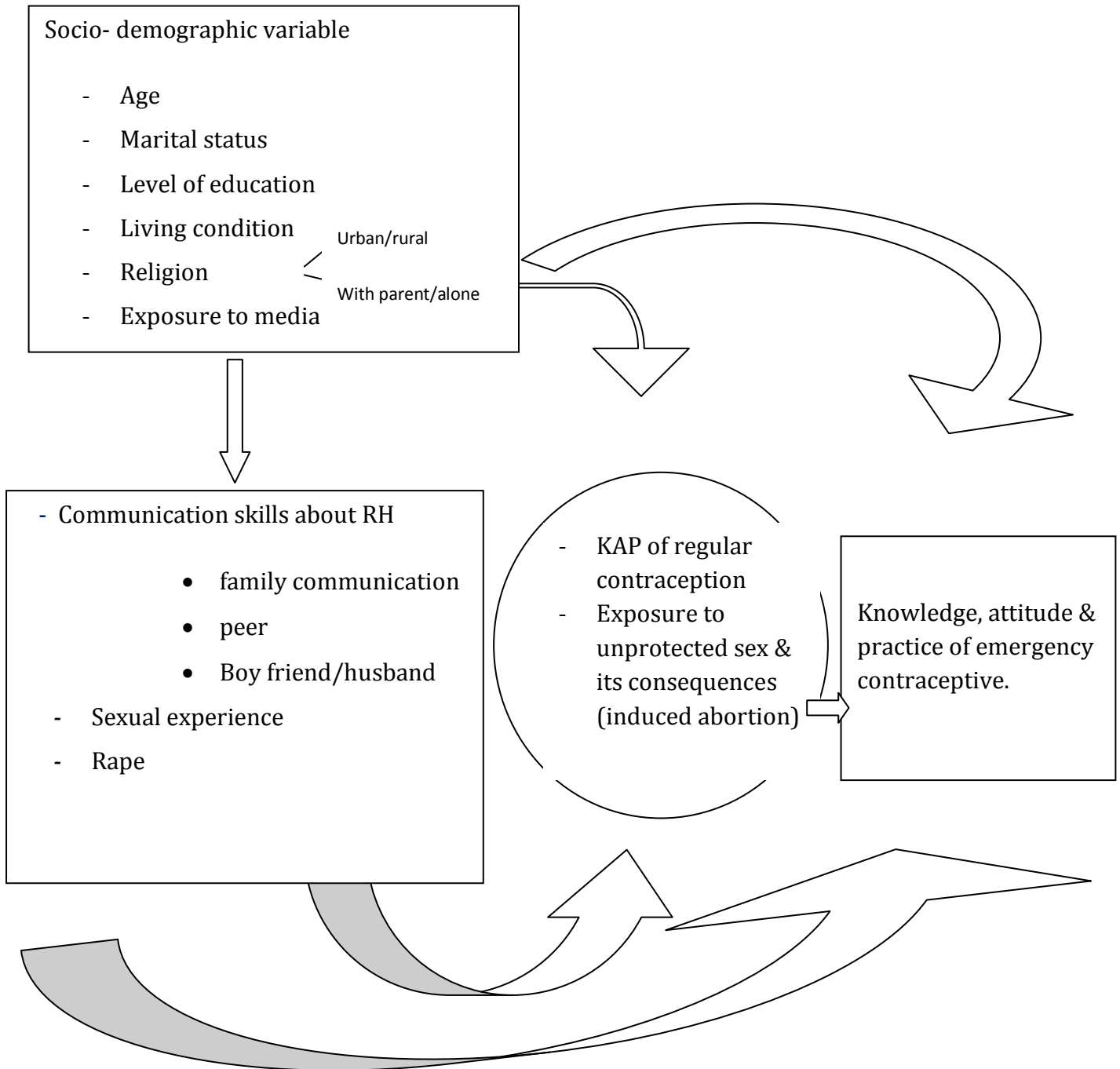
emergency contraception is clearly demonstrated by the occurrence of unwanted or induced pregnancies. In populations where most women of reproductive age don't have access to contraception, unwanted / mistimed pregnancies occur frequently. Most victims of unwanted pregnancy are adolescents, who are expelled from school, often ending their formal education & the potential for future employment. For fear of being expelled from school, many adolescent girls resort to clandestine abortion, which often results in serious complications or death.

ECs have become almost available in many developing countries. However, limited provider knowledge & negative attitudes as well as poor user awareness and access, have hindered adolescents in learning and using EC. Many adolescents are subjected to have sex sporadically, which makes contraceptive planning difficult. Other experience contraceptive failure & their failure rates may be higher than adults due to their inexperience. No method of contraception is 100% effective. Furthermore, few people use their method perfectly every time they have intercourse thus demonstrating the need for an emergency backup method. Also many young women experience coerced sex, including rape. EC gives these women practically option & a critical last chance to prevent unwanted pregnancy and the associated hardships. [3, 38]

## **2.4 Conceptual frame work**

Based upon the literature reviewed above, in the study the socio-demographic, exposure to different Medias and other communication are considered as independent variables, knowledge and practice of contraception and exposure to unprotected sex and its consequences as intermediate variables, and knowledge and attitude of EC as dependent variable.

The independent variables: socio- demographic factors such as age, marital status, sexual experience, level of education exposure to different media & communication about RH matters like (family, peer, and boy friend/ husband communication) affects or determines KAP of EC among female college students directly or through the knowledge, practice of regular contraception and exposure to unprotected sex & its consequences like induced abortion.



**FIGURE 1-** Conceptual frame work on factors that influence the KAP of female college students.

Source: modified from Wondimu B. (2008)

### **3. OBJECTIVES**

#### **3.1 General objective**

- To assess knowledge, attitude and practice of female college students towards emergency contraceptives in Mekelle town, 2010/2011.

#### **3.2 Specific objective**

- To describe the awareness of emergency contraceptive methods
- To determine attitude towards emergency contraceptive methods.
- To assess use of emergency contraceptives methods

## **4. METHODS**

### **4.1 Study area and period**

The study was carried out between January up to May 2011 at Mekelle town.

Mekelle is the capital city of Tigray Administrative regional state, located approximately 783 kilometers north part of Addis Ababa, the capital city of Ethiopia. The town is divided in to seven administrative localities. According to Population statistics projected for 2008 its population is estimated to be 227,505. As to the governmental health facilities Mekelle town has one referral hospital, three general hospitals, and eight Health centers making the health coverage 56%, with the contraceptive prevalence rate of 38.2%. In the town there are four governmental and fifteen private colleges, including social science educations, health science colleges, technical and vocational colleges which run in diploma and degree programs. In these college institutions thousands of female students are following their tertiary education.

The area of study was selected by its high prevalence of unsafe abortion, lack of tangible previous research under this topic and its convenience access to the investigator.

### **4.2 Study design**

An institution based cross - sectional study design was conducted to asses KAP of ECs among Mekelle governmental & private female college students.

### **4.3- Study population and sampling**

#### **4.3.1- Source population**

The primary population source of the study was all college female students in Mekelle town who were attending their education during the study period.

### 4.3.2- Study population

Female students who were randomly selected from Mekelle health Science College, SDC Mekelle TVET, and Sheba College in Mekelle town.

### Eligibility criteria

### Inclusion criteria

- All regular voluntary female college students who are enrolled in 2003 academic year.

### Exclusion criteria

- Male students, extension students, those students who are blind and not willing to participate.

### 4.3.3 Sample size determination

The sample size was determined using single population proportion formula assuming the proportion of students who are aware of ECs is to be 50%. Adding non response rate of 10%, and multiplying by a design effect of 2 due to the multistage nature of the sampling method. The required samples based on the usual formula were as follows:

$$n = \frac{(z\alpha/2)^2 p (1-p)}{d^2}$$

Where, n=the required sample size

Z= standard score corresponding to 95% confidence interval

P= assumed proportion of aware of students towards the EC

d= the margin of error (precision) 5%

Then,  $n = \frac{1.96^2 \times (0.5 \times 0.5)}{(0.05)^2} = 384$ , from an undefined population so, for defined

Population will be calculated as follows:

$$n = \frac{n_0}{1 + n_0}$$

N

Where,  $n_0$  = the sample size from an infinite population.

N= finite population size

$$n = \frac{384}{1 + \frac{384}{1041}} = 280$$

By taking additional 10% contingency for non-response rate, the total sample size would be:  $280 + 10\%(\text{non-response rate}) = 308$  and considering the design effect of  $2 \times 308 = 616$ .

#### 4.3.4. Sampling technique/ Procedure

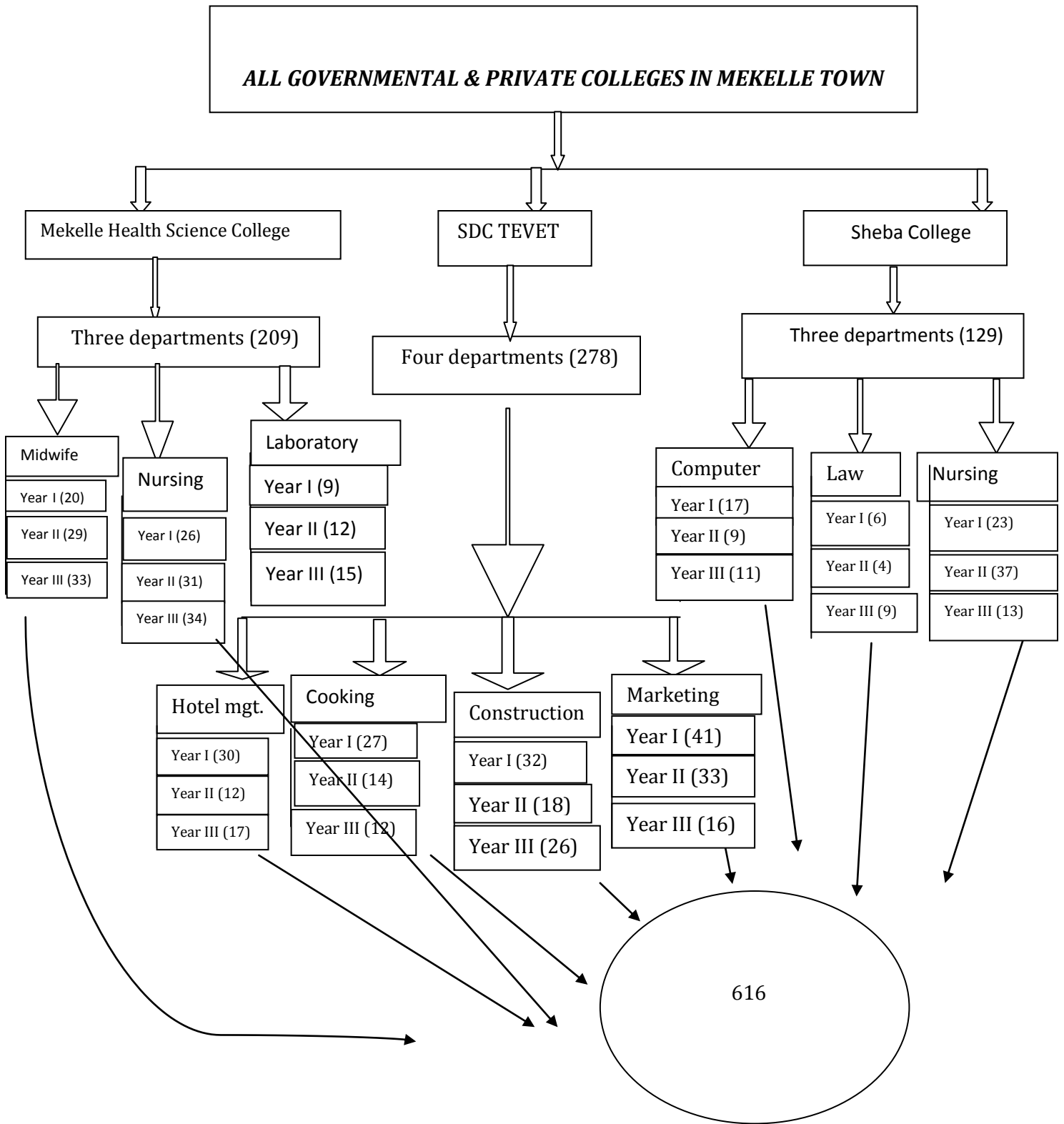
After calculating the sample size, the multistage stratified sampling were employed considering all governmental and private colleges/ institutions in Mekelle town, streams or departments and year of study in the sampling process for the selection of the study subjects.

