

Perception and Practice of Emergency Contraception by Females of Reproductive Age Group in a Tertiary Healthcare Institution in South Eastern Nigeria

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ABSTRACT

Background: *Unsafe abortion continues to contribute significantly to maternal morbidity and mortality especially in developing countries. Adequate knowledge and correct use of Emergency Contraception (EC) will serve as a backup for regular contraception. This will help to reduce unwanted pregnancies and the consequent unsafe abortion.*

Objective: *This was to determine the knowledge, attitude and use of EC by the females of reproductive age group in Nnamdi Azikiwe University Teaching Hospital (NAUTH), Nnewi. The findings will help in making recommendations on the use of EC.*

Methods: *This was a cross-sectional survey, using self administered questionnaire among female workers and students in NAUTH, Nnewi aged 15-49 years.*

Result: *A survey of 450 females of reproductive age in NAUTH Nnewi showed that the concept of Emergency Contraception (EC) was well known. The majority of the respondents 330 (73.3%) were aware of emergency contraception. However, only 120(26.7%) had used one form of emergency contraception or the other. Among the various methods of EC mentioned by the users, progesterone only pills (postinor) 60 (50.0%) and combined oral contraceptive pills 30 (25.0%) were the commonest types used by the respondents. Few respondents 25 (20.8%) had misused other form of agents and methods for EC. The respondents reported varying circumstances under which EC was indicated but the majority cited miscalculation of rhythm method, 107 (32.3%) and condom breakage during coitus 76 (22.7%). The most common source of information about EC was from friends, 128 (40.0%) while patent medicine store was the commonest source of procurement 60 (50.0%). Most, 180 (40.0%) of the respondents felt that EC should not be used mainly on religious grounds.*

Conclusion: *The knowledge of EC was high among the females of reproductive age in NAUTH but the utilization was poor. Training and retraining of health workers and public health education in hospitals, schools and religious groups are necessary to develop a positive attitude and correct use of EC.*

Key words: *perception, practice, emergency contraception*

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INTRODUCTION

Emergency contraception is defined as the use of drugs or devices to prevent unintended pregnancy within a few days of unprotected sexual intercourse or following a potential contraceptive failure¹⁻⁴. Sometimes it is referred to as 'morning after' or post coital contraception. The term 'emergency' stresses the fact that the regimens are not intended for ongoing use. They are back up contraception⁵. The commonly used emergency contraceptive methods include levonorgestrel tablets (postinor), Yuzpe regimen (ethinyl-oestradiol 100 µg and 0.5mg of levonorgestrel) and the copper intra uterine device^{6,7}. Emergency contraception is a safe and effective means of post coital treatment and has been estimated to prevent at least 75% of pregnancies expected from unprotected intercourse².

The availability and use of emergency contraception has generated enormous debate and controversy since its inception about 40 years ago⁸. Of recent, the concerns over unsafe abortion statistics, teenage pregnancy cases, and increased use of condoms as a contraceptive (due to HIV infection) and issues of sexual and reproductive rights of women⁹ have pushed this method of contraception to the fore. Unintended pregnancy continues to be a major global tragedy for most of these pregnancies end in unsafe abortion. About 80 million pregnancies that occur annually all over the world are unwanted. Of this number, 35 to 50 million are induced to abort, of which 20 million are performed under unsafe condition¹⁰. In Africa, about five million abortions take place every year,¹¹ while in Nigeria, the figure is 610,000¹² annually. This represents a rate of 25 abortions per 1000 women aged 15-44. All these abortions could have been minimized if there is knowledge availability and use of emergency contraception.

This study is designed to cut across the reproductive age groups of female workers and students in Nnamdi Azikiwe University Teaching Hospital, Nnewi, Anambra State, South Eastern Nigeria. The factors that influence their knowledge, attitude and usage of emergency contraception were sought. The result will help in marshalling out strategies for effective emergency contraceptive knowledge and utilization and for the formulation of policies to achieve them.

