

# Knowledge, attitude, and practice on emergency contraceptives among female university students in Addis Ababa, Ethiopia

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## Abstract

**Background:** Unwanted pregnancy followed by unsafe abortion can be avoided by using different contraceptive methods, including emergency contraceptives. Information on knowledge, attitude and practice of emergency contraceptives among women is particularly important because of high rates of teenage and unwanted pregnancies as well as soaring STI and HIV/AIDS rates.

**Objectives:** The aim of the study was to assess the knowledge, attitude and practice of emergency contraceptives among young females.

**Methods:** A cross-sectional survey was conducted among 774 female students at Addis Ababa University and Unity University College from January to September 2005.

**Results:** About 43.5% (95% CI 40.0 - 47.0%) of the students said that they have heard about emergency contraceptives. When asked about specific types of emergency contraceptives, among those who have ever heard of emergency contraceptives, 279 (82.8%) mentioned pills and 115 (34.1%) mentioned intrauterine contraceptive devices (IUCDs). About 53% (95% CI 49.1-56.1%) of the students had positive attitude towards emergency contraceptives and only 4.9% (95% CI 3.4-6.4%) respondents reported that they had used emergency contraceptive methods previously.

**Conclusion:** The study has shown that there is low level of knowledge and practice of emergency contraceptives among female university students. [*Ethiop.J.Health Dev.* 2007;21;(2):111-116]

## Introduction

Unwanted pregnancy leading to unsafe abortion is one of the most important causes of maternal morbidity and mortality. Unsafe abortion is a major medical and public health problem in Ethiopia (1-3). Ethiopia has a high incidence of unwanted pregnancies and incomplete and unsafe/septic abortions, particularly among adolescents. Several studies in the country have revealed that women who tend to undergo induced abortion are below the age of 30 years and are literate; many of whom being above the secondary educational level. (4-8).

Consequences of unprotected sex, such as unintended pregnancy and unsafe abortion, can be prevented by access to contraceptive services including emergency contraception. Emergency contraception is a method used to avoid pregnancy after unprotected sexual intercourse unlike the regular methods of contraception that are taken before sexual contact. It has the potential, as the last resort, to avoid unwanted pregnancy and therefore abortion; a desirable goal especially when abortion is illegal. Oral contraceptive pills and intrauterine contraceptive devices (IUCDs) are mainly used as emergency contraceptives. When used within 72 hours after sexual contact pills have the capacity to prevent pregnancy by 75-85% and with the use of IUCDs unwanted pregnancy can be prevented by as much as 99%. This is especially significant for those young couples that opt not to use a long-term regular contraceptive method and their sexual behavior is rather unplanned, erratic and irregular (9-11).

Knowledge and practice on emergency contraception are particularly important because of high rates of unwanted and teenage pregnancy and soaring STI and HIV/AIDS rates. Different studies, however, have shown that the knowledge and practice in relation to emergency contraception are limited among women (12-15). The practice of emergency contraceptives is almost nonexistent in Ethiopia, as the method is not presented with other methods of contraceptives. Literature is also scarce in this area. Recently a survey has been conducted in the country for the purpose of expanding coital dependent and contraception methods and the findings showed that young people opt not to use long-term regular contraceptive methods as their sexual practices are unplanned and irregular (10). The aim of this study is therefore to assess the level of knowledge, attitude and practice of emergency contraception among young students at higher institutes.

## Methods

A descriptive cross-sectional study was conducted among female students at Addis Ababa University (AAU) and Unity University College (UUC). AAU is the oldest higher education governmental institute in Ethiopia, founded in 1950. Currently it runs bachelors, medical doctorates, postgraduates and certificates of specialty programs. According to the statistics obtained from the main office of the registrar at the university, a total of about 38,000 students were enrolled in all the programs with female students accounting for 26%. According to

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the information obtained from to registrar office of AAU during the study period, there were about 60 departments at different faculties, schools, and colleges. At the level of undergraduate program, regular students live within campus away from family with peer groups. These students are gathered from all regions of the country with cultural and language diversity. UUC is the biggest private college in Addis Ababa founded in the 1990s. It runs diploma's and bachelor's degree programs in the regular and extension sections in accounting, computer technology, economics, law, marketing, management, architecture and management information systems. During the study period a total of 3373 students were registered in the regular section, out of whom 1412 (41.9%) were females. In contrast to the AAU students at UUC live out of campus.

