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Assessment of Knowledge, Attitude and Practice towards Emergency Contraceptives and Associated Factors among Wollo University (Dessie Campus) Undergraduate Female Students in Dessie, Ethiopia

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Abstract

Introduction: Each year there are about 250 Million pregnancies globally and despite the presence of Emergency contraceptives one third of these are unintended and 20% of these undergo induced abortion. In Low income countries like Ethiopia, more than one third of the 182 million pregnancies are unintended; the fate of 19% will be induced abortion and 11% of this is unsafe. In Ethiopia, abortion emanating from unintended pregnancy is one of the most significant causes of maternal morbidity and mortality.

Objectives: To assess the knowledge, attitude and practice of Wollo University (Dessie campus) female students towards emergency contraceptives and its associated factors from November 2012 to May 2013.

Methods: A quantitative descriptive cross -sectional study was conducted on 342 female students of Wollo University (Dessie campus) from November 2012 to May 2013. Colleges in the University were categorized in to strata and from each college participants were selected by systematic random sampling.

Result: In this study from the total 342 respondents, 72.5% have heard about Emergency contraceptives, 36.5% were knowledgeable, 40.6% had positive attitude and only 21.3% ever used Emergency contraceptives. Results of logistic regression also showed that awareness and use of Emergency contraceptives were associated with religion, age, educational status of their parents, and year of study and place of origin.

Conclusion: In general the knowledge of respondents on Emergency contraceptives and its use was very low when compared to their awareness on regular methods of contraception. Factors associated with the knowledge, attitude and practice of emergency contraceptives were religion, age, educational status of their parents, year of study and place of origin.

Keywords: Emergency contraceptive; Knowledge; Attitude; practice; Unwanted Pregnancy; Female students; Wollo University.

Introduction

Emergency contraception (EC) has been in use for over 50 years, available across many countries and contexts in multiple formulations and offered through various access points [1]. Even though, the wide range of effective contraceptive options are available, women's awareness and use of these options especially in developing countries is still lagging. Barriers to access and low patient and provider awareness limit the use of Emergency contraceptives in preventing unintended pregnancies [2-4]. Consequently, unintended pregnancies continue to occur in large numbers worldwide. World Health Organization (WHO) estimated that 84 million unwanted pregnancies occur annually worldwide. About 3 million unwanted pregnancies occur in the United States. Most of these results are from nonuse of contraception or from noticeable contraceptive failure, (such as broken condom) which could be prevented with the use of Emergency contraceptives [5-7]. Despite the technological advancements in modern contraception methods, unintended pregnancy is still a big problem in Ethiopia. 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. Ethiopia is one of the countries with high maternal mortality rate; the estimated rate in 2011 was 676 per100, 000 live births which is increased by three from 2005 Ethiopian democratic health survey report. Various reports show that there is little knowledge and information available about Emergency contraceptives in the country. Even students may be aware that use of emergency contraception can prevent occurrence of unintended pregnancy, but still they may practice it inadequately due to many factors [8-11]. Therefore, the study examined the level of Knowledge, attitude and practice of Wollo University students towards Emergency contraceptives and identified important factors that influence students' awareness, practice and attitude towards it.

Methods and Materials

A quantitative descriptive cross-sectional study was conducted from November 2012 to May 2013 on female students of Wollo University (Dessie campus) to assess their knowledge, attitudes and practice towards emergency contraceptive and associated factors. There are six colleges and one teacher and pedagogical institute in Dessie campus. From a total of 6,354 students in all colleges 1846 were females. Sample size was determined taking the following assumptions; the proportion of students who are aware of emergency contraception to be 43.5% (taken from previous study). Confidence interval of 95%, margin of error 5% and 5% non response rate was taken. Since the population is less than 10,000 correction formula was used. The sample size, therefore, was 347. Stratified sampling technique was employed in this research. Students from each

college (strata) were taken proportionally. Data collection was carried out using structured self-administered questionnaires that were prepared in English and translated into Amharic and then back translated to English. Prior to the actual data collection, the questionnaire was pre-tested on similar populations in Combolcha campus using 5% of the sample sizes (17 students) and necessary corrections were incorporated accordingly. The researcher determined the knowledge about Emergency contraceptive pills using seven multiple-choice questions. Students were considered knowledgeable about Emergency contraceptives if they correctly answer 4 or more knowledge questions. Those who gave four or more response in favor of Emergency contraceptives among eight [8] attitude questions were considered as having a positive attitude. The student's practice was measured whether they ever used Emergency contraceptives or not. For data processing and analysis, SPSS version 16 was used. Data was checked for completeness and consistency. Coded data were entered into computer programs after the required cleaning was done. Frequency distribution tables were used to describe most of the findings and graphs were also plotted for some accordingly; and other descriptive summaries were calculated. A logistic regression test was used to control confounding variables. The output of the analysis was given using odds ratio with their respective confidence intervals. P value of 0.05 was taken as level of significance. Ethical clearance was obtained from ethical review board of department of Nursing, College of health Sciences. Written permission was obtained from Wollo University. Verbal consent was also obtained from individual participants to conduct the study.

