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Knowledge, Attitude and Practice on Emergency Contraception and Associated Factors among Female Students of

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Abstract

In Ethiopia more than 60

Index terms— malaria, knowledge, attitude, practice, insec-ticide treated net utilization.

Objective: The aim of the study is to assess the knowledge, attitude and practice of emergency contraception and associated factors among female regular undergraduate students of Debre-markos University.

Method: A cross-sectional study design was employed from March 26 to 30/2013, on 624 regular undergraduate female students of Debre-markos University. Self administered questionnaires were used for data collection and analyzed using logistic regression. OR with 95% CI was taken as statistically significant association.

Results: A total of 599 voluntary students were participated in the study with overall response rate of 96%. 374(62.5%) of respondents had good knowledge and 322(53.8%) had favorable attitude towards EC. Only 68(11.4%) used the method.158 (26.4%) of students were sexually active, 32(78%) had history of unwanted pregnancy of this 30 (93.7%) had history of induced abortions. Residence (AOR: 2.3, 95% CI: 1.3, 4.3), Year of study (AOR: 2.1, 95% CI: 1.1, 4.1), Mather's educational status of the student (AOR: 4.4, 95% CI: 1.1, 17.8) and ever use of regular contraceptive (AOR: 3.2, 95% CI: 1.0, 9.6), showed significant association with knowledge of EC. Age (AOR: 9.0, 95% CI: 1.4, 20.0), Marital status (AOR: 6.5, 95% CI: 2.5, 17.3), father's educational status of the students (AOR: 4.5, 95% CI: 1.1, 17.6) and knowledgeable on EC ??AOR: 23.97, ??5%CI: 3.19, ??5.83) showed significant association with practice of Ec.

Conclusion: Knowledge and attitude of EC among female regular undergraduate students in this University was good , but utilization of EC was very low There was misinformation among these students such as correct indication of EC.

Introduction ne fourth of world population is between age 10 and 24. One third of the total population of sub Saharan Africa is aged between 10-24 years (1). Ethiopia has a predominantly young population that makes up to 30% of the total population (2). Young people today marry later, and more start sex before marriage. Thus they face more risk of unwanted or unintended pregnancy results in unsafe abortion (3).

Behavioral factors that frequently put adolescents at greater risk of unintended pregnancy include experimentation and risk taking, as well as limited ability to plan ahead. The nature of relationships and frequency of intercourse are often different during adolescent years than later in life. Shorter relationships, sometimes with long intervals in between, are not uncommon, and sex may be infrequent and sporadic. This may lead to reluctance to adopt a regular family planning method or make it harder to plan to use one (4). For many youth, sex is largely unplanned and sporadic yet few young people know about the option of emergency contraception, contraceptives after unprotected intercourse (5).

World health organization (WHO) estimates that every year, nearly 5.5 million African women have an unsafe abortion, as many as 36,000 of these women die from the procedure, while millions more experience short-or long term illness and disability Moreover, 59 % of all unsafe abortions in Africa are among young women aged 15-24 years (6).

Despite the technological advancements in modern contraception methods, unintended pregnancy is still a big problem in Ethiopia. More than 60% of the pregnancies in adolescents are unintended; ones which result from contraception non-use, contraception method failure and rape. The incidence of unintended pregnancy and unsafe abortion, particularly among adolescents, remains high. In Ethiopia, abortion emanating from unintended

pregnancy is one of the most significant causes of maternal morbidity and mortality; it is also a major medical and public health problem **??**7).

EC uses the same hormones that regular oral hormonal contraceptives contain, but EC is administered in higher doses and within a defined period of time.

EC is a method that is safe for women's health there are no known medical conditions under which ECPs should not be used. From a medical perspective, EC does not interrupt pregnancy; therefore it does not induce abortion (8).

In 2001, the Family Guidance Association of Ethiopia (FGAE) in collaboration with the Population Council initiated for the time a pilot project to introduce EC in selected youth center clinics in the country. In this project EC was provided in a repackaged attractive brand for adolescents and youth by cutting the regular contraceptive pills though the services were limited in scope and coverage. Emergency contraception was officially introduced in Ethiopia by the Ministry of Health in 2005 with the aim of improving sexual and reproductive health (SRH). The method, however, remained poorly known and unavailable (9).

Studies showed that there was a gap on knowledge, attitude and practice of emergency Contraception in the studies conducted in different countries. Different studies conducted in Ethiopia indicated that awareness of EC is less than 50% and utilization is less than 10% **??**10, 11, 12, and 13). Thus, this thesis was tried to assess knowledge, attitude and practice of emergency contraception and its associated factors among female students of Debre-Markos University. The information attained from this study could help to improve reproductive health services for young people and to apply appropriate interventions based on the findings.

