ADDIS ABABA UNIVERSITY

COLLEGE OF HEALTH SCIENCES

SCHOOL OF PUBLIC HEALTH

ASSESMENT OF FACTORS AFFECTING EMERGENCY CONTRACEPTIVE USE AND PREVALENCE OF UNWANTED PREGNANCY AMONG FEMALE STUDENTS IN AKSUM UNIVERISITY

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Addis Ababa University

College of Health Sciences

School of Public Health

Advisor's Approval Sheet

This is to certify that the thesis in titled "Assessment of factors affecting emergency contraceptive use and prevalence of unwanted pregnancy among female students in Aksum University" is submitted in partial fulfillment of the requirements for the degree of MSC with specialization in "Reproductive health" to the Graduate Program of the school of Public Health at Addis Ababa University and has been carried out Giziyenesh Kahsay Fisseha under my supervision. The student has fulfilled the thesis requirements and hence hereby can submit the thesis to the school.

Name of Advisor: Mitike Molla Sisay [PhD]

Signature; _____

Date:_____

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Examiners' Approval Sheet

We, the undersigned, members of the Board of Examiners of the final open defense by Giziyenesh Kahsay Fisseha, have read and evaluate her thesis entitled "Assessment of factors affecting emergency contraceptive use and prevalence of unwanted pregnancy among female students in Aksum University". This is therefore to certify that the Thesis has been accepted in partial fulfillment of the requirements for the MPH Degree in "Reproductive Health".

Name of Advisor_____Signature _____Date _____

Name of internal Examiner:_____ signature_____ Date _____

Name of External Examiner; _____ signature_____ Date_____

Final approval and acceptance of the thesis is contingent upon the submission of the final copy of the thesis to the candidate's Department

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ACRONYMS

AAU	Addis Ababa University
AIDS	Acquired Immunodeficiency Syndrome
AOR	Adjusted Odds Ratio
CI	Confidence Interval
COR	Crude Odds Ratio
EC	Emergency Contraception
ECPs	Emergency Contraceptive Pills
EDHS	Ethiopian Demographic Health Survey
FGAE	Family Guidance Association of Ethiopia
FP	Family Planning
IQR	Inter Quartile Range
RC	Regular Contraceptive
RH	Reproductive health
SPSS	Statistical Package for Social sciences
SRH	Sexual and Reproductive Health
SRS	Simple Random Sampling
STI	Sexually Transmitted Infections
WHO	World Health Organization

ABSTRACT

Background:

Emergency contraception (EC) is a method used to prevent the occurrence of pregnancy after unprotected intercourse. Unwanted pregnancy is a common problem among young unmarried women in Ethiopia where more than 60% of all pregnancies among adolescents is unwanted. Despite the availability this method, the prevalence of abortion is still high however, little is known about use of EC and factors influencing its use among girls attending higher education in Ethiopia.

Objective: To assess magnitude and factors affecting emergency contraceptive use and prevalence of unwanted pregnancy among female students in Aksum University.

Method: A cross-sectional quantitative study was done among 628 female under graduate students in Aksum University using structured self administered questionnaire. Multistage sampling technique was used to select participants. Data were cleaned and analyzed using SPSS version 21. Multivariate logistic regression analysis was done to identify independent predictors of EC and variables with p-value $\leq$0.05 considered as significant predictors.

Result: A total of 617 students participated in this study. About quarter 147(23.8%) of the respondents ever had sexual intercourse and 29 (19.7%) where married, 26(26.5%) had sex had their sexual debut before 18 years. Fifty eight (39.5%) had been pregnant of whom 40(69%) were unwanted. Ever use of emergency contraceptive among the sexually active was 92 (62.6%). Respondents who visited religious place at least once a week were 3.76 times [AOR= 3.76; 95%CI, [2.482, 9.555], single 4.88 times [AOR= 4.88 95%; 1.937-12.288], respondents who have good knowledge on contraceptive 2.39 times [AOR=2.39 95% CI; 1.202, 4.743], study year 8.71 (AOR=8.71; 95% CI; 2.68, 28.8) more likely to use emergency contraceptive than their counterparts. Whereas those who did not discuss with their close friend on emergency contraceptive 63% [AOR= 0.37, 95%, CI; 0.193, 0.703] and those who never discussed on reproductive health issue with their family 42% [AOR= 0.58, 95%, CI0.321, 1.036] less likely to use emergency contraceptive than counter parts.

Conclusions and recommendations: The prevalence of unwanted pregnancy is high while emergency contraceptive use among the sexually active students was low .This may put young girls at risk complication of unsafe abortion including premature death. There is a need to educate adolescents about EC use in averting unwanted pregnancy through creating and strengthening different clubs at schools.

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1. INTRODUCTION

1.1. Background

According to World Health Organization (WHO) definition, adolescent and youth comprises of individuals between the age group 10-19 and 15-24 years respectively (1). Adolescence has been described as a critical developmental period in the life course of individuals. Adolescence period has major changes occurring in biological, cognitive, psychological, social and environmental processes, exploratory behavior and experimentation with a wide range of behaviors that are essential for normal adolescent development (2, 3). Each year, about 210 million women become pregnant globally. Among them, about 75 million pregnancies (36%) are unplanned and/or unwanted (4). An estimated 14 million adolescents give birth globally each year and more than 90% of these live births occur in developing countries(5).

Adolescents in the sub-Saharan Africa (SSA) region have low family planning utilization rates and limited knowledge of reproductive health (RH) services. Literatures showed that adolescents often lack basic RH information, knowledge, experience, and are less comfortable accessing reproductive and sexual health services than adults (5). This could be attributed to parents, health care workers, and educators who are frequently unwilling or unable to provide age-appropriate RH information to young people (6). This is often due to their discomfort about the subject or the false belief that providing the information will encourage sexual activity (7).

According to the Ethiopian Demographic Health Survey (EDHS) 2011, 28.6% of the married women were using family planning method. The coverage is only 23.8% among adolescents' of 15–19 years of age. Unmet needs for family planning in Ethiopia in the same year was 25% and it is highest among adolescents of 15–19 years of age. Although the government provides contraception at no cost, these supplies are frequently not readily accessible (8, 9).

Students of higher learning institutions are assets of the society and change agents in filling the gap and on whom the future generation is based (10). Ethiopia is increasing University enrollment much faster than any other SSA countries (11). But Ethiopia has a high incidence of unwanted pregnancies and incomplete 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 (12, 13)

Many of the avoidable problems in reproductive health (RH), such as unwanted pregnancy, abortion and its complications, sexually transmitted infections (STIs) including HIV require for various preventive strategies to be put in place (14). One of the main interventions to reduce unintended pregnancy and unsafe abortion outlined in the national youth strategy is availing emergency contraceptive (EC). However, information about factors affecting EC use is lacking (15).

1.2. Statement of the problem

Unwanted pregnancy among higher education students poses major public health problems in developing countries, including Ethiopia (16-18). These pregnancies are mostly unplanned and unintended, and many are terminated either legally or illegally (19). Unwanted pregnancy is a big problem in Ethiopia. A study from Adama indicate that among 660 students, one hundred ninety four (29.4%) students were sexually active and 63 (9.4%) had a previous history of pregnancy. Most of the pregnancies (92%) were unintended. Majority (77.7%) of pregnancies were terminated by way of induced abortions carried out by untrained persons. Only 26.7% of those who had unprotected sex used emergency contraception (20).

Regardless of the Ethiopian government's effort to prevent unwanted pregnancies and abortion among youth of age less than 24 years, the number of youth requesting termination of pregnancy is increasing annually (9, 21). Different studies showed that the knowledge, attitude and practice of emergency contraceptive among women are limited (22-24). Around 30% -50% of women presenting for choice on termination of pregnancy were not using contraceptives at the time of conception (25).

Even though there are some studies related with EC use among university students, little has been explored about factors influencing its use among university girls in Ethiopia except few studies (26), and still the information about factors affecting EC use is lacking. This study was conducted to enhance emergency contraceptive use to decrease unwanted pregnancy and to provide evidence for concerned bodies. The purpose of this study was, therefore, to assess magnitude and factors affecting emergency contraceptive use and describe prevalence of unwanted pregnancy among female students in Aksum University, which helps to provide evidence based valuable information for the decision makers to design intervention programs.

1.3 Research Questions

1. What is the magnitude of emergency contraceptive use among female students in Aksum University?
2. What is the magnitude of unwanted pregnancy among female students in Aksum University?
3. What are the factors affecting emergency contraceptive use among female students in Aksum University?

2. LITERATURE REVIEW

2.1. Sexual Health and Family planning

Limited access to targeted RH care and services for young people contributes to and exacerbates many of the RH problems. Over a quarter of all pregnant youth and adolescents feel that their pregnancies are mistimed, reflecting this population's limited access to family planning (FP) and RH services (7).

Ethiopia is a nation of young people ; over 65% of its population is under 25 years of age (9) and a nation whose youth have profound reproductive health needs. Among the many sexual and reproductive health problems faced by youth in Ethiopia include sexual coercion, unplanned pregnancies, closely spaced pregnancies, abortion, sexually transmitted Infections (STIs) including HIV/AIDS(9).

Emergency contraceptives: Emergency contraceptives are back-up methods of preventing pregnancy after unprotected sexual intercourse (21), often referred to as morning-after pill and effective way to prevent pregnancy after unprotected intercourse. Despite this, many teenage girls are not aware of its existence or do not know how to obtain it. The term morning-after pill should be avoided because this name implies that it can only be used the next day. Young women may not present for emergency contraception because they think it is too late. Because neither method of emergency contraception in use will work if implantation has already occurred, these methods are not to be considered as abortifacients (22).

Unwanted Pregnancy; Unplanned pregnancy among young women are a worldwide problem with social and economic repercussions for the unprepared young individual(27). 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 (28).

Importance of EC for the youth:

Emergency contraception involves methods 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 professional training who are

engaged in irregular and infrequent 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 or mistimed pregnancies occur frequently. Adolescents are most victims of unwanted pregnancy, who are expelled from school, often ending their formal education and the potential for future employment. For fear of being expelled from school, many adolescent girls resort to clandestine abortion, which often results in series complications or death (23).

Effectiveness of emergency contraception; Emergency contraception reduces the risk of pregnancy if it is used appropriately. On average, the Yuzpe method of emergency contraception reduces the risk of pregnancy by 75% and progestin-only pills (Plan B) reduce the risk of pregnancy by 89%. The effectiveness of both methods depends on how quickly the woman obtains emergency post coital contraception. The sooner the pills are taken within the 72-hour window, the more effective they will be (24).