Results

Socio-demographic characteristics

Response was obtained from 342 female students and five questionnaires were missed making the response rate 98.5%. As shown in Table 1 slightly more than half of the respondents (50.3%) were less than or equal to 20 years of age. The mean age was 20.6 years and median age of 24.5 years, ranging from 17 to 35 years. Most of the respondents 77.8% were followers of the Orthodox Christianity and 71.9% of respondents were Amhara. Eighty five point four percent of the respondents were single and 14% were married. Majority of respondents 59.9% came from urban area and 40.1% from rural area. From the total 342 respondents, 62.3% were first year, and 37.7% were second year and above.

Sexual and reproductive Characteristics

Table 2 indicates about 49.1% of the respondents had sexual intercourse in their life time while 50.9% had never experienced sexual intercourse. Of those who ever had sexual intercourse, about 43.5% were by the consent of the female, while 56.5% were forced.

Of those who had forced sex, unwanted pregnancy was the most common problem they had faced which was a problem of 57.9% respondents. Of those who ever had sexual intercourse 70.2% of them had been pregnant and 46.6% of pregnancies were unwanted.

Knowledge of emergency contraceptives

Table 3 shows that from the total of 342 respondents 72.5% had heard about Emergency contraceptives while 27.5% did not hear. Emergency oral contraceptive pills were the most common known method which accounts 70.6% and 26.6% of respondents knew about both Emergency oral contraceptive pills and IUCD while only 2.8% of students knew IUCD. The sources of information for respondents to know about emergency oral contraceptive pills or IUCD were health institutions, 28.2% and mass media, 27.8%. Regarding the recommended time to take Emergency oral contraceptive pills majority of the respondents, 74.2% said that Emergency oral contraceptive pills should be taken within 72 hours after unprotected sex. The majority of respondents, 61.7% did not knew the appropriate time to take IUCD type of Emergency contraceptives, 23.0% said within 72 hours and 14.5% said it should be taken within 24 hours. Therefore, the summary index showed that only 36.5% were knowledgeable about Emergency contraceptives while the rest 63.5% were not knowledgeable.

As indicated in the Figure 1, majority of respondents 40.7% knew all the situations/conditions to take emergency contraceptives, while 37.9% of respondents said that it should be taken at the time of forced sex only.

Knowledgeable: A woman is considered knowledgeable if she recalled at least one long acting contraceptive method (i.e. either implants or IUCD).

Table1: Socio-demographic and academic Characteristics among WU (Dessie campus) female Students; March 2013 (n=342)

Characteristics	Percent (%)
Age	
≤ 20	50.3
21-24	46.8
25 and above	2.9
Religion	
Orthodox	77.8
Muslim	11.4
Protestant	8.5
Catholic	2.0
Others	0.3
Ethnic group	
Amhara	71.9
Tigrie	13.5
Oromo	7.6
Others	7.0
Place of origin	
Urban	59.3
Rural	40.1
Marital status	
Single	85.4
Ever Married	14.0
Divorced	0.6
Parents' educational status (mother)	
Cannot write and read	37.4
Can read and write	36.0
Above secondary school	26.6
Parents' educational status (father)	
Cannot write and read	14.9
Can read and write	46.8
Above secondary school	38.3
Monthly income of family	
≤ 500	26.6
501-1499	41.8
≥ 1500	31.6
Current residence	
In campus	98.5
Out of campus	1.5
Year of study	
Year I	37.7
Year II and above	62.3
College of respondents	
Health science	15.2
Social science	19.9
Agriculture	13.2
FBE	20.8
Law	3.2
ITPS	5.3
Natural science	22.5

Table 2: Sexual reproductive characteristics and patterns of Sexual intercourse among WU (Dessie campus) female students; March 2013

Characteristics	Percent
Ever had sexual intercourse (n=342)	
Yes	49.1
No	50.9
Total	100.0
Age of first sex (n=168)	
Less than 18	31.5
≥ 18	68.5
Total	100.0
Ever had forced sex (without consent) (n=168)	
Yes	56.5
No	43.5
Total	100.0
Problems faced after forced sex (n=95)	
Unwanted pregnancy	57.9
STI	19.0
Tension	10.5
Total	100.0
Ever had been pregnant (n=168)	
Yes	70.2
No	29.8
Total	100.0
Ever practiced induced abortion (n=118)	
Yes	90.7
No	9.3
Total	100.0
Number of abortions for those who say yes (n=107)	
One	96.3
Two	3.7
Total	100.0

Not Knowledgeable: A woman is considered not knowledgeable if she cannot recall at least one long acting contraceptive method.

