



Knowledge, Attitude, Practice towards Emergency Contraceptives and Associated Factors among Dill Ber High School Female Students in Addis Ababa, Ethiopia, 2021; Multi Center Cross Sectional Study

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Keywords: knowledge; Attitude; Practice; Emergency contraception; Female students.

Abbreviations: CSA: Central Statistical Agency; ECs Emergency contraceptive pills; FMOH: Federal Ministry of Health; IUCDs: Intra-uterine Contraceptive Devices; MDG: Millennium development goal; SPSS: Statistical package for social science; STIs: Sexually Transmitted Infections

Abstract

Background: Emergency contraceptives are fallback options for stopping pregnancy during unprotected sexual activity. Unexpected teenage pregnancies have a significant negative effect on students' lives and have been linked to risking their academic success and aspirations for the future.

Objective: To assess the knowledge, attitude and practice of emergency contraception among female Dill Ber High School students in Addis Ababa, Ethiopia.

Method: A cross-sectional survey was conducted and 326 study subjects were selected using systematic random sampling technique. Data was gathered from January to March 2022. After gaining verbal informed consent from the interviewees, data were gathered. Data was collected using pre-tested structured questionnaires at w/ro kelme-work memorial school and data were coded, entered and analyzed SPSS version 26. The crude and adjusted odds ratio (AOR) together with their corresponding 95% confidence intervals was computed. Bivariate and multivariate logistic regression was used to assess the association of independent variable with knowledge, attitude and practice of emergency contraception. P-value <0.05 was considered to declare a result as statistically significant.

Results: Of the total respondents, 235(72.1%) who have heard about ECs and 58 (17.8%) of the respondents had ever had sex in the past. Oral contraceptive pills (OCPs) were the most widely known technique among those who had ever heard of ECs, with 205 (87.2%). Of the sexually active



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respondents 58 (17.8 %) of the respondents have ever had sex in the past. Whereas 249 (74.6%) did not use emergency contraception, some of the reasons included a lack of knowledge about ECs (42.9%) and religious prohibition (177 (71.1%).

Conclusion and recommendation: The study indicated knowledge and awareness towards EC for the female students increased with their level of education. Therefore, designing specific strategies to enhance emergency contraceptive utilization by increasing female students' awareness on emergency contraceptive is recommended.

Introduction

Emergency contraceptive pills (ECPs) reduces the chance of pregnancy following unprotected or insufficiently protected sexual activity [1]. Emergency contraception refers to any method of birth control that women can use following unprotected sexual activity but before the potential window for implantation (EC). When a regular method fails, no method was used, or forced sex was utilized, emergency contraception (EC) provides a critical opportunity to prevent unintended pregnancy [2]. Emergency contraception (EC) is a contraceptive method used to prevent unwanted pregnancy in the first few days after the unprotected sexual intercourse or contraceptive failure/accident. The EC is also known as post-coital pills or morning-after pills [3]. Approximately 40% of pregnancies (85 million) worldwide were unintended. Women with an unintended pregnancy may face the dilemma between terminating the pregnancy and allowing an unwanted birth [5]. The annual number of induced abortions in Africa rose between 2003 and 2008 from 5.6 million to 6.4 million. In 2008, the most abortions occurred in eastern Africa (2.5 million), followed by western Africa (1.8 million), northern and middle Africa (0.9 million), and Southern Africa (0.2 million) [4].

According to WHO, EC can prevent up to 95% of pregnancies. In many developed countries, there is an increased incidence of high-risk sexual behavior among the adolescents' age group, and their awareness level of the EC was excellent, with the percentage varying from 61 to 93%. By the age of 18 years, 40–80% of females become sexually active. But their awareness level regarding the EC is low compared with developed countries. Limited access to information and services often causes major reproductive health problems for young women due to unwanted pregnancy or unsafe/illegal abortions [3].