Initially, of the whole nineteen governmental and private college institutions in the town three institutions, Mekelle health Science College, SDC Mekelle TVET and Sheba College were selected randomly and the total sample size of the study were distributed over each of the institute proportional to their size.

In the second stage, departments/streams from the selected college were selected using simple random sampling (SRS) technique. Accordingly the sample size of the study allocated to each institute was distributed to each of the stream and department proportional to their size.

Finally, the required numbers of female students were selected randomly (applying SRS) from each year of study again proportional to their size from the randomly selected streams/departments.

*(The allocation of students at each stage is proportional to size)*



**FIGURE 2-** Schematic presentation of the sampling procedure

#### **4.4 Data collection technique and quality control methods**

For this study a self administered structured questionnaire were conducted. The questionnaires contain open as well as closed ended questions which covers socio demographic information, knowledge, attitude and practice on emergency contraceptive. This were prepared in English and translated to Tigrigna and then turn to English for its consistency. Well trained data collectors were participated in the data collection process. The study participants were participated based on their willingness in the study. Adequate information was given on how to fill the questionnaire. The principal investigator was made the necessarily supervision and training throughout the data collection period to guide and correct any problems.

The questionnaire was tested before the actual survey within a pilot survey on 40 college students from New Millennium Private College to ensure its clarity, ordering, consistency and acceptance.

#### **4.5 Study variables**

##### **Dependant variables:**

Knowledge, attitude and practice (KAP) of emergency contraceptives.

##### **Independent variables:**

Socio demographic characteristics- age, marital status, religion, place of origin, years of study, and residence.

#### **4.6 Operational definitions**

**Emergency contraceptive:** is a form of oral contraception and IUCD contraception method that can be used immediately or in the first few days after sexual intercourse but before pregnancy is established. It is intended for emergency situations such as unprotected intercourse, contraceptive failure or rape.

**College student:** a student who completed their high school education at grade 10 and has joined to college.

**Knowledge of EC:** include heard about EC, type of EC, knew time limit to be taken EC after unprotected sex with 72 / 120 hrs & occasions when EC will used/ not used.

- *Knowledgeable:* From the knowledge questions on emergency contraception who respond correctly above the median value.
- *Not knowledgeable:* Those who score median value & less than the median value.

**Attitude:** is an opinion, out looks, values, position and intentions of the study subjects towards the utilization of EC methods. Study subjects who have concerns and negative opinion about ECs and responded negatively for attitude items will be regarded to have negative attitude towards EC. While those who have positive outlook and no concern towards ECs and responded the attitude questions positively will be considered to have a positive attitude towards ECs.

**Practice:** is the utilization skill or ever use of EC on the basis of their knowledge when the study subjects are exposed to unprotected sexual intercourse to prevent an intended pregnancy.

#### **4.7 Data processing, analysis and interpretation**

After the data collection, each questionnaire was checked for its completeness. Data cleaning and editing as well as coding were done by Epi Info version 3.5.1 statically software package & enter in to SPSS window version 16.0 software for analysis purpose. Data were presented using frequencies, percentages of table and associations between variables were assessed by using odds Ratio, 95% Confidence Intervals. Multiple logistic-regressions were used to adjust for possible confounding variables.

To ascertain the level of female college students' knowledge about EC, seven knowledge assessment questions were provided for those respondents who have heard about EC. These respective series of questions were adopted from previous similar studies concerning knowledge about ECs. To obtain the summarized extent of knowledge of female students of Mekelle health Science College, SDC Mekelle TVET, and Sheba College each knowledge assessment question response was recorded into the value '1' for correct answers and the value '0' for the incorrect answers in the first place. Then respondents' correct responses to the questions were aggregated and ranged from 0 – 7. And based on the cumulated correct responses score, the study subjects were classified as not knowledgeable and knowledgeable about EC.

Regardless of attitude questions, of female college students at Mekelle town those who had heard about EC were asked three standard questions to assess their opinion and concerns towards Ec. The questions were made to be responded either "Yes", "No", "may be" or "Do not know" and agree, or disagree. For positively worded statements (having positive implication for EC use) those who responded "Yes" were considered as having positive attitude and those who responded "No" were categorized to have negative attitude. On the

other hand, for negatively worded statements (having negative implication for EC use) those who responded “No” were considered as having positive attitude and those who responded “Yes” were grouped to have negative attitude. In both cases those who responded “Do not know” and “may be” were included under the category of those having negative attitude.

The respondents’ attitudinal scores were aggregated and ranged 0–3. And based on the cumulated score, the respondents scored above the median were considered as having “positive attitude”; while those scored median and below the median value were considered as having “negative attitude”.

#### **4.8 Ethical considerations**

The research permission was obtained from the Institution review board of department of midwifery and nursing, college of health science, AAU. A formal letter was written to Tigray regional health bureau and permission to carry out the study was obtained from the regional health bureau to conduct the study in the selected sites of Mekelle town colleges.

Verbal consent was obtained from the study participants after explaining the objective and procedure of the study. Confidentiality was maintained and assured by excluding their names from identification of the study subject.

#### **4.9 Communication of the Results**

The study result will be presented to Addis Ababa University, college of health science, school of nursing & midwifery and result documents will be disseminated to all responsible bodies in the study area. Finally the findings will be disseminated through different meetings, workshops and publishing in the local or an international journal.

## 5. RESULTS

### 5.1 SOCIO - DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

Out of total six hundred sixteen (616) female college students 584 were included in the study with a responses rate of 94.8%. Most of the respondents 301 (51.5%) were within age group of 20-24 years. and ranged from a minimum of 16 years to a maximum of 43 years with the mean, median age of 20.99 and 20.00 respectively and S.D of 3.48.

Majority of the study subjects 579(98.1%) were from Tigray ethnic group. And 379 (64.9%) had urban background prior to their entry to the colleges, with the rest being from rural and 444(76%) of the students were attending their education in governmental college and 140 (24%) were in private college.

With regard to their marital status, about 438(75%) were not currently married, 121(20.7%) were married. Most of the respondents, 539 (92.3%) were followers of Orthodox Christianity followed by Muslim who accounts 26(4.5%). The distribution of the study subjects on the bases of their year of study showed that the majority, 260(44.5%) of the respondents were first year students, and the rest 182(31.2%) and 142(24.3%) were third year and second year students respectively. **(Table 1)**

*Table 1 Socio - demographic and academic characteristics among female college students at Mekelle town, March, 2011.*

Characteristics	Number (584)	Percent
Age(years)		
15-19	211	36.1
20-24	301	51.5
25-29	55	9.4
30+	17	2.9
Place of origin		
Urban	379	64.9
Rural	205	35.1
Marital status		
Single	438	75
Married	121	20.7
Divorced and widowed	25	4.3
Residence		
In campus	87	14.9
Outside campus	497	85.1
Religion		
Orthodox	539	92.3
Muslim	26	4.5
catholic	13	2.2
Protestant	4	0.7
Other	2	0.3
Ethnicity		
Tigray	573	98.1
Amhara	11	1.9
Attending college		
Governmental	444	76.0
Private	140	24.0
Year of study		
First year	260	44.5
Second year	142	24.3
Third year	182	31.2

