

Knowledge and Determinants of Emergency Contraception use Among Students in Tertiary Institution in Osun State, Nigeria

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ABSTRACT

Background: Emergency contraception (EC) or postcoital contraception has the potential to reduce the number of unwanted pregnancies and thus the abortion rate. Tertiary institutions' students are a unique group with very high social interaction, but by virtue of their level of education, probably forms a group in any community, which should have an overall higher level of awareness and use of available methods of contraception, including that of EC. **Aim:** The aim of this study was to assess the knowledge and attitude toward EC, and as well to determine the prevalence of emergency contraceptive use among the students of tertiary institutions in Osun State, Nigeria. **Subjects and Methods:** A cross-sectional study using the self-administered structured questionnaire on questions relating to the socio-demographic characteristics of the students, sexual relations, knowledge of contraception in general and EC, use and determinants of EC use. **Results:** A total of 384 of the 400 questionnaire were returned of which male respondents were 178/384 (46.4%) while the females were 206/384 (53.6%). Two hundred and seven respondents 207/384 (53.9%) were university students, while 177/384 (46.1%) were polytechnic students. Most respondent 142/376 (37.8%) derived knowledge of EC from friends and family life education from school 186/373 (49.9%). More than half of respondents are in sexual relationships, with only 71/384 (18.5%) showing good knowledge of EC. However, use of EC was 106/384 (27.6%). **Conclusion:** Most tertiary institutions' students are involved in a sexual relationship, have poor knowledge of EC and use of EC also. Formal family life education, partner approval, and previous use of EC encourage further use. There is a need for carefully designed education programs and promotion of family life education with deliberate awareness on safe sex practices, including EC in existing students' health enlightenment programs on campuses.

KEY WORDS: Emergency contraception, family life education, Nigeria, students, tertiary institution

INTRODUCTION

Emergency contraception (EC) refers to any device or drug that is used as an emergency procedure to prevent the pregnancy after unprotected sexual intercourse.^[1,2]

Attentions have recently focused on the potential for EC or postcoital contraception to reduce the number of unwanted pregnancies and thus the abortion rate.^[2] It is estimated that between 30% and 50% of women presenting for terminations of pregnancy were not using contraception at the time they became pregnant while nearly half of all women who became pregnant do not plan to do so.^[3,4] Many of the women presenting for abortion would have used EC,

provided they had adequate knowledge of its availability and how to use it. Many patients and providers are not even aware of EC which further limits its use.^[5,6] Every year, unplanned pregnancies lead to at least 50 million abortions world-wide, many of them being unsafe, and subsequently resulting in approximately 80,000 maternal deaths.^[7] An increase in the use of EC would reduce the number of unwanted pregnancies and the number of induced abortions.

Young people in general are sexually active and tertiary institutions' students form a significant high-risk group in any society. The youth in this age group are most often at the beginning of exploration of their sexuality, very often free of parental guidance, under great peers influence, and often indulging in alcohol or other influential illegal substances. Tertiary institutions' students on the other hand, by virtue

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of their level of education, probably form a group in any community, which should have an overall higher level of awareness of available methods of contraception, including that of EC.^[8] This study sought to assess the knowledge and attitude towards EC, and as well to determine the prevalence of emergency contraceptive use among students of the tertiary institutions in Osun State, Nigeria.

SUBJECTS AND METHODS

Design

This was a descriptive, cross-sectional study, using the self-administered, pre-tested, structured questionnaire. Ethical approval for the study was obtained from our institution.

Target population

Students of tertiary institutions in Osun State, Nigeria.

Study population

Students of State Polytechnic, Iree, and Obafemi Awolowo University, Ile Ife, Osun state, Nigeria.

Sample size

The sample size was determined using the Kish and Leslie formula for cross-sectional studies, assuming; 95% level of confidence, proportion of EC use of 11.8%^[9] and 5% margin of error. This gave a sample size of 150, but was increased to 400 to allow for greater representation or incomplete data.

Sample technique

The two institutions studied were selected by balloting. Respondents were recruited through a simple random technique, using lecture theaters and hostels as catchment locations. From each institution, two of each catchment location was selected by balloting.