2.2. Magnitude and Factors Affecting Emergency Contraceptive Use

Demographic and socioeconomic factors: Studies done at different universities in Ethiopia showed that married respondents were more likely to use emergency contraceptive than others, but study in Addis Ababa University(AAU) was not identified the difference on marital status (29). studies done in Addis Ababa and Adama universities identified age as a factor for emergency contraceptive use (16, 19) where as age was not a factor in a study done in Arbaminch and Mekelle Universities (30, 31). Number of children was a factor in a study at AAU but not in Adama University (16).

Religion was another factor for attitude to use emergency contraceptive that catholic and protestant had less attitude than orthodox (31). In contrast to this protestant were 60 % more likely positive than orthodox (AOR= 1.6 (95% CI, 1.31, 2.73). Where as it is not a factor for emergency contraceptive use at different universities in Ethiopia (16, 19, 30). Respondents from urban residence were more likely to have had positive attitude to EC (31). Descriptive finding from EDHS 2011 indicates regional variation on modern contraceptive use. But region was not a factor for EC use (32). As study year increase both knowledge and attitude towards EC increase

(19, 31, 32). Research has found that more teens would prefer to get information about contraceptives from their parents than from a health center, class, hospital, media or friends. In addition father education was not a factor for EC use. Family income was a factor for knowledge and attitude in Arbaminch university but not found for EC use(32).

Sexual characteristics: finding from Arbaminch revealed that those who had good knowledge were 7.5 times more likely to use emergency contraceptive than those with poor knowledge (AOR= 7.474, 95% CI 1.583-35.277 (33). Similarly study done in Adama was found that respondents with poor knowledge were 99% less likely to use emergency contraceptive than those with good knowledge (AOR= 0.09 ,95% CI 0.041-0.189) (34). Attitude was not statistically significant factor for EC use at Arbaminch and Adama universities (16, 31).
Being ever user of regular contraceptive was a factor for emergency contraceptive use in Adama University (34). this was not found in another study done in Adama (16).

Study done among female students in Mekelle reveal that those who start sexual inter course after 18 years were 7 times more likely to use emergency contraceptive than their counter parts (30). Without controlling any variable history of pregnancy was a determinant factor for EC use (30) where as not in the adjusted analysis (34). Descriptive findings from AAU indicate that 73.5% of unwanted pregnancy (19). Among those who had unprotected sex only 26.7% used EC (16).

Conceptual frame work

Based upon the literature reviewed above, in the study, the socio-economic and cultural factors ,demographic factors, behavioral and other sexual characteristics are considered as independent variables and emergency contraceptive use is considered as a dependent variable.

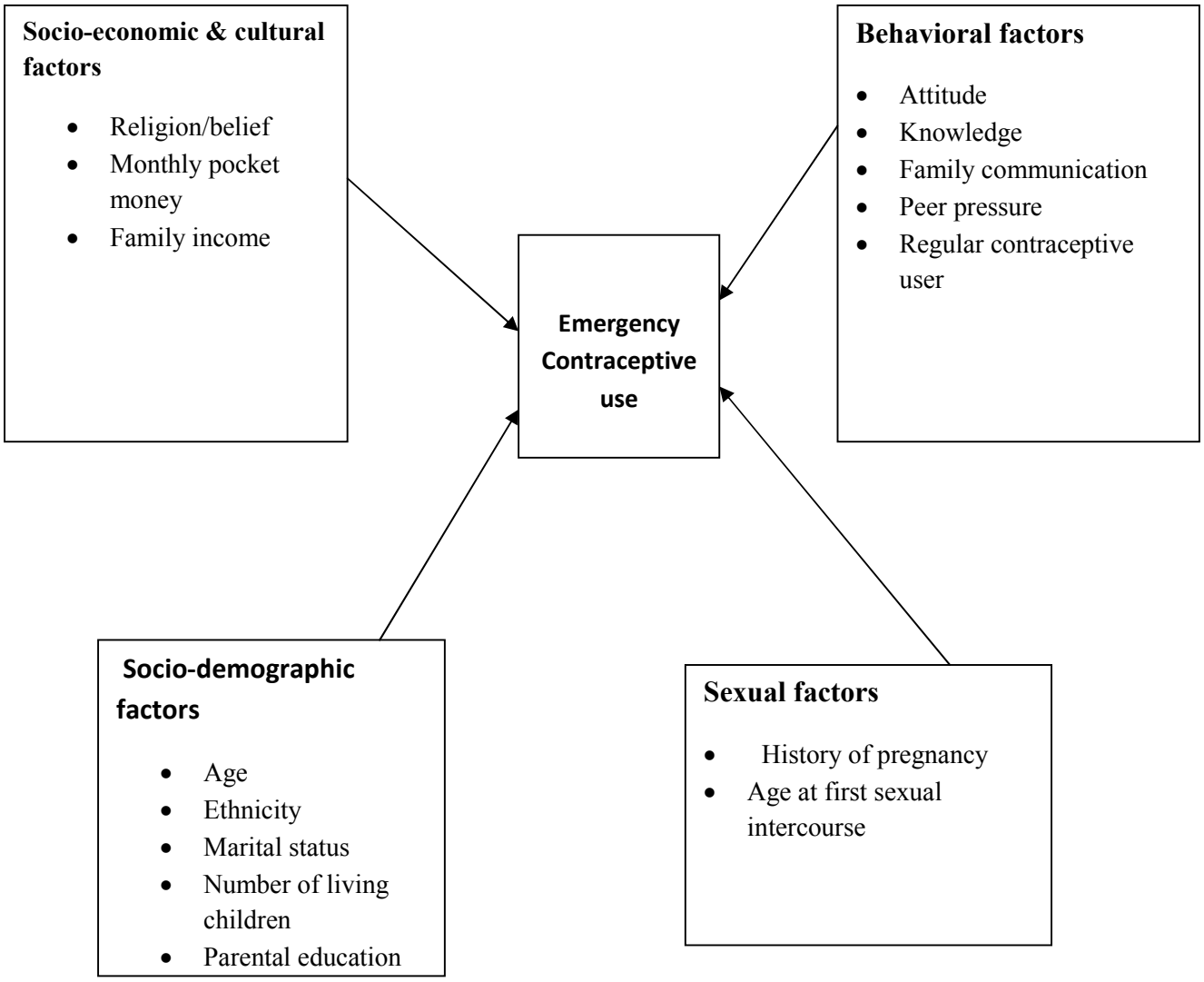

Figure 1. A conceptual frame work on determinants of emergency contraceptive among female students in Aksum University, Tigray, Ethiopia, march 2014..

3. OBJECTIVES

3.1. General objective

To assess magnitude and factors affecting emergency contraceptive use and prevalence of unwanted pregnancy, among female students in Aksum University, in 2014.

3.2. Specific objectives

- To determine magnitude of emergency contraceptive use among female students in Aksum University.
- To determine magnitude of unwanted pregnancy among female students in Aksum University.
- To identify factors affecting emergency contraceptive use among female students in Aksum University.

4. METHODS AND MATERIALS

4.1. Study Area and Period

The study was conducted in Aksum University, found in Axum town, which is oldest city in Ethiopia located the northern part of Tigray region about 1010Km from Addis Ababa, the capital city of the country. Axum enshrines one of the most impressive archeological and historical areas in the world. It is the cradle of Ethiopian culture and is the holiest city of the Ethiopian Orthodox Church. The town has one referral hospital under construction, one zonal hospital, two governmental health centers, one University clinic, seven different level of private clinic, one Family Guidance Association of Ethiopia (FGAE), pharmacies and drug venders. All health facilities provide health care service including SRH except the referral hospital. Aksum University is one of the newly established public higher education institutions in Ethiopia, located in Axum town which was established in 2005. Recently the University has 5 colleges 32 programs and 9103 regular under graduate students of which 4956 are females. The study period was on March 7, 2014.

4.2. Study Design

Institution based quantitative cross-sectional study design was used in 2014.

4.3. Source and Study Population

Source population: All regular undergraduate female students in Aksum University.

Study population: Regular undergraduate female students in Aksum University who participated during the data collection period.

Inclusion Criteria: All regular undergraduate female students in Aksum University.

Exclusion Criteria: students who were critically ill during the data collection period

4.4. Sample Size Determination

The sample size was determined using single population proportion formula by considering the following assumptions:

The prevalence was derived from studies done in Adama (26.9%), and Bahir-Dar (25.8%) for EC and unwanted pregnancy, respectively.

scenario	Prevalence	d^2	Sample size	Design effect	Final sample size
Scenario 1	P = 25.8 for Unwanted pregnancy	0.05	294	2	588
Scenario 2	P = 26.9 for EC	0.05	303	2	606

P= prevalence of unwanted pregnancy in scenario 1 and prevalence of emergency contraception use in scenario 2

Z= 95 % confidence level = 1.96

D= design effect =2

E =Margin of error =0.05

n= sample size

$$n = \frac{(Z\alpha_{/2})^2 p\,(1-P)}{E^2}$$

$$n = \frac{(1.96)^2 0.269(0.731)}{(0.05)^2} = 303$$

Since the source population is 4,956, correction formula was considered to calculate the final sample size and finally 10% non response rate was added based on previous studies done at different university.

1. Sample size = $\frac{303}{1+ 303/4956} = 286$
2. 286 + 28(10% none response rate)*2 = 628

4.5. Sampling Procedures

All regular undergraduate female students in the five colleges of the university were included in the sampling frame through multistage sampling technique. In the first stage departments from each college was selected proportionally by simple random sampling (SRS), using lottery method. After having the list of all female students from the selected departments, respective to the year or batch of the students, sample was allocated proportional to each stratum. Finally, a total of 628 samples were taken from each stratum through simple random sampling technique by random table generation using SPSS.

