

FACTORS ASSOCIATED WITH THE KNOWLEDGE, ATTITUDE AND PRACTICE OF EMERGENCY CONTRACEPTIVE AMONG METTU UNIVERSITY FEMALE STUDENTS, OROMIA REGIONAL STATE, WEST ETHIOPIA

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Abstract

Higher Education students' unwanted pregnancies pose a major public health problems in the developed and developing countries including Ethiopia and are associated with far reaching effects. The aim of this study was to assess knowledge, attitude and practice of emergency contraceptives and factors affecting it among of female students of Mettu University.

Institution based cross-sectional study on assessing knowledge, attitude and practice of emergency contraceptive was conducted from March to April 2013.

Among the total participants (n = 318), only 25.8 % were sexually active. Ninety-three (29.3%) of them had ever heard of Emergency Contraceptive and only 21 (22.6%) used the method. The majority (78.5%) of the respondents had a positive attitude towards emergency contraceptives. Knowledge of emergency contraceptives was significantly associated with the faculty of respondents and sexual status of respondents (p<0.05). Similarly, attitude and practice of emergency contraceptives were significantly associated with predictor variables, including age, faculty and sexual status of respondents (P< 0.05).

The study showed low emergency contraceptive awareness and usage was found to be low. Therefore, it is highly recommended that interventions intended to combat maternal mortality through contraceptive usage need to be aware of such information specific to the target groups.

Keywords: Emergency contraceptives, knowledge, attitude, practice, Mettu University

Introduction

Worldwide, 70,000 women aged 15-19 years die each year of pregnancy and childbirth related causes. Although more than 18 million young women give birth to a

baby each year, nine in ten of them are in developing countries. Moreover, about 30% of women give birth to the first child before they are 20th birthday in developing countries¹. Unwanted pregnancies among

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higher education students pose a major public health problem^{2, 3}. It is associated with far reaching effects such as jeopardizing students' educational progress and future careers^{2, 3}. These pregnancies are mostly unplanned and unintended, and many are terminated either formally or informally². Around 30%–50% of women presenting with a choice on termination of pregnancy were not using contraceptives at the time of conception, and similar numbers of pregnancies were unplanned and unwanted². Unwanted pregnancy is a big problem in Ethiopia; more than 60% of the pregnancies in adolescents are unwanted which is an alarming figure, and most of these pregnancies, particularly in adolescents, end up with unsafe abortion³. In about half of all unwanted pregnancies, conception occurs due to inadequate guidance to use contraception effectively, including the users' inability to address their feelings, poor attitudes towards contraceptives, and lack of motivations².

The study showed that the knowledge, attitude, and practice of emergency contraceptives among women are limited⁴. In the same manner, unsafe abortion is a major medical and public health problem in Ethiopia as the country has a high incidence of unwanted pregnancies and unsafe abortions, particularly among adolescents⁵. Teenage girls are particularly prone to unintended pregnancies. The proportion of teenage pregnancies in Ethiopia is 16.3%⁶. Although many of unmarried adolescents have infrequent sexual intercourse, a large proportion of them are sexually active and irregular users of contraceptives or do not use a reliable contraceptive method at all that is exposing them to unwanted pregnancy⁷.

In addition to the higher risk of morbidity and mortality, adolescent pregnancy can lead to serious social stigma and health

consequences. However, in many developing countries, pregnancy severely limits an adolescent in pursuing education and in having broader economic opportunities in the future⁸. Basically, in preventing unintended pregnancy, ECPs can help avert the risk to the mother and child associated with pregnancy and childbearing⁸.

Emergency contraceptive is largely underutilized worldwide and has been referred to as one of the best-kept secrets in reproductive health. Different studies conducted in Ethiopia indicated that awareness of EC is less than 50% and utilization is less than 10%³. Despite the Ethiopian government's effort to prevent unwanted pregnancies and abortion among youths of age less than 24 years, the number of youths requesting termination of pregnancy is increasing annually³. Contraceptives are available with affordable costs. However, there is a large number youth' with unwanted pregnancies and unsafe abortion³. This study tried to assess the knowledge, attitude, and practices of emergency contraceptives among university students.

Methods and Materials

The study was conducted in Mettu University, which is one of the thirty-three Public Universities in the country located 605 km to the west from the capital of Ethiopia (Addis Ababa). A student in Metu University comes from different regions of the country having different ethnicity and cultures. Mettu University established in 2010 and at the beginning of 2012/13 academic year it had a total of six faculties with twenty-two departments and had a total number of 1783 students, of which 574 were females.