The sample size was calculated using a single proportion formula. Assuming the proportion of students who are aware of emergency contraception to be 50%, adding non-response rate of 10%, and multiplying by a design effect of 2 due to the multistage nature of the sampling method the required sample was 850. Based on proportional allocation, 680 students from AAU and 170 students from UUC were needed in the study.

At the first stage 26 departments were selected using probability-sampling proportion to size method from a total of 60 departments at AAU (from five campuses namely, Social science, Natural science, Faculty of Business and Economics, Medical faculty and Commerce School). At the second stage, individual students were selected using simple random sampling method from the selected departments. A random selection method was used from all female students of the UUC Gerji Campus.

Data was collected using self-administered questionnaires. The questionnaire was adapted from the nation wide survey conducted by Ethiopian Family Guidance Association (FGAE) 2002 (10), with some modifications to make this study contextual. The questionnaires was prepared in English and was pre-tested in students at two departments of AAU, which were not selected for the main survey one week before the start of data collection. Five data collection facilitators were trained and involved in data collection.

Verbal consent was obtained from the participant students whom information was obtained. Ethical clearance was obtained from the ethical committee of the Medical faculty, AAU.

Data processing and analysis was done using the SPSS version 11 for windows program. Descriptive statistics and odds ratio, with 95% confidence interval were used to show associations between target variables.

## Results

Full response was obtained from a total of 774 students (614 from AAU and 160 from UUC) making the response rate 91%. As it is shown in Table 1 the age of study participants ranged from a minimum of 17 years to a maximum of 41 years. The mean age was  $21 \pm 2.7$  years. Most of the respondents, 66.1%, were followers of Orthodox Christianity followed by Protestants who account for 18.6%. Majority (92.7%) of students were not married.

Table 1: **Socio-demographic and academic characteristics among female university students at AAU and UUC; Addis Ababa, 2005**

| Characteristics           | Number | Percent |
|---------------------------|--------|---------|
| <b>Age</b>                |        |         |
| 15-19                     | 216    | 27.9    |
| 20-24                     | 483    | 62.4    |
| 25+                       | 52     | 6.7     |
| <b>Marital status</b>     |        |         |
| Single                    | 713    | 92.1    |
| Married                   | 35     | 4.5     |
| Others                    | 21     | 2.7     |
| No response               | 5      | 0.6     |
| <b>Religion</b>           |        |         |
| Orthodox                  | 509    | 65.5    |
| Protestant/catholic       | 189    | 24.4    |
| Muslim                    | 72     | 9.3     |
| No response               | 4      | 0.5     |
| <b>Number of children</b> |        |         |
| None                      | 733    | 95.9    |
| One& above                | 31     | 4.0     |
| No response               | 10     | 1.3     |
| <b>University</b>         |        |         |
| Public                    | 614    | 79.3    |
| Private                   | 160    | 20.7    |
| <b>Year of study</b>      |        |         |
| Year I                    | 221    | 28.8    |
| Year II                   | 179    | 23.3    |
| Year III                  | 182    | 23.4    |
| Year IV & above           | 186    | 24.2    |

At the time of the survey about 151 (19.5%) respondents have ever had sex in the past. Of those who are sexually active, about 6% started sex before the age of 15 and 16% started sex between 15 to 19 years of age. Ten percent of the respondents claimed to have used contraceptive methods other than male condoms by their partners. The most commonly used contraceptive method was pills (44%) followed by injectables (21%).

A total of 53 respondents replied that they had been pregnant at least once previously (Table 3). This represents 6.8% of the total respondents and 35.1% of those who are sexually active. Almost half of those who were pregnant were below the age of 20 years and two of whom below the age of 15 years. Similarly 50% of those

who were pregnant reported that their pregnancy was unwanted, two of them reported that they were raped. About 13% of respondents reported that as they got pregnant while using a contraceptive method.

Table 3 shows that 38 (5%) students had practiced induced abortions one or more times. This figure accounts for 25% of all the students who are sexually active and about 71.7% of those who said to have had at least one pregnancy. Unwanted pregnancy was the main reason reported by 36 (95%) respondents for undertaking abortion. The mean number of abortions calculated was  $1.6 \pm 0.8$  ranging from 1 to 4. A considerable proportion of abortions 15.8% and 13.2%, respectively, were done by self-infliction and by untrained abortionist.