## 5.2 FAMILY PLANNING KNOWLEDGE, ATTITUDE & PRACTICES OF THE RESPONDENTS

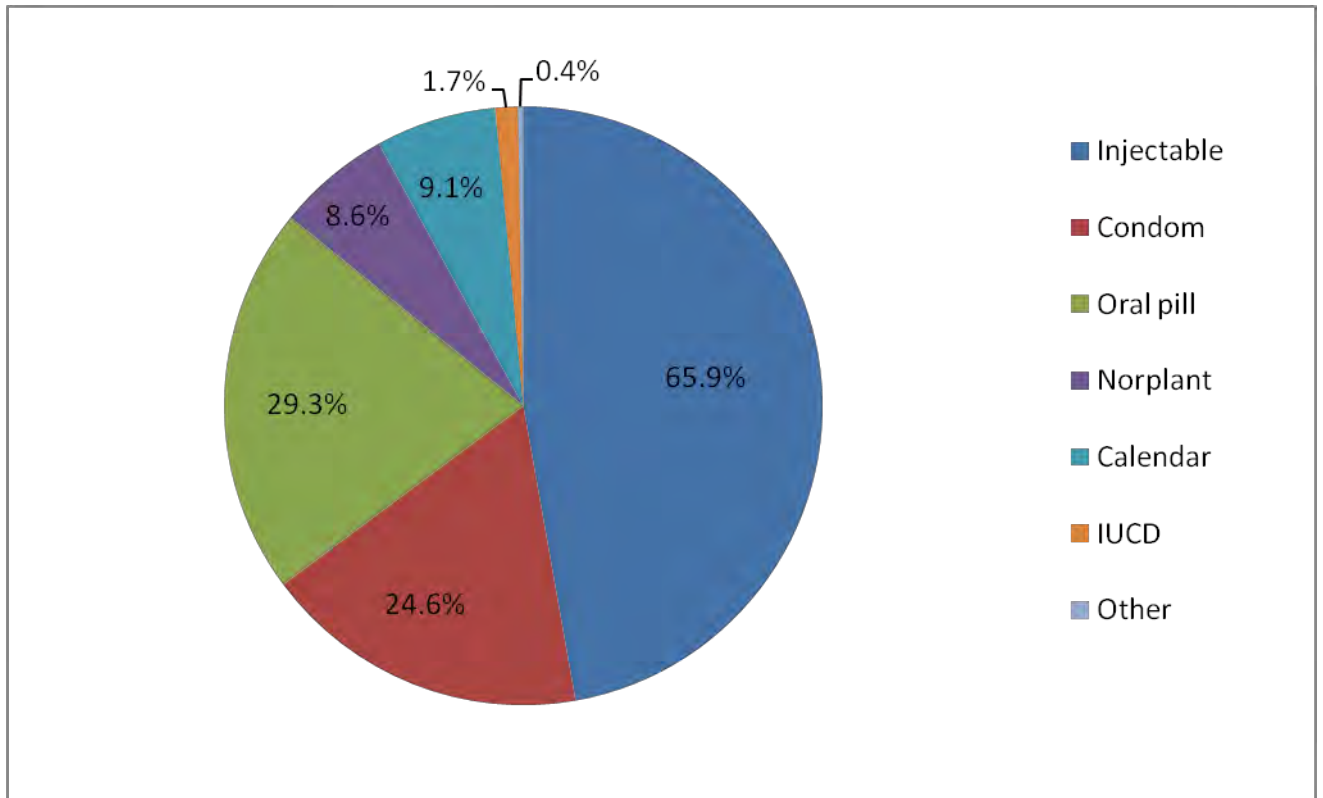
Family planning knowledge, attitude & practice of the respondents (table 2) showed that, majority of them, 574 (98.3%) of female students in the study had ever heard about regular modern contraceptives. While only 10 students (1.7%) never heard about any family planning method in their life time. Knowledge of modern contraception 476(82.9%) of respondents knew condom type of contraception, 442(77.0%) oral pill, 452 (78.7%) Injectable, 260(45.3%) Norplant, 238(41.5%) calendar, 233(40.6%) IUCD & 4(0.7%) followed by other type of contraceptive methods. The common sources of information were 289(50.3%) from health institution and 226(39.4%) from school. **(Table 2)**

Table 2 Knowledge, attitude and practice about regular type of contraceptives among female College students in Mekelle town, March, 2011

<b>Variables</b>	<b>Frequency</b>	<b>Percent</b>
<b>Ever heard of Contraceptives(N=584)</b>		
Yes	574	98.3
No	10	1.7
<b>Source of information(574) *</b>		
Health institution	289	50.3
Mass media	160	27.9
Friend	60	10.5
Family	77	13.4
School	226	39.4
Other	1	0.2
<b>Know method of contraceptive *</b>		
Condom	476	82.9
Oral pill	442	77.0
Injectable	452	78.7
Norplant	260	45.3
Calendar	238	41.5
IUCD	233	40.6
Other	4	0.7
<b>Importance of contraception</b>		
Yes	558	95.5
No	26	4.5
<b>Ever use of contraception</b>		
Yes	232	39.7
No	352	60.3

*\* refers some respondents have multiple responses*

Most of the respondents, 558(95.5%) also believed that contraceptives are important in preventing unwanted pregnancy. 232(39.7%) of the respondents were ever used contraceptive methods and the most commonly used method was Injectable 153(65.9%) followed by oral pill 68 (29.3%). **(Figure 3)**



**FIGURE 3-** Percentage of type of modern regular contraceptives used by the respondents.

### **5.3 EMERGENCY CONTRACEPTIVE KNOWLEDGE, ATTITUDE & PRACTICES AMONG MEKELLE FEMALE COLLEGE STUDENTS**

#### **5.3.1 Awareness and Knowledge of Emergency Contraceptive**

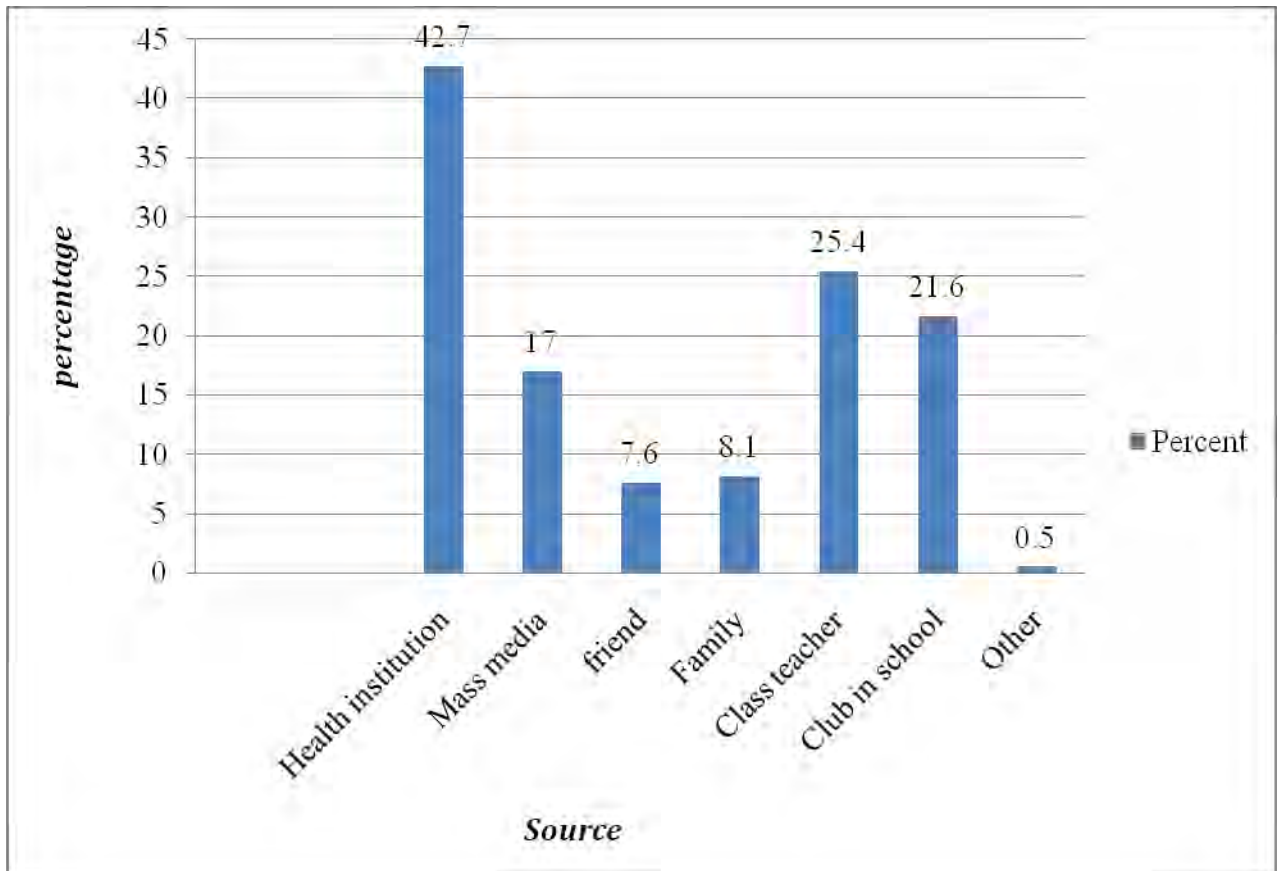
This study examined the awareness of respondents about EC prior to the assessment of their detailed knowledge. According the survey findings, about 393 (67.3%) of the whole

respondents ever heard about ECs. In addition, When asked about specific types of emergency contraceptives, among those who had ever heard of emergency contraceptives, 224 (57.0%) mentioned oral pills and 154 (39.2%) mentioned both oral pills and IUCDs, 9(2.3%) mentioned IUCD only, and 6(1.5%) followed by others **(Table 3)**.

Table 3 - Percentage distributions of female college students by ECs awareness in Mekelle town, March, 2011

<b>Variable</b>	<b>Number</b>	<b>Percent</b>
<b>Ever heard about ECs</b>		
Yes	393	67.3
No	191	32.7
<b>Know method of ECs</b>		
Oral contraceptive pill	224	57.0
IUCD	9	2.3
Both	154	39.2
Other	6	1.5

The main sources of information about emergency contraceptive were health institution about 168(42.7%), followed by class teacher 100(25.4%). **(Figure 4)**



**FIGURE 3** - Main sources of information on emergency contraceptive among respondents who have heard about it.

Of those respondents who were aware of emergency contraceptives, 260(44.5%) correctly identified the recommended time limit to be taken, i.e. combined ECPs within 72 hours after an unprotected sex. 108(18.5%) correctly knew the effectiveness of ECPs in preventing an unwanted pregnancy, 159(27.2%) and 188 (32.2%) of the respondents also identified the recommended number of doses and the recommended time between the doses of ECPs, respectively. Forced sex or rape (45.9%) and accidental breakage or slippage of condom (33.6%), missed pills (32.7%) and followed by failure of contraceptives (25%) stated as appropriate situation to use ECs to prevent unintended pregnancy (**Table 4**).