Schematic Presentation of Sampling Procedure

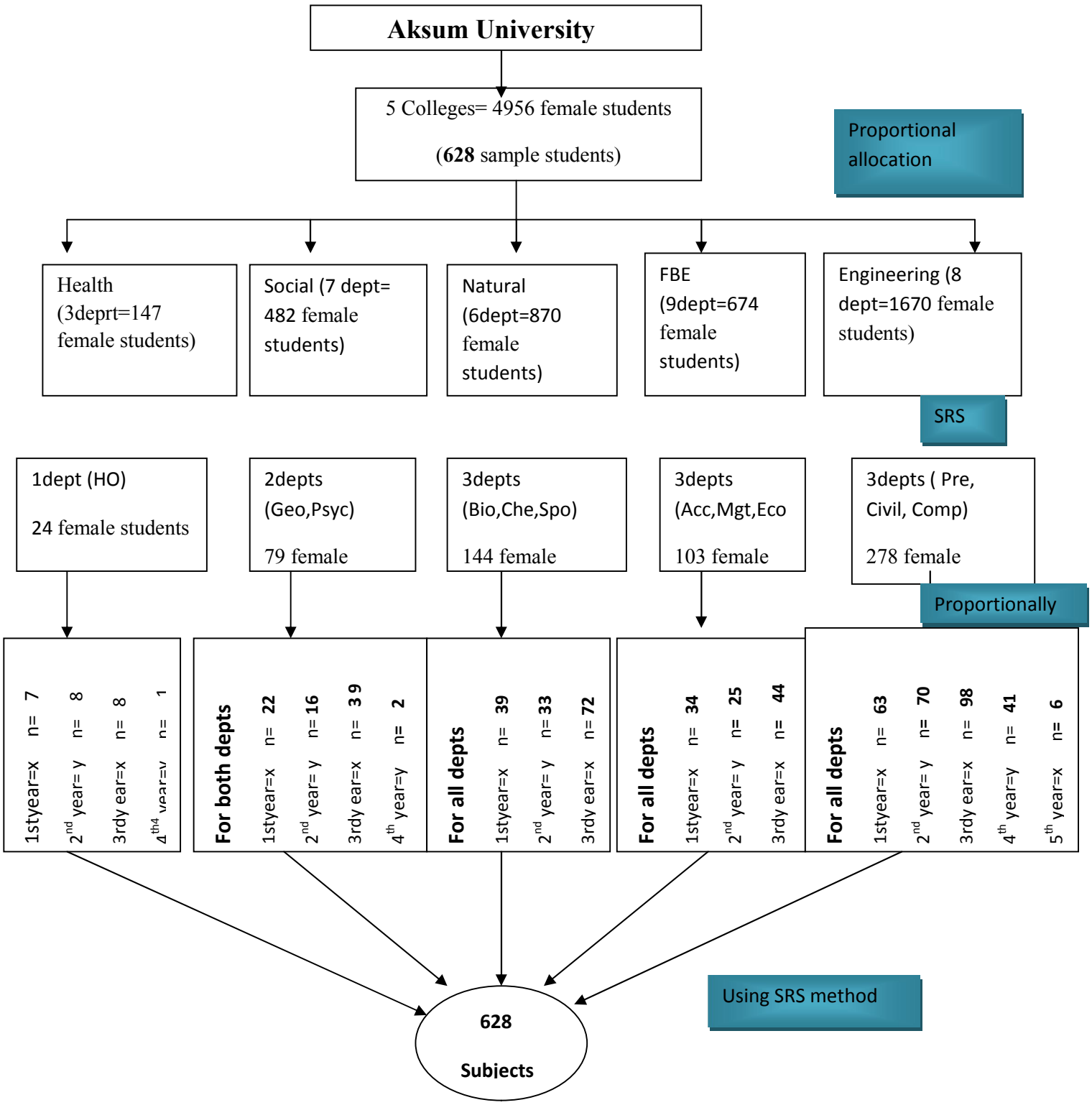

Figure 2. A schematic presentation of sampling procedure

4.6. Data Collection Procedure and Quality Control methods

Structured questionnaire was prepared in English after reviewing literatures of similar surveys that have been carried out previously, including EDHS (34). The final modified English questionnaire was translated to Amharic and back translated to English by a collogue who has good command of both languages to ensure its consistency and clarity. Thirty nine diploma nurse for data collectors and 5 health officers for supervisors were selected and trained prior to the actual data collection period so as to understand the questionnaire as well as objective of the study as well. To check clarity, consistency, skipping pattern and order of the questions, the questionnaire was pre-tested at a governmental college among 31 students (5% the total sample size), and modification was made.

Data were collected using structured self-administered questionnaire by trained data collectors. The questionnaires distributed to the classroom and data were collected in the same day to avoid information contamination. Sufficient time was given for the study participants in order to have complete information. There were frequent supervision and checking of the questionnaire by the supervisors, for its completeness. The principal investigator was also there to handle any problem during data collection. The collected data were reviewed and checked for completeness before data entry and variables with more missing values were excluded from the analysis.

4.7. Study variables

Dependent variable: emergency contraceptive use

Independent variables:

Socio- economic and cultural factors:-, previous Schooling type, , current residence, pocket money, employment status of parents, religiosity and religion/ belief.

Socio-demographic factors: age, marital status, ethnicity, region, number of living children, parent's education, previous place of residence and year of study.

Sexual factors: Age at first sexual intercourse, history of pregnancy.

Behavioral factors: knowledge about EC, attitude towards EC use, family communication on RH issues, peer pressure and regular contraceptive users.

4.8. Operational definitions

Emergency contraception (EC):- Is a contraception indicated after unprotected sexual intercourse to prevent unintended pregnancy.

Knowledge of EC: awareness, type, importance, effectiveness and time of utilization of EC methods**.**

-Good Knowledge: informants who answer questions about emergency contraception and earned above the mean value.

- **Poor knowledge**: informants who score median value & less than the mean value.

Attitude: Is an opinion, out looks, values, position and intentions of the study subjects towards the utilization of EC methods.

- **Positive attitude:** study subjects who score above the mean value On the attitude questions.
- **Negative attitude:** Study subject who score mean value & less than the average score.

Non-EC user: A student who is not using any of EC methods and is sexually active.

Unprotected sex: Having sex without any FP methods

Unintended pregnancy: Is pregnancy that is either mistimed or unwanted at the time of conception (pregnancy occurred with no plan).

Rape; sexual assault involving sexual intercourse initiated against one.

Multiple sexual partners: those who have more than one partner

Discussion on RH issues: any conversation about RH issues

4.9. Data Management, Processing and Statistical Analysis

Variables were coded then data were entered into Epi info version 3.5.3 and cleaned to assure accuracy and completeness before data analysis. We used SPSS version 21 to analyze the data. Descriptive statistics was used; for categorical variables either statistics with frequency and percentage or graphic presentation using bar-chart was used. For continuous variables, median and IQR was used since the distribution was skewed. Multivariate logistic regression analysis was done to identify independent variables of EC and variables with p-value $\leq$0.05 considered as significant predictors.

4.10. Ethical Consideration

Ethical clearance was obtained from Research Ethics Committee (REC) of Addis Ababa University School of Public Health, Have permission from Aksum University and then informed written consent was taken from all the study subjects before data collection. No personal identification was written on the questionnaire and confidentially all information was kept.

4.11. Dissemination of Results

The result of the study will be disseminated to different organizations; AAU SPH, Aksum University and other concerned body working for the improvement of students' health problems related to sexual practice and other reproductive health issues and possibly through publication.

5. RESULT

5.1. Socio-demographic characteristics

Majority 498(80%) of the respondents were in age group of 20-24 years, 433(70.2%) were single, 140(22.7%) in relation, 36(5.8%) married and 8(1.2%) were divorced and widowed. About 496(80.4%) of the respondents were Orthodox Christian followed by 58(9.4%) Muslim, 49(8.0%) Protestant and 14(2.2%) were others. Concerning their place of residence before they join the University, 397(64.3%) were from urban and 220(35.3%) were from rural area. The three major ethnic groups were Amhara 275(44.6%), Tigre 218 (35.3%), and Oromo 58 (9.4%) (Table1).

Table 1: Demographic characteristics of female students in Aksum University, Tigray Ethiopia, march 2014.

Variables	Number (Percent)
Age of respondent	
15- 19years	100(16.2)
20- 24 years	498(80.7)
25-29years	19(3.1)
Region (N= 412)	
Amhara	152(36.9)
Tigray	129(31.3)
Addis Ababa	73(17.7)
Oromia	33(8.0)
SNNP	14(3.4)
Others£	11(2.7)
Previous place of residence	
Urban	397(64.3)
Rural	220(35.7)
Marital status	
Single	433(70.2)
In relation	140(22.7)
Married	36(5.8)
Others	8(1.2)
Ethnicity	
Amhara	275(44.6)
Tigre	218(35.3)
Oromo	58(9.4)
Gurage	29(4.7)
Wolayita and Hadiya	14(2.2)
Others¥	8(2.2)
Religion of Respondents	
Orthodox	496(80.4)
Muslim	58(9.4)
Protestant	49(8.0)
Catholic	10(1.6)
No religion	4(0.6)

Others£: Afar, Bensangul-Gumuze and harerie

Others¥: Somali, hadiya, wolayta, konso, afar, sidama, shinasha

5.2. Socio-economic characteristics

Five hundred seventeen (83.8%) participants attended their secondary school at governmental, 84(13.6) at private and 16(2.6%) at missionary high school. About 578(93.7%) of the participant were living in the University dormitory whereas 15(2.4%) and 24(3.9%) were living with their families and rented house respectively. About 247(40.5%) and 165(27.0%) of respondent mother and father were not educated. The median family income was 1900 ETB with inter quartile range of (800, 3500) (Table 2).

Table 2: Socioeconomic characteristics of female students in Aksum University, Tigray Ethiopia, march 2014.

Variables	Number (Percent)
Attend Secondary School	
Public/governmental	517(83.8)
Private high school	84(13.6)
Religious/missionary	16(2.6)
Year of study	
1st	116(18.8)
2nd	159(25.8)
3rd	256(41.5)
4th	77(12.5)
5th	9(1.5)
Pocket income	
No	54(8.8)
<100	97(15.7)
100-299	156(25.3)
300-499	201(32.6)
≥ 500	109(17.7)
Living accommodation	
University dorm	578(93.7)
With family	15(2.4)
Rented house	24(3.9)
Fathers education (610)	
No education	165(27)
Grade 1-4	105(17.2)
Grade 5-8	95(15.6)
Grade 9-12	72(11.8)
Above grade 12	169(27.7)
Religious	4(0.7)
Mothers education (610)	
No education	247(40.5)
Grade 1-4	100(16.4)
Grade 5-8	92(15.1)
Grade 9-12	73(12.0)
Above grade 12	98(16.1)
Monthly Family income(ETB)	Median (IQR) 1900 (800,3500)

5.3. Sexual behavior

About a quarter 147(23.8%) of the respondents ever had sexual intercourse, where 26(26.5%) had their first sexual intercourse before they were 18 years of age. Among the sexually active respondents 58(39.5%) had ever been pregnant of whom 40(69.0%), 95% CI (56.9, 79.3) were unwanted. The first three reasons for not using EC mentioned by the respondents were 20.6% want to be pregnant, religious prohibition (14.7%), and negative attitude to wards service providers (11.8%) (Table3).