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METHODS

The study population was in Nnewi, in the South Eastern part of Nigeria. It comprised female staff and female students in Nnamdi Azikiwe University Teaching Hospital who were of reproductive age group (15-49 years). They are students from school of nursing, medical students, medical doctors and other lecturers in the school of nursing and college of medicine. It also included female nurses and other female members of staff of the teaching hospital. The total number of these females of reproductive age group in the hospital was 1,501. Five hundred females out of the total were recruited for the study. The sample size was calculated using the formula by Taylor DW. The knowledge prevalence rate of 61% for emergency contraception in a work done at Enugu by Ikeme et al¹⁵ was used in calculating the sample size as follows:

$$N = Pq/(E/1.96)^2$$

Where P = maximum known prevalence

$$Q = 1 - p$$

E = Allowable error margin = 0.05

$$1.96 = \text{constant}$$

Thus,

$$N = \frac{0.61 \pm 0.39}{0.05/1.96} = \frac{0.2379}{0.0006508} = 366.0$$

To further increase the power of the study, the sample size was increased to 500. Structured questionnaires were designed after a pilot test with 50 selected members of the study group. The female staff and students were stratified into six professional groups namely; medical doctors (60), nurses and midwives (426), administrative and accounts staff (275), medical and nursing students (500), Lecturers (40) and others (200). One third of each subgroup was drawn on the basis of first seen. The questionnaires which included the socio-demographic characteristics, awareness of EC, use of EC, type of EC used, reason for use of EC among others were self administered to the respondents.

Consent was obtained from each respondent as well as from the ethics and research committee of NAUTH. Confidentiality was ensured to all respondents.

The information extracted was coded and analyzed using Epi info statistical package. Test of statistical significance was calculated using chi square test with p

value < 0.05 accepted to be significant. The results were presented in frequency tables and percentages.

RESULTS

Of the 500 questionnaires distributed, 450 were correctly filled and returned which gave a response rate of 90.0%.

Characteristics of Respondents

The demographic characteristics of the respondents were as shown in table I. The respondents were variably distributed in various age groups but most, 140 (31.1%) were in age group 20-24. Majority, 250 (55.6%) of the respondents were Catholics. One hundred and sixty eight (37.3%) had senior school certificate and constituted the majority and 244 (54.2%) of the respondents were married.

A total of 330 (73.3%) had knowledge of emergency contraception while 120 (26.7%) has no knowledge of emergency contraception. One hundred and twenty (26.7%) has used one form of emergency contraception previously while 330 (73.3%) have not used any form of emergency contraception. The commonest EC used by respondents was progesterone only pills (postinor). Others include combined oral contraceptive pills 30 (25%), 25 (20.8%) used various drugs and substances including quinine, lemon, alcohol and douching and 5 (4.2%) used herbal medicine.

Table II shows the indication for the use of emergency contraception. Sources of information on emergency contraception include friends 138 (41.8%), patent medicine dealers 64 (19.4%), health care providers 64 (19.4%), media 32 (9.7%) while 32 (9.7%) quoted other sources.

Table III shows sources of emergency contraceptive. Patent medicine store was the main source of drugs used by the respondents, 60 (50.0%).

Table IV shows respondents' attitude towards the use of emergency contraception. Most, 180 (40.0%) of the respondents felt that EC should not be used because it was against their religion.

Table V shows the influence of bio-social factors on the awareness and the use of emergency contraception.

TABLE I: Socio-demographic characteristics

Characteristics	Number	percentage
A. Age group (years)		
15 - 19	45	10.0
20 - 24	140	31.1
25 - 29	80	17.8
30 - 34	48	10.6
35 - 39	75	16.7
= 40	62	13.8
Total	450	100.0

B. Religion

Catholic	250	55.6
Anglican/Pentecostals	185	41.1
Islam	5	1.1
Others (Sabbath, Grail message)	10	2.2
Total	450	100.0

C. Level of Education

SSC	168	37.3
OND/NCE	144	32.0
Graduates/ HND and above	138	30.7
Total	440	100.0

D. Marital status

Single	244	54.2
Married	190	42.2
Separated/ Divorced	-	-
Total	434	100.0

TABLE II: Indications for the use of emergency contraception [N=120]

Indications	Number	Percentage
Miscalculation of rhythm method	107	89.2
After condom breakage	76	63.3
Neglect of use of contraception	58	48.3
After sexual assault	52	43.3
Failed coitus interruptus	37	30.8

TABLE III: Supply of emergency contraception

Main source	Number	Percentage
Patent medicine store	60	50.0
Pharmacy store	24	20.0
Hospital / Clinic	18	15.0
Drug hawkers	6	5.0
Others	12	10.0
Total	120	100.0

TABLE IV: Attitude towards the use of emergency contraception

Reasons	Number	Percentage
Against my Religion	180	40.0
Should not be used at all	102	22.7
No knowledge, no reason	68	15.0
More convenient than regular Contraception	52	11.6
Very useful and recommendable	48	10.7
Total	450	100.0

TABLE V: The influence of age, education, religion and marital status on the awareness and the use of EC