1 II.

2 Methods

Institution based cross-sectional study was employed at Debre-Markos University from March 26 to 30/2013.Debre-Markos University is found in Debre-Markos town, East Gojam zone of Amhara regional state and is located 300 km North West of Addis Ababa. Debre-Markos University began its operation in 1993. It has 33 departments under seven colleges these are College of Agriculture, College of Business and Economics (CBE), College of Engineering (CE), College of Law and Governance (CLG), College of Language and Social Science (CLSS), College of Natural and Computational science (CNCS) and College of Health Sciences (CHS). According to the statistics obtained from student service center, in Debre-Markos University in the seven colleges, the total number of regular undergraduate students enrolled at the time of survey were about 8094 and 2176 (26.9%) of them were females. The university has one clinic in campus which provides health services to the university students and there is one referral hospital in the town owned by the town which provides service to the population of Debre-Markos and the university students.

The study population was comprised of all female regular undergraduate students of, Debre-Markos University attending their education during time of data collection. A two-stage sampling technique was used; where first 18 departments were selected from the total of 33 departments using lottery method,. The number of study participants from the selected departments was determined using probability proportionate-to-population size allocation methods depending on their educational year. The sample size was determined by using a single population proportion formula considering the following assumptions: proportion of students with positive attitude towards Emergency contraception to be 53 %(p = 0.53), 5% level of significance (? = 0.05) () and 2 design effect. The final sample size was adjusted for none response rate of 10% and the total samples arrived at was 624.

Two diploma nurses and Eight 12 th grade completed female student were assigned and trained for supervisor and data collection respectively. Data analysis was performed using SPSS version 16.0 software package. Variables found significant (p-value ? 0.2) on bivariate analysis was included in multiple logistic regression analysis. The results were presented in the form of tables, figures and text using frequency and summary statistics such as mean, standard deviation and percentage. The degree of association between the independent and dependent variables was analyzed using odds ratio with 95% confidence interval.

Ethical clearance was obtained from Midwifery department, College of medicine and Health sciences, University of Gondar review board. Both written and verbal permissions were secured to undertake the study from Educational Office of Debre-Markos University III.

3 Result a) Socio-demographic characteristics of respondents

A total of six hundred twenty four (624) female students were included in which 599 female students were willing to participate in the study with overall response rate of 96%

4 c) Contraceptive history of respondents

Five hundred fifty (91.8%) of respondents have heard about regular modern contraceptive methods. Oral contraceptive pills were the most commonly known method 86.3% followed by injectables (81.4%). From those who heard about regular modern contraceptive methods 132 (24%) of the respondents used regular contraceptive methods and of these the most commonly used methods was pills 74 (56%) followed by Injectables (42.4%)

(Table 3). The prevalence of ever use of emergency contraception among female students was only 68(11.4%). Emergency contraceptive pills were the commonest EC method used which accounted for 65(95.6%) and IUCD only 3(4.4%) (Table **??**).

5 f) Factors associated with Knowledge of EC

Among variable showed association on bivariate logistic regression analysis , only Residence, Year of study, Mather's educational status of the student and ever use of regular contraceptive showed significant association with knowledge of EC in multivariate logistic regression analysis.

Female students who came from urban area were 2.34 times more likely to have knowledge of EC when compared to those who came's from rural area (ARO: 2.34, 95% CI: 1.27, 4.29). Female students who are third year and above were 2.13 times more likely to have knowledge of EC when compared to first year female students (AOR: 2.13, 95% CI: 1.08, 4.19).

Female student's whose mother's educational status college and above were 4.37 times more likely to have knowledge of EC when compared to who their mother's do not read and write (AOR: 4.37, 95%CI: 1.07, 17.84).

Female students who ever used modern contraceptive were 3.17 times more likely to have adequate knowledge of EC when compared to those who were not ever used (AOR:3.17, 95% CI: 1.04, 9.55)(Table 6). g) Factor associated with practice of EC Among Factors associated with practice of EC during Bi-variate analysis ,only Age, Marital status, father's educational status of the respondents and having adequate Knowledge of EC showed significant association with student's practice of EC in Multivariate analysis.

Students age 25 and above were 9 times more likely practice EC than who are age between 15-19years old(AOR :9.00,95%CI:1.448, 20.040).

Students who are married were 7 times more likely practice EC than not married (AOR: 6.51, 95% CI: 2.455, 17.279).