Table 3: Sexual characteristics of the participants in Aksum University, Tigray, Ethiopia March 2014

Variables	Number (Percent)
Ever had sexual intercourse	
Yes	147(23.8)
No	470(76.2)
Reason for not practicing sexual intercourse	160(40.3)
Religious prohibition	110(27.7)
To achieve my objectives	98(24.7)
Have no sexual partner	16(4.0)
Fear of pregnancy	13(3.3)
Fear of STI	
Age at first sex	
< 18years	26(17.7)
≥18years	72(49.0)
Not responded	49(33.3)
With whom first sexual intercourse (N=147)	
Boy friend	82(55.8)
Spouse	52(35.4)
Teacher	6(4.1)
Stranger	5(3.4)
Foreigner	2(1.4)
Reason for first sex	
Personal desire only	52(35.6)
Marriage	43(29.5)
Promising words	28(19.2)
Peer pressure	6(4.1)
Financial	6(4.1)
By force	6(4.1)
For grade	5(3.4)
Number of sexual partner in life time	
One	95(64.6)
Multiple	25(17.0)
Not responded	27(18.4)
Ever been pregnant (147)	
Yes	58(39.5)
No	89(60.5)

Pregnancy wanted in life time (N=58)	
Yes	18(31.0)
No	40(69.0)
Reason for unwanted Pregnancy	
Forgetting to take contraceptive	22(55.0%)
Contraceptive failure	9(22.5%)
Rape	9(22.5%)
Visiting religious places	
Every day	309(50.1)
At least once a week	269(43.6)
At least once a month	39(6.3)

5.4. Reproductive history and emergency contraceptive use

Prevalence of EC use was 92 (62.6%), 95% CI (46.6, 70.7) among the sexually active participants. Around 4.7 of these had used other modern family planning's. About their marital status, 59(40.1%) were single, 56(38.1%) in relation, 29(19.7%) married and 3(2.1%) others. 52(56.5%) were used after joining university. Regarding the type of emergency contraceptive use, 69(75%) were used contraceptive pills, 15(16.3%) IUCD whereas 8(8.7%) did not remember what type they were used. Their source for EC were pharmacy 39(53.5%), university clinic 16 (21.9%), and 9(12.3%) governmental health facilities. Concerning their knowledge and attitude on EC use only 40(27.2%) had good knowledge and 78(53.1%) had positive attitude (Table 4).

Table 4: Reproductive history and emergency contraceptive use among sexually active participants in Aksum University, Tigray, Ethiopia, and March 2014

Variables	Number (Percent)
Ever use EC among sexually active (n=147)	
Yes	92(62.6)
No	55(37.4)
Type of EC used	
EC pill	69(75.0)
IUCD	15(16.3)
Do not remember	8(8.7)
EC use after joining University	
Yes	52(56.5)
No	40(43.5)
Marital Status	
Single	59(40.1)
In relation	56(38.1)
Married	29(19.7)
Others	3(2.1)
Source for EC(N=92)	
Pharmacy	39(42.4)
University Clinic	16(17.4)
Private clinic	9(9.8)
Governmental health facilities	9(9.8)
Not mentioned	19(20.6)
RC utilization	
Yes	29(19.7)
No	74(50.3)
Not responding	44(30.0)
Knowledge on contraceptives	
Good	40(27.2)
Poor	107(72.8)
Attitude to EC	
Positive	78(53.1)
Negative	61(41.5)
Not responding	8(5.4)
Discussion on RH issue with family	
Yes	82(55.8)
No	65(44.2)
Feeling comfort to get information on EC	
Health worker	80(54.4)
Friends	27(18.4)
Religious leader	6(4.1)
Clubs	9(6.1)
Reading materials	6(4.1)
Teachers	2(1.4)
From All	4(2.7)
Not mentioned	13(8.8)

Among the 58 ever pregnancies reported, 32(55.2%), 18(31.0%) and 8(13.8%) were gave birth, aborted and currently pregnant, respectively (Figure 3).

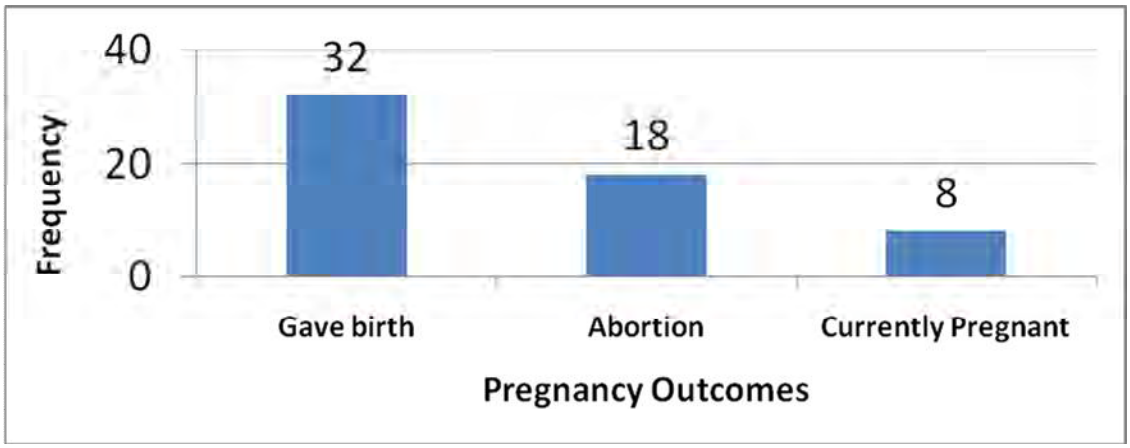

Figure 3. Pregnancy outcome of participants in Aksum University, Tigray, Ethiopia, March 2014

5.5. Factors Associated with EC use

Crude logistic regression analysis was used to determine the effect of each independent variable on emergency contraceptive without controlling the effect of any other variables. Variables statistically significant at bivariate logistic regression were religiosity, marital status, study year, pocket money, communication on RH issues, and knowledge on contraceptive and discussion with close friends about EC.

Even though it was not statistically significant respondents in age group 25-29 year were 2.4 times whereas; 20-24 were 44% more likely to use EC than those whose age 15-19 without controlling any other variables [COR=2.4; 95%CI: 0.666, 8.648 and COR= 1.44; 95%CI, 0.464, 4.441] respectively. Respondents who visit religious place at least once a week were 4.4 times more likely [COR=4.42; 95%CI, 2.180, 8.952] and those at least once a month 6.4 times more likely [COR= 6.40; 95% CI; 3.048, 13.417] to use emergency contraceptive than those who visit on daily basis. Single respondents were 6.25 times [COR=6.25; 95% CI; 2.969, 13.168] and those in relation 1.84 times more likely [COR=1.84; 95% CI; 0.851, 3.971] to use EC than single without controlling other variables. In the bivariate analysis EC use increases as study year increase and this difference was statistically significant. Communication on RH issues with their families was found as a factor in the bivariate logistic analysis that those respondents who did not were 43% less likely to use EC than who did [COR=0.57; 95% CI; 0.359, 0.894] (Table5).

Table 5. Factors associated with EC utilization among female students in Aksum University, Tigray, Ethiopia, March 2014

Variables	Ever used EC		COR [95% CI]	AOR[95% CI]
	Yes	No		
Age categories				
15-19	10	90	1.00	
20-24	78	420	1.44[0.464, 4.441]	----------
25-29	4	15	2.40[0.666, 8.648]	
Residence				
Urban	63	334	1.24[0.773, 1.996]	----------
Rural	29	191	1.00	
Religiosity				
Daily	46	263	1.00	1.00
At least once a week	29	240	**4.42[2.180, 8.952]**	**3.76[1.482, 9.555]**
At least once a month	17	22	**6.40[3.048, 13.417]**	**5.21[2.046, 13.246]**
Marital status				
Single	40	393	**6.25(2.969, 13.168)**	**4.88[1.937, 12.288]**
In relation	36	104	1.84[0.851, 3.971]	2.19[0.850, 5.621]
Married	14	22	0.96[0.141, 6.450]	1.00
Study year				
1st	4	106	1.00	1.00
2nd	7	134	**1.80[1.069, 3.032]**	1.48[0.781, 2.789]
3rd	50	212	**8.13[3.411, 19.371]**	**6.85[2.574, 18.205]**
4th and 5th	31	73	**11.25[3.810, 33.241]**	**8.71[2.681, 28.277]**
Pocket money				
>500	23	86	1.00	1.00
300-499	28	173	1.65[0.899,3.039]	1.60[0.764, 3.354]
100-299	13	143	**2.942[1.417,6.109]**	2.10[0.885, 5.000]
<100	19	78	1.098[0.556,2.168]	0.51[0.205, 1.277]
No	9	45	1.33[0.571,3.131]	0.90[0.306, 2.629]
Attending secondary school				
Missionary	4	12	1.00	
Governmental	71	446	2.09[0.657,6.672]	----------
Private	17	67	1.314[0.376,4.588]	
Living accommodation				
In campus	83	496	1.00	
Off campus	9	29	1.86[0.847, 4.058]	----------
Communication on RH issue				
Yes	58	258	1.00	1.00
No	34	267	**0.57[0.359, 0.894]**	0.58[0.321, 1.036]
Knowledge on Contraceptive				
Poor	19	245	1.00	1.00
Good	73	280	**3.36[1.973, 5.729]**	**2.39[1.202, 4.743]**
Discussion with close friend				
Yes	64	198	1.00	1.00
No	20	279	**0.22[0.130, 0.378]**	**0.37[0.193, 0.703**]
Feeling comfort				
Health workers	53	219	1.00	
Friends	16	113	0.96[0.0466, 1.961]	----------
Other	18	133	0.56[0.314, 0.995]	

All variables statistically significant at bivariate level were included in the multivariate logistic regression analysis to determine factors affecting emergency contraceptive use by controlling other variables in the model. Respondents who visit religious place at least once a week were 3.76 times more likely to use emergency contraceptive than those who visit on daily basis [AOR=3.76 ; 95% CI,1.482, 9.555] whereas those who visit at least once a month were 5.21 times more likely to use EC than daily visitors [AOR= 5.21 95% CI; 2.046, 13.246].

