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Review article

Assessment of Knowledge, Attitude and Practice on Emergency Contraceptive among Goba Female High School and Preparatory Students

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ABSTRACT

Introduction: Emergency contraception refers to the type of contraception that is used as Emergency procedure to prevent unintended pregnancy following an unprotected act of sexual intercourse. Knowledge, attitude and practice of Emergency contraceptives in Ethiopia are very low among adolescents/youngsters. Therefore, the aim of this study is to determine knowledge, attitude and practice on emergency contraceptive among Goba preparatory and high school female students.

Methods and Materials: School based cross-sectional study was conducted among 260 preparatory and high school female students. After securing the list of female students from the school, Systematic sampling technique was used to select study subjects and data was collected by self-administered questionnaire. Finally the data was analyzed using SPSS version 16 software package.

Results: There were a total of 260 respondents, the majority 255 (98.1%) being the age group 14-19 and few were between the ages of 20-24. Most of them were single 216 (83.1%), 15 (5.5%) and were able to tell correctly the result Were sexually active, 3 have given a history of previous pregnancy and 2 had history of induced abortion. Most of the students, 205 (78.8 %), had heard about emergency contraceptives and the most cited source of information were media and health personals. Out of those who have heard, only 21 were able to tell correctly the recommended time for emergency contraceptives use (i.e. within 72 hours of unprotect sex). Indeed emergency contraceptives use among those with prior knowledge was found to be very low 25 (12%).

Conclusion and recommendation: Based on this research result, a significant number of respondents had positive attitudes 185 (71.2%) whereas the general awareness, detail knowledge and practice of emergency contraceptives among students are very low. It is recommended that adolescent reproductive health/family planning program be initiated in school. Further ensuring on safe sex practice and to do adolescent emergency contraceptive information and service should be promoted.

Keywords: Knowledge; Attitude; Practice; Emergency contraceptive; Preparatory students

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INTRODUCTION

Emergency Contraception (EC) refers to the type of contraception that is used as an emergency procedure to prevent unintended pregnancy following an unprotected act of sexual intercourse [1].

Generally, there are three types of emergency contraception methods. These are Combined Oral Contraceptive Pills (COCPs): an increased dose of combined oral contraceptives containing ethinyl estradiol and levonorgestrel (Yuzpe's regimen), Progesterone Only Pills (POPs): High dose Progesterone Only Pills containing levonorgestrel and Intrauterine Contraceptive Devices (Copper Releasing Intrauterine Contraceptive Devices) [2].

Combined Oral Contraceptive Pills (COCPs) and Progesterone Only Pills (POPs) are common and constitute the oral Emergency contraceptives that a woman can take within 72 hours after unprotected intercourse to reduce her risk of becoming pregnant. They contain a higher dose of the same active ingredients that regular birth control pills contain. They are intended for use after sexual intercourse when no contraception is used, when a regular contraceptive method does not work properly (as when a condom breaks or slips) [3].

Progestin-only Emergency Contraceptive Pills (ECPs) have largely replaced the combined ECPs because they are more effective and cause fewer adverse effects. Progestin-only ECPs are most effective when taken immediately after unprotected intercourse. Efficacy declines as time elapses between sex and drug administration. The original treatment schedule was one 0.75 mg dose within 72 hours after unprotected intercourse and a second 0.75 mg dose 12 hours later [2].

In Ethiopia, Emergency Contraception (EC) was identified in the late nineties. In 2001, the Family Guidance Association of Ethiopia (FGAE) in collaboration with the Population Council initiated EC in selected youth center clinics in the country. In this project, EC was provided in a repackaged brand so it would appeal to adolescents and youth in several ways for example, by cutting the cost of regular contraceptive pill, though the services were limited in scope and coverage. However, after the survey, the availability and accessibility of EC were ensured in both public and private sectors of the country [4].

Though progress has been made on the modern contraceptives use, unintended pregnancy remains high in low developed countries including Ethiopia [5,6]. This can be evidenced by the prevalence of unwanted pregnancy in adolescents which is more than 60% occurring due to contraception failure, non-use and rape [7,8]. Moreover unwanted pregnancy and abortion especially on adolescents is high in Ethiopia [6,9,10]. Abortion is a major Public Health concern in causing significant maternal death due to excessive bleeding and infections during and after abortion [5,6].

