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Knowledge Attitude and Utilization of Emergency Contraception among Health Science and Medical Students of Arba Minch University, 2015

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Abstract

Introduction: Emergency contraception refers to contraceptive methods that can be used by women to prevent an unwanted pregnancy in the first few days after unprotected intercourse or contraceptive accident such as leakage/slippage of condom. It is important to prevent unwanted pregnancy and there by induced abortion. There for this study aimed to assess the knowledge attitude and practice of emergency contraceptive among Arba Minch University health science students.

Methods: Cross-sectional quantitative study was conducted from July 21, 2017 among female health science and medicine students of Arba Minch University. Self-administered structured and pre-tested questioner was used to obtain information from 216 study participants who were selected by population proportional systematic random sampling technique. After data collection the data was coded, entered and analyzed by using SPSS version 20.0. Binary logistic regression was fitted with forward stepwise method and significance was determined at p-value<0.05.

Result: The study showed that, 95.9% of the university female students had heard about emergency contraceptive; 87.4% of them identified the correct timing of use (72 hours). 84.8% students support the idea of making available emergency contraceptives for all females, 88.2% respondents said they are willing to use emergency contraceptive if need arises and 88.2% said they will recommend emergency contraceptive for other females if need arises. And also 58.8% of the respondents have ever practiced emergency contraceptive, of which 55.7% were used oral pills, 18.4% were used intra uterine contraceptive device. There is significant relation between use of emergency contraception and the level of class they are attending (class year), residence, knowledge about emergency contraceptives, attitude towards EC and parental communication.

Conclusion and recommendations: The level of knowledge, their attitude and practice of emergency contraceptive among students was high compared to other studies, further to increase this has to focus on information communication with in the school and families.

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Keywords

Contraceptive; Intrauterine device; Pregnancy; Abortion

Introduction

Each year about 210 million women around the world become pregnant. Among them, about 75 million pregnancies are unplanned or unintended. It is estimated that between 8–30 million pregnancies each year result from contraceptive failure either due to inconsistent or incorrect use or failure of the method itself. Most of these unplanned/unintended pregnancies are not carried to full term, but aborted often in unhygienic conditions leading to serious consequences. The larger segment of this population is in developing countries [1,2]. This high incidence of unplanned and unwanted pregnancies occur because sexual intercourse does not always happen in a planned and completely controlled context, insufficient access and knowledge to modern methods of contraception, failure and imperfect use of contraceptives [1,3].

And many young couples initiate sexual activity before they begin to practice ongoing contraception; many youth have unplanned intercourse or sporadically, which makes contraceptive planning difficult, many young women experience coerced sex, including rape [4]. Emergency contraception (EC) is the only method women can use to prevent 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 to prevent an unwanted pregnancy in the first few days. It offers women a last chance to prevent pregnancy and should not be used as a regular family planning method but should be used only in an emergency as a backup and provided by as an emergency contraceptive pills (ECPs) or Intrauterine device (IUD), although it does not protect against STIs [1,5,6].

Currently, there are four types/products in the market and health facilities. Three of these products are approved for prevention of pregnancy when taken within 72 hours after unprotected sex. Adults may purchase all of these methods without prescription. The fourth product, Ella can be taken up to 5 days after unprotected sex; it is available by prescription. In Ethiopia IUCD is not used as a primary preference for emergency contraceptive in public health facilities due to its cost intensive effect [6]. Levonorgestrel only pill and combined oral contraceptives are the most common emergency contraceptives available in Ethiopia [7]. The most recent data confirm that compliance with this regimen reduces the risk of pregnancy by 75% [8].

Addressing adolescent pregnancy is important for achieving the national health care plan of developing countries. Millions of unwanted pregnancy and unsafe abortion could be averted if ECs were easily available. Thus, unwanted pregnancy and abortion are the major public health problems in our country and also throughout the world. In order to prevent these problems after unprotected sexual intercourse EC play an important role. But due to lack of adequate information many females are exposed to different health and health related risks. Also there is a few data available on female's knowledge, attitude and practice towards EC

or it is not well searched/studied as compared to its significance. Assessing KAP of health science students regarding EC is much significant; as they are part of adolescent and care providers. The findings of this study could be helpful in planning to reduce unwanted pregnancy, unsafe abortion and its complication, improve sexual and reproductive health of female students of the university.