Single respondents were about 5 times more likely to use EC than married and those who were in relation were 2.19 times more likely to use EC than married with [AOR= 4.88 95%; 1.937, 12.288] and [AOR= 2.19, 95%CI; 0.850, 5.621], respectively. Study year was a factor for EC use that as study year increase rate of uses also increase. Participants who did not discuss on EC with their close friends were 63% less likely to use EC than counter parts with [AOR= 0.37, 95% CI; 0.193, 0.703]. Those respondents who have good knowledge on contraceptive were 2.4 times [AOR=2.39 95% CI; 1.202, 4.743] more likely to use EC. Even thought it was not statistically significant in adjusted analysis those participants who never discuss on RH issue with their family were 43% less likely to use EC [AOR=0.58, 95% CI; 0.321, 1.036].

6. DISCUSSION

Being single, visiting religious place less frequently, good knowledge on contraceptive use, not discussing with close friends about EC use and increased year of study (higher batches) were found to be significant factors associated with EC use among sexually active female students. the magnitude of emergency contraceptive use among the female university students was found to be 92(62.6%),95% CI(46.6,70.7) and the prevalence of unwanted pregnancy was 40(69%),95% CI(56.9,79.3).

Around one fifth 25(17.0%) of the respondents had multiple sexual partners and there was high rate of unwanted pregnancy 40 (69%). This is consistent with a study done in Arbaminch (64%) and higher than other studies done in Bahir-Dar (25.8%) and Addis Ababa (35%)(33, 35). And lower than study conducted in Dessie (78.3%) (19, 36). The difference may be due to study time and being urbanization. The other reason could be socio-cultural and norms of different communities' indifferent settings.

The prevalence of emergency contraceptive use in this study was92(62.6%). The finding is comparable with a study done in South Africa(64.2%) , lower than Bahir- Dar (73.4%)(17) but is inconsistent with studies done in Dessie (15.4%) and Mekelle (24.2%), (16, 30, 36) and this could college students my be different from university students.

With regard to marital status, being single was a factor (AOR; 4.88, 95% CI; 1.94, 12.29) for emergency contraceptive use than married in this study. This finding is parallel with studies conducted among different institutions, Addis Ababa (AOR;4.80,95% CI; 2.21,10.42) Adama (AOR; 9.3,95% CI; 2.538,20.73), Dessie ($p<0.05$,95% CI;1.007, 8.368)(19, 26, 36) and on the other hand this is inconsistent with studies conducted in Mekelle (AOR; 2.25,95% CI; 0.56, 9.06) and Arbaminch (AOR; 6.13,95% CI; 1.363,27.505)(30, 31). This may be due to the fact that university students my be different from college students.

This study revealed that knowledge on contraceptives is a factor for EC use, (AOR; =2.39; 95% CI; 1.20, 4.74). This is comparable with studies conducted in Adama (AOR; 0.09,95% CI; 0.041,0.189) and Arbaminch (AOR; 7.47, 95% CI; 1,583, 35.277)(16, 31) universities in which

respondents having good knowledge on EC use were more likely to use EC but a study done in Mekelle (AOR;0.49,95% CI; 0.19, 1.22) failed to detect knowledge as a factor (30).

This study revealed the higher years, 3rd and ≥ 4th years were at higher utilization of EC with (AOR=6.85; 95% CI; 2.57, 18.21) and (AOR=8.71; 95% CI; 2.68, 28.8), respectively. which revealed that as study year increases utilization of EC also increases. This finding is different with studies done in Arbaminch (AOR= 1.152; 95% CI; 0.163, 8.145), Addis Ababa (AOR; 0.79, 95% CI; 0.27, 2.25) and Adama (AOR; 3.88, 95% CI; 0.905, 16.64) (16, 31, 32).

Based on the finding of this study discussion with close friends about EC was another factor for EC use. Students who did not discuss with their close friends about utilization of EC had lower chance of using EC (AOR=0.37; 95% CI; 0.19, 0.70). This is supported by studies from Hawasa (37). This could be explained by the fact that young Adults exchange their ideas on RH freely and confidentially which further increases knowledge.

This study identified that religiosity is another factor identified for emergency contraceptive use; students who report lower level of visiting religious places were more likely to use EC. Students who visit religious places once a week (AOR=3.76; 95% CI; 1.48, 9.56) and once a month (AOR=5.21; 95% CI; 2.05, 13.25) were more likely to use EC as compared to the daily visitors(38). This may be due to young adults with high level of belief are less likely to have had sex.

Being single, visiting religious place less frequently, good knowledge on contraceptive use, not discussing with close friends about EC use and increased year of study (higher batches) were found to be significant factors associated with EC use among sexually active female students.

7. STRENGTHS and LIMITATIONS

The data used in this study is a primary data that gives actual information of the university students about emergency contraceptive and unwanted pregnancy.

The response rate of the study was high that decreases the non-response bias.

Even if confidentiality were maintained, social desirability bias could be introduced because of sensitive nature of the study and self reporting information errors.

Possibility of under estimation cannot be ruled out because some students may have been hesitant to report sensitive issues of sexual behavior.

8. CONCLUSIONS AND RECOMMENDATIONS

8.1 Conclusions

There was low level of prevalence of EC use whereas the magnitude of unwanted pregnancy was very high.

Despite the potentially devastating outcomes that can result from unprotected sexual intercourse university students do not take the necessary precautions to protect themselves from unintended pregnancy. Significant number of the sexually active respondents had encountered unintended pregnancy. The main reasons for unwanted pregnancy mentioned by the respondents were forgetting to take pills, failure of contraceptive and rape.

Being single, visiting religious place less frequently, good knowledge on contraceptive use, not increased year of study (higher batches) and discussing with close friends about EC were found to be significantly associated with EC use among sexually active female students.

8.2. Recommendations

- More emphasis should be given for the need to empower young females to discuss reproductive health issues with their parents, friends and others.
- University and different stakeholder should enhance working together to improve their knowledge, strengthening clubs, peer discussion.
- The current study gives a quantitative exploration and future researchers could offer clarifying the insights through the use of qualitative methodology.

9. REFERENCE

1. WHO, USAID. improving the reproductive health of SSA countries youth. 2005.
2. Organization WH. Programming for adolescent health and development. Report of a WHO. UNFPA/UNICEF study group on programming for adolescent health; 1999.
3. Patton GC, Viner R. Pubertal transitions in health. The Lancet2007;369(9567):1130-9.
4. Harrison T. Availability of emergency contraception: a survey of hospital emergency department staff. Annals of emergency medicine2005;46(2):105-10.
5. Neema S, Ahmed FH, Kibombo R, Bankole A. Adolescent sexual and reproductive health in Uganda: results from the 2004 National Survey of Adolescents. Occasional Report2006(25).
6. McCauley AP, Salter C, Kiragu K, Senderowitz J. Meeting the needs of young adults. Population reports Series J, Family planning programs1995(41):1-43.
7. Federal Ministry of Health. National Reproductive Health Strategy in Ethiopia 2006-2015. 2006.
8. Haney E, Singh K. Ethiopia 2011 Demographic and Health Survey: Key findings. Journal of Medicine and Medical Sciences;1(4):106-14.
9. FHI U. Youth Net Assessment Team: Assessment of Youth Reproductive Health Programs in Ethiopia. Addis Ababa, Ethiopia2004.
10. PEOPLE Y. INVESTING IN OUR FUTURE. 2006.
11. Materu PN. Higher education quality assurance in Sub-Saharan Africa: status, challenges, opportunities and promising practices: World Bank-free PDF; 2007.
12. Hassen F. Analysis of factors for unwanted pregnancy among women in the reproductive age group attending health institutes in Jimma town. Report Feb2000.
13. Melkamu Y, Enquselassie F, Ali A, Gebresilassie H, Yusuf L. Fertility awareness and post-abortion pregnancy intention in Addis Ababa, Ethiopia. Ethiopian Journal of Health Development2004;17(3):167-74.
14. SchÃ¼nmann C, Glasier A. Measuring pregnancy intention and its relationship with contraceptive use among women undergoing therapeutic abortion. Contraception2006;73(5):520-4.
15. Lule E, Rosen JE, Singh S, Knowles JC, Behrman JR. Adolescent health programs. Disease control priorities in developing countries2006;2:1109-26.
16. Tilahun D, Assefa T, Belachew T. Predictors of emergency contraceptive use among regular female students at Adama University, Central Ethiopia. Pan African Medical Journal;7(1).
17. Manena-Netshikweta M. Knowledge, perception and attitude regarding contraceptives among secondary school learners in the Limpopo province, November 2007, South Africa. South Africa.
18. UNFPA. The cost and benefit of investing in family planning and maternal and newborn health. GUTTMACHER december 2009:6.
19. Tamire W, Enqueselassie F. Knowledge, attitude, and practice on emergency contraceptives among female university students in Addis Ababa, Ethiopia. Ethiopian Journal of Health Development2007;21(2):111-6.