The questionnaire (appendix), which consisted of questions relating to the socio-demographic characteristics of the student, sexual relations, general contraception knowledge, knowledge of EC, use and intention to use EC were administered to willing participants in the locations, after explaining the purpose of the study. Confidentiality was ensured by omitting names in the questionnaire.

Four hundred students of the State Polytechnic, Iree, and Obafemi Awolowo University, Ile Ife, both in Osun State, southwestern Nigeria, were recruited from both institutions.

Statistics

Data were entered and validated; statistical analysis was performed using the Statistical Package for Social Sciences version 17 software (SPSS Inc., Chicago, IL, USA). Results

were presented in frequencies/percentages, cross-table analysis, and descriptive measures.

A score for knowledge of EC was obtained for each respondent by summing up the correct answers given on selected questions from the questionnaire. These included what EC is the time limit for its use, side-effects, its effectiveness in preventing the pregnancy and its safety. The maximum score possible was 9. Score of 4 or less was regarded as poor knowledge while a score of 5 and above was regarded as good knowledge.

RESULTS

A total of 384 respondents of the proposed 400 participants returned partially/fully completed questionnaire giving a 96% response rate. The proportion of male respondents was 178/384 (46.4%) while the females were 206/384 (53.6%). Two hundred and seven respondents 207/384 (53.9%) were university students while 177/384 (46.1%) were polytechnic students.

The mean (SD) age of all respondents was 23.6 (5.1) years, with range of 15-46 years. However, the mean (SD) ages for the male and female respondents were 24.0 (4.9) and 23.2 (5.3) years respectively ($P=0.13$; 95% confidence interval 0.23-1.83).

Majority of the respondents were Christians (71.1%;273/384) while most of them were of the Yoruba tribe (78.9%;303/384), single (87.5%;336/384) and are in stable (105/384) or casual (112/384) sexual relationship (56.5%) [Table 1].

Of the overall 384 respondents, only 373 responded to questions on family life education, of which 269/373 (72.1%) had formal family life education, the major source being schools 186/373 (49.9%), followed by seminars and home. The most common source of information about EC by

Table 1: Socio-demographic characteristics of respondents

Variables	Number, n=384	Percentage
Religion		
Christianity	273	71.1
Islam	104	27.1
Traditional	7	1.8
Tribe		
Yoruba	303	78.9
Hausa	21	5.5
Igbo	43	11.2
Others	17	4.4
Marital status		
Single	336	87.5
Married	44	11.5
Widowed	4	1.0
Types of relationship		
Stable sexual	105	27.3
Casual sexual	112	29.2
Never had sexual	167	43.5

respondents was from friends 142/376 (37.8%), with the least being mother 15/376 (4.0%). Knowledge of EC was poor in more than 8 out of 10 [Table 2].

Among the respondents, only 106/384 (27.6%) of them had used EC in the past and chemists/pharmacy, 52.7% (156/296) was the most common place where respondents obtained EC. Other sources include friends 9/296 (3.1%), partner 5/296 (1.7%), family planning clinic 55/296 (18.6%), doctors/nurse 46/296 (15.5%), others 8/296 (2.7%), and no response 17/296 (5.7%).

Influence of previous use of EC, partner's approval and family life education on decision to use EC in Table 3, among 269 respondents who had formal family life education, 167/269 (62.1%) expressed willingness to use EC, against 102/269 (37.9%) who are unwilling. This is in contrast to those in the group without family life education, in whom only 7.8% (9/115) would use EC ($P < 0.01$). Furthermore, previous use of EC was more positively associated with re-use, with 61.3% (65/106) indicating a desire for re-use, against 29.1% (55/189) respondents among those who had never used EC.

Partner's approval would positively influence the use of EC in 83.3% (85/102), whereas with disapproval or indifference, 36.3% (29/80) and 24.5% (24/98) respectively would still use EC.

Determinants of respondents' recommendation of EC use to friends in Table 4, previous use of EC would influence

recommendation to friends in 81.1% (86/106) while 34.9% (66/189) of respondents who do not use EC would still recommend its use to friends. Good knowledge of EC by the respondents positively would influence its recommendation in 78% (46/59) of respondents in that group, in contrast to 22% (13/59) of the group.