Materials and Methods

Study design and settings

This institution based cross-sectional study was conducted in Arba Minch University College of medicine and health sciences, Nech Sar campus, Southern Ethiopia through interviewing female students. Arba Minch University is one of the 33 public universities in the country which have 5 campuses with enrolment capacity of more than 20 thousand students. Nech Sar is one of the five campus which enrolls health science and medical students.

Study population and sampling technique

All female students in college of medicine and health sciences were source populations. The sample size was calculated using single population proportion formula based on the following assumptions: Proportion of knowledge of emergency contraceptive 85% [9].

Significant level at $\alpha=0.05$, at 95% confidence interval, Margin of error is 5% and 10% nonresponse rate, the minimum sample size became 216 female students. A systematic random sampling technique had been used to select study participants from students attending at Arba Minch University College of medicine and health sciences (Figure 1).

Data collection procedure and data quality control

After necessary modification and changes that had been made based on the pre-test the final data was collected by using structured pretest self-administered questionnaire. The questionnaire was developed through a review of related national and international literature. The data collection instrument was an anonymous structured questionnaire, which was prepared in English.

The questionnaire sought information on socio-demographic characteristics (Age, Marital status, Occupational status, Residence, Religion, Class year, Respondents) their knowledge, attitude and practice and associated factors of emergency contraceptive.

Study variables and data analysis

The dependent variables are knowledge, attitude and practice:

Knowledge: A response of greater than 50% of the 8 knowledge assessment questions.

Attitude: A response of greater than 50% of the 4 attitude assessment questions.

Practice: Utilization of emergency contraceptives by respondents following unprotected sexual intercourse and the independent variables were socio-demographic characteristics, Sexual and reproductive history.

The data was cleaned, coded and entered into Epi-info version 7 and exported to SPSS version 20 for analysis. Exploratory data analysis carried out to check the levels of missing values, presence of influential outliers, independence of errors, multi-collinearity and normality.

Binary and multiple logistic regressions were run to assess the association of various factors with practice of emergency contraceptive. The final model was fitted with variables significant at level of $p\text{-value} < 0.25$. The fitness of the model was checked by Hosmer and Lemeshow test. The strength of association of predictor variables were assessed using odds ratio and significance of variables were reported by using 95% confidence interval and $p\text{-values} < 0.05$.

Result

Socio demographic variables

A total of 216 university female students who are attending their education in Arba Minch University College of health sciences and medicine were included in the study and Full response was obtained making the response rate of 100%. The age of respondents ranged from 19 years to 32 years with mean age of 23 (SD +3) years. Most of the respondents, 62%, were followers of orthodox Christianity followed by Protestants, accounting 27.2% of respondents. Majority of the respondents were single (63.7%). More than one third of respondents were Amhara (33.4%) followed by Oromo (24.1%). Majorities of respondents were from families who attend primary school (39.3%), among the respondents only 19% have discussed about reproductive health with their parents and 87% have discussion with friends (Table 1).

Sexual and reproductive history of respondents

The mean age of menarche was 13.7 years with minimum age of 11 years and maximum of 16 years. Majority of respondents (94.8%) correctly identified their risk period and 5.2% did not know their risk period. 90.2% said they could be pregnant at first sexual intercourse and 9.8% did not sure. 84.7% students have sexual intercourse in the past being the first time at mean age of 16.7. Among these, around 18% of students said it was forced. Around 43.4% have more than one partner. 45% of students did not use family planning methods during their first sexual intercourse (Table 2).

Knowledge about emergency contraception

Among 216 respondents, 208 (95.9%) had heard about emergency contraceptives; 41.2% reported from mass media followed by health professionals 29.4% and 13.4% from teacher being their source of information about emergency contraceptives. Out of these who heard about emergency contraceptives, 54.9% identified oral pills as a possible methods of emergency contraceptive, followed by injectable 18.1% and intra uterine contraceptives

(19%). More than half (87.2%) of the respondents have correctly identified the recommended 72 hours as a time limit for the method use and 12.6% of them responded as they do not know the time of use. In the other hand about 70.6% of the respondents have identified as IUCD to be inserted within five days of unsafe sexual inter course and 29.4% of the respondents answered as they do not know correctly the time to be used in order IUCD to be effective. Out of the university students having information about emergency contraceptive 28.4% of them responded emergency contraceptive can be used as regular method of contraceptive. 83.6% students said emergency contraceptive pill is less safe and 16.3% did not know the safety of emergency contraceptive pills when compared to other oral pills. About 89.8% students said emergency contraceptive pill is less effective and 10.2% said it is more effective when compared to other oral pills. The majority of students 69.3% know its efficacy when it is compared to other oral pills. Over all 95.9% of them was knowledgeable; and 4.1% of the respondents having no adequate knowledge regarding emergency contraceptive (Figures 2 and 3) (Table 3).