**Table 2: Age at first sex and contraceptive use among female university students at AAU and UUC; Addis Ababa, 2005**

| Characteristics  | Number | Percent |
|--|--------|---------|
| <b>Ever had sex</b>                                      |        |         |
| Yes  | 151    | 19.5    |
| No   | 615    | 79.0    |
| No response  | 8      | 1.0     |
| <b>Age at first sex (n=151)</b>                          |        |         |
| <15  | 9      | 6.0     |
| 15-19  | 24     | 16.9    |
| 20+  | 114    | 75.5    |
| No response  | 4      | 2.6     |
| <b>Ever used contraceptives (n should have been 151)</b> |        |         |
| Yes  | 78     | 10.1    |
| No   | 668    | 86.3    |
| No response  | 28     | 3.6     |
| <b>Type of contraceptives used (n=78)</b>                |        |         |
| OCP  | 36     | 43.9    |
| Injectable   | 17     | 20.7    |
| Implant  | 14     | 17.1    |
| IUCD   | 7      | 8.5     |
| Others   | 8      | 9.6     |

About 43.5% (95% CI 40.0 - 47.0%) of the students said that they have heard about emergency contraceptives (Table 4). The main sources of information about emergency contraceptive were the media and friends (Figure 1).

When asked about specific types of emergency contraceptives, among those who have ever heard of emergency contraceptives, 279 (82.8%) mentioned pills and 115 (34.1%) mentioned IUCDs. Of those who have heard about pills as an emergency contraceptive method, 73 (26.2%) could tell the correct timing of administration of pills after the unexpected sexual contact, while, of the respondents who have heard about IUCDs, only 10

(8.7%) could tell the correct timing of administration of the IUCD.

Table 4 also presents that about 53% (95% CI 49.1-56.1%) of the students have positive attitude towards emergency contraceptives. some of the positive attitudes reported by the respondents were: (i) emergency contraceptive protect women, particularly adolescents from unwanted pregnancy as a result of unplanned sexual intercourse or rape, (ii) it protects unplanned sexual intercourse or raped from undertaking unsafe and painful abortion and (iii) it is a simple method to use than the routine and long contraceptive method which is easy to forget. A considerable proportion (about 30%) of the respondents, however, did not know or did not respond to the question concerning attitude towards emergency contraception.

**Table 3: Pregnancy and related characteristics among sexually active female university students at AAU and UUC; Addis Ababa, 2005 (n=151)**

| Characteristics                      | Number | Percent |
|--------------------------------------|--------|---------|
| <b>Ever been pregnant</b>            |        |         |
| Yes                                  | 53     | 35.1    |
| No                                   | 91     | 60.3    |
| No response                          | 7      | 4.6     |
| <b>Age at first pregnancy (n=53)</b> |        |         |
| <15                                  | 2      | 3.8     |
| 15-19                                | 23     | 45.3    |
| 20+                                  | 24     | 45.3    |
| No response                          | 3      | 5.7     |
| <b>Unwanted pregnancy (n=53)</b>     |        |         |
| Yes                                  | 36     | 73.5    |
| No                                   | 13     | 26.5    |
| No response                          | 4      | 7.5     |
| <b>Induced abortion (n=53)</b>       |        |         |
| Yes                                  | 38     | 71.7    |
| No                                   | 14     | 26.4    |
| No response                          | 1      | 1.9     |
| <b>Number of abortions (n=38)</b>    |        |         |
| One                                  | 18     | 47.4    |
| Two                                  | 13     | 34.2    |
| 3 & above                            | 4      | 10.5    |
| No response                          | 3      | 7.9     |
| <b>Place of abortion (n=38)</b>      |        |         |
| Self infliction                      | 6      | 15.8    |
| Clinics                              | 24     | 63.2    |
| Untrained abortionist (TBA)          | 5      | 13.2    |
| No response                          | 3      | 7.9     |

About 17% of respondents had reported problems with emergency contraceptives. Some of the reasons included were; (i) it causes health problems and unpleasant side effects, (ii) it might cause more STI and HIV/AIDS infections due to non use of condoms, (iii) it would