Regardless of IUCD emergency contraception, of those who were aware of emergency contraceptive method, 130(22.3%) stated the correct timing of administration of IUCD which is after the unexpected sexual contact, and 198(33.9%) were correctly identified its effectiveness in preventing unintended pregnancy. By computing the knowledge questions of the respondents the mean value was 2.33, median of 2.00 and S.D of 1.47. Therefore, regardless of knowledge of ECs summary index below, majority of the respondents, 321(55.0%) were not knowledgeable. (**Table 4**)

Table 4- Knowledge regarding the timing and dosing of emergency contraceptive among female college students, who know ECs in Mekelle town, March, 2011

<b>Knowledge assessment questions(N=393)</b>	<b>Frequency</b>	<b>Percent</b>
<b>Situation(s) that EC should be taken *</b>		
If condom ruptured during intercourse	196	33.6
When there is missed pills	191	32.7
When forced to have sex/raped	268	45.9
When there is failure of contraception	146	25.0
I don't know	138	23.6
<b>Recommended time to take Combined ECPs</b>		
Within 24 hours after sex	106	18.2
Within 72 hours after sex	260	44.5
Within 4-6 days after sex	22	3.8
Even after a missed a period	17	2.9
I do not know the time	179	30.7
<b>Recommended time for IUCD on ECs</b>		
Within 24 hours after sex	52	8.9
Within 72 hours - 120hrs / 5 days after sex	130	22.3
Even after a missed a period	20	3.4
I don't know and others	382	65.4
<b>Effectiveness of ECPs in preventing pregnancy</b>		
Highly effective (>95%)	257	44.0
Effective (75-89%)	108	18.5
Less effective (<10%)	19	3.3
Not effective at all	3	0.5
I don't know	197	33.7
<b>Effectiveness of IUCD in preventing pregnancy</b>		
Highly effective (>95%)	198	33.9
Effective (75-89% )	87	14.9
Less effective (<10%)	46	7.9
Not effective at all	7	1.2
I don't know	246	42.1
<b>Recommended number of dose of ECPs</b>		
One dose	203	34.8
Two dose	159	27.2
Three dose	16	2.7
I don't know	206	35.3
<b>Recommended time between the doses of ECPs</b>		
12 hours apart	188	32.2
24 hours apart	129	22.1
I don't know	267	45.7
<b>Knowledge of ECs (Summary index)</b>		
Not knowledgeable	321	55.0
Knowledgeable	263	45.0

\* refers some respondents have multiple responses

### 5.3.2 Attitude towards emergency contraception and willingness for future use

As table 5 presents that, concerning the attitude assessment questions towards emergency contraceptives, the respondents score was with mean of 1.52, median 2.00 and SD 0.79. Based on this majority of the students, 313 (53.6%) of them have negative attitude towards ECs.

Table 5- Percentage distribution of Female College Students in Mekelle town by Attitude towards EC, March, 2011

<b>Indicators of Attitude</b>	<b>Frequency</b>	<b>Percent</b>
Think Provision of ECs after an episode of un Protected sex can prevent unwanted pregnancy?		
Agree	373	63.9
Disagree	211	36.1
Believe EC may hurt the baby in case it does not work		
Yes	267	45.7
No	108	18.5
I don't know	209	35.8
Willingness to use ECs method in the future		
Yes	404	69.2
No	107	18.3
May be	73	12.5
Attitude of ECs (summery index)		
Positive attitude	271	46.4
Negative attitude	313	53.6

### **5.3.3 Emergency Contraceptive practices and pregnancy related characteristics among sexually active female college students at Mekelle town.**

At the time of the study 289 (49.5%) respondents have ever had sex in the past. Of those who are sexually active, about 243(84.1%) started sex before the age of 18 and 46(15.9%) started sex at 18 years of age and above. Regardless of the respondents having number of sexual partner in their life time, most of them, 226 (78.2%) had one sexual partner. Concerning rape, respondents who were sexually active in the past, 32(11.1%) of them were claimed to had sex without their consent or raped.

With regard to pregnancy experience, on those who were sexually active, a total of 130(45.0%) respondents replied that they had been pregnant and with 65.4% gave a history of at least once pregnancy previously. And from the pregnant study subjects, 42(32.3%) had practiced induced abortion. On the other hand, those respondents who had heard of emergency contraceptives, only 70(24.2%) respondents reported that at least once they had used emergency contraceptive methods previously. 65(92.9%) of the participants said that they had used oral pills as type of emergency contraceptive methods, 3(4.3%) IUCDs & 2(2.9%) both oral pill and IUCD type of ECs. Of the 219 respondents who had not ever used ECs, 94(42.9%) were due to lack of knowledge about Emergency contraceptives and 50(22.8%) hadn't desire to use it **(Table 6)**.

Table 6 - ECs practice and Pregnancy related characteristics among sexually active female college students at Mekelle town, March, 2011

<b>Characteristics</b>	<b>Number</b>	<b>Percent</b>
<b>Ever had sex(N=584)</b>		
Yes	289	49.5
No	295	50.5
<b>Age at first sex (N=289)</b>		
< 18 years	243	84.1
≥ 18 years	46	15.9
<b>Ever had sex without consent or raped (N=289)</b>		
Yes	32	11.1
No	257	88.9
<b>Number of life time sexual partners(N=289)</b>		
One	226	78.2
Two	46	15.9
More than three	11	3.8
Do not remember/know	6	2.1
<b>Ever been pregnant (N=289)</b>		
Yes	130	45.0
No	159	55.0
<b>Number of pregnancies (N=130)</b>		
One times	85	65.4
Two times	30	23.1
Three & above	15	11.5
<b>Ever had induced abortion (N=130)</b>		
Yes	42	32.3
No	88	67.7
<b>Number of induced abortions (N=42)</b>		
One times	34	81.0
Two times	5	11.9
three and more	3	7.1
<b>Ever used ECs (N=289)</b>		
Yes	70	24.2
No	219	75.8
<b>Type of ECs used (N=70)</b>		
Oral pill	65	92.9
IUCD	3	4.3
Both	2	2.9
<b>Reason for not used ECs (N=219) *</b>		
ECs not accessible	36	16.4
hadn't desire to use it	50	22.8
Lack of Knowledge about ECs	94	42.9
Partner opposed	9	4.1
Religious reasons	37	16.9
Fear of side effect	20	9.1
Wanted to be pregnant	19	8.7

\* Remained some respondents have multiple responses

## **5.4 DETERMINANTS OF KNOWLEDGE, ATTITUDE AND PRACTICE TOWARDS ECs**

### **5.4.1 Determinant factors related to knowledge about Emergency Contraceptives**

In bivariate analysis, age group of female college students was found to be associated with the knowledge of EC; those respondents who were in the age group of 20-24 were 1.46 more knowledgeable compared to respondents who were in the age group of 15-19. As shown in table seven [COR=1.46, 95% CI (1.02, 2.09)]. But the association was insignificant after adjusting for possible confounders.

The crude odds ratio result indicated that place of origin of the respondents prior to the entry to their college were also found to be significantly associated with knowledge of ECs; Students who were rural back ground prior to their entry to the college were more knowledgeable of ECs compared to students who were urban back ground [COR=1.47, 95%CI (1.04, 2.07)]. Marital status has a significant effect on knowledge of ECs among female students without controlling other variables; ever married female students were found to be 2.43 times more likely to be knowledgeable of ECs than those who are single and those divorced & widowed were also 2.39 times more knowledgeable than single female students. Were as the adjusted odds ratio of marital status was found insignificant when the other variables controlled.

Similarly according to crude analysis, number of life time sexual partner of the respondents was found to be negatively associated with the knowledge of ECs. The likelihood of ECs knowledge among respondents who had have more than one sexual partner was less by 46% compared with those who had have one sexual partner in their life time. [COR=0.54, 95%CI (0.38, 0.71)]. This output assured that female students having one sexual partner

have more likely to be knowledgeable of ECs than those who have more than one sexual partner.

Adjusted for other variables, experience toward use of EC has to be a significant factor on respondents knowledge of EC; those who had not ever used ECs were found to be 0.38 times less likely to be knowledgeable towards ECs than those who had have an experience of use of ECs. As shown in table 7 [Adj.OR=0.38, 95% CI (0.21, 0.70)] **(Table 7)**.

Table 7- Socio-demographic and other determinant variables of knowledge of EC among female college Students of Mekelle town, March, 2011

variable	Knowledge of ECs		Odds ratio (95% CI)	
	Not knowledgeable	Knowledgeable	Crude	Adjusted
<b>Age(years)</b>				
15-19	129 (61.1%)	82(38.9%)	<b>1</b>	<b>1</b>
20-24	156 (51.8%)	145(48.2%)	<b>1.46(1.02,2.09*</b>	1.03(0.56,1.87)
25-29	29 (52.7%)	26 (47.3%)	1.41(0.78, 2.56)	0.66(0.28,1.58)
30+	7 (41.2%)	10 (58.8%)	2.25(0.82, 6.14)	0.86(0.25,2.96)
<b>Place of origin</b>				
Urban	221(58.3%)	158(41.7%)	<b>1</b>	<b>1</b>
Rural	100(48.8%)	105(51.2%)	<b>1.47(1.04,2.07*</b>	1.19(0.72,1.98)
<b>Marital status</b>				
Single	263(60%)	175(40%)	<b>1</b>	<b>1</b>
Married	48(39.7%)	73(60.3%)	<b>2.43(1.59,3.69*</b>	1.65(0.84,3.23)
Divorced & widowed	10(40%)	15(60%)	<b>2.39(1.05,5.47*</b>	1.81(0.63,5.24)
<b>Religion</b>				
Orthodox	297 (55.1%)	242 (49.9%)	<b>1</b>	
Muslim	12 (46.2%)	14 (53.8%)	1.43 (0.65, 3.15)	
Catholic/Protestant & others	12 (63.2%)	7(36.8%)	0.72 (0.28, 1.75)	
<b>Attending college</b>				
Governmental	255(57.4%)	189(42.6)	<b>1</b>	<b>1</b>
Private	66(47.1%)	74(52.9%)	<b>1.51(1.03,2.22*</b>	1.19(0.67,2.11)
<b>No of life time sexual partners</b>				
one	103 (45.2%)	123(54.4%)	<b>1</b>	<b>1</b>
More than one	218(60.9%)	140(39.1%)	<b>0.54(0.38,0.75*</b>	0.88(0.47,1.67)
<b>Ever been Pregnant</b>				
Yes	46 (35.4%)	84(64.6%)	<b>1</b>	<b>1</b>
No	88 (55.3%)	71(44.7%)	<b>0.44(0.27,0.71*</b>	0.59(0.32,1.09)
<b>Ever used ECs</b>				
Yes	19 (27.1%)	51(72.9%)	<b>1</b>	<b>1</b>
No	302 (58.8%)	212(41.2%)	<b>0.26(0.15,0.46*</b>	<b>0.38(0.21,0.7*</b>

\* Remained statistically significant in both crude and adjusted odds ratio in the table.

#### **5.4.2 Determinant factors related to Attitude about Emergency Contraceptives**

The multivariate analysis disclosed that the extent of knowledge of respondents towards EC was a statistically significant factor for positive attitude towards EC and had a positive relation. The result in both crude odds ratio & adjusted odds ratio test showed that the likelihood of positive attitude increased as the extent of knowledge of EC increased.

Controlling all the other variables, respondents who were knowledgeable have 2.48 times more likely to have positive attitude towards EC as compared with those who were not knowledgeable respondents. As shown in table 8 [Adj.OR=2.48, 95% CI (1.34, 4.57)].

