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Assessment of Male Involvement in Emergency Contraception in the University of Benin, Benin City, Edo State

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ABSTRACT

Background: Emergency contraception (EC) refers to the use of drugs or a device as an emergency measure to prevent pregnancy. Lack of awareness and appropriate use of emergency contraception after unprotected sexual intercourse can lead to unwanted pregnancies and unsafe abortions. Male involvement in contraceptive practices could help reduce these sequelae. This study assessed the knowledge, attitude and practice of emergency contraception and extent of partners' communication with each other on pregnancy prevention among male students in the University of Benin, Benin City.

Methods: A descriptive cross-sectional study was carried out on 400 male students of the University of Benin selected by multistage sampling technique. Data was obtained with pretested interviewer administered questionnaire. Data was analyzed with SPSS version 20 and statistical significance was determined using Chi square and Fishers exact with p value set at < 0.05.

Results: Three hundred and thirty-four (95.4%) of the respondents, had incorrect knowledge of Emergency Contraception (EC) while 293 (83.7%) respondents had a good attitude toward EC. One hundred and seventy-five (80.3%) of the respondents' partners have used emergency contraception and only 93 (43.1%) respondents discussed pregnancy prevention with their partners.

Conclusion: The knowledge of emergency contraception among respondents was poor. However, most respondents had positive attitude towards its use and majority of their partners had used EC. Therefore, health education program on pregnancy prevention methods is recommended to improve respondents' knowledge.

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INTRODUCTION

Emergency contraceptives are contraceptives generally used when other family planning methods which are supposed to be safe and very effective fail as in condom breakage or slippage and IUCD expulsion.[1, 2] They are also used when women in the reproductive age group do not use family planning methods, are late for monthly injectable contraceptives, miss two or more consecutive combined oral contraceptive pills, or are sexually assaulted.[1, 2] They comprise of hormonal method which involves the use of progestin only or combined estrogen-progestin pills and the barrier method which involves the use of Cu

IUCD (CuT-380A). [1, 2] Both methods can prevent pregnancy up to five days after unprotected sexual intercourse and while the hormonal method acts by preventing and delaying ovulation, impairing endometrial receptivity for implantation, and interfering with sperm transport and corpus luteum function; Cu IUCD acts through its copper component which is spermicidal, thus preventing the sperm from fertilizing the ova.[1, 2]

In general, emergency contraceptives are effective and safe means of preventing unintended pregnancies and have the potential, as the last resort to prevent abortion; a desirable goal especially in countries where abortion is illegal such as in Nigeria.[3,4] In Nigeria, unintended intercourse is the primary cause of unwanted pregnancies, and many women with unwanted pregnancies decide to end them by abortion.[4] Since abortion is illegal in Nigeria (unless medically recommended to save a mother's life), many abortions are carried out in unsafe environment[5]. The consequences of these abortions are grave and can be life-threatening, including leading to maternal death.[5-7]

Some of the factors which influence the use of emergency contraceptives include age, level of education, marital status, religious beliefs, place of residence (rural/urban), socio-economic class, number of living children, number of male children, availability and accessibility of services, cost of services, attitude of the woman, the husband, family members, side effects, failure of contraceptives and inter-spouse communication.[8] Amongst these, the male spouse and the inter-spouse communication are the greatest factors affecting contraceptive use. This is because although women are the direct users of emergency contraceptives, it is well documented that men's general knowledge and attitude concerning the ideal family size, gender preference of children, ideal spacing between childbirths and contraceptive methods use greatly influence their preferences and opinions.[6] Men are also recognized to be responsible for the large proportion of the consequences of unsafe abortion suffered by their female partners as they have more control over condom use, are more likely to control the frequency of sexual relations and the possibility of abstinence within a relationship.[9] Male involvement helps not only in accepting a contraceptive method but also in its effective and continual use.[8]

There is insufficient data on male involvement in emergency contraception. Most of the available surveys on emergency contraception are focused on females. A 2009 study by Family Health International in Ghana examined how and why men support or influence women's use of emergency contraception[12]. The study found that men's support for emergency contraception ranges from shared decision making to dominant controlling behavior.[12] In addition, findings in a study carried out in 2007 in Providence, Rhode Island showed that male involvement in contraceptive practices would help reduce these sequelae of unwanted pregnancies.[13]

Lack of awareness and appropriate use of emergency contraception after unprotected sexual intercourse can lead to various consequences such as unwanted pregnancies and induced abortion. This study would provide data on the knowledge and extent of male involvement on the use of emergency contraception and how it affects appropriate use. This study will contribute to the reduction of morbidity and mortality of Nigerian women especially the younger women by highlighting the importance of male involvement in emergency contraception.