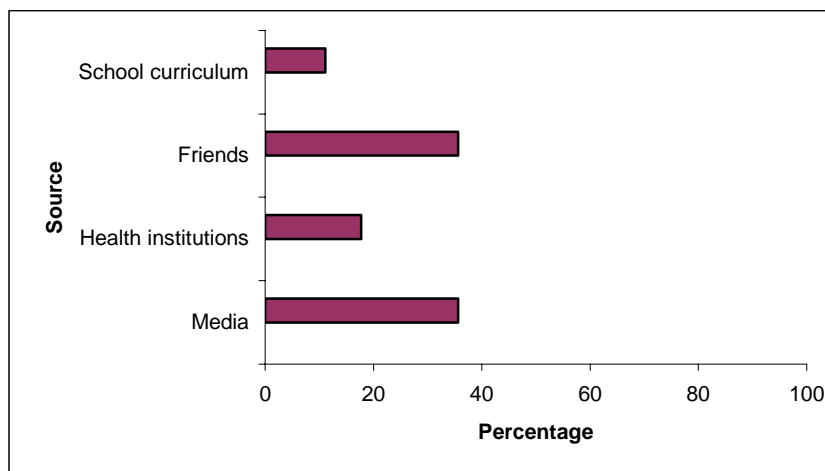


Figure 1: Main sources of information on emergency contraceptive among respondents who have heard about it.

Table 4: Knowledge, attitude and practice about emergency contraceptives among female university students; AAU, Unity College; Addis Ababa 2005

| Characteristics                      | Number | Percent |
|--------------------------------------|--------|---------|
| <b>Ever heard of EC</b>              |        |         |
| Yes                                  | 337    | 43.5    |
| No                                   | 424    | 54.8    |
| No response                          | 13     | 1.7     |
| <b>Type of EC ever heard (n=337)</b> |        |         |
| Pill                                 | 279    | 82.8    |
| IUCD                                 | 115    | 34.1    |
| <b>Positive attitude towards EC</b>  |        |         |
| Yes                                  | 407    | 52.6    |
| No                                   | 134    | 17.3    |
| Don't know                           | 208    | 26.9    |
| No response                          | 25     | 3.2     |
| <b>Ever used EC</b>                  |        |         |
| Yes                                  | 38     | 4.9     |
| No                                   | 699    | 90.3    |
| No response                          | 37     | 4.8     |

increase promiscuity, (iv) it could fail and will be completely useless after having sexual contact, (v) it is very expensive and (vi) few respondents reported that its use is objected for religious reasons.

Adjusted for the other variables positive attitude towards emergency contraceptives was significantly higher among followers of Orthodox and Muslim religions compared to Catholic and Protestants (Adj OR 0.52 95% CI (0.29, 0.92)) and among senior students compared to their juniors. Similarly positive attitude towards emergency contraceptives was better among older age groups, who have one or more child and among UUC students compared with AAU, however, this significance disappeared when adjusted for the other variables (Table 5).

As it is shown in Table 4, only 4.9% (95% CI 3.4-6.4%) respondents reported that they had used emergency contraceptive methods previously. All participants said that they used pills as emergency contraceptive methods and only four reported that incorrect timing of administration of the pills after the sexual contact.

The trend of ever use of emergency contraceptives significantly increases with increasing age, and was higher among students who are married, who have one or more child and students of UUC, than their counter parts respectively. When adjusted for other variables, married students compared to not married (Adj OR=3.24, 95% CI (1.19, 8.77) and students of UUC compared with students of AAU (Adj OR=4.88, 95% CI (2.23, 10.75) remained statistically significant (Table 5).

### Discussion

This study has tried to show the sexual behaviors as well as patterns of perception and practice on contraception; with a special emphasis on emergency contraception in students at higher education level in Ethiopia. The limitations in this study could be the fact that other colleges and segments of adolescents were not included and especially the knowledge, attitude and practice of emergency contraceptives among care providers and health institutions were not assessed; which could have been equally important to identify the problem in addition to approaching clients.

Almost one-fifth of the total number of study subjects reported that they are sexually active in their lifetime. Similar results were reported by different studies among Nigerian university students, and female medical school students in Mexican university (16, 17). Among unmarried students who were sexually active, about 27%

gave history of at least one pregnancy, of which 73.5% were unwanted pregnancies. On the other hand, among the total study participants, the prevalence of unwanted pregnancy was 4.7%, which is lower than reported by some studies conducted in the country, which ranged between 15-50% (1). The prevalence of induced abortion

in this study was 4.9%. Unwanted pregnancy was the main reason given for undergoing induced abortion (about 95%). The result was relatively higher as compared to a study done by Tadesse et al (1).