Attitude towards emergency contraception

From the total, 183 (84.7%) students supported the idea of making available emergency contraceptives for all females. And 191 (88.4%) respondents said they are willing to use emergency contraceptive if need arises and they will recommend emergency contraceptive for other females if need arises. The preferred route of delivery of emergency contraceptive cited by students were health workers by 189 (87.6%) followed by pharmacists 27 (12.4%) (Table 4).

About One hundred forty five (67%) students believed service provided in pharmacy or nearby clinic is convenient to use emergency contraception. Almost 96.3% of students believed unplanned sexual intercourse is a problem of young females. Also 88.3% believed unwanted pregnancy is a problem of young females. About 87.1% students had positive attitude towards emergency contraception.

Practice of emergency contraception

About 127 (58.8%) of the respondents have ever practiced emergency contraceptive, of which (55.7%) were used oral pills. Almost 18.3% were used intra uterine contraceptive device. Majorities respond that they used emergency contraceptive due to not using regular contraceptive and used within three days as nobody was recommended them to use (Table 5).

Factors associated with emergency contraceptive use

In bivariate analysis, a significant difference was observed between predictors; age, marital status, level of education, residence, knowledge about emergency contraceptives, attitude towards EC and parental communication were associated with practice (use of emergency contraception). By using variables which have $p\text{-value} < 0.25$ in bivariate analysis multiple variable analysis model was fitted with forward step wise procedure. After controlling the effect of other variables level of education, residence, knowledge about emergency contraceptives, attitude towards EC and parental communication were significantly associated with practice (use of emergency contraception) (Table 6).

Discussion

According to this study, 95.9% of the university students had heard about emergency contraceptive which is higher compared to studies done in Nigeria 75% [10] Addis Ababa 43.5% [9], Jima 41.9% [11] and Debreworkose 36.8% [12]. Of those who had heard about emergency contraceptive, 87.4% of identified the correct timing of use (72 hours). This is greater than the study done in Nigeria [10] shows only 18% of the respondents identified the correct timing of use, In a Ghana study, only 11% of the students surveyed knew the correct timeframe for starting ECPs. In Jamaica, even though 84% of the 205 students surveyed knew of ECPs, few knew about availability, dosage, and timing [1,2].

A study in Northern India [13] reported that very few of the youth surveyed was familiar with the concept of EC, A study done in Turkish nursing and midwifery students [14] show that 59.5% participants knew at least one method of EC, A study done in Nepal College students [15] show that only about 68% of them had heard about EC, study which is done in Cameroon university students [16] show that general level of awareness of ECPs was 63.0%. This higher level of knowledge in this study may be due to the fact that the respondents involved in the current study were health science students and majorities were year two and above in which they took the course reproductive health, pharmacology and other similar courses which could increase knowledge of emergency contraception through education.

According to this study finding 84.8% students support the idea of making available emergency contraceptives for all females, 88.2% respondents said they are willing to use emergency contraceptive if need arises and 88.2% said they will recommend emergency contraceptive for other females if need arises. Over all their attitude towards emergency contraceptive was good and it is much higher when compared to a study conducted in Cameroon university students [16] in which up to 65.0% have positive attitude towards emergency contraceptive. In a study which was done in South Africa University 51% [17] of the respondents have positive attitude, a study done in Addis Ababa university student's shows that 32.3% [9] had a positive attitude towards it and In Jimma University study, it shows that 71.2% [11] agreed to use EC when they practice unintended sexual intercourse. This difference could be due to time and professional difference.