The objective of this study was to assess the knowledge, attitude, and practice of emergency contraception and extent of partners' communication with each other on pregnancy prevention among male students in the University of Benin, Benin City.

METHODOLOGY

The study was carried out in the University of Benin, Benin City. It consists of two campuses: the Ugbowo campus of the University which is the main campus and the Ekenwan campus that serves as the home for Faculty of Arts and other services offered by the University such as the UNIBEN Business Enterprise (UBE). University of Benin (UNIBEN) is one of Nigeria's Federal Universities and offers courses at various levels: Postgraduate, Undergraduate, Diploma and Certificate. Presently, the total student population is over 40,000. This consists of both full-time and part-time students shared among its various faculties. There are 13 Faculties in the University of Benin viz Agricultural Sciences, Arts, Basic Medical Sciences, Dentistry, Education, Engineering, Law, Life Sciences, Management Sciences, Medicine, Pharmacy, Physical Sciences and Social Sciences.

A descriptive cross-sectional study was carried out among 400 male students across all the faculties in the University over a year period ending August, 2013. The sample size was calculated using; $n = Z^2pq/d^2$ [15] Where; n = desired minimum sample size, Z = standard normal deviate (1.96 at $\alpha = 0.05$), p = prevalence rate of 63.2% was used based on the proportion of male respondents who have had knowledge of emergency contraception based on a study carried out in the University of Buea, Cameroon in 2005[16], q = 1-p and d = degree of accuracy (5% = 0.05). Thus, the minimum sample size was 358. Addition of 10% non-response (36) increased sample size to 393. However, 400 respondents participated in this study.

A multistage sampling technique was used in recruiting the respondents. The first stage included selecting one department from each the 13 faculties in the University using simple random sampling method (balloting). The second stage was selection of respondents from the departments using stratified sampling technique. The levels of study (100 – 600L) formed the basis for each strata. The total number of male students in the different levels in all the selected departments was obtained (3,415) and proportional allocation was used to determine the number of respondents to be selected in each level. All the students in the selected levels were assigned numbers. A sampling interval (total number of students (N) ÷ sample size (n) = 3415 ÷ 400 = 8.538, approx. 9) was determined. Thus, in each level, every 9th male student who met the inclusion criteria was recruited for the study.

Data for this study was obtained with pretested, structured interviewer-administered questionnaire. It consisted of open and close ended questions which covered the objectives of the study. The questions were broadly divided into sections: Socio-demographic characteristics, knowledge of emergency contraception, attitude towards the use of emergency contraception, male involvement in the use of emergency contraception and partners' communication with each other on pregnancy prevention. Data was analyzed using the Statistical Package for Scientific Solution (SPSS) version 20.0. The domains of knowledge assesed were definition, methods and mode of action of emergency contraception.

Univariate analysis was done for all variables. Bivariate analysis was done to determine

associations between socio-demographic variables and approval and partners' use of emergency contraception using Chi-square test and Fisher's exact test. A p-value of less than 0.05 was considered statistically significant. The results were represented in prose, frequency tables and contingency tables. Ethical approval was obtained from the Ethics and Research Committee in UBTH. Written informed consent was also obtained from the individuals and they were educated on the purpose of the study before questionnaires were administered.