Study Design and Population

A cross-sectional institution based design was employed using quantitative methods

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from March to April 2013. All female undergraduate regular students in the University were the source population, while all females from the selected faculties were the study populations. In this regard, four from six faculties of the university were randomly selected to include all female students into the study. A total of 327 female students were identified and included into the study.

Data Collection

The data were collected using a pretested structured self-administered questionnaire adapted from previous similar studies. The instrument includes socio-demographic and economic characteristics, questions that measure knowledge, attitude and practices of the respondents. The data were collected by five female university students and supervised by two nurses recruited from the Metu Hospital. Two days training was given to the data collectors and supervisors on the objective of the study and clarification of questions one by one. Appropriate and convenient time was arranged with the faculties and department heads to administer the questionnaire.

Analysis

The pre-coded responses were double entered into Epi DATA version 3.1 by the principal investigator and exported into IBM SPSS version 20 for data checking, cleaning, bivariate and multivariate analysis. The analysis was focused on the awareness, attitude and practice of respondents on emergency contraceptives and the association of selected potential socio-demographic and behavioral factors. A binary logistic regression model was used and the results were expressed as crude and adjusted odds ratio relative to the reference category at the statistical significance of 95% confidence interval and P-value of < 0.05. The assumptions of logistic regression were checked to be satisfied.

Ethical Considerations

Ethical clearance and approval to conduct the research were obtained from institutional review board in College of Health Sciences, Mettu University. Permission to conduct the study was also requested from the respective faculty and department deans. Prior to administering the questionnaires, the aims, and objectives of the study were explained and verbal consent was obtained from study participants before administering the questionnaire. They were also informed to leave the questions if they didn't want to respond and even the possibility of withdrawing from the study at any time. Moreover, confidentiality and anonymity were ensured throughout the study.

- ❖ The following operational definitions were used:
- ❖ Knowledge of EC: respondents were labeled to have "Knowledge of EC" if they score the mean score of the group or above on the three close ended knowledge questions related to EC.
- ❖ In this study, respondents were considered to have positive attitude towards EC if they were willing to use EC and if they recommend others (friends) to use it when needed
- ❖ Ever use of EC: Those respondents who used EC for at least one time.

Results

Socio-demographic characteristics of the respondents

From the female students planned to be included into the study, 318 completed the questionnaire making a response rate of 97.2%. More than half (51%) were in the range of 20-24 years and the mean age and standard deviation was 22.03 ($\pm 3.03SD$) years. The majority (48%) were Orthodox Christians in their religion. The vast majority 94.2% reported that they never had sex and nearly all (98.4%) were never married (Table 1).

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Table 1: Socio-Demographic Characteristics of the Respondents (female students) in Mettu University, April 2013, Western Ethiopia

Characteristics	Frequency	Percent
Age in years		
15-19	57	18
20-24	163	51
25-29	96	30
30 and above	2	1
Religion		
Protestant	110	35
Muslim	49	15
Orthodox	153	48
Others	6	2
Marital status		
Married	4	1.3
Unmarried	313	98.4
Widowed	1	0.3
Faculty		
Medical and health science	44	13.8
Natural & computational science	132	41.5
Social science & humanitarian	77	24.2
Forestry & natural science	65	20.4

Reproductive characteristics of the respondents

At the time of the survey, 82 (25.8 %) of the respondents had ever had sex in the past and 30 (9.4%) had ever been pregnant. Of all who had ever been pregnant, 19 (63.3%) had one pregnancy while the rest had two times. Only two (6.7%) of the pregnancies were

wanted and the rest 28 (93.3%) were unwanted pregnancies. When asked about the reasons, eighteen (64.3%) of the respondents failed to prevent pregnancy due to missed pills, seven (25%) due to condom breakage, two (7.1%) due to forced sexual intercourse and one (3.6%) due to another reason (Table 2).

