

Original Article

Awareness and utilization of emergency contraception among female undergraduates in a Nigerian University

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ABSTRACT

Background: Many women are not aware of emergency contraception, which limits its use. Because increased risk of unwanted pregnancy and subsequent unsafe abortion have been well-documented, research on the knowledge and usage of emergency contraception is appropriate.

Materials and Methods: The present study was a descriptive cross-sectional study conducted among 450 female undergraduate students of a University in northeast Nigeria from November to December 2014.

Results: The age range of the respondents was 19–30 years, with a mean age of 21.4 ± 2.1 years. Most of them, 308 (68.4), were between the ages of 20 and 24 years. Majority of the students, 321 (71.3%), were single. Overall, 295 (65.5%) students were aware of emergency contraception, and 211 (71.5%) had utilized them. Among those who had utilized them, 174 (82.4%) were singles. The most common source of initial information about emergency contraception was health personnel, 148 (50.1%), followed by friends, 107 (36.3%). School, 11 (3.7%), and parents, 4 (1.4%), were the least utilized sources of information. Information from health personnel, news media and schools were the major influences of emergency contraceptive utilization. Levonorgestrel only pills (Postinor-2^R) and combined pills (Yuzpe) were the most commonly utilized emergency contraception by 91 (43.1%) and 85 (40.3%) of the respondents, respectively.

Conclusion: There was good level of awareness and utilization of emergency contraception among female undergraduates. However, there is a need to educate the parents, students and staff or counselors at the family clinic section of the university health clinic on its importance to improve the awareness of the students.

Key words: Awareness; emergency contraception; Nigeria; University of Maiduguri; utilization.


Introduction

Approximately two-third of the 50 million abortions carried out worldwide each year is unsafe, with majority occurring in developing countries, causing at least 78000 maternal deaths per year and large number of permanent disabilities and health problems.^[1] Unsafe abortions are consequent to unwanted pregnancy and these two continue to be a major reproductive health problem globally, including Africa.^[2,3] Because unwanted pregnancy still poses a major challenge to the reproductive health of young adults in developing countries, there is a need to improve their knowledge and

utilization of contraception. Among the various forms of contraception, emergency contraception is the only one that can be used after sexual intercourse, offering a second chance to prevent unwanted pregnancy.^[4]

Emergency contraception, also known as post-coital contraception or morning after pills, is a method that women

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can use after sexual intercourse to prevent an unwanted pregnancy when it could occur without contraception. Other indications for emergency contraception include failure of barrier methods, such as the spillage or breakage of condoms, and after rape.^[5]

There are various forms of emergency contraception. The Yuzpe (Combined progesterone–Oestrogen Pills) regimen was introduced in 1972 and is still commonly used.^[6] In 1976, Lippes *et al.*^[7] described the use of copper intrauterine contraceptive device (IUCD) for emergency contraception. Interest in the progestogen only pill emerged in the 1990.^[8] Combined oral contraception pills taken at a dose higher than is used for regular contraception (Yuzpe method), insertion of a copper intrauterine devices and oral administration of levonorgestrel only regimen have been widely used as emergency contraception with excellent results.^[9,10]

Many women are not aware of emergency contraception, which limits its use.^[11] A number of studies have reported that 57–65% of undergraduate are aware of emergency contraception but only 13–32% utilize them.^[12,13] Worldwide, one of the biggest obstacles to the widespread use of emergency contraception is that many women do not know about it.^[14] Without education regarding emergency contraception, women are unable to make informed contraceptive choices. When there is better recommendation of its availability and advantages, women make better choices.^[12] One strategy to increase accurate information regarding emergency contraception among people would be by promoting reproductive health education.^[11] It has been suggested that youth friendly centres that are equipped to offer contraceptive information services in our tertiary institutions to take care of the reproductive health needs of the students can improve contraceptive usage.^[15]

Because the increased risk of unwanted pregnancy and subsequent unsafe abortion among adolescents and young adults, as well as their prevention by contraception have been well documented,^[1-3] research on the knowledge and usage of emergency contraception among undergraduates in University of Maiduguri, Nigeria can form a benchmark upon which reproductive health strategies and future researches can be carried out among adolescents and young adults in this community. This formed the purpose of our study.

Materials and Methods

This was a descriptive cross-sectional study conducted among female undergraduate students of the University of Maiduguri from November to December 2014. The University of Maiduguri is located in Maiduguri, the capital of Borno

State, in the northeastern corner of Nigeria. It is the largest town in northeast Nigeria. It is inhabited by all ethnic groups of Nigeria. However, the principal ethnic group in the town is Kanuri. The population of Maiduguri Metropolis is projected to have crossed the million mark. Although English is the official language, Hausa and Kanuri are widely spoken. Maiduguri has been a centre of learning and commercial activity since the 17th century, and the University of Maiduguri is one of the seven institutions of higher learning established by the Federal Military Government in 1975, as part of the third National development plans. In 1978–1979, the University opened the session with six faculties and a college of Medical sciences.

At present, the University boasts of 25000 students from around the world, specialized centres and units, a college of medicine and eleven faculties. The students of University of Maiduguri reside on and off campus.