RESULTS

Four hundred respondents with mean age of 22.9 (± 3.2) years participated in this study. Majority of the respondents were Christians 389 (97.2%), single 384 (96.0) while 99 (24.8%) were in 200 level (Table 1)

Majority of the respondents 350 (87.5%) had heard about emergency contraception. Of these nearly two thirds 222 (63.4%) of the respondents' source of information on emergency contraception was from their friends. However, more than two-fifths 147 (42.0%) heard about emergency contraception from health personnel. Majority of the respondents 334(95.4%) did not know the definition of emergency contraception. Two hundred and ninety-two (83.4%) of the respondents had incorrect knowledge of methods of emergency contraception while over half of the respondents 181 (51.7%) saw emergency contraception as a form of early induced abortion. (Table 2)

Table 1: Socio-Demographic Characteristics of Respondents

Characteristics	Frequency (n=400)	Percent
Age group (years)		
15 – 19	54	13.5
20 – 24	222	55.5
25 – 29	112	28.0
30 – 34	11	2.8
35 – 39	1	0.4
Mean ± SD = 22.9 ± 3.2		
Religion		
Christianity	389	97.2
Islam	9	2.3
ATRΨ	2	0.5
Christian denomination (n = 389)		
Catholic	70	18.0
Pentecostal	300	77.1
Others†	19	4.9
Study level		
100	81	20.2
200	99	24.8
300	73	18.2
400	78	19.5
500	44	11.0
600	25	6.2
Marital status		
Single	384	96.0
Cohabiting	11	2.8
Married	5	1.2

ΨATR = African Traditional Religion; †Others include Anglican (4.1%), Jehovah's Witness (0.5%) and Methodist (0.3%)

Table 2: Respondents' Knowledge of Emergency Contraception

Variable	Frequency	Percent
Heard of EC (n = 400)		
Yes	350	87.5
No	50	12.5
Source of information on EC* (n = 350)		
Friends	222	63.4
School	208	59.4
Health personnel	203	58.0
Television	172	49.1
Radio	133	38.0
Family	98	28.0
Others∫	11	3.1
Preferred source of information on EC (n = 350)		
Health personnel	147	42.0
School	70	20.0
Television	61	17.4
Friends	38	10.9
Family	13	3.7
Others‡	11	3.1
Radio	10	2.9
Definition of EC		
Correct	16	4.6
Incorrect	334	95.4
Knowledge of methods of EC		
Correct	58	16.6
Incorrect	292	83.4
Knowledge of mode of action of EC		
Correct	169	48.3
Incorrect	181	51.7

*Multiple responses; ∫Others include internet (2.2%), books (0.6%) and social events (0.3%); ‡Others include internet (2.2%), books (0.6%) and social events (0.3%)

More than half, 206 (58.9%) of the respondents' religion did not permit the use of emergency contraception while 335 (95.7%) of the respondents perceived abortion as unsafe in Nigeria. Two-thirds of the respondents 220 (62.9%) perceived emergency contraception as a family planning method. Majority of the respondents 285 (81.4%) perceived emergency contraception as a form of induced abortion. Two hundred and ninety-three (83.7%) of the respondents thought that emergency contraception was important in pregnancy prevention. (Table 3)

Two hundred and eighteen (62.3%) of the respondents had had sexual intercourse. Of these, majority 175 (80.3%) had used emergency contraception and 113 (51.8%) of the respondents first felt the need for emergency contraception in the age range of 15-19 years.

One hundred and eighteen (67.4%) of the respondents had approved of spouses using emergency contraception. Of these, majority of the respondents 112 (94.9%) approved of the use of emergency contraception to avoid unwanted pregnancy while 49 (86.0%) who disapproved the use of emergency contraception did so on the basis of their religion. (Table 4)

Less than half, 94 (43.1%) of the respondents sometimes discussed pregnancy prevention with their partners and in over half of the respondents, 98 (51.6%) the discussion was initiated by both the respondent and his partner. One hundred and eighty-seven (98.4%) of the respondents that discussed pregnancy prevention stated that the discussion with partner helped in pregnancy prevention. (Table 5)