Respondents whose father's educational status secondary school and above were 4 times more likely practice EC when compared to who their father's do not read and write (AOR:4.493, 95% CI: 1.146, 17.619). Students who has adequate knowledge of EC were 24 times more likely practice EC than who has inadequate knowledge of **??**C (AOR: 23.97, **??**5%CI: 3.19, **??**5.83).(Table 7) . b) Factors associated with knowledge and practice of EC In this study students who come from urban area were 2 times more likely to have knowledge of EC than who comes from rural area (AOR : 2.33, 95% CI: 1.27, 4.29). In a situation where use of any modern family planning is low (23%) in most areas of the rural Ethiopia, it is likely that female students with rural background know little about such rarely available contraception. A study conducted on Finnish adolescents also documented that girls from rural villages or sparsely populated areas were less often aware of EC than those from city areas. Similarly, the result is consistent with the study conducted at Haramaya University **??**28, 29 & 13).

Moreover, as the year of study in campus increases, there appears to be an increase on emergency contraceptive knowledge. Respondents who are third year and above were 2 times more likely to have knowledge of EC than first year students (AOR: 2.13, 95% CI: 1.08, 4.19). The reason of this result may be as the year of study in campus increases students are more exposed to RH education in Campus and difference in educational level. The result is consistent with similar studies conducted in Haramaya and Adama University (13 and 11).

Student's whose mother's educational status college and above were 4 times more likely to have knowledge of EC than who had mother's do not read and Wright (AOR: 4.37, 95%CI: 1.07, 17.84). The reason may be most of the time educated mother may discus sexual issues with their daughter more openly about matters related to health including EC. Result is consistent with similar studies conducted in Kampala University, Uganda and Haramaya University (24, 13).

Knowledge of EC was 3 times higher among the respondents who had ever used regular contraceptives than those who had no experience of it (AOR: 3.16, 95% CI: 1.04, 9.55). Those respondents who already use some method of regular contraceptive are more likely to know the importance of EC. Because when giving service of family planning, health personnel gives information to clients about different type of contraception , where EC is a part, it is likely that using some method of contraception may help access knowledge on others. Result is consistent with similar studies conducted in Haramaya University (13).

In this study, students age 25 and above were 9 times more likely practice EC than who are age between 15-19years old (AOR: 9.00,95%CI:1.44,20.04) its consistent study done in Adama University and Addis Ababa and Unity University College(11,10).The reason may be Younger girls may have less information about the availability and indication of EC due to the fact that difference in educational level and life experience.

Married respondents were 7 times more likely utilize EC than those never married respondents (AOR: 6.51,95% CI:2.45,17.27).It's similar to the study conducted in Adama University and Addis Ababa and Unity University College (11,10). The possible reason may be that the service sites may not be convenient to non married clients.

Respondents whose father's educational status secondary school and above were 4 times more likely practice EC than who has illiterate fathers (AOR: 4.49, 95% CI: 1.14, 17.61). Discussion of RH issue in the house hold and economic difference could be the possible explanation for this difference.

In this study, female students who had adequate knowledge about EC were found 23 times more likely practice EC than their counterparts **??**AOR: 23.97, **??**5%CI: 3.19, **??**5.83). The possib le explanation may be as students become exposed to information regarding emergency contraceptive, their knowledge become improved. As a result, they practice EC if they face risk of unprotected sexual intercourse.

V.

6 Conclusion

Knowledge and Attitude towards EC among the regular under graduate female students in this University was good. But there was misinformation among these students such as correct indication of EC.

Residence, Year of study, Mather's educational status of the student and ever use of regular contraceptive are determinant factors for knowledge of EC.

Utilization of emergency contraceptive was very low and determinant factors for practice of EC are Age, Marital status, father's educational status of the respondents and having adequate knowledge of EC.

2

. Majority of the respondents

438(73.1%) belongs to age group of 20-24years. The mean age was 20.29 years (±1.4SD).Majority 540(90.1%) were not currently married, 527(87.9%) were Orthodox Christian followers, 477(79.6%) of students were Amhara in ethnicity, 408(68.1%) were originally from urban area and 583(97.3%) students were studying undergraduate 3rd year and below .Regarding Parent Educational Status 495(82.6%) of the respondents' fathers were alive and of them 29.9% were do not read and write. Similarly, 546 (91.1%) of the respondents'

Figure 1: Table 2 :

3

Undergraduate Debre-Markos University students, March 2013

Variables	Number	Percent
Ever heard about regular modern contraceptive (n=599)		
Yes	550	91.9
No	49	8.2
Types of regular modern contraceptive ever heard		
Pills	475	86.3
Injectable	448	81.4

Figure 2: Table 3 :

6

Condom	396 72
Implant	336 61
IUCD	303 55

Ever used regular modern

d) Knowledge of EC among female regular undergraduate Debre-Markos University Students.