The high school time is mostly the period where the need for relationships, sexual desires, etc. start or goes higher with no or inadequate information on preventive methods. Different data showed that more and younger people engage in sexual activity before marriage, often without using contraception due to peer pressure, explorative behavior as well as influenced by other environmental factors [6,11,12]. This behavior can increase the risk to unwanted pregnancies, Sexually Transmitted Infections (STIs) including HIV/AIDS, as they are vulnerable to unprotected and unplanned sexual interactions [13,14].

Unwanted pregnancy and early child bearing has negative impact on the educational performance and school drop outs on females because of the illness resulting from unsafe abortion when the pregnancy is unwanted. The girl's future career will be affected greatly resulting low or no employment opportunity. As a result there will be economic dependence on the particular girl as well as poor female participation of girls in the overall socioeconomic development of their communities and their countries [10,11].

Even Ethiopian university students' knowledge on correct use of ECs is low. 10%of Addis Ababa University and Unity University College [8], 18.8%of Gondar University [10] and 25.7% of Harromaya University female students had good knowledge of EC [15].

Literature review

Several studies were conducted globally and specifically in our country Ethiopia focusing on the predictors (i.e. socio-demographic factors, Knowledge and attitude) and practice of EC use among high school students.

Socio demographic factors

Various studies have been conducted to examine the effect of socio demographic factors on EC use. For example, according to study carried out in Finland, it was found that an increased EC use with increasing alcohol consumption. Smoking, dating, and poor school achievement were related to increased use as well as not living in nuclear family. A lower use was observed if living in rural area or father's education was high. Mother's education was not related to EC use [16].

According to similar study done in Adama University, previous use of contraceptives, being married and age of 20 years and above were found to be significant predictors of EC use. This study also reported that religion, history of pregnancy, and age at first sexual intercourse had statistically significant association with EC use even though the association was not independent [17].

Knowledge

A study done in south east Scotland aimed at assessing the knowledge of high school students towards EC reported that only 26.4% pupils gave the correct answer for the appropriate time of EC use, 22.4% did not know, 14.3% thought emergency contraception had to be used within 48 hours after intercourse, and 27.3% thought it had to be used within 24 hours. This study also reported that school and magazines were the commonest sources of information about EC [18].

Another similar study among female students at a high school in Nova Scotia reported that 80% of the students knew about EC, though few (8%) knew the time frame for EC use. Most (42%) heard of EC at school [19].

Another similar study done in Sweden on senior high school students reported that four of five students knew about ECP and where to obtain it if necessary. Many teenagers (67.3%) also knew that ECP prevented implantation. The main sources of information about ECP were youth clinics followed by friends [20].

In Ethiopia, several studies have been performed to assess the knowledge of modern contraceptives. For example, a study done among north Gondar high school students reported 75.7% of the students claimed that they know at least one method of modern contraception where schools were the main sources of modern contraceptive information followed by books, friends, mass media and sexual partners. The most common reason for not using modern contraceptive methods among sexually active respondents was little or no knowledge of contraceptives followed by no access to contraceptives and harmful effects of contraceptives [10]. In another study on never married high school students in Butajira, Ethiopia also reported that about 91% of the females did not use modern contraceptives at their last sexual intercourse. The most important reasons for non-use of contraception were lack of adequate knowledge, partner refusal, perception of diminished pleasure and embarrassment to buy. 71% of the respondents knew at least one contraceptive method. Over half of the students had no source of information on sexuality and for 25.9% school was the main source of information [21].

On a recent study focused on assessing Knowledge and practice of emergency contraception among Jimma University community high school female students reported that 64.1% of the students had heard about EC and the most cited sources of information were school teachers and health professionals. Out of those who have heard about EC, only 19% of the respondents were able to tell correctly the recommended time for EC use (i.e. within 72 hours of unprotected sex) [22].