Impact of knowledge of EC and family life education on use of EC

Table 5 showed that knowledge of family life education positively translated to good knowledge of EC in 78% (199/255) of the respondents, in contrast to 6.8% (3/44) respondent in those without family life education. The impact of good knowledge was ably demonstrated when more than half of the respondents (66/106) with good knowledge of EC (62.3%) had used EC, in contrast to 37.7% (40/106) with poor knowledge.

Table 3: Relationship between formal family life education, partner's approval, previous use of EC and use of emergency contraception

Variables	Use of EC (%)		χ^2	df	P value
	Yes	No			
Formal family life education (n=384)					
Had formal family life education	167 (62.1)	102 (37.9)	93.35	1	<0.01
Had no formal family life education	9 (7.8)	106 (92.2)			
Partners approval of EC (n=290)					
Partners approved	85 (83.3)	17 (16.7)	74.01	2	<0.01
Partners disapproved	29 (36.3)	51 (63.7)			
Partners indifferent	24 (24.5)	74 (75.5)			
EC and its re-use again (n=295)					
Used emergency contraceptive	65 (61.3)	41 (38.7)	27.90	1	<0.01
Do not use emergency contraceptive	55 (29.1)	134 (70.9)			

EC – Emergency contraception; df – Degree of freedom

Table 2: Sources of knowledge of emergency contraceptive and sexual education

Source	Frequency	Percentage
*Emergency contraceptive (n=376)		
Pharmacist	23	6.1
General practitioner	11	2.9
Family planning clinic	23	6.1
Mother	15	4
Friends	142	37.8
TV, radio, newspapers	36	9.6
Other sources	84	22.3
No response	42	11.2
*Family life education (n=373)		
Home	33	8.8
School	186	49.9
Church/mosque	41	11
Seminars	49	13.1
Others	19	5.1
No response	45	12.1
Knowledge score (n=384)		
Poor knowledge	313	81.5
Good knowledge	71	18.5
*Source of commodity for EC users (n=296)		
Chemist/pharmacy	156	52.7
Family planning clinic	55	18.6
Friends	9	3.1
Doctor/nurse	46	15.5
Partner	5	1.7
Others	8	2.7
No response	17	5.7

*Multiple responses permitted; EC – Emergency contraception

Table 4: Relationship between knowledge, use of EC and its recommendation to friends

Variables	Recommendation of EC to friends (%)		χ^2	df	P value
	Yes	No			
Use of EC (n=295)					
Used EC	86 (81.1)	20 (18.9)	58.23	1	<0.01
Do not use EC	66 (34.9)	123 (65.1)			
Knowledge of EC (n=295)					
Poor knowledge	106 (44.9)	130 (55.1)	19.34	1	<0.01
Good knowledge	46 (78.0)	13 (22.0)			

EC – Emergency contraception; df – Degree of freedom

Table 5: Relationship between knowledge of EC, family life education and EC use

Variables	Knowledge of EC (%)		χ^2	df	P value
	Good knowledge	Poor knowledge			
Use of EC (n=300)					
EC use	66 (62.3)	40 (37.7)	58.23	1	0.01
Do not use EC	19 (9.8)	175 (90.2)			
Family life education (n=299)					
Formal family life education	199 (78.0)	56 (22.0)	83.63	1	0.01
No formal family life education	3 (6.8)	41 (93.2)			

EC – Emergency contraception; df – Degree of freedom

DISCUSSION

The overall mean age of respondents in this study was 23.6 ± 5.1 years, predominantly single and mostly in a sexual relationship, possibly unprotected, and with multiple sexual partners. Coupled with the absence of parental guidance, these are overwhelming risk factors for unintended pregnancy and associated problems of unsafe pregnancy termination.

It has been suggested that millions of unwanted pregnancies could be prevented if emergency contraceptives were used.^[6] World-wide, one of the biggest obstacles to the widespread use of emergency contraceptive is that many women do not know about it. A survey had shown that only 11% of all women in the United States knew the basic facts about emergency contraceptive.^[10] Even where women have heard about EC, myths and misconceptions still exist regarding it. A study in Nigeria revealed that all respondents who had terminated a pregnancy indicated that they would have used EC had they known about it.^[11] In addition, sexual, and reproductive health education is not part of the curriculum in primary and secondary schools in Nigeria.

