Original Article

# Factors Influencing the Knowledge and Practice of Emergency Contraception among Nigerian Male Undergraduates

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## ABSTRACT

***Background:*** Unwanted pregnancies among young women is a growing reproductive health concern. Correct and consistent use of contraception will stop this ugly trend while emergency contraception (EC) can also be viewed as a 'second chance method' in preventing unwanted pregnancies and unsafe abortions. The aim of this study is to assess the knowledge and practice of emergency contraception among Nigerian male undergraduates as they are known to have risky sexual behaviours.

***Methodology:*** This was a cross sectional study involving three hundred and thirty male undergraduates from three Tertiary institutions in Ibadan. A Multi-staged random sampling technique was used to recruit participants.

***Results:*** Knowledge about EC was poor among majority (74.5%) of male undergraduates. About 55.2% of the participants were sexually active and out of which 33.9% are currently using EC. The commonly (67.5%) used EC by their partners was levonorgestrel only pill (Postinor). Participants with higher levels of education, awareness of EC, previous use or having a partner who had previously used EC, participants who had sex within the past 6 months and those who were willing to recommend EC to others had a better knowledge of EC, which were all statistically significant.

***Conclusion:*** Providing accurate information to improve knowledge of EC among young men could lead to an increase in the uptake of EC.

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## INTRODUCTION

Unwanted pregnancies among married couples and pregnancies among young women is a growing reproductive health concern especially in developing countries.[1] When young women become pregnant, they are exposed to a myriad of far-reaching socio-economic consequences.[1] These unplanned pregnancies have led to at least 50 million abortions worldwide and consequently approximately 80,000 maternal deaths due to unsafe abortions.[2] In developing countries, it is known that unsafe sex is common among adolescents who have sexual and reproductive health challenges asides unwanted pregnancies.[3] These unwanted pregnancies which are a major contributor to unsafe abortion, are directly proportional to access and proper use of contraception.[4,5]

In Nigeria, the contraceptive prevalence rate is 17% among married women and 37% among unmarried women with adequate knowledge of contraception. Superficially it may be comforting to know that there is a high knowledge of contraception but only about 36% of both women and men had knowledge

of emergency contraception.[6] Inconsistent and improper use of contraception, poor knowledge of EC coupled with the significant unmet need for family planning are major causes for concern. Emergency contraception (EC) is defined as any drug or device which when it is used after intercourse will prevent pregnancy. Its popularity may have increased since its first description in 1970 but knowledge is still limited globally.[7] As a major proportion of women presenting for termination of pregnancy do not consistently use any form of contraception and EC can be seen as a 'second chance method' in preventing pregnancy.[2]

Efforts at reducing the incidence of unwanted pregnancies have focused largely on females disregarding the role men can play in pregnancy prevention.[8] Young men are not considered important in preventing adolescent pregnancies.[9] Studies show that males should be incorporated into the reproductive health decision making processes in order to enhance positive health outcomes for their partners. However even with giant strides in developing countries, accurate knowledge of EC by men remains surprisingly low and many misperceptions abound.[10,11] In the United States, it was seen that male partners initiate discussions around the use of EC.[10] Males are also decision makers and have a stronger desire to avoid pregnancy which has a significant association with use of EC.[12] In a cross-sectional study in Turkey, although there was a high sexual exposure among males in Bachelor degree programs, however only 14.5% had heard of EC.[13] A population based survey in France showed that many males reported unintended pregnancies during the period their partners were supposedly using a method of contraception.[14] In Brazil, a survey among high school students mostly between the ages of 15 and19 years shows that over half of them had initiated sexual practices out of which about a third had used EC.[15] Many descriptive studies in Nigeria have explored the knowledge both female and male or only female adolescents have of EC.[2,16–19] It is time for a shift in focus to the male who obviously have a major role to play in preventing unintended pregnancies.

The aim of this study is to assess the knowledge and practice of emergency contraception among Nigerian male undergraduates using three Tertiary institutions in South-west Nigeria as a case study. This should help device strategies to improve uptake of EC by this vulnerable group and ultimately reduce morbidities and mortalities from unwanted pregnancies.

## MATERIALS AND METHODS

This was a cross sectional study involving three hundred and thirty male undergraduates from three institutions in Ibadan namely the University of Ibadan, Lead City University and the Polytechnic Ibadan. Ethical approval was obtained from the UI/ECH institution Research Board. Sample size was calculated using the formulae for cross sectional studies and included 10% non-responders. Proportionate sampling was used to select the number of participants from each institution and Multi-staged random sampling was done to recruit participants. Informed consent was obtained from the participants and self-administered questionnaires containing questions on socio-demographic data, awareness of EC, source of awareness and the practice of EC were used in obtaining information related to the study.