Attitude

The study done in the south east Scotland also reported that Most of the high school students (82.5%) believed that emergency contraception would prevent pregnancy on all or nearly all occasions. When asked about side effects of emergency contraception 8.0% of the students believed infertility to be a potential risk [18].

Similarly, the study done in Sweden high school students also reported that most of them believed ECP could be used much more; and two-thirds (66.7%) thought ECP use could lead to negligence with ongoing contraception; and one in four (25%) believed that concerns for side effects could deter them from using ECP [20].

Practice

Several studies have also been done aiming at the assessment of EC use. One of them is a study done on high school students in south east Scotland. In this study, of girls who had experienced sexual intercourse, 31.4% had used emergency contraception [18]. In another study in female students at a high chool in Nova Scotia, 80% used no contraception at last intercourse and only 2% ever had used EC [19]. Another study in Sweden also reported that 28.3% of the high school students stated that they themselves or their partner had used ECP [20]. In another similar study in Jimma community high school, Ethiopia; the practice of EC among all of the respondents was significantly low 2.8% [22].

METHODS

Study area

This study was conducted among Goba female high school and preparatory students. Goba is found in Bale zone, Oromia regional state, south eastern Ethiopian. Goba town is located 455 km from Addis Ababa. It has a total population of 50,650 from which 24,256 are males and 26,394 are females. The town is located about 2743 meters above and has a climatic condition of ''Dega'' according to Goba town administration.

There is one high school and one preparatory school in the town. Goba high school was established in 1995 and 4 km far from central Goba town, found in south east. In 2005 E.C there were 1477 grade 9 students from which 751 are female and 726 are males. In grade 10 it contains 1038 students from this 517 are female and 751 are males. The preparatory was upgraded in 1995 E.C, but in 1943 E.C it was established as elementary school and located 3 km far from central Goba town, found in south east. In 2005 E.C it has 826 students from which 493 are males and 333 are females.

Study design and period

The study design was quantitative descriptive school based cross-sectional study by using structured self-administered questionnaires to the female students of Goba preparatory and high school from 12/07/2005-18/07/2005 EC.

Population

All female high school and preparatory students in the town were our source of population.

Study population

Randomly selected female Goba high school and preparatory students

Inclusion and exclusion criteria

Inclusion criteria

All regular high school and preparatory female students within the age range of 14-49 years and willing to participate.

Exclusion criteria

All female students other than the regular students (e.g. night students sample size determination and sampling technique).

Sample size

Sample is calculated by using the single population proportion formula assuming that the knowledge of EC among female high school students is 19% [17], the sample size will be

N=(Zα/2) 2(P(1-P))/d^2

N=(1.96) 2(0.19(1-0.19))/ (0.05) ^2

N=236

Where, N=Sample size

P=proportion of EC knowledge among female students (0.19).

Z=Standard normal distribution curve value for the 95% confidence interval (1.96)

d=margin of error (5%=0.05)

Adding 10% non-response rate and design effect to be 1

Therefore, our final sample size was 260

Sampling technique

There were a total of 850 female students from grade 10-12. After having the full list of female students by using systematic random sampling, we calculated the sampling interval to be 4. Then the first student was selected by lottery method and the rest of the participants were selected every 4 students interval.

Study variables

Dependent variable

- Emergency contraceptive us
- Knowledge
- Attitude

Independent variable

- Socio demographic factors
- Operational definitions

Emergency contraception: A kind of contraception indicated after unprotected sexual intercourse to prevent unintended pregnancy.

Sexually active: Having a previous history of vaginal sexual intercourse.

Unintended pregnancy: Pregnancy occurred with no plan.

Knowledge: awareness of the existence of EC, its importance and effectiveness. For this study purpose, there are 7 EC knowledge related questions having 1 point for each question. The score range will be between 0 and 7. Finally the student's score out of 7 will be converted to 100 points. Students will be considered as having adequate knowledge about EC if they scored above 50% otherwise, they will be considered as having inadequate knowledge if score <50% [17].