In this study, majority of the respondents (80.3%) had poor knowledge of EC. This is not different from previous studies.^[6,8,12,13]

Out of all the respondents in this study, only 106/384 (27.6%) had previously used EC.

This prevalence rate from this study was slightly higher than the findings in studies conducted in Ibadan and Durban.^[8,11] This might be because of our studied population and higher awareness among tertiary institutions' students in this study. However, generally speaking, good knowledge and use of emergency contraceptive were still very low at 19.7% and 27.6%, respectively.

An association was found between formal family life education and emergency contraceptive use. School was the most commonly cited source of family life education (49.9%). This is similar to findings of a study conducted in South East Scotland.^[14] However, the low percentage contribution of homes to family life education (8.8%), further reinforces a possible disconnect of parents in facing the reality related to issue of sexuality in our society. It also not very surprising, the low percentage (11%) recorded by the religious institutions since issues of sex and sexuality are deliberately avoided by them. However, it is note-worthy that more respondents were educated on family life issues in Church/Mosque than at home, possibly the manifestation of group activities within these institutions and not from the clergy.

Partner's approval contributed significantly to emergency contraceptive use, thus advocacy on EC use must be across gender. Among women who had used emergency contraceptive before, majority of them intended using it again. This shows that emergency contraceptive use influences its re-use and previous usage influence its recommendation to friends.

There is a significant association between knowledge of EC and its recommendation to friends. Without education about EC, women are unable to make informed contraceptive choices. When there is better knowledge of its availability and advantages, better choices are made.

There was a positive association between knowledge of EC and having received formal family life education. Formal family life education contributed significantly to knowledge of EC. Although the students in this study had an overall limited knowledge and use of EC, it was however higher than that of the general public. In a study by Smith *et al.*^[15] in South Africa, knowledge, attitudes and use of EC among public sector primary health-care clients was investigated. Only 22.8% of the women who were interviewed had heard of EC and it was noted that younger age group and higher educational status were significant factors independently associated with knowledge.

These gaps identified in this study should lead us to a better understanding of attitude and practice of students in tertiary education institutions and enable us plan better intervention toward preventing unintended pregnancies and consequences of pregnancy terminations.

CONCLUSION

Most tertiary institutions' students are involved in a sexual relationship, have poor knowledge of EC and use of EC. Formal family life education, partner approval, and previous use of EC encourage further use. Improved home and religious institutions contribution to family life education will further enhance knowledge and will enhance uptake of EC. Evidently, there is a need for carefully designed education programs and promotion of family life education with deliberate awareness on safe sex practices, including EC in existing students' health enlightenment programs on campuses. Awareness programs can also be organized by non-governmental organizations and even the federal Government on the role of EC.

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APPENDIX

Questionnaire

KNOWLEDGE AND DETERMINANTS OF EMERGENCY CONTRACEPTION USE AMONG STUDENTS IN TERTIARY INSTITUTION IN OSUN STATE, NIGERIA

Dear Respondents,

Kindly complete this questionnaire. The information supplied shall in no way be traceable to you and it remains confidential. Thank you.

A. DEMOGRAPHIC DATA

1. Age:
2. Sex: i) Male ii) Female
3. Level of Education:

National Diploma Programs		Bachelor's Degree Programs
OND 1 <input type="checkbox"/>		Level 1 <input type="checkbox"/>
OND 2 <input type="checkbox"/>		Level 4 <input type="checkbox"/>
HND 1 <input type="checkbox"/>		Level 5 <input type="checkbox"/>
HND 2 <input type="checkbox"/>		Level 6 <input type="checkbox"/>
Post-graduate <input type="checkbox"/>		
4. Religion:
5. i) Islam ii) Christianity iii) Traditional
 iv) Others (please specify)

6. Tribe:
 i) Yoruba ii) Hausa iii) Igbo iv) Others (please specify)
7. Marital status:
 i) Single ii) Married iii) Widowed iv) Divorced
8. Reproductive and sexual history:
 i) Stable sexual relationship ii) Casual sexual relationship
 iii) Never had a sexual relationship