Variable	Awareness of EC		Usage of EC	
	Yes	No	Yes	No
A. Age				
15-19	66	24	23	40
20-24	79	32	34	59
25-29	43	16	18	32
30-34	42	15	18	32
35-39	54	17	14	25
= 40	46	16	13	22
Total	330	120	120	210

B. Education

SSC	79	29	58	100
OND/NCE	90	32	38	68
HND/Graduates and above	161	59	24	42
Total	330	120	120	210

C. Religion

Catholic	188	62	40	148
Anglican/ Pentecostal	136	49	75	61
Islam	2	3	2	0
Others (Jehovah Witness, Sabbath Grail message)	4	6	3	1
Total	330	120	120	210

D. Marital Status

Single	202	72	92	110
Married	128	48	28	100
Total	330	120	120	210

There is statistically significant association between age and awareness of EC ($\chi^2 = 90.81 > 11.07$, $df = 5$, $p < 0.05$). There is also a significant association between age and use of EC ($\chi^2 = 14.73 > 11.07$, $p < 0.05$).

A statistically significant association between level of education and awareness of EC was found ($\chi^2 = 8.04 > 5.99$, $df = 2$; $p < 0.05$), but the use is not related to the level of education ($\chi^2 = 0.0197 < 5.99$, $p > 0.05$).

There is statistically significant association between religion and awareness of EC ($\chi^2 = 62.13 > 7.81$, $df = 3$, $p < 0.05$) as well as its use ($\chi^2 = 37.71$, 7.81 ; $p < 0.05$).

No statistically significant association was found between marital status and awareness of EC ($\chi^2 = 0.057 < 3.84$, $df = 1$; $p > 0.05$) but there is significant association with the use ($\chi^2 = 18.88 > 3.84$, $p < 0.05$).

DISCUSSION

Every woman of reproductive age who is sexually active and fertile and wishes to prevent unintended pregnancy after unprotected sexual intercourse can use emergency contraception¹⁴. Yet, this practice is filled with a lot of confusion and controversies based on lack of knowledge and misconception. In this study, the awareness of emergency contraception is high, 330 (73.3%). This finding is similar to the work done in Enugu by Ikeme et al, where 61% of female undergraduates were aware of emergency contraception¹⁵. Similar works by Abasiattai et al in Akwa Ibom¹⁶, Arowojolu and Adekunle³ in Ibadan and Broham et al¹⁷ showed a similar experience. The slightly higher awareness in this study compared to that from Enugu could be due to the fact that this study was carried out in a health institution.

In contrast with the knowledge, the practice of emergency contraception was low. Only 120 (26.7%) of the respondents who were aware had used either one form of emergency contraception or the other. Similar findings have been documented in the literature^{2,16-19}. Pills in the form of progesterone only pills (postinor) 60 (50%) and combined oral contraceptives 30 (25%) were the type of emergency contraceptive commonly used. This may be explained on the basis that oral pills are easily purchased over the counter and have been available as an emergency contraceptive for many years. This finding was different from a work done at Ibadan by Arowojolu and Adekunle³, where combined oral contraceptive (Yuzpe) was the commonest EC used, but similar with work done in Enugu by Ikeme et al¹⁵. A recent randomized controlled trial by the World Health Organization has shown that levonorgestrel (postinor) regimen is better tolerated and more effective than combined pills (Yuzpe regimen)²⁰. So, those respondents who procured their drugs from doctors and pharmacists were likely to have been given postinor. The copper bearing intrauterine device is a highly effective post coital contraceptive with failure rate of less than 1%,^{21,22} yet, this device (IUCD) was not used by any respondent in this study. This may be due to the inconvenience associated with the device since a trained healthcare provider under aseptic condition should insert it. People are more likely to accept it for regular contraception than for emergency contraception. In addition, the procedure is difficult to insert in a nulliparous woman²³ and actually contraindicated in women at risk of sexually transmitted disease and these are frequently the same

women who need emergency contraception²⁴. In Addition, this study has revealed a lot of misuse of emergency contraception. Twenty-five (20.8%) respondents had used various forms of agents and devices for emergency contraception. These agents included quinine tablets, lemon, strong alcohol, douching, purgatives and hot bath. This finding was similar to the work done in Akwa Ibom, where menstrogen and quinine were the most common medications used for emergency contraception¹⁶. This calls for an urgent need for the education of health workers and the general populace on the types, timing and correct use of emergency contraception.