Table 2: Reproductive characteristics of the respondents in Mettu University, Western Ethiopia, April 2013

Variable	Number	Percent
Ever had sexual activity (n=318)		
Yes	82	25.8
No	236	74.2
Reason for first sex (n=82)		
Marriage	2	2.4
Love	72	87.8
To get some advantage	8	9.8
When started sex (n=82)		
Before joining the University	60	26.8
After joining the University	22	73.2

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Ever pregnant (n=318)		
Yes	30	9.4
No	288	90.6
Frequency of pregnancy (n=30)		
One	19	63.3
Two	11	36.7
Pregnancy status (n=30)		
Intended	2	6.7
Unintended	28	93.3
Reasons for unintended pregnancy (n=28)		
Forget to take contraceptives	18	64.3
Condom breakage	7	25.0
Forced sexual intercourse	2	7.1
Others	1	3.6
Outcome of pregnancy (n=30)		
Childbirth	5	16.7
Induced abortion	25	83.3
A place of induced abortion (n=25)		
Clinic/Hospital	13	52.0
No response	9	36.0
Local abortionist	3	12.0

Knowledge of Contraceptive among Respondents

To assess knowledge about contraceptives, respondents were asked whether they know contraceptives or not. Three hundred ten (97.5%) of respondents knew about contraceptives, of which 291 (93.9%) knew oral pills, 283 (91.3%) knew injectables, 190 (61.3%) knew implant, 122 (39.4%) knew IUD, 87 (28.1%) knew the calendar method and 12 (3.9%) knew other methods such as breastfeeding as contraceptives. For about half (51.0%) respondents, their source of information for methods of family planning was formal education followed by family/friends (19.4%). In (18.4%) of the respondents reported TV/Radio as the

source of information. In addition, 93 (29.3%) of respondents were aware of emergency contraceptive methods. The commonest source of information for emergency contraceptives were private clinics (54.2%) followed by public health institution (33.3%) pharmacy (14.0%) and others (7.5%). About one-fourth of the respondents exactly answered the types of EC and mentioned the recommended time frame to take emergency contraceptives. Less than half (45.2%) correctly answered its mechanism of action to prevent pregnancy. Only about one in seven (17.3%) respondents were knowledgeable about EC (Table 3).

Table 3: Knowledge of the respondents on emergency contraceptives, Mettu University, Western Ethiopia, April 2013,

Variables	Number	Percent
Knows specific methods (n =93)		
Combined oral contraceptive	29	31.2
Progesterone only pills	19	20.4
IUCD	12	12.9
Injectable	33	35.5

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Knows EC (n = 318)		
Yes	93	29.2
No	125	70.8
Correct time to take EC (n=93)		
72 hrs of sex	24	25.8
Immediately after sex	31	33.3
Within a week	12	12.9
Within 24 hrs of sex	9	9.7
After missing period	7	7.5
I do not know	10	10.8
Mechanism of action of EC		
Prevent pregnancy	42	45.2
Induced abortion	37	39.8
I do not know	14	15.1
Knowledge score of EC		
Knowledgeable	56	17.6
Not Knowledgeable	265	82.4

Attitude of Emergency Contraceptives among the Respondents

It was observed that a large proportion of study participants agreed on the idea and use of emergency contraceptives. In this regards more than three-fourth (78.5%) of the respondents agreed on the benefits of emergency contraceptives. Moreover, nearly all (94.6%) were interested to know more

about emergency contraceptives. Also, 89.2% were agreed to recommend the use of emergency contraceptives for their friends. In addition, among those who were not previously users of emergency contraceptives, majority 61 (83.6%) of them indicated they intend to use it in the future (Table 4).

Table 4: Attitudes of respondents on emergency contraceptives, Mettu University, Western Ethiopia, April 2013,

Variable	Number	Percent
The benefits of EC outweigh its negative effects (n = 93)		
Agree	73	78.5
Disagree	8	8.6
Neutral	12	12.9
I desire to know more about EC (n = 93)		
Agree	88	94.6
Disagree	5	5.4
I would recommend the use of EC to a friend (n = 93)		
Agree	83	89.2
Disagree	7	7.5
Neutral	3	3.2

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I want to use EC in the future (n = 73)		
Agree	61	83.6
Disagree	7	9.6
Neutral	5	6.8
I want to discuss frequently EC with my friends/partners (n=93)		
Agree	84	90.3
Disagree	9	9.7

Practices of respondents in Contraceptive use

Out of all (318) respondents, few 59 (18.6%) of them had ever used contraceptive methods, of which the majority ever used a condom method (s) followed by oral pills. The study also revealed that among those who were aware of EC, 21 (22.6%) had ever used emergency contraceptives.