20. Aziken ME, Okonta PI, Ande AB. Knowledge and perception of emergency contraception among female Nigerian undergraduates. International family planning perspectives2003:84-7.
21. Abortion FACTS & FIGURES [database on the Internet]2011.
22. AM 98-01. CANADIAN PAEDIATRIC SOCIETY CLINICAL PRACTICE GUIDELINE. Paediatr Child Health1998;3.
23. Dereje A. assessment of knowledge & practice of EC among female college students in Oremia region south west shewa zone Wolliso town. Gondar university Addis continental institute of MPH unpublished thesis.
24. The latest on emergency contraceptives [database on the Internet].
25. Associations Cp. Emergency contraception Question and answers. 2000.
26. Tilahun D, Assefa T, Belachew T. Knowledge, Attitude and Practice of Emergency Contraceptives among Adama University Female Students, Ethiopia. Ethiopian journal of health sciences;20(3).
27. Mqhayi Mmabatho Margaret, Annsmit Jennifer MFML, Beksihiska Mags, Conolly Cathy, Zuma Khangelani and Morroni Chelsea. Misted opportunities Emergency contraception Utilization by young South African Women. African journal of reproductive health2004;8(2).
28. perspectives IFp. estimates of abortion in Mexico: what's changed between1996-2006? December 2008
34 (4).
29. Tamire1 W, FE. Knowledge, attitude, and practice on emergency
contraceptives among female university students in Addis
Ababa, Ethiopia. EthiopJHealth Dev2007;21(2).
30. Gebrehiwot H, Gebrekidan B, Berhe H, Kidanu K. ASSESSMENT OF KNOWLEDGE, ATTITUDE, AND PRACTICE TOWARDS EMERGENCY CONTRACEPTIVES AMONG FEMALE COLLEGE STUDENTS AT MEKELLE TOWN, TIGRAY REGION, ETHIOPIA: A CROSS SECTIONAL STUDY.
31. Worku A. Knowledge, attitude and practice of emergency contraceptives among female college students in Arba Minch Town, Southern Ethiopia. Ethiopian Journal of Health Development;25(3):176-83.
32. Ahmed FA, Moussa KM, Petterson KO, Asamoah BO. Assessing knowledge, attitude, and practice of emergency contraception: a cross-sectional study among Ethiopian undergraduate female students. BMC public health;12(1):110.
33. Worku A. Knowledge, attitude and practice of emergency
contraceptives among female college students in Arba Minch
Town, Southern Ethiopia. Ethiop J Health Dev2011;25(3).
34. Faten Dejene , Tilahun1, Tsion Assefa1, Belachew2 T. Predictors of emergency contraceptive use among regular female students at Adama
University. pan african medical jornal. [Open Access]. 26/11/2010
35. Zeleke' G, ZZ, BW. Knowledge, Attitude and Practice of Emergency Contraception among female Bahir Dar University
Students, Northwest Ethiopia. Ethiopian Journal of Reproductive Healthmay 2009;volume 3.
36. T. W, Nibabe1, Mgutshini2 T. Emergency contraception amongst female college
students – knowledge, attitude and practice. march 2014.
37. BEKELE W. EMERGENCY CONTRACEPTIVE:
POST- SECONDARY SCHOOL FEMALE STUDENTS' AND
SERVICE PROVIDERS' PERSPECTIVE
(THE CASE OF AWASSA TOWN). unpublished2008.
38. Demographic predictors of sexual risk susceptibility among undergraduates in two universities in nigeria 2012.

APPEDIX

ANNEX I: Study Information sheet, consent form and English questionnaire

1. Study Information sheet

Addis Ababa University School of public health

Introduction: To ensure the health of young adult, understanding the existing problems and related behaviors of this group of the population is very important. AAU School of Public Health needs to assess magnitude and factors affecting emergency contraceptive use and prevalence of unwanted pregnancy among female students in Axum University". Since you are included in the sample randomly by lottery method; you are kindly invited to participate in the study.

Purpose of the study: To generate information on factors affecting Emergency Contraceptive use and magnitude of unwanted pregnancy of university students, which helps to provide evidence based, valuable information for the decision makers to design interventions programs.

Confidentiality: Please do not write your name or any identification and provide your honest answers. The information that you provide during the study will be kept confidential.

Benefits of the study: By participating in this study you will not receive any direct benefit, but you will help to increase our understanding for the needs of the university students in terms of sexual and reproductive health services.

Rights: Your participation in this study is voluntary and you have the right to refuse. You do not have to answer any question that you don't want to answer it. Your decision not to participate or to withdraw will not affect any aspects of your university life. You have your own contribution to the success of this study through your honest and genuine participation for responding the questions.

If you have any question you can contact the principal investigator using the following address:

Name: Giziyenesh Kahsay Phone number: 0920-80 94 19
Address: Addis Ababa, Ethiopia E-mail: kgezienesh@yahoo.com

2. **Consent form**

Informed Consent Statement

I already get sufficient information through reading of the information sheet about the purpose, benefit of the study and what is expected from me. Even though I have a right to refuse, am willing to participate to provide my input for this study. Put your signature and continue if you agree to participate, or return back if you are not.

☐ Agree ☐ Disagree

Signature: _____ Date: _____

We thank you in advance for your honest

Please read the following questions very carefully and provide your honest answer by encircling the number of your choice and by put answers in the provided space.

Part I Demographic and socio-economic information

101. Your age in complete years	_____
102. From where region do you came?	_____
103. Residence before joining to the University?	1. Urban 2. Rural
104. Current marital status	1. Single 2. In relation 3. Widowed 4. Married 4. Divorced Other specify_____
105. Ethnicity	1. Amhara 5. Gurage 2. Tigre 6. Oromo. 3. Somalea 7. Hadya 4. Harari 8. Wolait Other (Specify)_____
106. What is your religion	1. Orthodox 4. Catholic 2. Muslim. 5.No religion 3. Protestant Other (Specify)_____
107. How often do you go to church or mosque?	1. Everyday 2. At least once a week 3. least once in a year 4. never
108. Where did you attend your high school?	1. Private high school 2. Public/governmental high school 3. Religious/missionary high school Other (specify) _____
109. what is your current study (faculty)	
110. Current grade level in the university	1. 1st year 4. 4th year 2. 2nd year 5. 5th year 3. 3rd year
111. What is your average monthly pocket income in birr received from your family /relatives?	1. I do not have 4. 300-499 2. <100 5. >500 3. 100-299
112.Current living accommodation	1. Dormitory 2. Off campus (with parents) 3. Off campus (rented)
113.Educational status of your father	1. No education 4. Grade 9-12 2. Grade1-4 5. Above 12 grades 3. Grade 5-8 Other (Specify)_____

114.Educational status of mother	1. No education 4. Grade 9-12 2. Grade1-4 5. Above 12 grades 3. Grade 5-8 Other (Specify)_____
115. What is your parent's monthly average income?	_____
116. Have you ever discuss with your families about reproductive health issues?	1. Yes 2. No

Part II Knowledge on emergency contraceptive

201. Have you ever heard of any modern Contraception?	1. Yes 2. No
202. Which do you know about contraceptives?	1. Pills 5. Condom 2 IUCDs. Others (specify)_____ 3. Injection 4. implant
203. Do you know about emergency contraceptive?	1. Yes 2. No (skip to 301)
204. Which method do you know?	1. Oral contraceptive pill 2. Emergency contraceptive pills 3. IUCD 4. Both Other, specify_____
205. What was your first source of information for emergency contraceptive?	1. Health institution 5. Teachers in class 2. Mass media 6. Club in School 3.Friends Other, specify_____ 4.Family
207. To prevent unwanted pregnancy effectively, how long the first dose emergency contraceptive pills should be taken after unprotected sexual intercourse?	1. Within 24 hours after sex 2. Within 72 hours after sex 3. Within 4-6 days after sex 4. Even after a missed period 5. I don't know the time Other, specify_____
208. Recommended time for IUCD on emergency contraception is?	1. Within 24 hours after sex 2. Within 72 – 120 hours / 5 days 3. After a missed period 4. I don't know the time Other, specify ----------
209. How effective are emergency Contraceptive pills in preventing un wanted pregnancy?	1. Highly effective (>95%) 2. Effective 75-89% 3. Less effective (<10%) 4. Not effective at all 5. I don't know

210. How effective are IUCD in preventing un wanted pregnancy?	1. Highly effective (>95%) 2. Effective 75-89% 3. Less effective (<10%) 4. Not effective at all I don't know
211. Recommended number of dose of ECP is?	1. One dose 2. Two dose 3. Three dose 4. I don't know
212. Recommended time between the ECP doses	1. 12 hours apart 2. 24 hours apart 3. I don't know

Part III Attitude Questions on emergency contraceptive

	strongly disagree,	Disagree	Neutral	Agree	Strongly agree
301. Emergency contraceptive causes a loss of trust between regular partners					
302. It is a good idea to avail Emergency contraceptive for all females					
303. The service in campus or nearby clinics is convenient to use Emergency contraceptive.					
304. It is beneficial to use Emergency contraceptive after unsafe sexual intercourse					
305. It is sinful act to apply Emergency contraceptive methods					
306. Emergency contraceptive use may cause infertility in a woman.					
307. Wives who practice Emergency contraceptive will be abandoned by their husbands.					
308. Emergency contraceptive use decrease sexual Satisfaction					
309. Emergency contraceptive may hurt the baby in case it does not work.					

Part IV. Information related to sexual and other behavioral characteristics

401. Have you ever had sexual intercourse?	1. Yes 2. No (**skip to Q.421**)
402. Your age at first sexual intercourse	_____years
403. With whom did you make your first sexual intercourse?	1. Spouse 2.Boy friend 3. Teacher 4. Stranger (unfamiliar person) 5. foreigner
404.What was the reason for your first sex? (Choose only one)	1. In a marriage 2. Personal desire (curiosity) 3. Promising word of partner for marriage 4. For financial purpose (to get money) 5. To pass exam (for grade) 6. By force against my will 7. Peer pressure
405. During your life time, with how many people have you had sexual intercourse?	_____
406. Have you ever been pregnant?	1. Yes 2. No (**skip to Q.413**)
407. When do you be pregnant?	1. After joining University 2. before joining University 3. Both
408. If Q406 is yes was the pregnancy wanted?	1. Yes 2. No
409. If your pregnancy was unwanted what was your reason?	1. Forgetting to take contraceptives 2. Rape 3. contraception failure Others(specify) _____
410. What was the outcome of your pregnancy?	1. Live birth . 2. Abortion 3. Currently pregnant Other (specify)___
411. How many times have you been pregnant?	_____
412. How many children do you have?	1. None 3. Two 2. One Other, specify_____
413. Have you ever used emergency contraceptive?	1. Yes 2. No (**skip to Q.420**)
414. If Q 413 is yes what method do you use?	1. ECP 2. IUCD 3. I don't know/remember
415. Do you use emergency contraceptive after joining University?	1. Yes 2. No

416. From where do you get?	1. Pharmacy 2. University clinic 3. Public health facilities 4. Private clinics
417. With in what time do you take emergency contraceptive after unprotected sexual intercourse?	1. With in 72 hrs for ECPs & 120hrs for IUCD 2. After 72 hrs ECPs & 120 for IUCD
418. How many times do you use emergency contraceptive in your life?	1. Once 2. Two and above 3. Not remember/Don't know
419. Do you use other modern contraceptive methods than emergency contraceptive	1. Yes 2. No
420. What was your reason for not using emergency contraceptive?	1. Negative attitude towards service providers 2. Distance to health facilities 3. Drug unavailability 4. Service providers being judgmental 5. Embarrassment (lack of privacy) 6. Inconsistent service delivery 7. Lack of knowledge 8. Partner opposed 9. Fear of side effect 10. Wanted to be pregnant 11. Religious prohibition
421. If you are not practicing sexual intercourse what is your reason?	1.Haven't sexual partner 2.Religion prohibition 3.Fearingpregnancy 4.Fearing Sexually transmitted disease 5.Iamnotmature Others (specify) _____
422. Have you ever discussed about emergency contraceptive with close friends?	1. Yes 2. No
423.Where do you feel comfortable to get Information on contraception?	1. Health workers education 2. Friends/peers discussion 3. Teachers in the class 4. Clubs in the schools 5. Religious leader 6. Mass media (TV, Radio…) 7. Reading articles other specify _____

Thanks for your honest participation!!!