A five item questions was used to test their knowledge of EC and a score of 3 and above was termed good knowledge and scores of 2 and below was termed poor knowledge. The data was stored on the computer, cleaned and analysed using Statistical Package for the Social Science (SPSS) version 22. Data analysis was summarized using descriptive statistics, charts, tables, means, median and mode. Test of associations between categorical variables was done using chi square and statistical significance was set at $p < 0.05$. The confidentiality of participants was ensured throughout the study.

## RESULTS

Table 1 showed that majority (56.4%) of the respondents were between 20 and 24 years old. Most were of the Yoruba tribe, Christian and pursuing their Ordinary National Diploma. As expected in many undergraduate programs, a vast majority were single (95.8%). About 4 in 10 respondents were aware of EC (Figure 1).

**Table 1: Socio-Demographic characteristics**

| | Frequency (N=330) | Percentage |
|---|---|---|
| **Age group** | | |
| <20 | 95 | 28.7 |
| 20-24 | 186 | 56.4 |
| 25-29 | 40 | 12.1 |
| 30-34 | 8 | 2.5 |
| >34 | 1 | 0.4 |
| | | |
| **Year of Study** | | |
| 100 | 67 | 20.3 |
| 200 | 53 | 16.1 |
| 300 | 50 | 15.2 |
| 400 | 53 | 16.1 |
| OND 1&2 | 75 | 22.7 |
| HND 1 & 2 | 32 | 9.6 |
| | | |
| **Religion** | | |
| Islam | 89 | 27.0 |
| Christianity | 234 | 70.9 |
| Traditional | 3 | 0.9 |
| Others | 4 | 1.2 |
| | | |
| **Tribe** | | |
| Yoruba | 261 | 79.1 |
| Hausa | 6 | 1.8 |
| Igbo | 39 | 11.8 |
| Others | 24 | 7.3 |
| | | |
| **Marital Status** | | |
| Single | 316 | 95.8 |
| Married | 11 | 3.3 |
| Divorced | 2 | 0.6 |
| Separated | 1 | 0.3 |

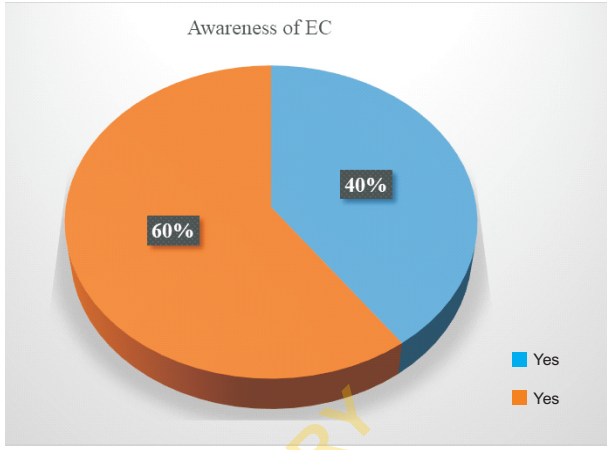


**Figure 1: Awareness of emergency contraception**

Parents and the family planning clinic were the least likely sources of awareness. The influence of friends and media is apparent in this group as they were the highest source of awareness and likely equally influenced the knowledge of EC (Figure 2).

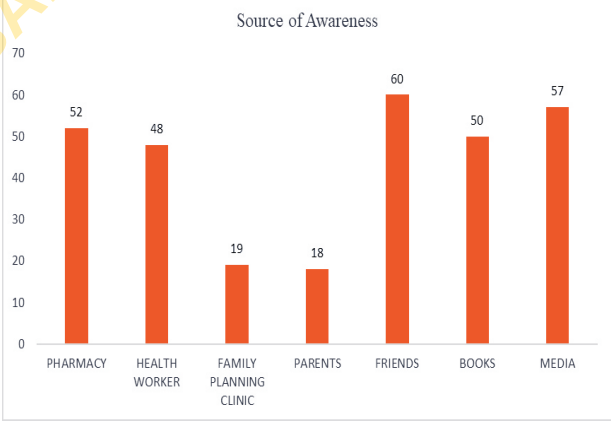


**Figure 2: Sources of awareness of EC**

The knowledge of EC was poor in most (74.5%) with only 25.5% having good knowledge of EC (Figure 3). Table 2 shows that a little over half of the respondents were sexually active with only a third of them attesting to the use of EC at any time. Thirty-five percent of participants had been sexually active in the 6 months preceding this study and a third had used EC during the same period. Postinor (Levonorgestrel) was most frequently used in 67.5% and EC was used occasionally in 42.5% and less than 24 hours post sexual exposure in 75%.