After Nigeria, Ethiopia has the second-highest population in Africa. Various strategies are being used to increase the use of family planning and the rate of population growth. The Family Guidance Association Ethiopia (FGAE) pilot initiative was exhibited in 2007. The popularity of EC among young people demonstrated the necessity of expanding the service. This effort was encouraging, but there was no coordinated, systematic way to meet the vast need for this technique. The FMOH and its partners as a result started a new effort that aims to stream EC into the public and Charity sector [4]. Ethiopia is at a critical point because of the country's 2.6% annual population growth, which puts significant strain on the country's health service infrastructure. Giving young people the information they need to make informed decisions about their reproductive health, including their desired fertility, is one of the most effective treatments to combat the rapid population expansion [5]. This study's objectives are to assess the utilization of emergency contraceptives in teenage females attending high schools students and to de-

termine the variables that affect their KAP of ECs. Hence, this study tries to find out the knowledge, attitude, and practice of emergency contraception among the female students of Dill Ber High School in Addis Ababa.

Methods and Materials

Study design, area and period

An institution based cross-sectional study design was conducted. Addis Ababa is the capital and largest city of Ethiopia. It is located on a well-watered plateau surrounded by hills and mountains, in the geographic center of the country, with a total population of 4.8 million people in the urban area and 2.7 million people living in its rural areas, even though they are bounded by Addis Ababa [6]. Addis Ababa is the political capital of Africa, for its historical, diplomatic and political significance for the continent where the Africa Union is headquartered and based. It is also the sit for the United Nations Economic commission of Africa. Addis Ababa is the political capital of Africa because of its historical, diplomatic, and political significance for the continent, where the African Union is headquartered and based. It is also the seat of the United Nations Economic Commission of Africa [6]. Currently Addis Ababa has 11 sub cities, 121 Woreda, 12 public hospitals, 101 public health centers and 700 private health facilities. Under those facilities 8960 health professionals and 9119 supportive staffs are giving service to the community [7].

The study was conducted at Dill Ber High School that is located in its northern part of Addis Ababa. The study was carried out from January 1, 2022, to March 31, 2022.

Sample size determination and sampling techniques

The sample size (n) was determined by using single population proportion formula, and calculated by taking the following statistical assumptions.

p= the proportion taken from the research done at Addis Ababa University, Ethiopia was

(43.5%) [8].

Z $\alpha/2$ = the corresponding Z score of 95% CI

d= Margin of error (5%)

N= Sample size

$$N = \frac{Z^2 (p/q)^2 P (1-P)}{d^2} = \frac{(1.96)^2 * 0.435 * 0.565}{0.0025} = 378$$

Since, the source population was less than 10,000, correction factor was used to estimate the final sample size required.

$$n = \frac{no}{1 + \frac{no}{N}}$$

nf = final sample size

N= total number of source population 1359

$$nf = \frac{378}{1 + \frac{378}{1359}} = 295.7 = 296$$

nf=296

Taking into account the non-response rate, the study's overall sample size was 296+30=326.

The sample size was therefore 326.

Study variables

Dependent Variable: Knowledge and practice of emergency

contraception among female students

Independent variables: Socio- demographic variable: Age, Level of education, Living condition, Religion and Exposure to media, **RH related factors:** Sexual experience, Number of partner, Ever been pregnant, and Number of births, **Family background factors:** Parent educational level, Parents: daughters communication about RH issues, **Health service factors:** Availability, Accessibility, Affordability and Quality of SRH.

Other factors: Peer communication about RH issues, Chewing chat, Alcohol consumption, Communication with boyfriends/ husband about RH issues, Exposure to mass media

Operational definitions of concepts

Emergency contraception (EC): is contraception applied after unprotected sexual intercourse to prevent unintended pregnancy.

Knowledge of EC: Knowledge of EC is awareness of the presence of contraception methods after unprotected sex, its sources, ability to identify when EC should be taken after unprotected sex,

Data collection instrument

The tools are adopted from different literature developed for similar purposes by different authors [9-12]. Data was prepared in English and then translated into Amharic and translated back to English by a person who was good at doing so to check for consistency and clarity. The questionnaires included socio- demographic characteristics, awareness of EC and regular contraception, attitude - toward EC, practice of EC and emergency service utilization related question and the availability and quality of emergency contraception services among female high school students. These respective series of questions were adopted from previous similar studies concerning knowledge, attitude and practice about ECs.