**Table 5: Factors related to knowledge, attitude and practice about emergency contraceptives among female university students at AAU and UUC, Addis Ababa, 2005**

| Characteristics           | Knowledge<br>OR (95% CI) | Attitude<br>OR (95% CI) | Practice<br>OR (95% CI) |
|---------------------------|--------------------------|-------------------------|-------------------------|
| <b>Age</b>                |                          |                         |                         |
| 15-19                     | 1                        | 1                       | 1                       |
| 20-24                     | 1.33 (0.96, 1.84)        | 1.77 (1.28, 2.44)*      | 1.49 (0.63, 3.53)       |
| 25+                       | 1.48 (0.81, 2.73)        | 2.34 (1.25, 4.38)*      | 4.64 (1.55, 13.90)*     |
| <b>Marital status</b>     |                          |                         |                         |
| Single                    | 1                        | 1                       | 1                       |
| Married & others          | 1.03 (0.61, 1.75)        | 1.66 (0.97, 2.86)       | 4.80 (2.21, 10.42)*     |
| <b>Religion</b>           |                          |                         |                         |
| Orthodox                  | 1                        | 1                       | 1                       |
| Protestant./Catholic      | 0.92 (0.56, 1.51)        | 0.52 (0.32, 0.87)*      | 1.56 (0.58, 4.29)       |
| Muslim                    | 0.75 (0.53, 1.05)        | 1.11 (0.80, 1.56)       | 1.06 (0.48, 2.33)       |
| <b>Number of children</b> |                          |                         |                         |
| None                      | 1                        | 1                       | 1                       |
| One& above                | 0.60 (0.28, 1.30)        | 1.26 (0.61, 2.61)       | 3.05 (1.01, 9.20)*      |
| <b>University</b>         |                          |                         |                         |
| AAU                       | 1                        | 1                       | 1                       |
| Unity                     | 1.10 (0.77, 1.56)        | 1.49 (1.05, 2.13)*      | 4.76 (2.46, 9.25)*      |
| <b>Year of study</b>      |                          |                         |                         |
| Year I                    | 1                        | 1                       | 1                       |
| Year II                   | 0.96 (0.64, 1.43)        | 1.40 (0.94, 2.08)       | 1.25 (0.48, 3.21)       |
| Year III                  | 0.98 (0.65, 1.45)        | 1.69 (1.13, 2.50)*      | 1.81 (0.76, 4.34)       |
| Year IV & above           | 1.66 (1.12, 2.46)*       | 2.34 (1.57, 3.50)*      | 0.79 (0.27, 2.25)       |

\* Remained significant when adjusted for other variables in the table

About 44% of the students had heard about emergency contraceptive, however, below 10% of them have identified the correct timing of administration of the pills after unexpected sexual contact. Several studies conducted in higher institutes in South Africa, Ghana, Nigeria and other developing countries reported more or less similar findings (13, 15, 18). In our study, pills are the most widely known emergency contraceptive method. The knowledge of students on emergency contraceptives was significantly higher for senior students (graduating class) as compared to their juniors.

Fifty-three percent of students believed that emergency contraceptives are important and they should be available for all couples. However, a considerable proportion of respondents reported problems of using emergency contraceptives and misconceptions about emergency contraceptives including that they protect from sexually transmitted diseases and HIV/AIDS. Positive attitude towards emergency contraceptives was significantly higher among followers of Orthodox and Muslim religions compared with Catholic and Protestants and among senior students compared to their juniors. Our

findings showed that contraceptive prevalence rate of about 10%. The pills and injectables are the most common methods used. However emergency contraceptive use was low (below 5%). One important reason could be the lack of awareness of the place where it is available, and also indicates the fact that there is low promotion and availability of methods in most health institutions and providers. There are also arguments that the introduction of emergency contraceptives widely could discourage adolescents from using regular methods of contraceptives. However, some studies have proved that the use of emergency contraceptives doesn't affect at all the pattern of using regular contraception. (19).

Relatively higher proportion of EC practice was reported in studies conducted in South Africa and Nigeria (13,18). The possible reasons for a low EC practice rate in this study could be, the proportion of students who are sexually active is lower (20%); compared to 57% at the university in South Africa. This study showed that emergency contraceptive use was higher for students of being married and being a student at UUC compared to

their counterparts respectively, when adjusted for other variables.

In conclusion, the study has shown that in the face of significant risk of unwanted pregnancy and induced abortion among the sexually active students, the knowledge and practice on emergency contraceptive is very low. There is a need to raise awareness about emergency contraceptives as an option with other contraception methods and revitalizing of the family life education program in schools to include among others information emergency contraceptive. Moreover, existing "Reproductive Health Clubs" in high schools could be the venue for disseminating similar information.

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