Factors associated with the KAP of emergency contraceptives

About 30% of the respondent's knowledge about EC is attributable to ever having sexual practices. Students who did not start

sexual intercourse had less knowledge on emergency contraceptives (AOR 0.703 CI 0.331-0.941). Similarly, knowledge about EC is significantly associated with respondent's faculty, as those from non-health faculty was less likely than those from health faculties to have knowledge about EC (AOR, 0.36; 95% CI: 0.17- 0.74) (Table 4). Other variables included in the analysis such as age, marital status, religion, and having ever pregnancy were not significantly associated with knowledge of EC ($p > 0.05$).

Table 4: Association between Knowledge about Emergency Contraceptive and socio-demographic status of female undergraduate students of Mettu University, from March to April 2013, Western Ethiopia

Variable	Knowledge about EC		AOR	95% CI	
	Yes	No			
Faculty					
Health Science	32	12	1.000		
None health sciences	61	213	0.357	0.171	0.744**
Ever had sex					
Yes	52	30	1.000	0.331	0.941**
No	41	195	0.703		

** remained significant after adjusted with age, marital status, religion, previous history of unwanted pregnancy

AOR: Adjusted Odds Ratio, CI: Confidence Interval

Respondent's attitude was significantly associated with age of respondents. Respondents whose age is greater than 25 had nearly three times favorable attitudes towards emergency contraceptives when compared with respondents in the age range

of 15-19 (AOR=2.65, $P < 0.05$). Similarly, attitude towards emergency contraceptives was significantly associated with the sexual practice. Those respondents with no sexual experience were less likely to have positive attitude towards emergency contraceptives (AOR = 0.34, $P < 0.05$) (table 5)

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Table 5: Association between attitude towards EC and socio-demographic status of respondents, Mettu University, Western Ethiopia, April 2013

Variable	Attitude		AOR	95% CI	
	Positive	Negative			
Age in years					
15-19	15	42	1.0		
20-24	50	113	0.26	0.04	0.53
25 and above	75	23	2	1.03	2.65**
Student's Faculty					
Health Science	38	6	1.0		
Non Health Science	79	195	0.57	0.24	1.36
Ever had sex					
Yes	60	22	1.0		
No	100	136	0.34	0.15	0.83**

** remained significant after adjusted for age, marital status, religion, previous unwanted pregnancy

As shown in table 6, being from none health sciences department by a female student was significantly associated with being a user of emergency contraceptives as students from none health sciences were less likely to use emergency contraceptives (AOR = 0.3, $p < 0.01$). Regarding ever had sex versus ever user of emergency contraceptive, ever having sex was associated with increased

likelihood of being a user of emergency contraceptives as students who had not practiced sexual intercourse were less likely to use emergency contraceptives (OR = 0.75, $p < 0.01$). Effect of variables included in this analysis such as faculty, age category, marital status, religious affiliation, and ever pregnant was not significant ($p > 0.05$) with an ever user of EC.

Table 6: Association between usage of EC and socio-demographic status of respondents, Mettu University, Western Ethiopia, April 2013

Variable	Ever used EC		AOR	95% CI	
	Yes	No			
Age in years					
15-19	1	56	1.0		
20-24	16	147	4.25	1.34	8.95
25 and above	5	93	1.07	0.56	2.04
Student's Faculty					
Health Science	16	28	1.0		
Non health science	5	269	0.3	0.02	0.85 **
Ever had sex					
Yes	18	64	1.0		
No	3	233	0.75	0.25	1.52 **

** remained significant after adjusted for marital status, religion and previous history of pregnancy.

Discussions

Unintended pregnancy poses a major challenge to the reproductive health of youth in developing countries. Some young women who had unintended pregnancies obtain an abortion. Many of which are performed in unsafe conditions and others carry their pregnancies to term, incurring the risk of morbidity and mortality higher than those for adult women². Emergency contraception is the only method that can be used to prevent pregnancy after unprotected sex or contraceptive accident.⁴ This study has tried to show the sexual behaviors as well as knowledge, attitude and practice on emergency contraception and factors affecting it at higher education level in Ethiopia.

As we noted from the result of the actual study, 82 (25.8%) of respondents were sexually active. The rate of unwanted pregnancy was high among respondents with a history of pregnancy as 25% of the pregnancy was unwanted pregnant. Twelve (48%) of the respondents had a history of induced abortions that was conducted not in the clinic or the hospital. The majority, 18 (64.3%) failed to prevent pregnancy due to missing pills, 7 (25.0%) condom breakage, 2 (7.1%) forced sexual intercourse and 1 (3.6%) due to another reason.