Data quality control and management

A total of four BSc nurses were hired as data collectors, and two more senior BSc nurses will be hired to serve as their supervisors. The lead investigator gave two days of training to the data gatherers. Expertise was given a tool to assess the accuracy and authenticity of the content. It was pre-tested on 5% (n=16) of comparable high school female students outside the study area to evaluate its thoroughness, clarity, length, skip patterns, and accuracy of filled-out questioners. Health experts with the necessary training from various departments of the hospitals collected the data. The lead investigator exercised supervision by seeing how data collectors went about their work. The lead investigator reviewed each completed questionnaire to ensure its accuracy and consistency.

Data processing, analysis, interpretation and presentation

EPI Data version 4.6 was used to enter the date, and SPSS Software version 26 was used to analyze it. Calculations were made for the means, standard deviations, frequencies, percentages, and odds ratios. Descriptive statistics including proportion, frequency, crosstabulation, and the measure of central tendency were computed once the data were coded and entered into the software.

To ascertain how different factors would effect the result variable, numerous logistic regression studies were carried out. To account for all potential confounders, the multivariable mod-

el included all variables with a p-value of less than 0.25. An odds ratio with a 95% confidence interval and a p-value of less than 0.05 was used to determine the strength of the relationship between the dependent variables.

Results

Socio-demographic characteristics of respondents

A response was obtained from 326 female Dil Ber high school students towards emergency contraceptives, making the response rate of 100%. The respondents' age distribution revealed that the majority (73.6%) of them were between the ages of 16 and 19. Most of the respondents (220, (67.5%) were followers of the Orthodox. Almost all (307) (94.2%) of the respondents were single. Concerning their educational status, 167 (51.2%) were in grade 10th and 159 (48.8%) were in grade 9th. The majority of the students (285, (87.4%) were living alone with their family/parents (Table 1).

Knowledge of emergency contraceptives

235 (72.1%) of respondents said they have heard of EC. The majority of students 165 (50.6%) were unaware of the ideal time to use an emergency contraception. Approximately 86 (26.4%) of the students were concerned about the effectiveness of emergency contraceptives in preventing unintended pregnancies.

Source of information about EC getting from friends for 83 (35.3%), health workers for 80 (34.0), family for 36 (15.3), club in school 35 (14.9%) and mass media (TV, Radio) for 1(0.4%) (Figure 1).

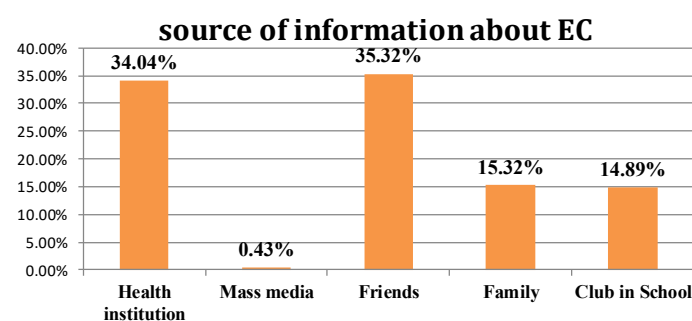


Figure 1: Source of information about EC pills among female Dil Ber high school students towards emergency contraceptive, Addis Ababa, Ethiopia, 2022 (n=235).

The majority of techniques (87.2%) were oral contraceptive pills (OCPs), which were followed by other methods (18.7%), both methods (9.8%), and IUDs (3.8%) (Figure 2).

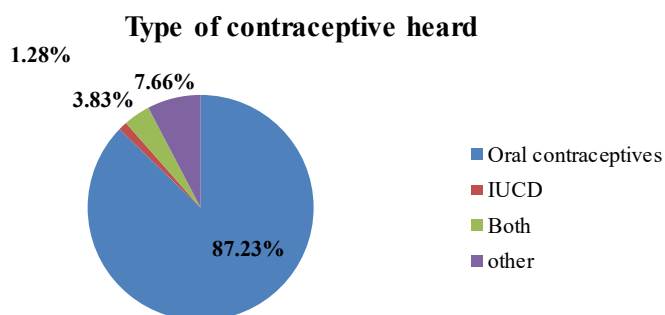


Figure 2: Type of emergency contraceptive heard among female Dil Ber high school students towards emergency contraceptive, Addis Ababa, Ethiopia, 2022 (n=326).