Table 8- Socio-demographic and other determinant variables of attitude towards EC among female college Students of Mekelle town, March, 2011 (n = 584)

Characteristics	Attitude of ECs		Odds ratio (95% CI)	
	Negative attitude	Positive attitude	Crude	Adjusted
<b>Age(years)</b>				
15-19	192(91%)	19(9%)	<b>1</b>	
20-24	276(91.7%)	25(8.3%)	0.92 (0.49, 1.75)	
25-29	52(94.5%)	3(5.5%)	0.58 (0.17, 2.05)	
30+	15(88.2%)	2(11.8%)	1.35 (0.29, 6.34)	
<b>Marital status</b>				
Single	404(92.2%)	34(7.8%)	<b>1</b>	
Married	108(89.3%)	13(10.7%)	1.35 (0.68, 2.67)	
Divorced & widowed	23(92%)	2(8%)	0.98(0.22, 4.34)	
<b>Religion</b>				
Orthodox	492 (91.3%)	47 (8.7%)	<b>1</b>	
Muslim	25 (96.2%)	1 (3.8%)	0.42 (0.06, 3.16)	
catholic/ protestant & other	18 (94.7%)	1 (5.3%)	0.58 (0.08, 4.45)	
<b>Ever had induced abortion</b>				
Yes	40(95.2%)	2(4.8%)	<b>1</b>	
No	79(89.8%)	9(10.2%)	0.44(0.91, 2.13)	
<b>Ever used ECs</b>				
Yes	62(88.6%)	8(11.4%)	<b>1</b>	
No	473(92%)	41(8%)	0.67(0.3,1.5)	
<b>Knowledge</b>				
Not knowledgeable	304(94.7%)	17(5.3%)	<b>1</b>	<b>1</b>
Knowledgeable	231(87.8%)	32(12.2%)	<b>2.48(1.34,4.57)*</b>	<b>2.48(1.34,4.57)*</b>

\* Remained statistically significant in both crude and adjusted odds ratio in the table.

### 5.4.3 Determinant factors related to Practice about Emergency Contraceptives

In Bivariate analysis, age group of the respondents was found to be associated with the practice of ECs. Those respondents who were in the age group of 20-24, 25-29 and 30 & above were less likely to practiced ECs compared to those respondents who were in the age group of 15-19years. As shown in table 9 [COR=0.36, 95%CI (0.2, 0.7), 0.24(0.1, 0.6) and 0.19(0.06, 0.69)] respectively. But the association was insignificant after adjusting for possible confounders.

The multivariate analysis also ascertained age at first sex of respondents as a statistically significant affecting factor of practice of EC. As the result indicated, being 18 years and above had a positive effect on the likelihood of practice of EC as compared with being age at first sex below 18 years. Female students who ever had sexual intercourse at age of 18 years & above were found 7.01 times more likely to be practiced of EC than those who had sexual intercourse at age of below 18 years. [Adj. OR=7.01, 95% CI (1.28, 38.3)] as shown in table 9. Number of life time sexual partner of the respondents was found to be positively associated with practice of EC. The likelihood of practice of EC among students who have more than one sexual partner was found to be 5.65 times more likely to be practiced ECs than those who have one sexual partner.[COR=5.65, 95% CI (3.24, 9.95)]. But it is insignificant after adjusting for possible confounders.

Crude analysis of experience of pregnancy was found to be statistically significant with practice of ECs. The respondents who had not have an experience of pregnancy was found to be 2.62 times more practiced of ECs than those who had an experience of

pregnancy.[COR=2.62, 95%CI (1.50, 4.56) whereas, controlling the other variables, the adjusted odds ratio of experience of pregnancy was found to be insignificant.

The experience of induced abortion among the respondents has a significant effect on the practice of female students towards EC. Without controlling the other variables, practice of ECs among those respondents who had not an experience of induced abortion were found to be 3.3 times more practiced towards ECs than those who have an experience of induced abortions[COR=3.3, 95% CI (1.52, 7.16)]. Knowledge of respondents towards ECs was found to be negatively associated with the practice of ECs; the likelihood of practice of ECs among respondents who were knowledgeable of EC was less by 74% as compared with those who were not knowledgeable towards ECs. [COR=0.26, 95% CI (0.15, 0.46)]. But the association was insignificant after adjusting for possible confounders. **(Table 9)**

Table 9- The socio-demographic and other determinant variables of practice towards EC among female college Students of Mekelle town, March, 2011 (n = 584)

Characteristics	Practice of ECs		Odds ratio (95% CI)	
	Yes	No	Crude	Adjusted
<b>Age(years)</b>				
15-19	12(5.7%)	199(94.3%)	<b>1</b>	<b>1</b>
20-24	43(14.3%)	258(85.7%)	<b>0.36(0.2, 0.7) *</b>	0.69(0.18, 2.60)
25-29	11(20%)	44(80%)	<b>0.24 (0.1, 0.6) *</b>	0.56(0.13, 2.58)
30+	4(23.5%)	13(76.5%)	<b>0.19(0.06, 0.69) *</b>	0.94(0.14, 6.1)
<b>Marital status</b>				
Single	37(8.4%)	401(91.6%)	<b>1</b>	<b>1</b>
Married	26(21.5%)	95(78.5%)	<b>0.23(0.12, 0.42) *</b>	2.25(0.56, 9.06)
Divorced & widowed	7 (28%)	18 (72%)	<b>0.16 (0.06, 0.42)*</b>	2.00(0.44, 9.06)
<b>Attending college</b>				
Governmental	44(9.9%)	400(90.1%)	<b>1</b>	<b>1</b>
Private	26(18.6%)	114(81.4%)	<b>0.48 (0.29, 0.82)*</b>	1.02(0.41, 2.52)
<b>Age at first sex</b>				
<18 years	67(27.6%)	176(72.4%)	<b>1</b>	<b>1</b>
≥18 years	3(6.5%)	43(93.5%)	<b>5.46(1.64,18.18*</b>	<b>7.01(1.28,38.3)*</b>
<b>Ever been raped</b>				
Yes	12(37.5%)	20(62.5%)	<b>1</b>	
No	58(22.6%)	199(77.4%)	2.06(0.95, 4.46)	
<b>No of life time sexual partners</b>				
One	52(23%)	174(77%)	<b>1</b>	<b>1</b>
More than one	18(5%)	340(95%)	<b>5.65(3.20, 9.95) *</b>	0.98(0.35, 2.78)
<b>Ever been pregnant</b>				
Yes	44(33.8%)	86(66.2%)	<b>1</b>	
No	26(16.4%)	133(83.6%)	<b>2.62(1.50, 4.56) *</b>	
<b>Ever had induced abortion</b>				
Yes	22(52.4%)	20(47.6%)	<b>1</b>	<b>1</b>
No	22(25%)	66(75%)	<b>3.3(1.52, 7.16) *</b>	2.71(0.99, 7.41)
<b>Knowledge</b>				
Not knowledgeable	19(5.9%)	302(94.1%)	<b>1</b>	<b>1</b>
Knowledgeable	51(19.4%)	212(80.6%)	<b>0.26(0.15, 0.46) *</b>	0.49(0.19, 1.22)

\* Remained statistically significant in both crude and adjusted odds ratio in the table.

## 6. DISCUSSION

Although emergency contraception is not recommended as a regular family planning method, it is the most useful as a group of birth control modalities, when used after an unprotected intercourse or contraceptive failure within defined time limits [2]. The result from this study revealed that greater than two-third (67.3%) of the respondents had heard of the emergency contraception method. This is lower than the reports on studies in San Francisco (89%). This could be due to low health promotion and low availability of EC in developing country like Ethiopia. It is comparable to reports from Katmandu- Nepal (68%)[21,26], & Jimma university community high school (64%) [3].

The mean age of respondents of this study was approximately 20 years. More than half (57%) had ever heard emergency contraceptive pills. The most common source of information was health institution (42.7%), class teacher (25.4%), club in the school (21.6%), mass media (17%) and friend (7.6%). This showed higher than studies conducted on Uganda, Makerere University among University Students with the mean age of the participants was 21 years and Less than half (45.1%) had ever heard about emergency contraceptive pills (ECPs) and their most common sources of information about EC were friends (34%), media (24.8%) and schools (19.4%)[10].

Almost half of the total number of my study subjects (49.5%) reported that they were sexually active in their lifetime with 84.1% of the respondents had first sex at age below 18 years. Majority of the respondents (53.6%) had negative attitude towards ECs. 39.7% had ever practiced regular type of contraception with only 24.2% having ever practiced emergency contraception. However, Of those respondents who are aware of emergency contraceptives, (44.5%) correctly identified the recommended time limit to be taken

combined ECPs within 72 hours after un protected sex, (18.5%) correctly knew the effectiveness of ECPs in preventing un wanted pregnancy, (27.2%) and (32.2%) of the respondents also identified the recommended number of doses and the recommended time between the doses of ECPs, respectively. This finding is lower in level of Knowledge and practice rate of ECs than studies reported among female undergraduates in the University of Lagos, Nigeria, which revealed that 67.8% of the respondents reported knowing about emergency contraception with more than half (56.1%) were sexually active and of this group, 96.8% had ever practiced contraception with only 33.9% having ever practiced emergency contraception. (27)

However, only 37.8% and 36.3% of respondents who had reported knowing about emergency contraception knew the correct time frame for effective use, and correctly identified emergency contraceptives respectively [24, 36]. The possible reason for low EC practice rate and knowledge in this study could be due to having negative attitude towards emergency contraception, lack of correct information, low promotion and availability of the methods in most health institutions as well as lack of enough mass Medias that works about reproductive health condition of the society.

This study revealed that 69.2% of female students of Mekelle College of health science, SDC Mekelle TVET and Sheba College who had heard about EC would like to use emergency contraceptives in the future, 18.3 percent would not, while 12.5 percent were unsure. This finding explained that less intention to use ECs in the future than studies obtained in Awassa town, south part of Ethiopia in which about 80 percent of female college students who had heard about EC would like to use emergency contraceptives in the future, 15.6

percent would not, while 4.2 percent were unsure. The possible reason for this may be: due to lack of awareness of ECs as well as due to mass Media inadequacy in Tigray region. (21) Among the respondents who were sexually active, about 45% became pregnant & of them 65.4% gave history of at least one pregnancy with 32.3% had induced abortion. On the other hand, among the total study participants, about 84.1% had first sex at age of below 18 years, 11.1% ever had sex without their consent, of which 53.1% were unintended pregnancy, which is higher than studies done in Oromia region, Wolliso town.(3)

The extent of knowledge of respondents towards EC was a statistically significant factor for positive attitude towards EC and had a positive relation. The likelihood of positive attitude increased as the extent of knowledge of EC increased. These respondents who were knowledgeable have more likely to have positive attitude towards EC as compared with those who have not knowledgeable respondents, which is consistent as study conducted in Awassa town (21).

Adjusted analysis of age at first sex of respondents was statistically significant affecting factor to practice of EC; being 18 years and above had a positive effect on the likelihood of practice of EC as compared with being age at first sex below 18 years, [Adj.OR=7.01,95%CI(1.28, 38.3)] (21).