An overall 374 (62.5%) had goo

while 225(37.5%) had poor knowledge about the method. When asked about specific types of emergency contraceptives, among those who have ever heard about EC, 419(98.3%) and 101 (23.7%) mentioned pills and IUCDs respectively. Of those who have heard about pills as an EC method, 262 (61.5%) could tell the correct timing of administration of pills, while, of the respondents who have heard about IUCDs, only 38 (8.9%) could tell the correct timing of administration of the IUCD. When asked about the indication of EC, majority of them mentioned the correct indication, 321 (75.4%) after unprotected sexual intercourse and 229(53.8%) when slippage of condom. And others gave different incorrect responses like after unwanted pregnancy 83(19.5%). Two hundred sixty eight (62.9%) respondents stated that they could get EC from government hospitals/health centers, 203 (47.6%) from pharmacy.

Figure 3: Table 6 :

7

Characteristics	Practice of EC		COR(95%CI)	AOR(95%CI)
	n(Yes)	n(no)		
Age in groups				
15-19	10	141	1.00	1.00
20-24	53	385	1.87(.80,4.36)	1.31(.48,3.61)
25 +	5	5	10.17(1.89,17.73)	9.00(1.44,20.04)
Marital status				
Single	47	493	1.00	1.00
Married	21	38	5.67(2.57,12.52)	6.51(2.45,17.27)
Residence				
Urban	59	349	3.47(1.43,8.42)	
Rural	9	182	1.00	
Year of study				
First year	25	260	1.00	
Second year	19	150	1.33(.62,2.85)	
Third year and above	24	121	2.33(1.11,4.87)	

Figure 4: Table 7 :

IV.

.1 Discussion a) Knowledge, attitude and Practice among female

Debre-Markos University Students. Although emergency contraception is not recommended as a regular family planning method it is a useful method after unprotected sexual intercourse to reduce the chance of unwanted pregnancies. Emergency contraception is most useful when there is a failure of barrier methods such as slippage and breakage of condoms, or when sexual intercourse was unplanned (8).

The overall prevalence of awareness among the study participant was 426(71.1%). It's greater than studies conducted in Adama University (46.8%), Jimma University (41.9%) and Kampala University, Uganda (45.1%) **??**11, 12 and 24). This difference might be due to difference in study setting, time variation related with currently accelerated RH promotion activities and youth friendly programs in some health institutions of the study area.

In this study the most common sources of information for EC were health institution/personnel's which is in agreement with studies from Bahirdar University and Nigeria, in tertiary schools **??**25, and 22). But different from Jimma University which is the most common source of information were peers/friends and for Addis Ababa and UUC students, mass media **??**12, **??**0).This difference may be due to the method they use for education of EC.

The efficacy of EC is dependent on how soon after the unprotected intercourse treatment is administered. If women are to benefit from EC, they need to have prior knowledge and easy access to the method since it has a time limit. Two hundred sixty two (61.5%) of them had identified the correct timing of administration of the pills after unexpected sexual contact with in 72 hrs, which is higher than reports from jimma University(30%) and Addis Ababa and Unity University college (26.2%)(12, 10). The possible reason may be linked to the source of information; health personnel/institutions that have good information on the subject than peers/friends and time difference may also be one reason.

In this study, 62.5% of the study participants had adequate knowledge about EC when overall summary index for knowledge is computed which is nearly similar to the studies conducted in Cameroon and USA (62.7% and 64.7% respectively) (23 and 16). But higher than that of Adama University (27.2%), Jimma University (50%) and Addis Ababa and UUC (43.5%) (11, 12 and 10). The possible reason may be due to time variation related with the currently accelerated RH promotion activities in the country and youth friendly programs in some health institutions of the study area.

Most of the respondents 53.8% had positive attitude towards EC. It is comparable to studies from Addis Ababa and Unity University College (53%)(10).But lower than the studies on Haramaya University (76.5%)(13).

This difference might be due to difference in study setting and socio-demographic variation of study participants. Majority of participants (88.9%) had agreed that I would use EC if I have unsafe sex and (90.6%) support use of EC after unsafe sex by all female which is higher than the results of Jimma University (71.2%)(12). Eighty-three point seven percent of students believed that emergency contraceptives are important and they should be available for all females.

The ever use of EC in this study was 11.4% which is comparable to a study conducted among university students in Cameroon(12.7%) and Kampala, Uganda (14.5%) **??**23, **??**4). Its higher than reports from Jimma University (6.8%), Addis Ababa and Unity University college (4.7%) and Adama University (4.7%)(12,10 and 11).The possible reason for such higher prevalence of EC use in this study could be also time variation, related with the currently accelerated RHs promotion activities in the country and increasing availability of EC in many Gev't and non Gevn't health institutions.

Findings from this study showed that the prevalence of regular contraceptive use was