Similar results were reported by different studies conducted in Ethiopia. For instance, the findings from Adama university students reported 63 (9.4%) participants had a history of pregnancy and 49 (7.4%) had a history of abortion⁹. This might be due to low awareness about EC, poor seeking behavior of using safe abortion service at a health facility or inaccessibility of EC-supply in the school or university.

It is evident from the present study that the participants' knowledge about emergency contraceptives was low as participants who had ever heard of EC were 29.3%. In addition, only one-fourth of the respondents exactly answered the types of EC known,

the recommended time frame to take emergency contraceptives and also less than half, 45.2% of the students answered its mechanism of action to prevent pregnancy which is similar to study conducted among female Jimma University students¹⁰. The finding from this study was similar to the findings from a study conducted on Adama university students in which 27.2 % of respondents had good knowledge about emergency contraception and was much better than the findings from the study conducted in India that indicated only 7.3% respondents were aware of EC methods. However, the finding of the current study was much lower than the findings of a study on Jimma university students that reported 41.9 % knowledge about emergency contraceptives. The difference in findings among the universities could be the difference in the provision of reproductive health information and services in different universities.

Most of the students in this study got information of emergency contraceptives from private clinics (54.2%) followed by public health institution (33.3%) pharmacy (14.0%) and others (7.5%) which is different from the findings from a study conducted on Jimma university students in which the common sources were friends for 60 (36.5%), radio for 37 (22.8%) and television for 20 (12.3%)¹¹.

The current study also reveals that among those ever heard EC, 21 (22.6%) had ever used emergency contraceptives. This result Much better than the result from studies conducted at Adama university and Jimma university students in which only 4.7 % and 6.8 % had ever used emergency contraceptives respectively^{9,11}. The difference could be due to the time difference between this study and previous studies as well as different reproductive health in formations provided for the students at high school and universities.

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Awareness of emergency contraception and trends of ever-use of emergency contraceptives were significantly associated with ever had sex and faculty of respondents ($P < 0.05$). Respondents who ever had sex before they knew and used emergency contraceptives more likely than who had not. Similarly, awareness and use were also significantly associated ($p < 0.000$) with the faculty of respondents. Respondents from health faculty were more likely than other faculties to have ever heard and used EC. This may be due to respondents from medical and public health faculty were more likely to have heard of ECs, as respondents from health-related faculties could have a better chance to get access to different sources of information for EC which gave them a higher awareness relatively. A consequence of other variables included in this analysis such as age category, marital status, religious affiliation, and ever pregnant were not significant ($p > 0.05$) with knowledge and use of EC. This result goes in line with different studies conducted on higher education students in Ethiopia including at Jimma University^{11,10}.

A large proportion of participants had a positive attitude towards emergency contraceptives. More than three-fourth (78.5%) of total respondents that were aware of emergency contraceptives believed that emergency contraceptives are important and they should be available for all couples and nearly all (94.6%) were interested to know more (learn more) on emergency contraceptives. In addition, 89.2% of respondents who were aware of emergency contraceptives admitted that they could recommend the use of emergency contraceptives to friends. Furthermore, majority 61 (83.6%), of them indicated that they were intending to use it in the future. This result is similar to the findings from a study conducted by Adama University in which 62.9% had a positive attitude towards emergency contraceptives⁹.

Positive attitude towards emergency contraceptives was significantly higher among students from medical and health faculty, ever had sex, and age greater than 24 years ($P < 0.05$). Students whose ages were greater than 25 had two times positive attitude towards emergency contraceptives in comparison those less than 20 years.

Cross-sectional nature of the present study could cause difficulty of determining the direction of the association between the study variables and the associations observed could only be discussed in terms of plausibility which could be limitations to be indicated. As far as the strengths of this study are concerned, the study included all students from four faculties to achieve generalization. In addition, the investigators had already adopted the standard and validated instrument from similar surveys. Moreover, the team used data collectors and supervisors who have past experiences of data collection of similar studies. Because of all these measures, it was found an extremely high response and prevalence rate of the study.

Conclusion and Recommendation

Conclusion

In conclusion, a significant number of students faced unintended pregnancy and unsafe abortion. In addition, among the sexually active students, many students were at significant risk of unwanted pregnancy and induced abortion. However, the knowledge and practice of emergency contraceptive were very low. Hence, there is a need to raise awareness about emergency contraceptives as an option with other contraception methods and revitalizing of the family life skill education program in schools and universities. Moreover, existing "Reproductive Health Clubs" in high schools and universities could be the key measure for disseminating similar information to prevent the unintended pregnancy and its complications.

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