Annex-II: Information sheet, Consent form and Questionnaire (Amharic Version)

መረጃ መስጫ ገጽ

የአዲስ አበባ ዩኒቨርስቲ የህብረተሰብ ጤና ትምህርት ክፍል

መግቢያ፡- የወጣቶች ጤና ለመጠበቅ ያለባቸውን የስነ ተዋልዶ እና ተያይዘው የሚመጡ ችግሮችን መረዳት አስፈላጊ ነው፡፡ ስለሆነ የአዲስ አበባ የህብረተሰብ ጤና ትምህርት ክፍል ይህንን ለመዳሰስ የአክሱም ዩኒቨርስቲ ሴት ተማሪዎች ድንገተኛ የእርግዝና መከላከያ መድሃኒት እንዳይጠቀሙ ተጽእኖ የሚያደርጉ ነገሮችን ለመዳሰስ በሚደረገው ጥናት ውስጥ እርስዎ በቀላል የእጣ ናሙና ዘዴ የተመረጡ ሲሆን ይሳተፉ ዘንድ በትህትና እንጠይቃለን፡፡

የጥናቱ አስፈላጊነት እና ግብ፡- የዚህ ጥናት አላማ ዩኒቨርስቲ በመከታተል ላይ ያሉ ሴት ተማሪዎች ሴት ተማሪዎች ድንገተኛ የእርግዝና መከላከያ መድሃኒት እንዳይጠቀሙ ተጽእኖ የሚያደርጉ ሁኔታዎችን በተመለከተ መረጃዎችን ልመሰብሰብ እና በዚሁ አቅጣጫ ለሚከሰቱት የጤና ችግሮች መፍትሄ ለማመላከት ያም ዘንድ ተገቢነት ያለው መረጃ ለመስጠት ነው፡፡

የመረጃ ሚስጢራዊነት፡- መጠይቁ ላይ ስም ወይንም ሌላ የማንነት መለያ ቁጥር መጻፍ አያስፈልግም፡፡ በጥናቱ ውጤት ላይ የግል ሁኔታን የሚገልጹ መረጃዎች በተናጠል አይቀርቡም ፡፡ የሚስጡን መረጃዎች ሁሉ ሚስጥራዊነታቸው የጠበቀ ሲሆን ከጥናቱ ውጭ ለሌላ ጉዳይ አይውሉም፡፡ ጥናቱ ከዚህ ቀጥሎ ያሉትን በግል የሚሞሉ የግል ህይወትን የሚዳስሱ ጥያቄዎችን ይዘዋል ፡፡ የጥናቱን አላማ ለማሳካት ትክክለኛ መረጃ እናሰባስብ ዘንድ የአንቺን እርዳታ እንጠይቃለን፡፡

ማንኛውም ተሳታፊ፡- እዚህ ጥናት ላይ ለመሳተፍ የሚችሉት ፍቃደኛ ሲሆኑ ብቻ ነው፡፡ ሁሉንም ወይም አንዳንድ ጥያቄዎችን ላለመመለስ ትችያለሽ በጥናቱ ውስጥ ባለመሳተፍሽ ምንም ዓይነት ችግር አያስከትልብሽም ፡፡

የፍቃደኝነት መግለጫ ፎርም

እኔ ከላይ በጥናቱ መግለጫ የተገለጸውን ሃሳብ አንብቤ የጥናቱን አላማ እና ጥቅም እንዲሁም ከእኔ ምን እንደሚፈለግ ተረድቻለሁ፡፡በተጨማሪም በማንኛውንም ግዜ ጥናቱን አቋርጬ መውጣት እንደምችል ተገንዝቤ አለሁ፡፡ስለሆነም በዚህ ጥናት ለመሳተፍ ያለኝን ፍቃደኝነት እገልፃለሁ፡፡

ፍቃደኛ ነኝ---------- ፍቃደኛ አይደለሁም----------

ፊርማ---------- ቀን----------

ለሚያደርጉልን ትብብር ሁሉ ምስጋናችን የላቀ ነው፡፡

የአማርኛ መጠይቅ

የግለሰብ መረጃ፡ የሚከተሉትን ጥያቄዎች በሚገባ ካነበቡ በኃላ መልሰዎን በማከበብ ወይም ክፍት ቦታ ላይ በማስፈር ይመልሱ፡፡

ክፍል አንድ:-አጠቃላይ መረጃዎች

101. እድሜዎ ስንት ነዉ?	_____
102. ከየትኛዉ ክልል ነዉ የመጡት?	
103. ወደ ዩንቨርስቲ ከመግባትዎ በፊት የኖሩበት ቦታ ምንድን ነዉ?	1. ከተማ 2. ገጠር
104. በአሁኑ ጊዜ የጋብቻ ሁኔታዎ ምን ይመስላል?	1. ያላገባች 2. በጓደኝነት ላይ ያሉ. 3. አግብቶ በሞት የተለያዩ 4. ያገባች 5. በፍቺ የተለያዩ ሌላ ካለ (ይገለፅ)_____
105. ከየትኛዉ ብሄረሰብ ክፍል ኖት?	1. አማራ 5. ጉራጌ 2. ትግሬ 6. ኦሮሞ 3. ሱማሌ 7. ሃድያ 4. ሀረሪ 8. ወላይታ ሌላ (ይገፅ)____
106. ሀይማኖትዎ ምንድን ነዉ?	1. ኦርቶዶክስ 4. ካቶሊክ 2. ሙስሊም 5. ሀይማኖት የለኝም 3. ፕሮቴስታንት ሌላ ካለ ይገለፅ_____
107. ወደ ቤተክርስቲያን ወይም መስጊድ መቼ መቼ የሄዳሉ?	1.በየቀኑ 2.ቢያንስ በሳምንት አንዴ 3. ቢያንስ በወር አንዴ 4. ቢያንስ በዓመት አንዴ 5. በፍጹም ሄጀ አላዉቅም
108. የከፍተኛ ሁለተኛ ደረጃ ትምህርት የተከታተሉት በምን አይነት ትምህርት ቤት ነዉ?	1. በግል ት/ቤት 2. በህዝብ/በመንግስት ት/ቤት 3. በሃይማኖታዊ/missionary ት/ቤት ሌላ (ይገለፅ)_____
109. አሁን የሚያጠኑት ዘርፍ /ፋካሊቲ	_____
110. አሁን የስንተኛ ዓመት ተማሪ ኖወት?	1. 1ኛ ዓመት 4. 4ኛ ዓመት 2. 2ኛ ዓመት 5. 5ኛ ዓመት 3. 3ኛ ዓመት
111. ከቤተሰብ/ከዘመድ የሚያገኙት ወርሓዊ የኪስ ሳንቲም ምን ያህል ነው?	1. የለኝም 4. 300-499 2. <100 5. >500 3. 100-299
112. በአሁኑ ጊዜ የሚኖሩት የት ነዉ?	1. ዩንቨርስቲ ዶርም 2. ከቤተሰብ/ከዘመድ ጋር 3. ከዩንቨርስቲ ዉጪ ተከራይቼ
113. የአባትዎ የትምህርት ደረጃ	1. አልተማረም 2. ከ1ኛ-4ኛ ክፍል 3. ከ5ኛ-8ኛክፍል 4. ከ9ኛ-12ኛክፍል 5. ከ12ኛ ክፍል በላይ ተምሯል

	ሌላ ካለ ይገለፅ____
114. የእናትዎ የትምህርት ደረጃ	1. አልተማረችም 3. 2. ከ1ኛ-4ኛ ክፍል 3. ከ5ኛ-8ኛክፍል 4. ከ9ኛ-12ኛክፍል 5. ከ12ኛ ክፍል በላይ ተምራለች ሌላ ካለ ይገለፅ____
115. የቤተሰብዎ ወርሓዊ ገቢ ምን ያህል ነው?	
116. ከቤተሰብዎ ጋር ሰለ ሰነ-ተዎለዶ ተወያይተው ያዉቃሉ?	1. አዎ 2. አላዉቅም

ክፍል ሁለት ፤

ስለ ዘመናዊ የእርግዝና መከላከያ አዉቀትን በተመለከተ ጥያቄዎች

201. ስለ ዘመናዊ የእርግዝና መከላከያ ሰምተዉ ያዉቃሉ?	1.አዎ 2.አላውቅም
202. ከሰሙ የትኛዉን አይነት ያዉቃሉ?	1. ክኒን 5. ኮንደም 2. ሉፕ ሌላ ካለ ይገለፅ____ 3. መርፌ 4. በክንድ የሚቀበር
203. ድንገተኛ የእርግዝና መከላከያን ያውቃሉ?	1.አዎ 2.አላውቅም (ወደ ጥያቄ 301)
204. ለጥያቄ ቁጥር 203 መልስዎ አዎ ከሆነ የትኛውን ያውቃሉ?	1. ድንገተኛ የእርግዝና መከላከያ ክኒን 2.ሉፕ (IUCD) 3.ሁለቱንም ሌላ ካለ ይጠቀስ_____
205. ለመጀመርያ ግዜ ስለ ድንገተኛ የእርግዝና መከላከያ የሰሙት የት ነበር?	1.ጤና ተቋማት 5. ከአሰተማሪ 2.ከዜና አውታራት 6. ከክለብ 3.ከጓደኞቼ ሌላ ካለ ይጠቀስ_____ 4.ከቤተሰብ
207. ያልተፈለገ እርግዝናን ለመከላከል ድንገተኛ የእርግዝና መከላከያ ክኒን መቼ መወሰድ አለበት?	1. የግበረስጋ ግንኙነት በተደረገ በ24 ስዓት ውስጥ 2. የግበረስጋ ግንኙነት በተደረገ በ72 ስዓት ውስጥ 3. የግበረስጋ ግንኙነት በተደረገ 4-6 ባሉት ቀናት 4.የወር አበባ ከቀረ በኋላ 5.መቼ እንደሚወሰድ አላውቅም ሌላ ካለ ይጠቀስ_____
208. ያልተፈለገ እርግዝናን ለመከላከል ድንገተኛ የእርግዝና መከላከያ ሉፕ መቼ መወሰድ አለበት?	1. የግበረስጋ ግንኙነት በተደረገ በ24 ስዓት ውስጥ 2. የግበረስጋ ግንኙነት በተደረገ በ72-120 ስዓት ውስጥ 3.የወር አበባ ከቀረ በኋላ 4.መቼ እንደሚወሰድ አላውቅም ሌላ ካለ ይጠቀስ_____
209. ያልተፈለገ እርግዝናን ለመከላከል ድንገተኛ የእርግዝና መከላከያ ክኒን ምን ያህል አስተማማኝ ነው ይላሉ?	1. ከ95% በላይ 2.ከ75-89% 3.ከ10% በታች 4.አስተማማኝ አይደለም 5.አላውቅም
210. ያልተፈለገ እርግዝናን ለመከላከል ድንገተኛ የእርግዝና መከላከያ ሉፕ ምን ያህል አስተማማኝ ነው ይላሉ?	1. ከ95% በላይ 2.ከ75-89% 3.ከ10% በታች 4.አስተማማኝ አይደለም