## **7. STRENGTH AND LIMITATION OF THE STUDY**

### **7.1 strength of the study**

- The adequate sample size was collected from different colleges which have a number of students and it was selected by the scientific sampling procedure methods (simple random sampling technique).
- The study tried to address areas which were not covered in previous studies. Additionally, the data was analyzed using an appropriate statistical test.

### **7.2 limitation of the study**

- Resource constraint in terms of money and time.

## **8. CONCLUSION AND RECOMMENDATIONS**

### **8.1 Conclusion**

College female students are expected to have greater knowledge of EC than most youth with no or less educational attainment. This study has shown that 67.3 percent of the female college students have awareness about EC and Even among those who were aware, only 45 percent had adequate knowledge of ECs, 46.4% positive attitude toward the methods.

The female students' attitude towards EC was significantly associated with their level of knowledge about the method (Adj.OR=2.48) as stated by the adjusted analysis. The finding revealed that the likelihood of positive attitude increased as the extent of knowledge of EC increased. Respondents who had adequate knowledge of EC were found 2.48 times more likely to have positive attitude towards EC than those who were not knowledgeable on EC. On the other hand, practice of EC is very low with high risk of unintended pregnancy and induced abortion among the sexually active students. This finding strongly suggests that adequate knowledge of the method and its availability is lacking among the female college students. Hence, there is a need to educate adolescents about ECs, with emphasis on the correct time limit for use, the situation when they use it and accurate message about its effect on health. Moreover, health education program should be set up to the college students to avail accurate information about emergency contraception and existing "Reproductive Health Clubs" in the college could be the venue for disseminating similar information.

## **8. 2 Recommendations**

Based on the finding from this study, the following recommendations are forwarded.

### **For MOH**

- Strategies and programs should be specifically designed to provide appropriate information and access to EC in the country in general and in college institutions in particular to enhance the appropriate awareness of EC among adolescents.

### **For academic institution**

- The study result indicated that majority of the respondents have negative attitude towards ECs. Thus, the academic institutions and those organizations working on RH matters should work on the promotion and enhancement of health education or counseling among students of college institutions.
- There is also a need for an intervention of aiming at adolescents' RH issues including EC, by using different Medias as the main means to broadcast appropriate information and Creating Reproductive Health Clubs in the college to address the target issues.

### **For FGAE**

- Use of EC among participants of this study is far less. Hence, there should be an intervention designed to expand service availability particularly at college level and advance provision of dedicated ECs for potential clients especially for college students.

### **For professionals/researchers**

- Similar other studies are recommended to generate more in-depth information on emergency contraceptives.

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## **Annex- I – Information sheet**

### **Dear students!**

My name is \_\_\_\_\_ Currently I am a graduate student at department of Midwifery & Nursing, College of health science, Addis Ababa University. I am conducting a survey to assess the knowledge, attitude and practices of ECs among collage female students in Mekelle town.

The ultimate purpose of this survey is to collect information necessary for developing programs to prevent unwanted /unplanned pregnancies and its squeals. To attain this purpose your honest and genuine participation is very important and highly appreciable. I, therefore, kindly request you to fill this questionnaire as accurately and carefully as possible. For close ended questions, please encircle your answer and for those you need suggestions write your opinion shortly, precisely &clearly on the space provided for each question.

Please be assured that all the information gathered will be kept strictly confidential and you do not need to write your name or any special identification that might disclose who you are, on any of the questionnaire page. Only the researcher has the access of the information and used it for the study purpose only. You have a full right not to participate in this study.

Data Collector

Name \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

Supervisor

Name \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

**Annex- II- Consent form**

In signing this document, I am giving my consent to participate in the study entitled “Assessment of Knowledge, Attitude, and Practice towards Emergency Contraceptives among female college students at Mekelle town, in Tigray Region, Ethiopia”.

I have been informed that the purpose of this research project and I understand that I am selected to participate in this study randomly. I have been informed that my participation in this study is willing full and voluntary even I have right to refuse or interrupt the filling of questionnaire and my name will not be mentioned on the questionnaire.

I, undersigned, have understood the purpose of the study & fully agree to participate in the study.

Signature of the participant----- Date -----

Thank you, have a nice day!

### Annex III Questionnaire

#### Section - I - Socio- demographic characteristics of the respondents.

Q.NO.	Questions	Responses/coding categories	Skip to:
Q.101	How old are you?	Age in completed years_____	
Q.102	Where did you come from?	Urban ----- 1 Rural ----- 2	
Q.103	Tell me about your current Marital status?	Single-----1 Married-----2 Divorced -----3 Widowed -----4	
Q.104	Where do you live now?	In campus-----1 Outside campus-----2	
Q.105	If your response to Q.104 is #2 with whom do you live now?	With parent -----1 With peers in rental house-----2 Alone in rental house-----3 With boy friend -----4 With husband -----5 If other specify_____	
Q.106	What is your Religion?	Orthodox ----- 1 Muslim ----- 2 Catholic -----3 Protestant ----- 4 Other, specify_____	
Q.107	What is your ethnicity?	Amhara ----- 1 Tigrian ----- 2 Oromo ----- 3 Other, specify_____	
Q.108	In which college are you attending?	Governmental ----- 1 Private -----2	

Q.109	What is your department /stream?	_____	
Q.110	Which year are you attending now?	First year----- 1 Second year ----- 2 Third year ----- 3 Fourth year & above -----4	

**Section - II- KAP on contraception**

Q.201	Have you ever heard about Family Planning Methods?	Yes ----- 1 No ----- 2	If no skip to Q.204
Q.202	If you say yes for Q. 201 where did you get the information?	Health institution ----- 1 Mass media ----- 2 Friend ----- 3 Family ----- 4 School ----- 5 Other, specify _____	
Q.203	Which one method of contraception do you know? (more than one response is possible )	Condom ----- 1 Oral pill ----- 2 Injectables -----3 Norplant ----- 4 Calendar ----- 5 IUCD ----- 6 Other, specify _____	
Q.204	Do you believe that family planning methods Prevent pregnancy?	Yes ----- 1 No ----- 2	
Q.205	Do you think that contraceptive is important?	Yes----- 1 No ----- 2	
Q.206	Have you ever used any type of contraceptive?	Yes ----- 1 No ----- 2	
Q.207	If you say yes for Q.206, which method do you use?(multiple	Injectable ----- 1 Condom ----- 2 Oral pill ----- 3	

	answer is possible)	Norplant ----- 4 Calendar ----- 5 IUCD ----- 6 Other (specify) -----	
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**Section - III - Knowledge on emergency contraceptive**

Q.301	Do you know about emergency contraceptive?	Yes, I know ----- 1 No, I don't know ----- 2	If no skip to Q.305
Q.302	If you say yes for Q.301 which method do you know?	Oral contraceptive pill----- 1 IUCD ----- 2 Both ----- 3 Other, specify_____	
Q.303	What was your first source of information?	Health institution ----- 1 Mass media ----- 2 Friend ----- 3 Family ----- 4 Teachers in class-----5 Club in School ----- 6 Other, specify _____	
Q.304	On which condition emergency contraceptive will be used?/multiple answer is possible/	If condom ruptured during intercourse.....1 When there is missed pills ----- 2 When forced to have sex ----- 3 When there is failure of contraception -----4 I don't know-----5	
Q.305	To prevent unwanted pregnancy effectively, how long the first dose of ECPs should be taken after unprotected sexual intercourse?	Within 24 hours after sex----- 1 Within 72 hours after sex ----- 2 Within 4-6 days after sex ----- 3 Even after a missed period -----4	

		I don't know the time ----- 5 Other, specify _____	
Q.306	Recommended time for IUCD on emergency contraception is?	Within 24 hours after sex-----1 Within 72 - 120 hours / 5 days---2 After a missed a period -----3 I don't know the time -----4 Other, specify -----	
Q.307	How effective are emergency Contraceptive pills in preventing un wanted pregnancy?	Highly effective (>95%) ----- 1 Effective 75-89% ----- 2 Less effective (<10%) ----- 3 Not effective at all--- ----- 4 I don't know -----5	
Q.308	How effective are IUCD in preventing un wanted pregnancy?	Highly effective (>95%) ----- 1 Effective 75-89% ----- 2 Less effective (<10%) ----- 3 Not effective at all--- ----- 4 I don't know -----5	
Q.309	Recommended number of dose of ECP is?	One dose -----1 Two dose -----2 Three dose -----3 I don't know-----4	
Q.310	Recommended time between the ECP doses are?	12 hours apart -----1 24 hours apart -----2 I don't know -----3	

**Section - IV- Attitude and Practice on ECs**

Q.401	Do you think provision of ECs after an episode of un protected sex can prevent unwanted pregnancy?	Strongly agree.....1 Agree.....2 Disagree .....3 Strongly disagree .....4	
Q.402	Do you believe EC may hurt the baby in case it does not work?	Yes .....1 No .....2 I don't know .....3	
Q.403	Have you ever had sexual intercourse?	Yes ----- 1 No ----- 2	
Q.404	Have you ever happened sex without your consent?	Yes -----1 No -----2	
Q.405	If your response is yes for Q.# 402 who forced you to have sex?	Student/ friend-----1 Teacher -----2 Relative in the parent---3 Un known person -----4 Other, specify_____	
Q.406	What problem you faced after the forced sex?	Unwanted pregnancy---1 STI -----2 Tension -----3 Nothing at all ----- 4 Other, specify_____	
Q.407	If you face un wanted pregnancy, how did you solve the problem?	I continued pregnancy& gave birth-----1 Induced abortion by different means's-----2 I go to health institution-----3 Other, specify_____	
Q.408	At what age were you had the first sexual intercourse?	Below 18 years old-----1 18 years and above-----2 I don't remember -----3	
Q.409	How many partners have you ever had for sexual intercourse up to date?	One ----- 1 Two -----2 More than three ----- 3 I don't remember them ---4	

Q.410	Have you ever been pregnant?	Yes ----- 1 No ----- 2	
Q.411	If 'Yes', how many times?	_____	
Q.412	Have you ever practiced induced abortion?	Yes, of course ----- 1 No, I don't ----- 2	
Q.413	If yes for Q#410, how many times?	_____	
Q.414	Have you ever used emergency contraceptive?	Yes, how many times _____ No, I have not used.	
Q.415	If yes, for Q#413 which method have you ever used?	Oral pill ----- 1 IUCD ----- 2 Both ----- 3 other, specify -----	
Q.416	If your answer for Q#414 is 'No' what was your reason? (more than one response is Possible)	Emergency contraceptive not accessible ----- 1 I don't want to use it ----- 2 Lack of Knowledge about Emergency Contraceptive-----3 Partner opposed----- 4 Religious reasons -----5 Fear of side effect----- 6 Wanted to be pregnant..... 7 If Other, specify _____	
Q.417	Do you intend to use Emergency contraceptive method to avoid unwanted pregnancy in the future?	Yes ----- 1 No ----- 2 May be ----- 3	

መምርሒ-I- ቅጥዲ ውልቀ ሓበሬታ

“ዩኒቨርሲቲ አዲስ አበባ”

“ጥዕና ሳይንስ ኮሌጅ”

አጠቃላሊ ቤት ትምህርቲ ነርስን ሚድዋይዩን

ዝኸበርከን ተምሃሮ !