Most of the respondents cited miscalculation of calendar or rhythm method as the reason for using EC. This goes a long way to prove that calculation of safe period is an unreliable method of contraception irrespective of the fact that it is one of the methods officially permitted by Roman Catholic Faith²⁵.

Source of information on emergency contraception plays an important role in determining its correct use, most especially with regard to dosage and correct timing. In this study, the commonest source of information by the respondents was friends 128 (40.0%). A similar observation was made from other studies^{15,26,27}. The implication of this is increased rate of misuse of emergency contraception as was evident in this study. There is need for improving the ways by which contraceptive information to people is provided. In addition, patent medicine shop was the main source of drugs used by the respondents 60 (50%). Only 18 (15%) and 24 (20%) of the respondents got their drugs from hospitals, and pharmacy shops despite the fact that respondents are hospital staff. This goes a long way to show that the level of knowledge and usage of emergency contraception in this study may be higher than what is obtainable in the general population.

Respondents' perception of emergency contraception showed that religion had a great influence on its use.

The majority of the respondents who felt that emergency contraception should not be used at all did that on religious ground. Similar observation has been reported by society for family planning in Lagos, where they found that religious belief, fear of side effect and equating emergency contraception to procuring abortion were major hindrances to effective utilization of EC²⁵. Out of the 180 respondents who were Catholics

and aware of emergency contraception, only 40 (21.3%) had used emergency contraception. Conversely, all the Moslems and 55.1% of the Pentecostals/Anglicans who were aware had used one form of emergency contraception or the other.

Emergency contraception was influenced by age. Most of the respondents between the ages of 15-19 and 20-24 showed high level of awareness and usage of emergency contraception. These were mainly medical and nursing students and were mostly at the risk of unplanned pregnancy and unprotected intercourse. This finding was in keeping with the findings in other studies^{3,27}.

The level of education was seen to influence the level of awareness but did not show a corresponding effect on the usage.

Of the total of 161 respondents who were graduates and aware, only 24 (14.9%) had used emergency contraceptive intervention. This is comparable to that of respondents who had Senior Secondary Certificate where 58 (73.4%) of those who were aware had used emergency contraception. This shows that knowledge of emergency contraception did not translate to usage. The respondents who were graduates, although were more aware of EC than those with less level of education, had less usage of EC. This may be because they are less likely to be exposed to the high level of sexual risk since they are more independent especially, financially. This could explain why their usage of emergency contraception is low. This finding is in contrast with the work done in Ireland by Phipps et al, where it was found that greater proportion of more educated people use emergency contraception²⁹.

The respondents who were single used emergency contraception more than their married counterparts. The married ones usually have less need of EC because their coitus was more likely to be planned and they may not see any need for it. This is quite unlike the respondents who were single and younger. In them, their sexual relationships are usually unplanned and these tend to occur during unstable relationship and most of them end in unsafe abortion³⁰.

In conclusion, the knowledge of EC was high among females of reproductive age in NAUTH but the utilization was poor. Training and retraining of health workers and public health education in hospitals,

schools and religious organizations are necessary to develop a positive attitude and correct use of EC.

REFERENCES

1. Gillain S, Brechin S, Penney G Allerton L. Emergency contraception. In: J fam Plann. *Reprod. Health Care*. 2006; 32 (2):121- 8.
2. Haggi D. Emergency Contraception: A Global Overview of Knowledge, Attitudes and Practices Among Providers. *Trop J Obstet Gynaecol.*, 2003; 20 (2): 153-157.
3. Arowojolu AO, Adekunle AO. Perception and Practice of Emergency Contraception by Post Secondary School Students in South West Nigeria. *Afr J Reprod. Health* 2000, 4 (1): 56-65.
4. Turner AN, Ellertson C. How Safe is Emergency Contraception. *Drug Safety* 2002; 25: 695-706.
5. Von Herten H, Van Look PFA. Research on New Methods of Contraception. *Fam Plann. Perspect* 1996; 22(2):62-68.
6. Cheng L, Gulmezoglu A, Piaggio G, et al. Interventions for Emergency Contraception *J Obstet Gynaecol*. 2005; 25(5): 491-3.
7. Glasier A. Contraception. In: Keith Edmonds (ed) *Dewhurst's Textbook of Obstetrics and Gynaecology*. 7th edition. Blackwell Publishing, London. 2007: 299 - 317.
8. Trussell J, Rodriguez G, Ellertson C. New Estimates of the Effectiveness of the Yuzpe Regimen of Emergency Contraception. *Contraception* 1998; 57: 363-369.
9. Adinma JIB. The Need to Understand Reproductive Health. *Women's Sexual and Reproductive Rights News*. 2007; 6(2): 1-22.
10. Adinma JIB. Unsafe Abortion. An Unacceptable Tragedy of our Time. *Women's Sexual and Reproductive Rights News*. 2007; 6(1): 1-19.
11. WHO. *Unsafe Abortion. Global and Regional Estimates of Incidence and Mortality* Geneva. 1998. WHO RHT MSM 97. 16.
12. Adinma JIB. An Overview of the Global Policy Consensus on Women's Sexual and Reproductive Rights; The Nigerian Perspective. *Trop J Obstet Gynaecol* 2002; 19 (1): 9-12.
13. Audit and Personnel Management Departmental Report. NAUTH, Nnewi. Anambra state. 2008.
14. Robinson ET, Metcalf-Whittaker M, Rivera R. Introducing Emergency Contraceptive Services Communication Strategies and the Role of Women's Health Advocates *Fam. Plan. Perspect*. 1996; 22: 71-75,80.