	5.አላውቅም
211. ያልተፈለገ እርግዝናን ለመከላከል ድንገተኛ የእርግዝና መከላከያ ክኒን ስንት ግዜ መወሰድ አለበት?	1.አንድ ግዜ 2.ሁለት ግዜ 3.ሶስት ግዜ 4.አላውቅም
212. ክኒኑ የሚወሰድብት የሰዓት ልዩነት ምን ያህል ነው?	1.12 ሰዓት ልዩነት 2.24 ሰዓት ልዩነት 3.አላውቅም

ክፍል ሶስት፡

የሚከተሉት ጥያቄዎች በድንገኛ የእርግዝናን አመለካከትን በተመለከተ የተዘጋጁ ሲሆን የሚስማሙበትን በመምረጥ ምልክት ያድርጉ፡፡

	በጣም አልስማማም	አልስማማም	ምንም ሃሳብ የለኝም	እስማማለሁ	በጣም እስማማለሁ
301.ድንገተኛየእርግዝና መከላከያ በጥንዶች መካከል እምነትን ያሳጣል					
302. ለሁሉም ሴቶች ድንገተኛ የእርግዝና መከላከያ ማቅረብ ተገቢ ነው					
303. በካምፓስ/ አቅራቢያ ያሉ ክሊኒኮችድንገተኛ የእርግዝና መከላከያ ለመውሰድ ምቹ ናቸው					
304. ያልታሰበ የግበረ ስጋ ግንኙነት ከተደረገ በኋላ ድንገተኛ የእርግዝና መከላከያ መውስድ ጥሩ ነው					
305. ድንገተኛ የእርግዝና መከላከያ መውስድ ሃጢያት ነው					
306. ድንገተኛ የእርግዝና መከላከያ መውስድ መህንነትን ያመጣል					
307.ድንገተኛ የእርግዝና መከላከያ የሚጠቀሙ ሴቶች ባሎቻቸው ይተዋቸዋል					
308. ድንገተኛ የእርግዝና መከላከያ መውስድ የወሲብ ፍላጎት ይቀንሳል					
309.እርግዝና ከተከሰተ ድንገተኛ የእርግዝና መከላከያ መዉሰድ ጽንሱን ይጎዳዋል					

ክፍል አራት፡

የስነ-ወሲብ እና ለሎች ከስነ-ወሲብ የተያያዙ ባህርያትን በተመለከቱ ጥያቄዎች

401. የግብረሥጋ ግንኙነት አድርገው ያውቂሉ?	1. አዎ 2. አላውቅም (ወደ ጥያቄ ቁጥር 421 ይለፉ)
402. ለመጀመሪያ ጊዜ የግብረሥጋ ግንኙነት ሲያደርጉ እድሜዎ ሥንት ነበር?	____
403. ለመጀመሪያ ጊዜ የግብረሥጋ ግንኙነት ያደረጉት ከማን ጋር ነበር?	1. ከባለቤቴ 2. ከወንድ ጓደገኛ 3. ከአስተማሪ 4. ከማላዉቀዉ ሰዉ ጋር 5. ከዉጪ ዜጋ/ፈረንጅ
404. ለመጀመሪያ ጊዜ የግብረሥጋ ግንኙነት ሲያደርጉ ምክንያትዎ ምን ነበር?	1. ሠርግ 2. የራሴ ፍላጎት 3. ጓደኛየ ቃል ስለ ገባልኝ 4. ገንዘብ ለማግኘት 5. ፈተና ለማለፍ 6. ተገድጄ 7. የጓደኛ ተፅዕኖ

405. በህይወት ዘመንዎ ከስንት ሰዎች ጋር የግብረስጋ ግንኙነት አድርገዋል?	____
406. አርግዘዉ ያውቃሉ?	1. አዎ 2. አላውቅም (ወደ ጥያቄ ቁጥር **413** ይለፉ)
407. ያረገዙት መቼ ነበር?	1. ዩኒቨርስቲ ከገቡ በኃላ 2. ከመግባቴ በፊት 3. ዩኒቨርስቲ ከመግባቴ በፊት እና በኃላ
408. ለጥያቄ ቁጥር 406 መልስዎ አዎ ከሆነ እርግዝናውን ይፈልጉት ነበር?	1. አዎ 2.አልፈልገውም
409. እርግዝናዎን የማይፈልጉት ከሆነ ምክንያትዎ ምን ነበር?	1. የእርግዝና መከላከያ ስለረሳሁ፡ 2. ስለተደፈርኩ፡ 3. የእርግዝናመከላከያ እየወሰድኩ ስላልሰራልኝ ሌላ ካለ(ይጠቀስ)____
410. የእርግዝናዎ ዉጤት ምን ነበር?	1. ወልጄአለሁ 2. አስወርጄአለሁ 3. አሁንም ነፍሰጡር ነኝ ሌላ ካለ(ይጠቀስ)____
411. ስንት ጊዜ አርግዘው ያውቃሉ?	_____
412. ስንት ልጆች አልዎት?	1. የለኝም 3. ሁለት **2.** አንድ ሌላ ካለ(ይጠቀስ)____
413. በህይወት ዘመንዎ ድንገተኛ የእርግዝና መከላከያ ተጠቅመው ያዉቃሉ፡፡	1. አዎ 2. አላውቅም (ወደ ጥያቄ ቁጥር 420 ይለፉ)
414. ለጥያቄ ቁጥር 413 መልስዎ አዎ ከሆነ ምን ተጠቀሙ?	1. ድንገተኛ የእርግዝና መከላከያ ክኒን 2. ሉፕ(IUCD) 3. አላዉቀዉም /አላስታዉስም
415. ዩኒቨርስቲ ከገቡ በኃላስ ድንገተኛ የእርግዝና መከላከያ ተጠቅመዉ ያዉቃሉ?	1. አዎ 2.አላውቅም
416. ከተጠቀሙ ከየት ያገኛሉ?	1. ከፋርማሲ 2. ዩኒቨርሲቲ ክሊኒክ 3. ከመንግስት ጤና ተቋማት 4. ከግል ክሊኒክ
417. ጥንቃቄ የጎደለው ግበረስጋ ግንኙነት ካደረጉ በኋላ ድንገተኛ የእርግዝና መከላከያ መቼ ይወስዳሉ?	1. ድንገተኛ የእርግዝና መከላከያ ክኒን በ72 ሰዓት ውስጥ ፤ለ ሉፕ 120 ሰዓት 2. ከ72 ስዓት በኋላ ለድንገተኛ የእርግዝና መከላከያ ክኒን እና ፤ለ ሉፕ ከ120 ሰዓት በኋላ
418. ድንገተኛ የእርግዝና መከላከያ ስንት ግዜ ወስደው ያውቃሉ?	1. አንድ ግዜ 2.ሁለት እና ከዛ በላይ 3.አላስታውስም/አላውቅም
419.ከድንገተኛ የእርግዝና መከላከያ ውጪሌላ ዘመናዊ የእርግዝና መከላከያ ተጠቅመው ያውቃሉ?	1. አዎ 2. አላዉቅም

420. ድንገተኛ የእርግዝና መከላከያ የማይጠቀሙ ከሆነ ምክንያትዎ ምን ነበር?	1.ለአገልግሎት ሰጪዎች ጥሩ አመለካከት ስለሌኝ 2.ጤና ተቋሙ ሩቅ ስለሆነ 3. ድንገተኛ የእርግዝና መከላከያ ስለማይገኝ 4.አገልግሎት ሰጪዎች ጥሩ አመለካከት ስለሌላቸው 5.ስለምፈራ 6.አገልግለቱ ስለሚቆራረጥ 7.የእውቀት ማነስ 8.ጓደኛየ ስለሚቃወመኝ 9.የመድሃኒቱ የጎንየሽ ጉዳት ስለምፈራ 10. ማርገዝ ስለ ፈለግኩ 11. በሀይማኖት ስለማይፈቀድ
421. የግብረ ስጋ ግንኙነት አድርገው የማውቁ ከሆነ፣ ላለማድረግዎ ምክንያት ምን ነበር?	1. የሚስማማኝን ተጣማሪ ስላላገኘሁ 2. በሃይማኖት ስለሚከለከል 3. እርግዝናን በመፍራት 4. የአባላዘር በሽታ በመፍራት 5.አካለመጠን ስላልደረስኩ ሌላ ካለ (ይጠቀስ)__
422. ስለ ድንገተኛ የእርግዝና መከላከያ ከቅርብ ጓደኛዎ ተወያይተው ያውቃሉ?	1.አዎ 2.አላውቅም
423. .ስለ ድንገተኛ የእርግዝና መከላከያ ከየት ቢሰሙ ደስ ይልዎታል?	1. ከጤና ባለሙያ 2. ከጓደኞቼ 3. ከአስተማሪ ክፍል ዉስጥ 4. ከክለብ 5. ከሀይማኖት መሪዎች 6. ከዜና አዉታራት 7. ከጹሁፍ በማንበብ ሌላ ካለ(ይጠቀስ)____

ላደረጉልን ትብብር ሁሉ ምስጋናችን የላቀ ነዉ!!!

Declaration

This MPH thesis is my original work and has not been presented for a degree and all sources of materials used for this thesis have been accordingly acknowledged.

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This MPH thesis had been submitted for examination with my approval as a main thesis advisor.

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Date_____