Attitude of emergency contraceptives

About 103 (30.7%) of the respondents agreed that emergency contraceptives cause a loss of trust between regular partners, and 95 (27.3%) were neutral about her attitude. Most of 189(58.0%) of them were it is agree for a good idea to avail emergency contraceptive for all females. Half of 162 (49.7%) the respondents were strongly agree emergency contraceptive it is beneficial to use after unsafe sexual intercourse.

Practices on ECs among female students

At the time of the study, 58 (17.8%) of the respondents had ever had sex in the past. Of those students, 20 (34.5%) had their first sexual intercourse with their boyfriend, and 17 (29.3%) were spouses (partners). Regardless of the respondents' having a number of sexual partners in their lifetime, most of them—49 (84.5%)—had one sexual partner. With regard to pregnancy experience, among those who were sexually active, a total of 23 (39.7%) respondents replied that they had been pregnant.

Utilization of emergency contraception

About 77 (23.6%) were to take ECs. Major source of ECs for respondents were pharmacy (drug vendors) 35(45.5%), private clinics 27 (35.1%), others 12(15.6%) and public health institutions followed by 3(3.9%). The study participants 225 (69.0%) have discussed about ECs with friends. Most of the respondents 102 (45.3%) were feelings are comfortable to get information on her friends/peers discussion (Table 2).

Factor associated with knowledge of emergency contraceptive

The association of the independent and dependent variables was first tested by using bi-variable analysis variables, which were associated ($P \leq 0.25$) were tested in the final multivariable analysis to see their significant association of knowledge towards emergency contraception among female high school students. Accordingly, as shown in Table 3 below, those bi-variable regressions associated with the crude odds ratios (COR) for knowledge towards emergency contraception, such as age of the student, educational status, ever used emergency contraceptive, emergency contraceptive pill taking time, emergency contraceptive received doses, and discussing emergency contraceptives with close friends (Table 3).

Factors associated with practices of emergency contraceptive

The association of the independent and dependent variables was first tested by using bi-variable analysis variables, which were associated ($P \leq 0.25$) were tested in the final multivariable analysis to see their significant association of knowledge towards emergency contraception among female high school students. Accordingly, as shown in Table 4 below, those bi-variable regressions associated with the crude odds ratios (COR) for practices towards emergency contraception such as age of the student, educational status, knowledge about ECs, effectiveness of EC pills, having ever had sexual intercourse, and using of other modern contraceptives.

In multivariable analysis, results showed that, there was a statistically significant association found between the practice of emergency contraception among female students, and parameters which showed a p-value of below 0.05 were knowledge about ECs and having ever had sexual intercourse (Table 4).

Discussions

Although emergency contraception is not recommended as a regular part of family planning, as a group of birth control modalities, it is the most useful when used after an unprotected intercourse or contraceptive failure within defined time limits. This study has tried to assess knowledge, attitude, and practice towards emergency contraceptives among Dill Ber High School female students in Addis Ababa.

In this study, knowledge about EC was 235(72.1%). According to the findings from the study done in Nigeria [13] which was (88%), knowledgeable who were mentioned at least one method. This variation could be due to the difference in the operationalization of the variable or methodological difference. In addition, female students who had practice about EC were 58 (17.8 %). This finding was lower than a study done in Nigeria (85.3%) and Dilla University students (62%) [13]. This difference could be due to socio demographic difference among study participants. The finding of this study was higher than a study done in Mizan Tepi University female students (38.4%) [14] and Ambo Technique College students (1.6%) [15]. This difference could be due to sensitivity nature of the information they may hide their history of sexual activities. This finding is almost agreed with a study done in Adama in which 85.5% and 10.5% of the respondents engaged in sexual activities in love and rape/forced sex respectively. This could be due to methodological similarity of the studies.