Table 3: Respondents' Attitude towards Emergency Contraception

Variable	Frequency (n = 350)	Percent
Respondents' religion permit the use of EC		
Yes	144	41.1
No	206	58.9
Respondents' perception on abortion safety in Nigeria		
Safe	15	4.3
Unsafe	335	95.7
Perception of EC as family planning method		
Yes	220	62.9
No	130	37.1
Perception of EC as a form of early induced abortion		
Yes	285	81.4
No	65	18.6
EC is important in pregnancy prevention		
Yes	293	83.7
No	57	16.3

Majority of the respondents 4 (80.0%) aged 30 years and above approved of the use of emergency contraception while 1 (20.0%) did not. Approval of the use of emergency contraception was observed to increase with increasing age of the respondents however, and this association was not statistically significant. (Fishers' exact = 0.533). Respondents who were cohabiting 9 (81.8%) were more likely to approve the use of emergency contraception than those who were married 2(66.7%) and single 107 (66.5%). This association was not statistically significant. (Fishers' exact = 0.575). Respondents in 600L were more likely to give approval for the use of emergency contraception 14 (77.8%) while 4 (22.2) were not. This association was not statistically significant (p = 0.891) (Table 6).

Table 4: Respondents' Use of Emergency Contraception

Variable	Frequency	Percent
Respondents who have had sexual intercourse	**(n = 350)**	
Yes	218	62.3
No	132	37.7
Use of EC (n = 218)		
Yes	175	80.3
No	43	19.7
Age at feeling first need for EC (n = 218)		
10 – 14	6	2.8
15 – 19	113	51.8
20 – 24	93	42.7
25 – 29	5	2.3
30 – 34	1	0.5
Approval of spouses' use of EC (n = 175)		
Yes	118	67.4
No	57	32.6
Reasons for approval of EC* (n = 118)		
Avoid unwanted pregnancy	112	94.9
Space birth	49	41.5
Achieve desired family size	47	39.8
Improved quality of life	45	38.1
Promote child health	28	23.7
Reasons for disapproval of EC* (n = 57)		
Religion	49	86.0
Encourage infidelity	28	49.1
Side effects	22	39.0
Culture	6	10.5
Cost	1	1.8

Table 5: Respondents' Extent of Communication with Partner on Emergency Contraception

Variable	Frequency	Percent
Discussion of pregnancy prevention with partner (n = 218)		
Sometimes	94	43.1
Always	52	23.9
Often	44	20.2
Never	28	12.8
Initiation of discussion on pregnancy prevention by respondents (n = *190)		
Both	98	51.6
Self	77	40.5
Partner	15	7.9
Discussion helped pregnancy prevention (n = 190)		
Yes	187	98.4
No	3	1.6

*n is number of respondents who discussed pregnancy prevention with their partners

Respondents' partner use of emergency contraception was highest among respondents aged 35-39 years 1 (100.0%) compared with the age groups 30-34, 8 (88.9%), 25-29, 60 (83.3%) and 20-24, 86 (78.2%). This association was not statistically significant. (Fishers' exact = 0. 789). Respondents who were married were more likely to have partners who use emergency contraception 3 (100.0%) than those who were cohabiting 10 (90.9%) and single 162 (79.4%.0%). This association was not statistically significant. (Fishers' exact = 0.8411). All the respondents in 500L had partners who used emergency contraception 16 (100.0%). This association was not statistically significant (p = 0.089) (Table 7).

Table 6: Socio-Demographic Characteristics of Respondents and Respondents Approval of Emergency Contraception Use

Variable	Approval of EC Use		Test Statistic
	Yes (n =118) n (%)	No (n = 57) n (%)	
Age group			
15 – 19	11 (73.3)	4 (26.7)	Fishers' Exact
20 – 24	63 (63.0)	37 (37.0)	= 0.533
25 – 29	40 (72.7)	15 (27.3)	
30 – 34	4 (80.0)	1 (20.0)	
Marital status			
Single	107 (66.5)	54 (33.5)	Fishers' Exact
Cohabiting	9 (81.8)	2 (18.2)	= 0.575
Married	2 (66.7)	1 (33.3)	
Religion			
Christianity	114 (67.9)	54 (32.1)	Fishers' exact = 0.575
Islam	2 (40.0)	3 (60.0)	
ATR†	2 (100.0)	0 (0.0)	