The study shows about 58.8% of the respondents have ever practiced emergency contraceptive, of which 55.7% were used oral pills, 18.4% were used intra uterine contraceptive device. Majorities respond that they used emergency contraceptive due to not using regular contraceptive and used within three days as nobody was recommended them to use it but themselves. This is again higher than findings of similar studies conducted in different areas. A study which was done in Cameroon University students 7.4% [16] students had used emergency contraceptive pills, study done in AAU student's [9] shows Among those who had unprotected sexual intercourse 75% had ever used EC and In Jimma University study [11], it shows that only 6.8% used emergency contraceptive.

There is also strong evidence of association between practice of respondents and at which class they are attending (class year), residence, knowledge about emergency contraceptives, attitude towards EC and parental communication of the respondents. Year two and above

grade students are 2.1 (1.1–3.32) times more likely to use emergency contraceptive than first year students. Similar findings were reported from other studies [9,11]. This association may be due to acquisition of knowledge in higher grades which help them to use EC whenever necessary. Similarly, as students from urban residence are more likely to have information, they are 1.43 (1.24–1.78) times more likely to use emergency contraception in this study.

According to this study, students who are knowledgeable are two times [AOR=2.3, 95%CI=(1.75–2.97)] more likely to use emergency contraceptive than their counterparts who are not knowledgeable. Such finding was also appreciated from different studies [13–16]. Since knowledge and attitude are the primary drive for practice, students who had positive attitude are more likely to use emergency contraceptives. Similarly students who had parental communication are more likely to practice emergency contraceptive [AOR=1.44, 95%CI=(1.03–2.01)].

Conclusion and Recommendation

This study showed that the awareness of emergency contraception among female students of Arba Minch University College of health sciences and medicine was high. The students had also optimal knowledge of the timeframe for the use of EOC. More over their attitude to use emergency contraception and to advice other to use and their practice is high. There is strong association between at which class they are attending (class year), residence, knowledge about emergency contraceptives, attitude towards EC and parental communication with practice of emergency contraception. Therefore further to increase the knowledge, attitude and practice of emergency contraception use friendly services, basic trainings and family communication services should be promoted.

Ethical Statement

Ethical clearance was obtained from institutional review board of Arba Minch University. Oral consent was also obtained from each participant. Each respondents were informed about the purpose of the study and also that all data obtained from them were kept confidential by using codes instead of any personal identifiers.

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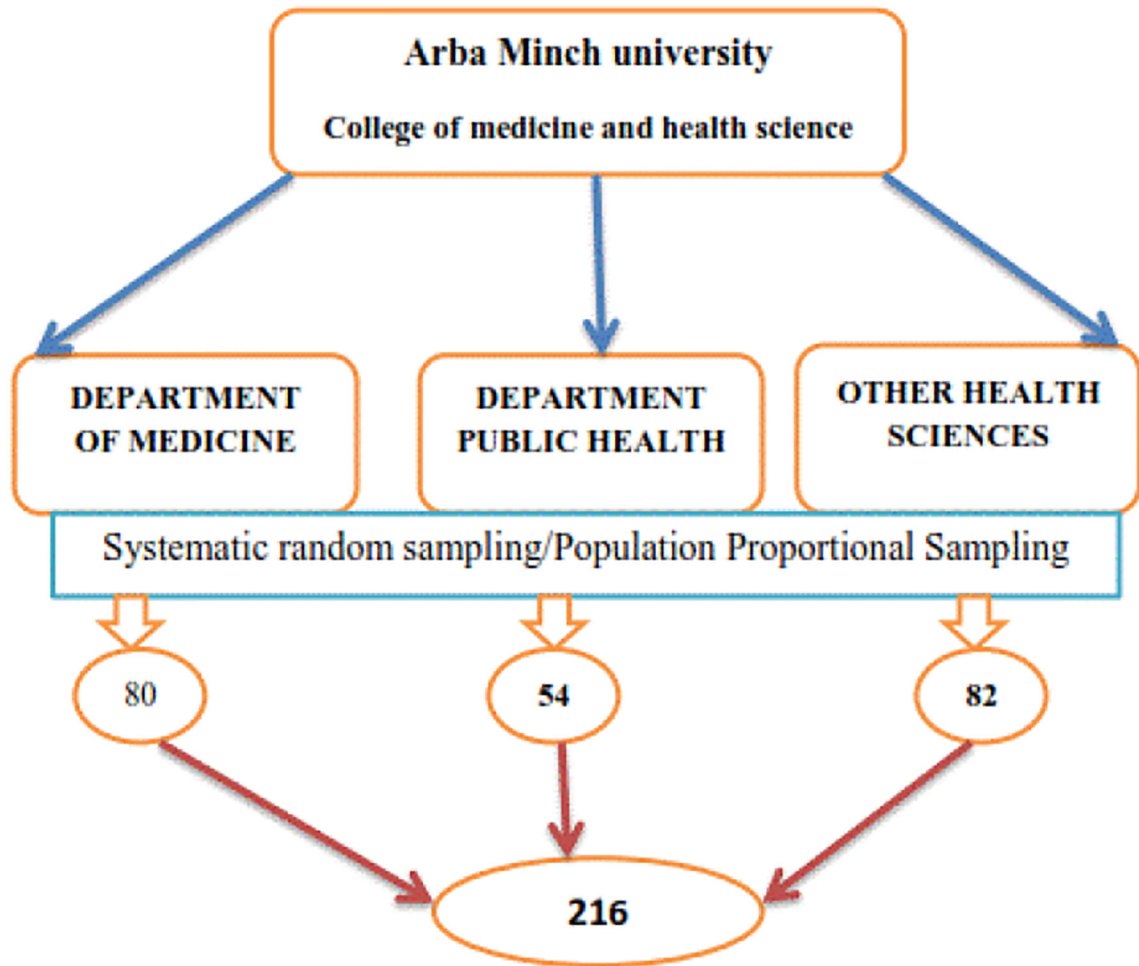