Because the target population was greater than 10000, Kish Leslie formula,^[16] stated below, was used to calculate the sample size:

$$n = z^2 \times p \times q/d^2$$

where z is 1.96, z value for 95% confidence limit, p is 0.38, expected proportion of female undergraduates who use emergency contraception, extrapolated from the study finding in southeast Nigeria where 37.9% of female undergraduates utilized emergency contraception.^[17]

$$q = 1 - p = 1 - 0.38 = 0.62$$

$d = 0.05$ is the acceptable error of the estimator at 95% confidence interval.

$$n = z^2 \times p \times q/d^2 = (1.96)^2 \times (0.38) (0.62)/(0.05)^2 = 362$$

It is estimated that 20% of the respondents would not contribute to the final analysis. Therefore, addition of 20% attrition gave: $n = 362/0.8 = 452.5$. Consequently, a total of 450 female undergraduates were recruited.

A multistage method of sampling was used to select females at the University. The sample consisted of 450 female undergraduates selected from the study population.

At the first stage, college of medical sciences, faculty of dentistry and faculty of veterinary medicine were excluded to avoid bias, leaving nine faculties. At the second stage, six faculties were selected out of nine which included the faculties of Agriculture, Sciences, Law, Arts, Education and Management sciences using the balloting method.

Two departments were then picked from each of the faculties mentioned above based on size (third stage); 37 questionnaires were distributed to each department through the class representative and collected at the end of the day. Two departments in the faculty of engineering had 40 questionnaires because they consisted of parts 1 to 5. Verbal consent was obtained from the participating students. Ethical clearance was obtained from the research and ethics committee of the University.

Descriptive statistical analysis was used. All the relevant information was obtained from the respondents through self-administered questionnaires, and the data were entered and analyzed using the Statistical Package for the Social Sciences version 20.0 (IBM, New York, USA), and presented in frequency tables.

Results

Four hundred and fifty students were studied during the period. As illustrated in Table 1, the age range of the respondents was 19–30 years, with a mean age of 21.4 ± 2.1 . Most of the respondents, 308 (68.4%), were between the ages of 20 and 24 years. Majority of the students, 321 (71.3%), were single, 107 (23.8%) were married and 22 (4.9%) were divorced or widowed. Half of the respondents, 200 (50.0%), were in part 4 whereas parts 3, 2 and 1 contributed 76 (16.9%), 72 (16.0%) and 47 (10.4%), respectively. Part 5 had the lowest participation with 30 (6.7%) respondents.

Table 2 presents the distribution of respondents based on their awareness, utilization and initial source of information of emergency contraception. Overall, 295 (65.5%) students were aware of emergency contraception, and 211 (71.5%) of them had utilized them. Among those who had utilized them, 174 (82.4%) were singles, 28 (13.3%) were married and 9 (4.3%) were divorced. The most common source of initial information about emergency contraception was health personnel, 148 (50.1%), followed by friends, 107 (36.3%), and news media, 25 (8.5%). School, 11 (3.7%), and parents, 4 (1.4%), were the least utilized sources of information.

As shown in Table 3, the specific type of emergency contraception utilized by the 211 students who had ever heard were levonorgestrel only pills (Postinor-2[®]), combined pills (Yuzpe), Copper-T IUCD and combined pills and Copper-T IUCD in 91 (43.1%), 85 (40.3%), 13 (6.2%) and 22 (10.4%), respectively.

Table 4 shows the association between sources of information and contraceptive utilization. It reveals that students whose initial sources of information were health personnel (91.2%

Table 1: Sociodemographic characteristics of respondents

| Characteristics | Frequency | Percentage |
|-----------------|-----------|------------|
| Age (years) | | |
| 19 | 28 | 6.2 |
| 20-24 | 308 | 68.4 |
| 25-29 | 89 | 19.8 |
| 30 | 25 | 5.6 |
| Total | 450 | 100 |
| Marital Status | | |
| Single | 321 | 71.3 |
| Married | 107 | 23.8 |
| Widow/divorce | 22 | 4.9 |
| Total | 450 | 100 |
| School Level | | |
| Part 1 | 47 | 10.4 |
| Part 2 | 72 | 16.0 |
| Part 3 | 76 | 16.9 |
| Part 4 | 225 | 50.0 |
| Part 5 | 30 | 6.7 |
| Total | 450 | 100 |

Table 2: Awareness, utilization and source of information of emergency contraception among female respondents

| Knowledge | Frequency | Percentage |
|-------------------------------------|-----------|------------|
| Awareness of EC | | |
| Yes | 295 | 65.6 |
| No | 155 | 34.4 |
| Total | 450 | 100 |
| Utilization of EC | | |
| Yes | 211 | 71.5 |
| No | 84 | 28.5 |
| Total | 295 | 100 |
| Initial Source of Information of EC | | |
| Health personnel | 148 | 50.1 |
| Friends | 107 | 36.3 |
| News Media | 25 | 8.5 |
| School | 11 | 3.7 |
| Parents | 4 | 1.4 |
| Total | 295 | 100 |

Table 3: Types of Emergency contraception used by correspondents

| Drug/Solution | Frequency | Percentage |
|---------------------------|-----------|------------|
| Levonorgestrel Pills only | 91 | 43.1 |
| Combined Pills (Yuzpe) | 85 | 40.3 |
| IUCD | 13 | 6.2 |
| Yuzpe, and IUCD | 22 | 10.4 |
| Total | 211 | 100 |

vs 8.8%), news media (80% vs 20%) and school (54.5% vs 45.5%) were significantly more likely to utilize emergency contraception ($\chi^2 = 249.322$; $P < 0.001$), whereas those who obtained initial information from friends (44.9% vs 55.1%) were significantly less likely to utilize emergency contraception ($\chi^2 = 249.322$; P value < 0.001).