†African Traditional Religion

Table 7: Socio-Demographic Characteristics of Respondents and Partners' Use of Emergency Contraception

Variable	Partners' Use of EE		
	Yes (*n = 175) n (%)	No (*n = 43) n (%)	Test Statistic
Age-group (years)			
15 – 19	20 (76.9)	6 (23.1)	Fishers' Exact
20 – 24	86 (78.2)	24 (21.8)	= 0.789
25 – 29	60 (83.3)	12 (16.7)	
30 – 34	8 (88.9)	1 (11.1)	
35 – 39	1 (100.0)	0 (0.0)	
Marital status			
Single	162 (79.4)	42 (20.6)	Fishers' Exact
Cohabiting	10 (90.9)	1 (9.1)	= 0.8411
Married	3 (100.0)	0 (0.0)	
Study Level			
100	33 (73.3)	12 (26.7)	$\chi^2 = 9.544$
200	41 (80.4)	10 (19.6)	p = 0.089
300	36 (83.7)	7 (16.3)	
400	37 (84.1)	7 (15.9)	
500	16 (100.0)	0 (0.0)	
600	12 (63.2)	7 (36.8)	
Religion			
Christian	165 (79.7)	42 (20.3)	Fishers' exact = 0.801
Islam	8 (88.9)	1 (11.1)	
ATR†	2 (100.0)	0 (0.0)	

†Others; African Traditional Religion. *n = Have had sexual encounter

DISCUSSION

Most of the respondents were between the age group of 20-24. This reflects a young student population in the University which indicates the young age of admission into Nigerian Universities. This finding is in line with the study carried out in four tertiary institutions in Anambra state, Nigeria where the modal age group fell between 21-29 years.[18] Majority of the respondents were single. The reason for this may be because majority of the respondents were young in their early twenties and not yet in any paid employment and thus not ready for marriage. Respondents were mostly Christians with majority of them being Pentecostals. This is due to the fact that the study was carried out in the Southern part of Nigeria where Christians are predominantly found.

Majority of the respondents were aware of emergency contraception. This is similar to a study conducted in Osun State where majority of the respondents were aware of emergency contraception.[17] The predominant sources of information about emergency contraception were from friends, health personnel and school, with a higher proportion having health personnel as their preferred source of information. Information from family, which plays an important role in early adolescent education, was deficient. This is at variance with a study done in North Carolina where relatives made up the predominant source of information, with only a few listing health personnel as source.[14] Less than half of the respondents got information on emergency contraception from the media. This was contrary to the finding of a study done in Buea, Cameroon where majority of the respondents' source of information was the media.[16] In this study, only a few of the respondents could correctly define emergency contraception, and majority of them had incorrect knowledge of emergency contraceptive methods. This could be a reflection of the deficiencies in their source of information. This finding is in contrast to that in a study conducted in North Carolina and Yaounde where all the males had correct knowledge of emergency contraception.[14, 19] Correct knowledge of emergency contraception has positive implications for its appropriate and correct use. This will help to reduce the prevalence of unsafe abortion which might result from an unplanned pregnancy.

Majority of respondents had a positive attitude to emergency contraception and felt it was important, as it prevents unwanted pregnancy. This could be attributable to the study population being an enlightened one, as may be expected of persons in a higher institution. Majority of respondents viewed abortion as unsafe in Nigeria. This is in line with a WHO publication which described almost all abortions as unsafe in developing countries.[25]

Most of the respondents who had sexual partners had made use of emergency contraception. This is not improbable as majority of the respondents knew the importance of emergency contraception and probably, its effectiveness in preventing unwanted pregnancy. However, this is contrary to a study carried out among University students in Cameroon where majority of the respondents had never used emergency contraception.[16] The main reason for use of emergency contraception was because respondents asked their sexual partners to use it and this buttresses the fact that males' opinion affects their partners' use of emergency contraception. This finding is similar to that in a study done in Ghana by Family Health International and Oyo State where the main reason for use was because respondents asked and sometimes insisted

that their partners use it and even oversaw their partners taking it.[20-21]