Figure 1:
Recruitment of study participants, Arba Minch University College of Medicine and Health Science, 2015.

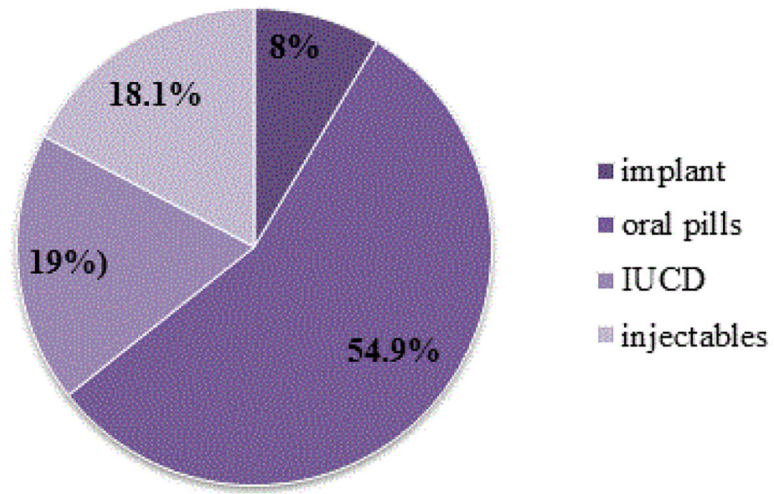


Figure 2:
A pie chart showing types of EC used among respondents at Arba Minch university, 2015.

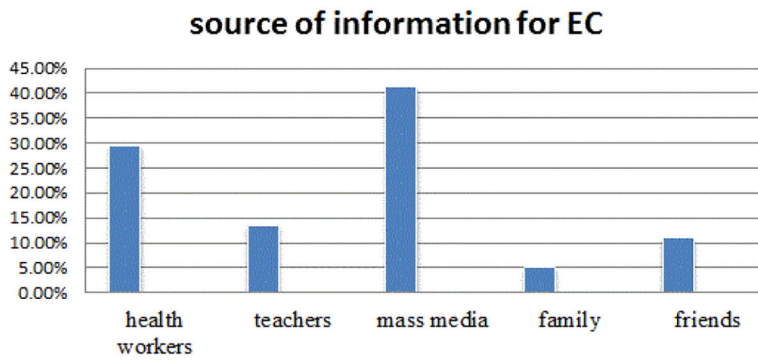


Figure 3: Percentage of female university students by their source of information about emergency contraceptive, 2015.