አነ ሸመይ ----- ዝተብሃልኩ ኣብ ዩኒቨርሲቲ አዲስ አበባ፣ ጥዕና ሳይንስ ኮሌጅ ፣ አጠቃላሊ ቤት ትምህርቲ ነርስን ሚድዋይዩን ዝማሃር ተምሃራይ እዮ። ኣብዚ ሕዚ እዋን ኣብ መቐለ ከተማ ውሽጢ ዘለዎ ኮሌጃት ዝርከባ ደቂ አንስትዮ ተምሃሮ ኣብ መከላኸሊ ድንገተኛ ጥንሲ ዘለወን ፍልጠት፣ አርአኢያን አጠቓቕማን መፅናዕቲ እናካየድኩ ይርከብ።

ናይዚ ፅንዓት ዋና ሽቶ ኣብ ልዕሊ ደቂ አንስትዮ ዝበፅሕ ዘይተደለየ ጥንስን መጥቓዕትን ብዝምልከት ኣድላይ ዝኾነ ሓበሬታ ንምስብሳብ እዮ። እዚ ሸትኡ ንኸወቅዕ ናተን/ናትኪ ግልፅነትን ሓቀኝነትን ብጣዕሚ ጠቓምን ኣድላይን ነገር እዮ። ስለዝኾነ እዚ ቅጥዲ ብጥንቃቄ ንኸመልኦ/ንኸትመልእዮ ብትሕትና ይጥይቑ። ቅጥዑ እንትትመልኦ/እንትመልኦ ኣድላይ መልሲ ኣብዝኾነ ቦታ ብምኽባብ፣ ናተን/ናትኪ ኣርአኢያ ብፅሑፍ ንምብርህራህ ኣብ ዘድልዮ ቦታ ድማ ብሓፃኑ ኣብ ዝተውሃቦ ክፋቲ ቦታ ይምልኦ/ምልኡ።

ዝሃብኦ/ዝሃብኪዮ ሓበሬታን ሓሳብን ከም ምሽጥራዊነቱ ሙሉእ ንሙሉእ ብዓና ወገን ዝተሓለወ እዮ። ስለዚ ኣብ ቅጥዑ ናተን/ናትኪ መንነት ዝገልፅ ምንም ዓይነት ሓበሬታ ምፅሓፍ አይድልን። ስለ ናተን/ናትኪ ሓበሬታ ብምፅንዑ ብቻ ዝፍለጥን ካብዚ ፅንዓት ወፃኢ ንኸሊእ ነገር ከምዘይውዕልን ይኸውን። ኣብዚ ፅንዓት ናይ ዘይምክፋል መሰለን /መሰልኪ/ ሙሉእ ብሙሉእ ዝተሓለወ እዮ።

ሓበሬታ ስብሳቢ

ሽም ----- ፊርማ ----- ዕለት -----

ተቆፃፃሪ /ተኸታታሊ

ሽም ----- ፊርማ ----- ዕለት -----

**ንምሕታት ፍቅር ምርካብ**

እዚ ቅጥዒ እንትፍርም ኣብ ኢትዮጵያ፣ ክልል ትግራይ፣ መቐለ ከተማ ውሽጢ ዘለዎ ኮሌጃት ዝርከባ ደቂ ኣንስትዮ ተምሃሮ ኣብ ድንገተኛ ናይ ጥንሲ መከላኸሊ ዘለወን ፍልጠት፣ ኣርኣእያን ኣጠቓቕማን ንምፅናዕ ኣብ ዝግበር ፅንዓት ንምክፋል ድልየት ከምዘለኒ ንምርግጋፅ እዩ።

ኣብዚ ፅንዓት ንኸካፈል ብኣጋጣሚ ዝተመርፀኩ ሰለዝኾንኩ ኣብ ፅንዓቱ ብዝገብሮ ተሳትፎ ብመሉእ ፍቓደይ ከምዝኸነን፣ ቅጥዑ ምምላእ ይኹን ምግዳፍ ከምዝኸእልን፣ ሸመይ እውን ኣብቲ ቅጥዒ ምፅሓፍ ከምዘይብለይን ተነጊሩኒ እዩ።

ናይ ተሳታፊ ፊርማ -----

ዕለት -----

**ንምትሕብባርክን ኣቕዲመ ካብ ልቦይ የመሰግን !!**

**ሰናይ መዓልቲ !!**

መምርሒ-1-በዛዕባ ማሕበራዊ ኩነታት ውልቀ ሓበሬታ

ሕ.ቁ	ሕቶ	መልሲ	ይዘለል
101	ዕድሜኤን/ኪ/ ክንደይ እዩ?	ብሙሉእ ዓመት ይገለፅ -----	
102	ካበይ መዲኤን/ኪ?	ከተማ .....1 ገጠር .....2	
103	አብዚ ሓዚ አዋን ናይ ሓዳር ኩነታትኪ/ተን ከመይ እዩ?	ዘይተመርዐወት/ ብሕታዊት/ .....1 ምርዕውቲ/ ብዓልቲ ሓዳር.....2 ዝተፋተሐት .....3 ሰብኣያ ዝሞታ .....4	
104	ሕጂ ኣበይ እየን/ኢኺ ዝነበራ/ትነበሪ?	አብ ካምፖስ .....1 ካብ ካምፖስ ወፃኢ .....2	
105	ንሕቶ ቁፅሪ 104 መልሰን /ሰኺ ቁፅሪ 2 እንተኮይኑ ሕጂ ምስ መን እየን/ኢኺ ዝነበራ/ትነበሪ?	ምስ ሰድራ .....1 ምስ መሐዙተይ አብ ዝ ኪራይ .....2 ንበሕተይ አብ ዝ ኪራይ .....3 ምስተቃራኒ ስታ ዓርከይ .....4 ምስ ብዓል ሓዳሪይ .....5 ካሊእ እንተሃሊዩ ይጠቐስ .....	
106	ሃይማኖትኪ/ተን እንታይ ዩ?	አርቶዶክስ ተዋህዶ .....1 ሙስሊም .....2 ካቶሊክ .....3 ፕሮቴስታንት .....4 ካሊእ እንተኾይኑ ይጠቐስ .....	

107	ብሄርኪ/ረን እንታይ ዮ?	ትግራውይቲ .....1 አምላሪይቲ .....2 አሮሞ .....3 ካሊእ እንተኾይኑ ይጠቀስ .....	
108	አባዮናይ ኮሌጅ ኢኺ ትምህሪ ዘለኺ?	ናይ መንግስታዊ ኮሌጅ .....1 ናይ ግሊ ኮሌጅ .....2	
109	ናይ ትምህርቲ ክፍልኺ/ለን እንታይ እዩ?		
110	ናይ ክንደይ ዓመት ተምህሪት ኢኺ/እየን?	ቀደማይ ዓመት .....1 ካልኣይ ዓመት .....2 ሳልሳይ ዓመት .....3 ራብዓይን ካብኡ ንላዕልን .....4	

**መምርሒ - II- ሓበሬታ ብዛዕባ ፍልጠት፣ ኣረኣኢያን ኣጠቓቕማን ሜላ መከላኸሊ ጥንሲ**

ሕ.ቁ	ሕቶ	መልሲ	ይዘለል
201	ብዛዕባ ሜላ ምጣነ ሰድራ ሰሚዕኺ ዶ ትፈልጢ?	እወ .....1 አይፈልጥን .....2	
202	ንቐፅሪ 201 መልስኺ እወ እንተኾይኑ ሓበሬታ ካብ መን ረኺብኪዮ?	ካብ ጥዕና ትካል .....1 ካብ መራኽብቲ ሓፋሽ .....2 ካብ ዓርካይ .....3 ካብ ሰድራይ .....4 ካብ ትምህርት ቤት .....5 ካሊእ እንተሃለዩ ይጠቀስ.....	
203	አየናይ ሜላ መከላኸሊ ጥንሲ ኢኺ ትፈልጢ?	ኮንደም .....1 ብአፍ ዝውሓጥ ክኒን .....2	

		ብመርፍእ ዝውጋእ .....3 ኣብ ጥንቻ ኢድ ዝቕበር/ኖርፕላንት/ .....4 ካላንደር .....5 ኣብ ማህፀን ዝኣቱ/IUCD/.....6 ካሊእ እንተሃሊዩ ይገለፅ .....	
204	ሜላ መከላኸሊ ጥንሲ ይከላኸሎ እዩ ኢልኪ ትሓሰቢ ዶ?	እወ .....1 ኣይሓሰብን.....2	
205	መከላኸሊ ጥንሲ ኣድላይ ዩ ኢልኪ ትሓሰቢ ዶ?	እወ .....1 ኣይሓሰብን .....2	
206	ካብ ሜላታት መከላኸሊ ጥንሲ ተጠቂምኪ ትፈልጢ ዶ?	እወ .....1 ኣይፈልጥን.....2	
207	ንሕቶ ቐፅሪ “206” መልስኺ እወ እንተኾይኑ ኣየናይ ሜላ ተጠቂምኪ (ካብ ሓደ ንላዕሊ መልሲ ምሃብ ይካኣል እዩ)	ብመርፍእ ዝውጋእ .....1 ኮንደም .....2 ብአፍ ዝውሓጥ ኪኒን .....3 ኣብ ጥንቻ ኢድ ዝቕበር /ኖርፕላንት/ .....4 ካላንደር .....5 ኣብ ማህፀን ዝቐመጥ/IUD/.....6 ካሊእ እንተሃሊዩ ይጠቀስ.....	