Attitude: Intention of using or recommending EC when a need arises. Intending to use or recommend is considered as a positive attitude, and no intention as a negative attitude. For this study purpose there are 7 attitude related statements. The students will be asked to indicate their level of agreement to the statements using a five-point rating scale (strongly agree=1, agree=2, neutral=3, disagree=4 and strongly disagree=5). The score ranges will be between 0 and 35. Finally the score out of 35 will be converted to 100 points. Higher scores (>50%) will indicate a more favorable attitude toward EC [23,24,25].

Practice: Any previous history of EC usage.

Media: Radio, Television.

Data collection instrument and method

Data collection instrument

The questionnaire contains socio-demographic characteristic of the students (age, sex, marital status, educational level, religion, etc.), knowledge of students, the students' attitudes and practice towards EC.

The questionnaire was 1 stprepared in English and then translated in to Afan Oromo and Amharic and then translated in to English to see its consistency by different individuals. Before the main study pretest was carried out on 5% of the total sample size (13 female students) who were not included in study. Based on the result the group members were reoriented and the questionnaire has been modified as necessary.

Structured self-administer questionnaires was distributed to respondents. All the research group members had actively participated during the data collection process. Moreover, collected data was checked daily by group members [26].

Data collection method

Data was collected through self-administered questionnaire

Data analysis

Data was checked for completeness and results are expressed in terms of counts, proportions or

Percentages using SPSS version 16.

Data quality control

To ensure the quality of data, a range of mechanisms was employed to address major areas of bias introduction during the data collection process. First, the questionnaire was pre-tested by taking 5% [13] of the sample size in other female students from Robe high school to ensure that Before the actual data collection, the questionnaire was pre-tested on 5% [13] of the total sample size in another female students from another high school (Robe high school) to ensure that whether the questions are understandably phrased; whether the respondent understand the questions and the instructions; to check and estimate the time it took to locate an eligible student and how long it took to collect the information from each female student; whether the design of the data collection tool in translated version allowed for legible recording of the data.

Ethical consideration

The study was done after gaining full approval from Mada Walabu University, college of Health Sciences Research Ethical Review Committee. The study participants were informed about the purpose of the study, the importance of their participation in the study, their right to skip question/s that they did not want to answer fully or partly, their right to quite the process at any time if they wanted to do so and their participation is voluntary. After assuring the confidentiality nature of responses and obtaining informed consent from the study subjects, the questionnaires was distributed among the selected female students.

RESULTS

All of the 260 students have responded to the questionnaire paper to fill it. The age of study participants ranged from 14-24 years.

Regarding to the Educational level, 115 (44.2%) were grade 10, 99 (38.1%) were grade 11 and the remaining 46 (17.7%) were grade 12.

Among the study subjects 216 (83.7%) were single, 38 (14.7%) had boyfriend, 3 of them were married and only one respondent was divorced.

Most of the respondents 191 (73.5%) were orthodox Christianity followers followed by Muslim and protestant which accounted for 57 (21.9%) and 11 (4.2%) respectively.

Most of 166 (64.6%) of the respondents came from urban area and 91 (35.4%) came from rural area. Regarding to their mothers' educational status, 67 (25.8%) of the students responded that their mother can read and write, 21 (8.1%) as illiterate, 86 (33.1%) attended primary school, 51 (19.6%) attended high school and 34 (13.1%) attended postsecondary school. More than half, 56 (21.5%) of the students responded that their father can read and write, 15 (5.8%) illiterate, 53 (20.4%) attended primary school, 42 (16.2%) attended postsecondary school.

Table 1: Socio demographics of Goba female high school and preparatory students June, 2013.

Variable	No	%
Age	255	98.1
14-19	4	1.5
20-24	1	0.4
>24	260	100
Total		
Grade (Education level)	115	44.2
10	99	38.1
11	46	17.7
12	260	100
Total		
Marital states	3	1.2
Married	216	83.7
Single	1	0.4
Divorced	38	14.7
Has boy friend	258	100
Total		
Religion	191	73.5
Orthodox	57	21.9
Muslim	1	0.4
Catholic	11	4.2
Protestant	260	100
Total		
Place of origin	166	64.6
Urban	91	35.4

Rural	257	100
Total		

Key: Edu=Educational, No=Number, % =percentage

Concerning to the knowledge on EC, 205 (78.85) of the study subjects have heard about EC. Regarding the source of information, most 119 (58.05%) heard from media followed by health personnel 57 (27.8%) and friend 22 (10.73%). Among those who have ever heard of EC, 68 (34.5%) identified correctly progesterone only pills as emergency contraception pills (ECPs) and 71 (36%) combined oral contraception and Intra Uterine Devices (IUDS) as emergency contraceptive methods.