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Table 1:

Socio-demographic characteristics of female students at Arba Minch University, 2015.

characteristics	Frequency	Percentage (%)
Age		
15–19	5	2.3
20–24	110	51
25–29	95	44
>30	6	2.7
Ethnicity		
Amhara	72	33.4
Oromo	52	24.1
Tigre	43	20
Others	49	22.5
Marital status		
Single	138	63.7
Married	78	36.3
Previous residence		
Urban	128	60.7
Religion		
Orthodox	134	62
Muslims	26	12.1
Protestant	56	25.9
Year at university		
2 nd year	26	12.03
3 rd year	126	58.33
4 th year	64	29.63
Family education level		
Illiterate	80	37
Primary education	85	39.3
Secondary	32	14.8
Tertiary	19	8.8
Having discussion with family		
Yes	41	19

Table 2:

Sexual and reproductive history of female students at Arba Minch University, 2015.

characteristics	N	Percentage (%)
Age of menarche	Mean and SD (13.7 + 2.7 year)	
Known risk periods		
Yes	205	94.8
Ever had sex		
Yes	183	84.7
Think about pregnancy (183)		
Yes	168	90.2
Ever been pregnant (183)		
Yes	18	9.2
Used contraceptive at intercourse		
Yes	101	55

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Table 3:

Emergency contraception knowledge of female students at Arba Minch University, 2015.

Variables	Frequency	Percentage (%)
Time for EC effectiveness		
Within 3 days (72) hours	188	87.2
3–5 days	4	1.8
After a week	12	5.9
I don't know	12	5.1
Time for IUCD effectiveness		
within 5 days	157	72.6
after 5 days	3	1.4
I don't know	56	26

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Table 4:

Attitude towards emergency contraception among female students at Arba Minch University, 2015.

Characteristics	Number	Percentage (%)
Support idea of availing EC pills? (N=216)		
Yes	183	84.7
Willingness to use EC? (N=216)		
Yes	95	88.2
Recommend for others to use? (N=108)		
Yes	190	88.2
Whom do you recommend provided EC service?		
Health workers	189	87.6
Pharmacists	27	12.4
Do you believe the service is convenient?		
Yes	145	67
Unwanted pregnancy is a problem of all youth females?		
Yes	191	88.3
Unplanned sexual intercourse is a problem of all young female?		
Yes	208	96.3

Table 5:

Practice of emergency contraceptives among female students at Arba Minch University, 2015.

Characteristics	Frequency	Percentage (%)
Ever used EC (n=216)		
Yes	127	58.8
No	89	41.2
Type of EC ever used (127)		
Pill	71	55.7
IUCD	23	18.3
Others	33	26.3

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Factors associated with emergency contraceptive use in Arba Minch University [*variables which are significant in multiple variable analysis at p-value<0.05].

Table 6:

Variables	EC practice		COR (95% CI)	AOR (95% CI)
	Yes (N)	No (N)		
Age group				
25	59	56	1	1
>25	66	35	1.8 (1.03–3.1)	1.7 (0.8–3.92)
Marital Status				
Married	52	26	1.68 (0.94–2.99)	1.4 (0.87–2.86)
Unmarried	75	63	1	1
Religion				
Orthodox	79	55	1.05 (0.44–2.46)	-
Protestant/catholic	33	23	1.05 (0.4–2.7)	-
Islam	15	11	1	-
Ethnicity				
Amhara	42	30	1	-
Oromo	31	21	1.05 (0.51–2.17)	-
Tigre	25	18	0.99 (0.46–2.13)	-
Others	29	20	1.03 (0.5–2.3)	-
Department				
Medicine	47	33	1	-
Public health	32	22	1.02 (0.5–2.06)	-
Other health	48	34	0.99 (0.53–1.85)	-
Level in the university				
Year I	27	31	1	1
Year II and above	100	58	1.98 (1.07–3.63)	2.1 (1.1–3.32)*
Residence				
Urban	83	45	1.76 (1.08–3.07)	1.43 (1.24–1.78)*
Rural	44	42	1	1

Variables	EC practice		COR (95% CI)	AOR (95% CI)
	Yes (N)	No (N)		
Knowledge on EC				
Yes	124	83	2.98 (0.7–12.3)	2.3 (1.75–2.97)*
No	3	6	1	1
Attitude/Belief				
Positive	111	77	2.1 (0.94–4.7)	2.6 (1.67–3.45)*
Negative	16	12	1	1
Parental communication				
Yes	27	14	1.9 (0.9–3.96)	1.44 (1.03–2.01)*
No	100	75	1	1