**መምርሒ III ሓበሬታ ብዛዕባ ፍልጠት መከላኸሊ ድንገተኛ ጥንሲ**

ሕ.ቁ	ሕቶ	መልሲ	
301	ብዛዕባ ድንገተኛ መከላኸሊ ጥንሲ ትፈልጥዮ ነገር ኣሎ ዶ?	እወ .....1 ኣይብለይን.....2	

302	ንሕቶ ቆፅሪ “301” መልስኺ እወ እንተኾይኑ አየናይ ሜላ ኢኺ ትፈልጢ?	ብአፍ ዝወሓጥ መከላኸሊ.....1 ኣብ ማህፀን ዝቐመጥ /IUCD.....2 ኩሎም .....3 ካሊእ እንተሃሊዩ ይጠቀስ .....4	
303	ናይ መጀመሪያ ፍልፍል ሓበሬታኺ ካብ ምንታይ ረኺብኪዮ?	ካብ ጥዕና ትካል .....1 ካብ መራኽብቲ ሓፋሽ .....2 ካብ ዓርኪይ .....3 ካብ ስድራይ .....4 ካብ ክፍሊ መምህራን .....5 ካብ ት/ቤት ክበባት .....6 ካሊእ እንተሃሊዩ ይጠቐስ .....	
304	ኣብ ከመይ ዓይነት ኩነታት ኢኺ መከላኸሊ ድንገተኛ ጥንሲ ትጥቀምዩ? (ካብ ሓደ ንላዕሊ ምምላስ ይካኣል እዩ)	ኣብ ስታዊ ርክብ ጊዜ ኮንደም ተተቀዲዱ.....1 መከላኸሊ ጥንሲ ክኒን ከይተዋሓጠ እንተተረሲዑ.....2 ተገዲዶ ስታዊ ርክብ እንተተፈጸሙኒ .....3 ሜላ መከላኸሊ ጥንሲ ብትኽክል እንድሕር ዘይተጠቐምኩ.....4 ካሊእ እንተሃሊዩ ይጠቐስ .....	
305	ዘይተደለየ ጥንሲ ሙሉእ ብሙሉእ ንምክልኻል ድሕሪ ጥንቃቄ ዝጎደሎ ስታዊ ርክብ ናይ መጀመሪያ መከላኸሊ ድንገተኛ ጥንሲ ክኒን ኣብ ክንደይ ሰዓት ውሽጢ ይውሰድ?	ኣብ ውሽጢ 24 ሰዓት ድሕሪ ርክብ.....1 ኣብ ውሽጢ 72 ሰዓት ድሕሪ ርክብ .....2 ኣብ ውሽጢ 4-6 ሰዓት ድሕሪ ርክብ .....3 ዋላ ድሕሪ ወርሓዊ ፅግዖተይ ምጥፍኡ...4 ሰዓቱ ኣይፈልጠን .....5 ካሊእ እንተሃሊዩ ይጠቐስ .....	
306	ኣብ ማህፀን ዝቐመጥ መከላኸሊ ድንገተኛ ጥንሲ/ IUCD/ ዝውሰደሉ ጊዜ መዓዝ እዩ?	ኣብ ውሽጢ 24 ሰዓት ድሕሪ ርክብ .....1 ኣብ ውሽጢ 72-120 ሰዓት/5 መዓልቲ.....2 ዋላ ድሕሪ ወርሓዊ ፅግዖተይ ምጥፍኡ.....3	

		ሰዓቱ አይፈልግን .....4 ካሊእ እንተሃሊዩ ይጠቅስ .....5	
307	ከኒን ሜላ መከላኸሊ ድንገተኛ ጥንሲ ፤ ዘይተደለየ ጥንሲ ናይ ምክልኻል ዓቕሙ ከንደይ ዝኣክል % ዩ?	ዝለዓለ ናይ ምክልኻል ዓቕሚ (≥95%).....1 ፅቡቕ ናይ ምክልኻል ዓቕሚ(75-89%).....2 ዝተሓተ ናይ ምክልኻል ዓቕሚ (10%).....3 ምንም ናይ ምክልኻል ዓቕሚ የብሉን.....4 አይፈልግን .....5	
308	ኣብ ማህፀን ዝቕመጥ መከላኸሊ ድንገተኛ ጥንሲ/ IUCD/ ዘይተደለየ ጥንሲ ናይ ምክልኻል ዓቕሙ ከንደይ ዝኣክል % ዩ?	ዝለዓለ ናይ ምክልኻል ዓቕሚ (≥95%).....1 ፅቡቕ ናይ ምክልኻል ዓቕሚ(75-89%).....2 ዝተሓተ ናይ ምክልኻል ዓቕሚ (10%).....3 ምንም ናይ ምክልኻል ዓቕሚ የብሉን.....4 አይፈልግን .....5	
309	ናይ ድንገተኛ ጥንሲ መከላኸሊ ከኒን ብሓደ ግዜ ከንደይ ከኒን ይውሰድ?	ሓደ .....1 ክልተ .....2 ሰለስተ .....3 አይፈልግን .....4	
310	መከላኸሊ ድንገተኛ ጥንሲ ከኒን ብከንደይ ሰዓት ርሕቕት ይውሰድ;	ብ 12 ሰዓት ፍልልይ .....1 ብ 24 ሰዓት .....2 አይፈልግን .....3	

**መምርሒ IV ሓበሬታ ብዛዕባ መከላኸሊ ድንገተኛ ጥንሲ አመለካኸታን አጠቓቕማን**

ሕ.ቁ	ሕቶ	መልሲ	ይዘለል
401	ድሕሪ ጥንቃቄ ዝጎደሎ ሪታዊ ርክብ ምፍጻምኪ ድንገተኛ ናይ ወሊድ መከላኸሊ ጥንሲ ካብ ዘይተደለየ ጥንሲ ይከላኸል ዶ ይመስለኪ?	ሙሉእ ብሙሉእ ይስማዕማዕ .....1 ብዘተወሰነ ይስማዕማዕ .....2 አይስማዕማዕን .....3 በጭራሽ አይስማዕማዕን-----4	

402	ድንገተኛ መከላከል ጥንሲ ተጠቅሞኪ ዘይተደልየ ጥንሲ እንድሕር ዘይተኸላኸሉልኪ ኣብ ህፃኑ ችግር የምፅእ ዶ ይመስለኪ?	እወ .....1 ኣይ፤ ኣየምፅእን .....2 ኣይፈልጦን .....3	
403	የታዊ ርክብ ፈገምኪ ትፈልጢ ዶ?	እወ ----- 1 ኣይፈልጥን ----- 2	
404	ብዘይ ፍቓድኪ የታዊ ርክብ ፈገምኪ ትፈልጢ ዶ?	እወ ----- 1 ኣይፈልጥን ----- 2	
405	ንሕቶ ቁፅሪ 404 መልስኺ እወ እንተኾይኑ ዘገደደኪ መን እዩ?	ተምሃራይ/ተቃራኒ የታ ----- 1 መምህር ----- 2 ምስ ሰድራና ዝነበር ዘመድ-----3 ዘይፍለጥ ሰብ ----- 4 ካሊእ እንተሃሊዩ ይጠቀስ ----- 5	
406	ተገዲድኪ የታዊ ርክብ ምስ ፈፀምኪ ዘጋጠመኪ ፀገም እንታይ እዩ?	ዘይተደለየ ጥንሲ -----1 ብግብረስጋ ርክብ ዝመሓለለፍ ሕማም ...2 ህውከት/ጭንቀት/----- 3 ምንም ኣየጋጠመን----- 4 ካሊእ እንተሃሊዩ ይጠቀስ -----	
407	እንድሕር ዘይተደለየ ጥንሲ ኣጋጢመኪ ነይሩ እዚ ፀገም ከመይ ኣሊኸዮ(ፈተሕክዩ)?	ዘይተሓሰበ ጥንሲ ኮይኑ ወሊደዮ ----- 1 ብባህላዊ መንገዲ ኣቋሪፀዩ/ኣውሪደዮ -----2 ኣብ ጥዕና ትካል ኣውሪደዩ ----- 3 ካሊእ እንተሃሊዩ ይጠቀስ -----	
408	ናይ መጀመሪያ የታዊ ርክብ ኣብ ክንደይ ዓመትኪ ጀመርኪ?	ንዓቕመ ሂዋን ምስ በፃሕኹ ----- 1 ኣይዝከሮን ----- 2	
409	ክሳብ ሕጂ ክንደይ ናይ ፍቓሪ ዓርኪ ነይሮምኺ /ኣሎውኺ?	ሓደ ----- 1 ክልተ ----- 2 ካብ ሰለስተ ንላዕሊ -----3 ኣይዝከሮምን -----4	
410	ጠኒስኪ ትፈልጢ ዶ?	እወ -----1 ኣይፈልጥን -----2	
411	እወ እንተኮይኑ መልስኺ ክንደይ ግዜ ጠኒስኪ?	_____	

412	ጥንሲ ሰዲድኪ/ነጺልኪ/ ትፈልጧ ደ?	እው -----1 አይፈልጥን-----2	
413	ንሕቶ ቁፅሪ 412 መልስሽ እው እንተኮይኑ ክንደይ ጊዜ?		
414	ሜላ መከላኸሊ ድንገተኛ ጥንሲ ተጠቂምኪ ትፈልጧ ደ?	እው, ክንደይ ጊዜ _____ አይ, አይተጠቅምኩን	
415	ንሕቶ ቁፅሪ '414' መልስሽ እው እንተኮይኑ አየናይ ሜላ ተጠቂምኪ?	ብኣፋ ዝወሓጥ ክኒን? ----- 1 ኣብ ማህፀን ዝኣቱ/IUCD/ ----- 2 ኩሎም----- 3 ካሊ እንተሃሊዩ ይጠቀስ ----- 4	
416	ንሕቶ ቁፅሪ '414' መልስሽ አይተጠቀምኩን እንተኮይኑ ምክንያትኪ እንታይ 'ዩ? (ካብ ሓደ ንላዕሊ መልሲ ምሃብ ይከኣል እዩ)	ድንገተኛ ናይ ጥንሲ መከላኸሊ ብቐረባ ስለ ዘይርከብ - -----1 ክጥቀም ስለዘይደለኹ -----2 ብዛዕባ ድንገተኛ መከላኸሊ ጥንሲ እኹል ፋልጠት ስለ ዘይብለይ -----3 ቦዓል ዝይ /ዓረከይ/ ስለ ዝቋወመኒ-----4 ሀይማኖት ስለ ዘይፈቕደለይ -----5 ካሊ ፀገም ከየምፅአለይ ፈረሐ -----6 ክጠንስ ስለ ዝደለኹ-----7 ካሊ እንተሃሊዩ ይጠቀስ -----8	
417	ንመፃኢ ዘይተደለየ ጥንሲ ንምክልኻል መከላኸሊ ድንገተኛ ጥንሲ ንምጥቃም ትሓሰቢ ደ?	እው ----- 1 አይሓሰብን ----- 2 ምናልባት ----- 3	

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**DECLARATION**

I, the undersigned declare that this thesis is my original work, has not been presented for a degree in any other university and that all sources of material used for this thesis have been duly acknowledged.

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This thesis has been submitted for examination with my approval as the university advisor.

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