Practice and Attitude towards emergency contraceptives

As indicated in Table 4 Majority 48.8% of respondents agreed that using Emergency contraceptive after unintended intercourse is important while 42.7% didn't agree. Fifty six point four percent had no willingness to advice their friends to use Emergency contraceptive in the future when need arises. More than half of respondents (56.1%) agreed that wide spread use of EC will increase prevalence of HIV/AIDS and STI. 50.6%, 57.9% and 83.9% of respondents agreed that use of emergency contraceptives is one way of abortion, affects use of regular methods negatively and Repeat use of it poses a health risk respectively. Based on this more than half of the students, 59.4% have negative attitude towards ECs while 40.6% of them have positive attitude (Table 4).

Attitude: Those who gave four or more response in favor of LARCS among eight [8] attitude questions were considered as having a positive attitude, and the rest as a negative attitude. (If respondents agree for positively stated questions (in favor of LARCs) and disagree for negatively stated ones it was taken as positive attitude and the rest were taken as negative attitude).

Factors associated with Knowledge, attitude and practice of EC among WU (Dessie campus) female students, March 2013

Cross tabulation and Logistic regression analysis was carried out to determine the association between socio-demographic factors with knowledge, attitude and practice of Emergency contraceptive among study participants. As shown on Table 5 age, marital status, study year, parity/gravidity, residence, and parents educational status has significant association with Knowledge, attitude and practice of EC (Table 5).

Table 3: Knowledge of emergency contraceptives among WU (Dessie campus) female students; March 2013

Characteristics	Percent	
Ever heard about EC (n=342)		
Yes	72.5	
No	27.5	
Total	100.0	
Types of EC ever heard (n=248)		
Oral emergency pills	70.6	
IUCD	2.8	
Both	26.6	
Total	100.0	
Source of information on EC (n=248)		
Health institution	28.2	
Mass media	27.8	
Peers/Friends	18.6	
Family	3.2	
Teachers in the school	20.2	
From clubs in the schools	1.2	
Others	0.8	
Total	100.0	
Knowledge assessment questions for those who heard about EC		
Recommended time to take ECPs after unprotected sex (n=248)		
Within 24 hours	25.0	
Within 72 hours	74.2	
4-6 days	0.8	
Total	100.0	
Recommended time to take IUCD after unprotected sex (n=248)		
Within 24 hours	14.5	
Within 72 hours	23.0	
4-6 days	0.8	
I don't know	61.7	
Total	100.0	
Effectiveness of ECPs (n=248)		
Very High (>90%)	23.0	
High (50-89%)	56.1	
Less effective (<50%)	15.7	
Not effective at all	1.2	
I don't know	4.0	
Total	100.0	
Effectiveness of IUCD (n=248)		
Very High I (>90%)	27.0	
High (50-89%)	30.7	
Less effective (<50%)	5.7	
Not effective at all	2.4	
I don't know	34.2	
Total	100.0	
Recommended number of doses of EC (n=248)		
One dose	24.2	
Two doses	16.1	
Three doses	8.9	
I don't know	50.8	
Total	100.0	
Recommended time between the first and next dose of ECPs (n=248)		
12 hours apart	50.0	
24 hours apart	20.6	
I don't know	29.4	
Total	100.0	
Knowledge of ECs (Summary index)		
Not knowledgeable	**217**	**63.5**
Knowledgeable	**125**	**36.5**

Table 4: Practice and Attitude towards emergency contraceptives Among WU (Dessie campus) female students; March 2013