Among those who responded as they know the maximum acceptable time of ECP after unprotected sex, only 21(43.8%) correctly identified 72 hours as the time limit for the ECPs. Among those who were aware of EC, only 12 (6.6%) identified correctly the two dose of ECPs. Regarding the recommended time between the doses, 6 (3.9%) responded 12 hours apart (Table 2).

When the overall knowledge score was computed, only 25 (9.5%) had good knowledge while 235 (90.4%) had poor knowledge about the EC methods.

Table 2: Awareness and knowledge of Goba female high school and preparatory students June, 2013.

	No	%
Have you heard about EC	205	78.8
Yes	55	21.2
No		
source of information about EC (N=205)	57	27.8
From health personnel	119	58.05
From media	22	10.73
From friend	7	3.42
Other		
Types of EC known (N=205)	68	34.5
Pills	71	36
IUCDs	46	23.4
Inject able	12	6.1
Other		
Do you the maximum acceptable time ECP taken after unprotected sex?	48	23.4
Yes	157	76.6
No		
Recommended time	22	45.83
Within 24 hours after sex	2	4.2
Within 48 hours after sex	21	43.8
Within 72 hours after sex	3	6.25
Other		
Recommended number of dose	36	19.9
One dose	12	6.6
Two dose	1	0.6

Three dose	132	72.9
I don't know	180	
Recommended time b/n the dose	6	3.9
12 hours apart	7	4.5
24 hours apart	142	91.6
I don't know		

The students disagreed to the following statements indicating their positive attitude: Availability of ECPs will make people irresponsible (attitude score=56.4/100), ECPS would increase promiscuity (attitude score=60.9/100), ECPS would cause more STIS/HIV due to nonuse of condom (attitude score=60/100), ECP use were would make people care less about the advance use of contraception (attitude score=64/100), ECP might affected on pregnancy in the future (attitude score=58.9/100), and I am afraid to use ECPS due to side effects (attitude score=60/100). However, they have negative attitude as they agree with the statement 'If ECPS were obtainable without prescription their use would be abused (attitude score=39.5/100)' (Table 3).

Overall, 185 (71.2) students have positive attitude (attitude score ≥ 50) and the rest, 75 (28.8), are regarded to have negative attitude towards the 7 attitude statements.

Table 3: Attitude level of Goba female high school and preparatory students June, 2013.

Statement	Strongly agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Strongly disagree (5)	Attitude score (out of 100)
	No (%)	No (%)	No (%)	No (%)	No (%)	
Availability of ECPs will make people irresponsible	50 (19.5)	73(28.4)	40(15.6)	61(23.7)	33(12.8)	56.42
ECPS would increase promiscuity	45(17.4)	52(20.2)	33(12.8)	103(39.9)	25(9.7)	60.85
ECPS would cause more STIS/HIV due to nonuse of condom	56(21.9)	49(19.1)	32(12.5)	77(30.1)	42(16.4)	60.00
If ECPS were obtainable without prescription their use would be abused	116(45.1)	84(32.7)	19(7.4)	23(8.9)	15(5.8)	39.53
ECP use were would make people care less about the advance use of contraception	29(11.5)	56(22.1)	38(15)	95(37.5)	35(13.8)	64.03
ECP might affected on pregnancy in the future	55(21.4)	45(17.5)	46(17.9)	83(32.3)	29(10.9)	58.91
I am afraid to use ECPS due to side effects	43(16.9)	55(21.6)	53(20.8)	67(26.3)	37(14.5)	60.00

Overall attitude score (out of 100) 57.11

Key: Attitude score ≥ 50=positive attitude, Attitude score<50=Negative attitude

Regarding to utilization of EC, of 260 respondents 15 (5.5%) ever had sexual experience without using condom and other contraceptive methods.