In this study, the age of female student less <15 year were 98% times less likely knowledgeable on emergency contraception when compared to age at >20 years. The result is closely similar with study done in Addis Ababa, Ethiopia [16]. This result is higher than result of study conducted in Agaro high school which was 14% [17] and another study which conducted in Nigerian female undergraduates (43%) [13]. This variation could be due to some tradition in which the girls do not provide the true response.

Female students in grade 9th were 52% less likely to be knowledgeable about emergency contraception than female students in grade 10th. A possible explanation is that educated women are more likely to terminate the pregnancy if it is not properly timed or unwanted rather than avoid it.

Female students who received EC pills once a day were 3 times more likely to have adequate knowledge of emergency contraception than female students who received EC pills two or more times a day. Majority of the study participants had lack of detailed knowledge in the recommended dose to use EC methods. The finding of this study is similar to findings in AAU and Jimma hospital. More than half of the study participants were not sure that the method prevents unintended pregnancy after unprotected intercourses [18]. This might be explained by the reason that as participants' level of EC utilization increases level of detailed knowledge increases as well. Another explanation this may be due to low health promotion in developing countries and socio-demographic variation between study subjects.

Furthermore, when compared to female students who had not discussed EC with close friends, students who had discussed EC with close friends were 86% less likely to be knowledgeable about emergency contraception. The possible reason for such great difference could be sample taken in this study is small in number/size and from only three health facility.

Female students who had adequate practice with emergency contraception had twice the odds of knowing about ECs as female students who had no knowledge about ECs. Similar community-based studies conducted in South Africa and Ethiopia showed [16] a high proportion of the study groups had some knowledge. This finding is consistent with studies conducted among female students at the University of Lagos in Nigeria, which revealed that 67.8% of respondents knew about emergency contraception, with more than half (56.1%) being sexually active, and of this group, 96.8% had ever practiced contraception, with only 33.9% having ever practiced emergency contraception [13]. The possible reason for low EC practice rate and knowledge in this study could be due to having negative attitude towards emergency contraception, lack of correct information, low promotion and availability of the methods in most health institutions as well as lack of enough mass Medias that works about reproductive health condition of the society.

Female students ever had sexual intercourse were 5 times more likely to have adequate emergency contraception practice than female students who had not had sexual intercourse. The result was lower than other study findings in North-west Ethiopia, debark among high school students was (65.3%) [19] and in South central Ethiopia, Meskan & Mareko district women (59%) were suffering from sexual violence [17]. Although there was a difference in the study period and area, this result indicates that there is an awareness of human rights in the community. In a similar study in Addis Ababa, female university students showed a higher rate of unwanted pregnancy (74%) [16]. The possible explanation for this is that most females who became pregnant in this study were single, based on their age and educational level, and were thinking about the interruption of education to take measures that threatened their life or darkened their future career.

This study has shown that 72.1% of the female high school students had adequate knowledge about EC and 17.8% practiced the methods. The students' knowledge and awareness of EC towards the end of their education increased. Most of them know where to go when to take ECS. The main source of information was friends. Strategies and programs should be specifically designed to provide appropriate information and access to EC in the country in general and in college institutions in particular, to enhance the appropriate awareness of EC among adolescents.

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Conflict of interest

The authors declare no conflict of interest in preparing this article

Ethical approval

Ethical clearance was sought from the department of adult health nursing, Rift Valley University, Abichu campus, Research and Ethics Committee. An official letter from the department

of adult health nursing at Rift Valley University was written to obtain permission to carry out the study at the selected schools. Ethical clearance was obtained from Addis Ababa public health research and emergency management directorate. Verbal consent was obtained from each female student after the investigators had explained the nature, purpose, and procedures of the study. Participants were assured that their participation was voluntary and that they had every right to withdraw or refuse to give information at any time in the study without any penalties.

Author contributions

Mr Yohannes Godie (BSc, MSc), Zeritu Feleke (BSc), and Dr. Girum Sebsbie (Assistant professor, PhD) made significant contributions to the work of the report, whether in conception, study design, execution, data acquisition, analysis and interpretation, or all of these areas, participated in the drafting, revision or critical review of the article, and ultimately approved the version to be published, Agreed to the journal to which the article was submitted and agreed to be responsible for all aspects of the work.

Data availability

Data are available on reasonable request.

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