B. CONTRACEPTIVE KNOWLEDGE

- 9a. Have you heard of emergency contraception before?
 i) Yes ii) No
- 9b. If yes, where? [Tick all options applicable to you]
 i) From a pharmacist ii) General practitioner
 iii) Family planning clinic iv) Mother
 v) Books/medical journals vi) Friends
 vii) TV, radio, newspapers viii) Others (specify)
10. Emergency contraception is method used when one has unprotected sexual intercourse
 i) Yes ii) No iii) Don't know
11. Emergency contraception should be used within 72 h after unprotected sexual intercourse
 i) Yes ii) No iii) Don't know
12. Emergency contraception can cause:
 Yes No Don't know
 a. Feeling of vomiting b. Vomiting
 c. Abdominal pain
13. Emergency contraception is 98% effective in preventing pregnancy after having unprotected sexual intercourse
 i) Yes ii) No iii) Don't know
14. Emergency contraception is very safe when being used
 i) Yes ii) No iii) Don't know

C. SEXUAL AND REPRODUCTIVE HISTORY

- 15a. Have you had formal sex education before?
 i) Yes ii) No
- 15b. If yes, where? (tick all options applicable to you)
 i) At home ii) School iii) Church
 iv) Mosque iv) Seminars v) Others (please specify)
- 16a. Have you had sexual intercourse before?
 i) Yes ii) No
- 16b. If yes, at what age did you first have intercourse? _____

D. PRACTICE

- 17a. Did you use contraception at first sexual exposure?
 i) Yes ii) No
- 17b. If yes, specify (tick appropriately)
 i) Oral contraceptive pills ii) IUCD
 iii) Condoms iv) Spermicides

- v) Implants
- vii) Diaphragms
- ix) Cervical caps
- xi) Others (please specify)
- vi) Injectables
- viii) Withdrawal method
- x) Safe period

18a. Did your spouse use contraception at first sexual exposure?

- i) Yes
- ii) No

18b. If yes, specify (tick appropriately)

- i) Oral contraceptive pills
- ii) IUCD
- iii) Condoms
- iv) Spermicides
- v) Implants
- vi) Injectables
- vii) Diaphragms
- viii) Withdrawal method
- ix) Cervical caps
- x) Safe period
- xi) Others (please specify)

19a. Have you used contraception in the last 3 months?

- i) Yes
- ii) No

19b. Why did you use above contraception?

- i) To prevent sexually transmitted infections including HIV/AIDS only
- ii) To prevent pregnancy only
- iii) I have been pregnant before
- iv) Reason (I) and (II) above
- v) Reason (I) and (III) above
- vi) None of the above
- vii) Other reasons (specify)

20a. Has your spouse used contraception in the last 3 months?

- i) Yes
- ii) No

20b. Why did your spouse use above contraception?

- i) To prevent sexually transmitted infections including HIV/AIDS only
- ii) To prevent pregnancy only
- iii) I have been pregnant before
- iv) Reason (I) and (II) above
- v) Reason (I) and (III) above
- vi) None of the above
- vii) Other reasons (specify)

21a. Do you use more than 1 method of contraception at a time?

- i) Yes
- ii) No

21b. If yes, specify

22. How many times have you used emergency contraception?

- i) Once
- ii) Twice
- iii) Thrice
- iv) 4 or more times
- v) None at all

23. Where can you obtain the emergency contraceptive?

- i) Chemists/pharmacy shops
- ii) Family planning clinics
- iii) Friends
- iv) Doctors/nurses
- v) Partner
- vi) Others (specify)

24. Does your partner approves further use of emergency contraceptive?

- i) Approves
- ii) Disapproves
- iii) Indifferent

25. What problem did you encounter while using the contraceptive? (tick appropriately)

- i) Difficulty in use
- ii) Pain
- iii) Lack of sexual satisfaction
- iv) Skin irritation

v) Expensive

vii) Others (please specify)

vi) Got pregnant following its use

viii) Break/slip of condom

26. Would you use emergency contraceptive again?

i) Yes

ii) No

27. Would you recommend emergency contraception to your friends?

i) Yes

ii) No

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