Among those who had had sexual intercourse 4 of them ever used ECPs. When asked why they used ECP, 2 of them replied because they didn't use any contraceptive methods while the rest 2 replied due to missed pills. When asked who recommended them to use it, 2 replied their sexual partner, 1 her girlfriend, and the another 1 replied health care provider. Regarding the source of ECPs; 2 of them responded from private clinic, 1 from public hospital and another 1 from pharmacy.

Among those who ever had sexual intercourse, 3 were pregnant once. Among this 2 of them had unplanned pregnancy and had induced abortion at private house.

DISCUSSION

Our study showed that those students who have never married (single) (83.1%) had better awareness on EC than have boyfriend (14.6%). The result of this study has also shown that more than two third (78.8%) of the total respondents were aware of the existence of EC. This figure is higher than those reported by Jimma university community high school female students 64.1% [22] and 75.5% from north Gondar [10], but it was lower than those reported from 80% in Nova Scotia female high school [19].

Similar to what many other studies have shown; our young students also lack specific details like dose and timeframe of the method (4.9%). This is very low when compared with the study done in south east Scotland (26.4%) [18]. Jimma university community high school female students (19%) [22] and Nova scotia high school female students (8%)[19]. This is due to lack of information about the importance and usage of family planning method at high school and in the community level by specified health program.

This study has shown no significant association of EC use with level of education which was contrast to many other studies.

The commonest source of information about EC in this study were media (58%) and health personnel (27.8%) followed by friends (10.7%) and others (3.4%)

In this study nearly one fifth (1/5) of sexually active respondents gave history of one pregnancy of which 2 of them were un wanted pregnancies. This occurs due to do not known the correct recommended time of EC. But the prevalence of unwanted pregnancy among the total study participants was 0.77%, which is much lower than reported by other studies conducted among Adama University female student's (8.8%) [17]. This study showed over all low rate of induced abortion. Of those who had sexual intercourse, four in 15 (fifteen) stated that they themselves had used ECP, which corresponds well to previous findings in Sweden [20] and Scotland [18].

The positive attitude of respondents towards EC is significantly higher among Orthodox 137 (74%) compered to Muslim 41 (22%) and protestant 7(3.7%).

Only 25 (9.6%) of respondents had good knowledge about EC on over all summary index for knowledge in this study lower than studies conduct Adama university Female students [17].

More than 2/3rd of respondents have heard about EC; in this study only 9.6% of them had good knowledge.

Strength and limitation of the study

Strength: Data was collected from each grade by giving well-structured self-administered questionnaires.

CONCLUSION

In the study there are a significant number of respondents who had heard about ECPs; but had not enough knowledge on the correct dose and time frame of ECPs. Even if emergency contraception was available in selected governmental health facilities, the study showed that there is superficial awareness and less utilization of EC methods among the study participants.

The study showed that majority of the respondents had positive attitude towards emergency contraception, but had not good knowledge about the method.

In the study the students have superficial awareness about EC methods. Of those who were aware about the availability of EC the majority lack the knowledge on what type of ECs.

Recommendation

Our study clearly indicated that there is superficial knowledge and low utilization of emergency contraception. To improve this situation the following recommendation are made.

Goba health office should strengthening advocacy and IEC (information education and communication) to increase awareness and knowledge of EC methods.

School directors should assigning nurse, training and motivating in the high school about EC and other family planning services.

Goba health office should give high emphasis on family planning service on high school students because they can act as a media to transmit for the community.

Data availability

The data used to support the findings of this study are available from the corresponding author upon request.

Ethics approval and consent to participate

Ethical clearance was obtained from Ethical Review Board of University of Madda Walabu University, College of Medicine and Health Sciences, Institute of Public Health prior to data collection. Written informed consent was obtained from each study participant after the purpose of the study explained. Food handlers who were not volunteered to continue from the beginning or from any part of the interview were respected to do so. Privacy and strict confidentiality were maintained during the interview process. Name and personal identifiers of participants had not been included in order to maintain Anonymity.

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