15. Ikeme AC, Ezegwui HU, Uzodinma AC. Knowledge, Attitude and Use of Emergency Contraception among Female Undergraduates in Eastern Nigeria. *J. Obstet Gynaecol.* 2005; 25(5): 491-3.
16. Abasiattai AM, Umoiyoho AJ, Bassey EA, Etuk SJ, Udoma EJ Misconception of Emergency Contraception among Tertiary School Students in Akwa Ibom State, South-South Nigeria. *Niger J Clin Pract* 2007; 10(1): 30-4.
17. Broham DR and Cartmill RSV. Knowledge and Use of Secondary Contraception among Patients Requesting Termination of Pregnancy. *Br. J Obstet, Gynaecol* 1993; 306: 556-557.
18. Camp SL. A Study-tour Report on Emergency Contraception in Seven European Countries. *Reproductive Health Technologies*, Washington D.C, 1994.
19. Robinson ET, Metcalf Whittaker M. Introducing Emergency Contraceptive Services: Communication Strategies and the Role of Women's Health Advocates. *Fam. Plann. Perspect.* 1996; 22(2) 71-75.
20. Taskforce on Postovulatory Method of Fertility Regulation. Randomised Controlled Trial of Levonorgestrel Versus the Yuzpe Regimen of Combined Oral Contraceptives for Emergency Contraception *Lancet* 1998; 352:428-432.
21. Fasoli M, Parazzini F, Cecchetti G, La Vecchia C. Postcoital Contraception: An Overview of Published Studies. *Contraception* 1989; 39: 459-468.
22. Trussel J, Ellertson C E. Efficacy of Emergency Contraception. *Fertile Control Rev.* 1995; 4(2): 8-11.
23. Ellertson C. History and Efficacy of Emergency Contraception: Beyond Coca-Cola. *Fam. Plann. Perspect.* 1996; 22(2): 52-56.
24. IUD's Update. *Popul. Rep. B. Intrauterine Device* 1995; 22(5): 3-10
25. Society for Family Health. *Emergency Contraception in Lagos, Nigeria.* Society for Family Health 1998.
26. Smith BH, Curney EM, Aboulella I, Templeton A. Emergency Contraception, A Survey of Women's Knowledge and Attitudes. *Br J Obstet Gynaecol.* 1996; 103: 1109-1116.
27. Hughes H, Myres P. Women's Knowledge and Preference about Emergency Contraception: A Survey from a Rural General Practice. *Br J Fam. Plan.* 1996; 22: 77-78.
28. Crosier A. Women's Knowledge and Awareness of Emergency Contraception. *Br. J. Fam. Plann.,* 1996; 22: 87-90.
29. Phipps MG, Matterson KA, Fernandez GE, Chiaverini L, Weitzen S. Characteristics of Women who seek Emergency Contraception and Family Planning Services. *Am J Obstet Gynaecol.* 2008; 199:111.e1-111.
30. Okonofua F.E. The Need for Reform of Abortion Law in Nigeria. In Okonofua F.E ed. *Abortion Law in Nigeria: The Way Forward.* Occasional Working Paper Series. Women's Health and Action Research center. Benin City. 2000.
31. Ozumba BC, Reducing the Barriers to the Attainment of the Millennium Development Goals for Maternal Health in Nigeria. In: Agboghorama, Achem and Uja ed.s. *Improving Maternal Health MDG: 5. The Road Map.* Proceedings of the 7th International Scientific Conference of the Society for Gynaecology and Obstetrics of Nigeria (SOGON) Abuja SOGON 2006: 34-39.