Characteristics	Percent
Ever heard about EC (n=342)	
Yes	72.5
No	27.5
Total	100.0
Types of EC ever heard (n=248)	
Oral emergency pills	70.6
IUCD	2.8
Both	26.6
Total	100.0
Source of information on EC (n=248)	
Health institution	28.2
Mass media	27.8
Peers/Friends	18.6
Family	3.2
Teachers in the school	20.2
From clubs in the schools	1.2
Others	0.8
Total	100.0
Knowledge assessment questions for those who heard about EC	
Recommended time to take ECPs after unprotected sex (n=248)	
Within 24 hours	25.0
Within 72 hours	74.2
4-6 days	0.8
Total	100.0
Recommended time to take IUCD after unprotected sex (n=248)	
Within 24 hours	14.5
Within 72 hours	23.0
4-6 days	0.8
I don't know	61.7
Total	100.0
Effectiveness of ECPs (n=248)	
Very High (>90%)	23.0
High (50-89%)	56.1
Less effective (<50%)	15.7
Not effective at all	1.2
I don't know	4.0
Total	100.0
Effectiveness of IUCD (n=248)	
Very High l (>90%)	27.0
High (50-89%)	30.7
Less effective (<50%)	5.7
Not effective at all	2.4
I don't know	34.2
Total	100.0
Recommended number of doses of EC (n=248)	
One dose	24.2
Two doses	16.1
Three doses	8.9
I don't know	50.8
Total	100.0
Recommended time between the first and next dose of ECPs (n=248)	
12 hours apart	50.0
24 hours apart	20.6
I don't know	29.4
Total	100.0
Knowledge of ECs (Summary index)	
Not knowledgeable	**217 63.5**
Knowledgeable	**125 36.5**

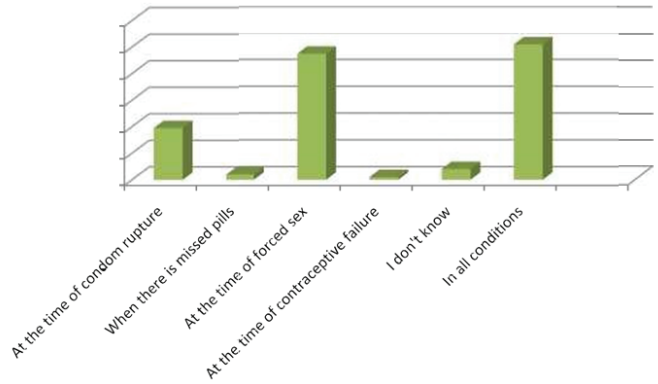

Figure 1: Recommended time or conditions to use EC by respondents

Discussion

Although emergency contraception is not recommended as routine family planning method it is a useful method to reduce the chance of unwanted pregnancy following unprotected sexual intercourse. The influence of respondent's socio-demographic characteristics on awareness, attitude and practice of Emergency contraceptives were discussed.

From 342 respondents, 72.5% were heard about Emergency contraceptives, 36.5% of them were knowledgeable and only 21.3% ever used Emergency contraceptives. This finding was lower when compared to similar studies conducted in Adama University (26.7%) and Addis Ababa University (51.7%) [12,13]. The possible reason for low Emergency contraceptives practice rate in this study could be due to lack of correct information, low promotion and availability of the methods as well as lack of student clubs that works on reproductive health in the University. Oral Emergency contraceptive pills were the most widely known and used emergency contraceptives (51.2%). This finding corresponds to survey conducted in Mekelle and Adama [14,15]. The reason may be due to accessibility of pills and it is easy to administer. One hundred sixty seven (48.8%) of respondents agreed that using Emergency contraceptives after unintended intercourse is important while 146(42.7%) didn't agree. This finding was slightly higher than a similar study conducted in Mekelle which reported only 46.4% of respondents agree with importance of using Emergency contraceptives [16]. This could be due to an increased awareness of Emergency contraceptives and favorable attitude towards Emergency contraceptives with respect to time. Generally in this study, more than half of the students, 203 (59.4%) have negative attitude towards Emergency contraceptives while 139(40.6%) of them have positive attitude [17]. This finding showed more should be done to change attitude of respondents towards EC. Results of logistic regression also showed that awareness and use of Emergency contraceptives were highly influenced by socio-demographic characteristics such as religion, age, educational status of their parents, and place of origin and year of study. Students of age 20 and above years were more likely to have knowledge of Emergency contraceptives than those age less than 20 years AOR=1.89(1.56-2.57) (95%CI). This result is consistent with a study done in Harar which stated that there is positive relationship between age of the respondents and knowledge of Emergency contraceptives [18]. This may hold true since there is a possibility for female students engaging in more sexual relationship as their age increases and so interested to know about Emergency contraceptives. Awareness and use of Emergency contraceptives were also associated with study year. As years of study increased there was a relative increase on the knowledge of EC, AOR=2.8 (95%CI 2.49- 3.3) for year two and above students. This may be due to the reason that senior students have more exposure to sexual and reproductive issues. Respondents with one or two parents literate were more likely to

Table 5: Association of Socio-demographic Factors and sexual & reproductive characteristics with KAP of EC among WU (Dessie campus) female students, March 2013.