**Table 2: Sexual practices, use and practice of EC**

| Category | Frequency | Percentage |
|---|---|---|
| **Ever had Sex (N=330)** | | |
| Yes | 182 | 55.2 |
| No | 148 | 44.8 |
| **Ever used EC (N=330)** | | |
| Yes | 67 | 20.3 |
| No | 263 | 79.7 |
| **Sex in the past six months (N=330)** | | |
| Yes | 118 | 35.8 |
| No | 212 | 64.2 |
| ***Approval of EC by partner (N=118)** | | |
| Yes | 49 | 41.5 |
| No | 69 | 58.5 |
| ***Recommend to others (N=118)** | | |
| Yes | 35 | 29.4 |
| No | 83 | 70.6 |
| ***Use of EC in the past six months (N=118)** | | |
| Yes | 40 | 33.9 |
| No | 78 | 66.1 |
| ****Reason for EC in the last use** | | |
| Condom Break | 25 | 62.5 |
| Rape | 4 | 10.0 |
| Missed Pill | 3 | 7.5 |
| Not Stated | 8 | 20.0 |
| ****Type of EC used in the past six months (N=40)** | | |
| IUCD | 3 | 7.5 |
| Postinor(Levonorgestrel) | 27 | 67.5 |
| Combined Pills | 10 | 25.0 |
| ****How often EC was used in the past six months** | | |
| Regularly | 11 | 27.5 |
| Occasionally | 17 | 42.5 |
| Rarely | 12 | 30.0 |

*Among currently sexually active participants
**Among participants who are sexually active and using emergency contraception

Higher levels of education and awareness of EC were associated with good knowledge of EC. Also, those who had ever used EC or had a partner who used EC previously, participants who had sex within the past 6 months and those who were willing to recommend EC to others had better knowledge of EC. Age, religion, tribe, marital status, approval by partner and last sexual act more than 6 months ago were not associated with good knowledge of EC.

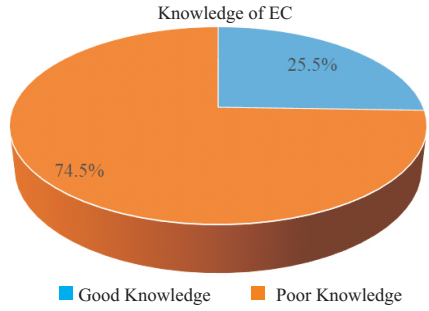


**Figure 3: Knowledge of EC**

**Table 3: Associations with Knowledge of EC**

| | Good Knowledge | Poor Knowledge | Chi square | p value |
|---|---|---|---|---|
| | Frequency | Frequency | | |
| **Age Group** | | | | |
| <20 | 22 | 73 | 7.83 | 0.09 |
| 20-24 | 43 | 143 | | |
| 25-29 | 13 | 26 | | |
| 30-34 | 5 | 4 | | |
| >34 | 1 | 0 | | |
| **Level of education** | | | | |
| OND1&2 | 7 | 65 | 29.4 | 0.00 |
| 100L | 10 | 56 | | |
| 200L | 18 | 36 | | |
| 300L | 15 | 34 | | |
| 400L and Above | 27 | 27 | | |
| HND 1&2 | 7 | 28 | | |
| **Religion** | | | | |
| Islam | 16 | 73 | 3.43 | 0.33 |
| Christianity | 66 | 168 | | |
| Traditional | 1 | 2 | | |
| Others | 1 | 3 | | |
| | 84 | 246 | | |
| **Tribe** | | | | |
| Yoruba | 63 | 198 | 7.44 | 0.11 |
| Hausa | 0 | 5 | | |
| Igbo | 16 | 23 | | |
| Others | 5 | 20 | | |
| **Marital status** | | | | |
| Single | 79 | 237 | 4.31 | 0.51 |
| Married | 3 | 6 | | |
| Divorced | 0 | 1 | | |
| Separated | 2 | 2 | | |
| **Awareness of EC** | | | | |
| Yes | 63 | 60 | 70.72 | 0.00 |
| No | 21 | 186 | | |
| | 84 | 246 | | |
| **Ever had sex (>6 months)** | | | | |
| Yes | 50 | 132 | 1.61 | 0.45 |
| No | 34 | 114 | | |
| **Ever or Partner used EC** | | | | |