Table 4: Influence of source of information on contraceptive utilization

| Initial Source of Information of EC | Yes (%) | No (%) | Total |
|-------------------------------------|------------|-----------|-------|
| Health personnel | 135 (91.2) | 13 (8.8) | 148 |
| Friends | 48 (44.9) | 59 (55.1) | 107 |
| News Media | 20 (80) | 5 (20) | 25 |
| School | 6 (54.5) | 5 (45.5) | 11 |
| Parents | 2 (50) | 2 (50) | 4 |

$\chi^2=249.322$; P value < 0.001

Discussion

The result from this study revealed that there is good level of awareness and utilization of emergency contraception among respondents. This picture is different from findings from many developing countries, including Nigeria, and some developed countries where there is poor practice or utilization of emergency contraception even among undergraduate students.^[10-15,17-29] The finding is surprising especially because 2008 Nigeria Demographic Health Survey reported contraceptive prevalence of 6.5% in the state where the study was carried out.^[30] However, pregnancy outside wedlock in the study area is known to be an absolute taboo, and as such any unmarried woman who is sexually active must ensure that pregnancy is prevented. The fact that a majority of respondents in this group were singles gives credence to this assumption. In the absence of emergency contraception, unwanted pregnancy could result and the opportunity to get it terminated safely is not there because of the restrictive abortion law in Nigeria.

Health personnel and friends constituted the initial source of information about emergency contraception in most respondents. This is consistent with findings from a number of studies,^[4,12,22-25] but contradicts a 1996 survey where information about sex and/or contraception came from parents (72%), teachers, nurses and sex education classes (69%), friends (60%) and the media (39%), such as magazines, television and movies.^[31] In particular, this 1996 survey finding differs from our finding as parents constituted the least source of information. However, in terms of contraceptive utilization, information from health personnel, news media and school was the major influence.

Similar to many places, reproductive health services are linked. This is seen in government owned secondary and tertiary health facilities in the city, including the University of Maiduguri health centre. This implies that a student who is managed for pelvic inflammatory disease or post-abortal sepsis would likely receive counseling for contraception before discharge, thereby creating more awareness about contraception through this source. This finding implies that the family planning clinic of the hospital can be used to spread

other reproductive health services beyond contraception. Family planning clinics should provide comprehensive services that include prevention, treatment and follow-up care. Ideally, a broad range of sexual and reproductive health care services should be offered, including pelvic and breast exams; pap smears, sexually-transmitted infections screening, counselling and treatment; human immunodeficiency virus testing and counselling; pregnancy testing and sexual health counselling. Cultural barriers and lack of knowledge might be the reasons why parents constituted the least source of information.

It has been documented that the most common methods of contraception among teens and young adults are condoms and oral contraceptives,^[32-34] and that one-third of those who use the pill also use condoms.^[35] In our study, the most common form of emergency contraception used was levonorgestrel (Postinor-2). The reason for this might be because Postinor is a well-known by many sexually active adolescents and young adults as an emergency contraceptive pill in Nigeria. It can be obtained over the counter without prescription. Insertion of IUCD requires the service of health personnel, hence the low utilization of this method. In addition, IUCD may be considered by young adults as being meant for married women requiring long-acting reversible contraception, and therefore, not suitable for them.

Conclusion

Most of the undergraduates studied were within the young age group and not married. It was also noted that utilization of emergency contraception was more in this group and less among the married students. In addition, the major sources of information were health personnel and friends whereas parents and schools constituted the least sources of information. However, health personnel, news media and school were the major influential factors of utilization. Postinor was the most commonly used emergency contraception probably because of its easy accessibility, availability and fewer side effects.

Consequently, it would be recommended that improvement on the information strength of health personnel by comprehensively linking contraceptive counselling with other health services, especially reproductive health services, in the university health centres, so that a wider coverage and more awareness can be achieved, should be done. In addition to this, sustained training of health personnel on the delivery of family planning services and provision of youth-friendly reproductive health services will go a long way in realizing this aim. The information weakness created by the parents might be overcome by removing

cultural barriers that can hinder communication regarding emergency contraception between parents and children. Identification of these cultural and other social barriers in the studied group and environment is an area that requires further research. There is a need to investigate the reason for low utilization of emergency contraception by the studied married undergraduates, especially in the face of increasing burden of population growth. Could it be that a majority of them were not using contraception or currently on natural family planning or modern methods of contraception?

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Conflicts of interest

There are no conflicts of interest.

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