Characteristics	Knowledge of EC		Attitude towards EC		Practice of EC	
	COR (95%CI)	AOR (95% CI)	COR (95%CI)	AOR (95% CI)	Crude OR (95%CI)	AOR (95% CI)
Age						
≤ 20	1.00	1.00	1.00	1.00	1.00	1.00
20 +	1.87 (1.54-2.41)	1.89 (1.56-2.57)	2.04 (1.0-2.2)	2.5 (1.2-3.2)	1.3 (0.4-1.5)	1.4 (0.8-1.7)
Origin						
Urban	1.00	1.00	1.00	1.00	1.00	1.00
Rural	0.9 (0.57-2.9)	0.9 (0.7-3.13)	0.3 (0.1-0.9)	0.6 (0.4-2.0)	0.2 (0.09-1.8)	0.5 (0.3-1.9)
Types of College						
Health	1.00	1.00	1.00	1.00	1.00	1.00
Non-health	0.9 (0.3-2.6)	0.92 (0.5-1.8)	0.8 (0.5-1.9)	0.9 (0.7-2.1)	0.8 (0.4-1.6)	0.8 (0.5-1.8)
Year of study						
First year	1.00	1.00	1.00	1.00	1.00	1.00
2nd &above	2.8 (2.49-3.3)	2.43 (2.12-2.7)	2.9 (1.8-3.8)	2.84 (1.2-3.7)	3.71 (1.51-5.2)	3.83 (1.61-5.4)
Marital status						
Never married	1.00	1.00	1.00	1.00	1.00	1.00
Ever married	1.98 (0.9-2.95)	1.9 (1.28-2.7)	2.08 (1.2-3.5)	2.32 (1.8-3.7)	3.3 (1.12-5.58)	3.4 (1.2-5.7)
Religion						
Christian	1.00	1.00	1.00	1.00	1.00	1.00
Muslim	0.4 (0.12-1.1)	0.5 (0.19-1.24)	0.68 (0.5-1.8)	0.74 (0.6-1.9)	0.78 (0.44-2.35)	0.8 (0.6-2.4)
Parent's Education status						
Illiterate	1.00	1.00	1.00	1.00	1.00	1.00
literate	3.7 (1.7-7.7)	3.5 (1.6-7.4)	1.64 (1.27-2.55)	1.82 (1.75-3.6)	1.2 (0.68-1.7)	1.3 (0.7-2.2)
Current place						
In campus	1.00	1.00	1.00	1.00	1.00	1.00
Out of campus	1.09 (0.6-1.8)	1.09 (0.6-1.8)	3.2 (1.6-4.4)	2.9 (1.4-3.8)	1.4 (0.6-2.5)	1.5 (0.8-2.9)
Pregnancy						
Null Para	1.00	1.00	1.00	1.00	1.00	1.00
Multi Para	2.62 (1.50- 4.56)	2.62 (1.50-4.56)	2.26 (1.84-4.45)	3.8 (2.98-4.7)	2.62 (1.50-4.56)	2.62 (1.50-4.56)

have knowledge of Emergency contraceptives than students from illiterate parents OR=3.7 (95%CI 1.7-4.7). Respondents who were knowledgeable about Emergency contraceptives had more likely to have positive attitude towards Emergency contraceptives as compared with those who had not knowledgeable, which is consistent as study conducted in Mekelle [19].

Conclusion

This study identified that awareness of regular contraceptive methods was high among Wollo University (Dessie campus) female students (96.8%) while the practice was low (39.2%). Regarding Emergency contraceptives, 72.5% of them were aware of it, 36.5% were knowledgeable, 40.6% had positive attitude and only 21.3% ever used Emergency contraceptives. In general the knowledge of respondents on Emergency contraceptives and its use was very low when compared to their awareness on regular methods of contraception. Even those who were aware of Emergency contraceptives were not using Emergency contraceptives because of different reasons such as religious rejections and negative attitude towards the methods.

Emergency oral contraceptive pills were the most common known and used method of emergency contraceptives. The major source of information for the respondents was health institutions followed by mass media.

Recommendation

To enhance the appropriate awareness and access to Emergency contraceptives among adolescents, Strategies and programs should be specifically designed in the country in general and in Universities in particular. University personnel's should encourage establishment of school clubs that create awareness on reproductive health services (such as Emergency contraceptives and other contraceptive use) through financial and emotional support.

Conflict of Interest

The authors declared that there is no conflict of interest in this research article.

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