*Among sexually active participants in the last six months

## DISCUSSION

In our study, two-thirds of the respondents were aware of EC and only a quarter had good knowledge of EC. It is plausible the inadequate knowledge was due to the average sexual exposure among the respondents; it stands to reason as it is unlikely for contraception to be discussed among those who are chaste. This average levels of awareness is similar to a study involving a male dominated cohort of undergraduates in Cameroon but higher than other surveys in Nigeria and Turkey.[13,18,20] Since the first description of EC in the 1970s, its spread has been slow and inconsistent. It is more apparent that knowledge has greatly influenced uptake globally.[7] Many other surveys have also identified inadequate knowledge levels among young men and women.[2,16,18,19,20] Studies among adolescents are markedly skewed towards evaluating females and perhaps this was reflected in a study by Schrager et al where adolescent females exhibited a superior knowledge of EC compared to their male counterparts.[11] Anand et al have shown that what males lack in knowledge they make up for with more positive attitudes to EC conversely, males had negative attitudes in South Africa.[19,21]

Friends contributed the most to the awareness and knowledge among the students, a finding which is in agreement with many other studies.[11,16,18,20] Interestingly adolescents in Osun state stated that parents/guardians were the most helpful source of information of reproductive health including contraception.[22] Physicians are missing out on the opportunity to counsel vulnerable youths on contraception including EC and although many have most of their information from peers, young men and women prefer physicians taking up that role.[11] It is imperative we highlight the shortcomings of health workers as the information they provide are more superior to those from friends. Lack of information or wrong information from friends is one of the reasons for the poor knowledge in our study.Adolescents have risky sexual behavior which is an attribute which exposes then to unwanted pregnancy.[3,5,23] A little over half of our study population had sex at least once in the past. This sexual exposure rate is similar to that in Brazil but lower than other others in Nigeria and Turkey.[13,16] In another state in South-western Nigeria, about half of the sexually active adolescents used a form of contraception.[22] About 1 in 5 of our cohort had a partner that used EC at least once in their lifetime and of those who were sexually active within the last 6 months, a higher proportion had used EC. These figures may reflect the difficulty in accessing EC. However, in Brazil where EC is free and a majority of teens are having regular sex, only a third and a fifth of those who were sexually active used EC in their lifetime and in the last 6 months respectively.[15] A condom break was the most common reason for patronizing EC; most of the students also had good knowledge of the window within which EC is most effective. Postinor2 (levonogestrel) was the most popular EC, a finding which is in keeping with other studies in Nigeria.[17,18] Compared with other hormonal methods like the Yuzpe regimen, Levonogestrel has less nausea because it doesn't contain estrogen. Surprisingly, nausea was a major problem with its use in our study.

Knowledge of EC increased with increasing level of education. This was an expected finding as more experience is gained with increasing level of education but surprisingly in our study, better knowledge was not associated with age. Those with good knowledge were those aware of EC, those who had sex within the prior 6 months and those who had used EC in the past. Those who had good knowledge of EC were more likely to recommend it to others, a finding Fasanu et al reported while surveying undergraduates in two tertiary centers in Osun State. They also discovered that previous use of EC promotes its recommendation.[2] The reason for this is the more positive attitudes and satisfaction experienced by those who had used EC in the past.

Men have a prominent role in adopting contraceptive methods even with many of these methods being women centered. Wright et al discovered that in heterosexual relationships, a woman's partner greatly influences contraception

behaviour even as contraception related policies continue to exclude men.[10] In San Francisco, a survey of women, most of whom were aware of EC, identified male dominance, male pressure for sex, male partner unhappy with a pregnancy as factors associated with the use of EC.[12]

### Limitation

Our study on knowledge and practice of EC among male undergraduates is a necessary step in improving uptake of EC and reducing complications from unsafe abortion but it has its limitations. Although the study population was of mixed ethnicity, the study was conducted in an urban area among an educated cohort. Also, our findings were based on self-reported responses that may be open to self-presentational bias due to the sensitive nature of the questions. It is also possible that the female partners used other forms of EC not known by the male respondents.

## CONCLUSION

We conclude that the awareness and knowledge levels of EC among male undergraduates is low. There is also a significant level of misinformation from peers. We strongly recommend that accurate information be disseminated through education and communication with medical personnel and through audio-visual media, which have been found to be reliable and associated with good knowledge on EC. When good knowledge positively influences the uptake of EC it will lead to a reduction in morbidities and mortality attributed to unsafe abortion.

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### Conflict of Interest

The authors report no conflict of interest.

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