Majority of the respondents approved of the use of emergency contraception because it prevented unwanted pregnancy unlike a similar study done in Osun State where majority of the respondents approved of its use because of birth spacing.[17] In addition, respondents who have had sex before were more likely to approve use of emergency contraception. This may be due to the fact that frequent sexual exposure (in the absence of the use of any of the family planning methods) may eventually necessitate the need for emergency contraception. This finding is in consonance with the results in a study carried out in the University of Buea, Cameroon.[16] Religion was a major reason why respondents disapproved of emergency contraception and this was similar to that seen in a study conducted in Osun State were the religion was a major determinant of its disuse by most respondents.[17]

Majority of the respondents supported their sexual partners by introducing and sharing information about emergency contraception. This finding is similar to that seen in Ghana by Family Health International where respondents were very supportive of their spouse use of emergency contraception. This maybe because the males who were predominantly single, might have a stronger desire to avoid unwanted pregnancies and its antecedent problems such as unsafe abortion.[20]

Less than half of the respondents sometimes discussed pregnancy prevention with their partners. This represents a fairly high rate of spousal communication on family life issue. This is similar to a study done in Oyo State and unlike the finding in a study done in India where more than half of the respondents reported no communication or discussion with their sexual partners and when there was a discussion, it was mainly initiated by the husbands.[22,26] This maybe because most of the respondents in this study were single and may who have had a stronger desire for its use. This thus shows the need for more awareness/enlightenment programs on its use. This study also revealed that spousal discussion on emergency contraception contributed to pregnancy prevention especially amongst partners who were married. This therefore, highlights the need for promotion of family counseling among married people and the need for enlightenment programs to ensure that single males are aware of pregnancy prevention methods. In addition, discussions with partners would further increase its use thus contributing to a decrease in the incidence of unwanted abortion.

In conclusion, knowledge of emergency contraception was poor as many respondents could not correctly define or identify its method of use. Respondents were however, positively disposed towards the use of emergency contraceptives, although this varied with religion. Majority of the respondents had used emergency contraception. This study revealed that most respondents did not discuss about pregnancy prevention.

The government at all levels should organize special programs on the mass media, so as to educate the public correctly on emergency contraceptives. Health workers should identify individuals who perform unsafe abortions via good referral system and either prosecute them or give re-orientation if required. Respondents should seek proper information and guidance on emergency contraception from appropriate persons, preferably health personnel.

References

1. Fertility control. In: Monga A and Dobbs S editors. Ten Teachers Gynaecology. 18th Edition. London. Hodder Arnold Publishers. 2006. p 67-68.

2. National Health Services Choices. Emergency contraception: morning after pill, IUD. 2013.www.nhs.uk/conditions/contraception-guide/pages/emergency-contraception.aspx. Accessed 17/4/17

3. Trussell J, Koenig J, Ellertson G, Stewart F. Preventing unintended pregnancy; the cost effectiveness of three methods of emergency contraception. American Journal of Public Health. 1997; 87: 932-937.

4. Otoide VO, Oronsaye F, Okonofua FE. Why Nigerian adolescents seek abortion rather than contraception: Evidence from focus-group discussions. International Family Planning Perspectives. 2001; 27 (2):77-81.

5. Abiodun OM, Balogun OR. Sexual activity and contraceptive use among young female students of tertiary educational institution in Ilorin, Nigeria. Contraception Journal. 2009; 79:146-149.

6. Oye-Adeniran BA, Adewole IF, Umoh AV, Ekanem EE, Gbadegesin A, Iwere N. Community-based survey of unwanted pregnancy in Southwestern Nigeria. African Journal of Reproductive Health. 2004; 8(3):103-115.

7. Oyediran KA, Ishola GP, Feyisetan BJ. Factors affecting ever-married men's contraceptive knowledge and use in Nigeria. Journal of Biosocial Science. 2002; 34(4):497-510.

8. Nazish R, Zulfia K, Najam K, Abdul R S, Seema H. Inter-spouse communication and acceptance of family Planning. Indian Journal of Community Health. 2011; 23 (2).72-74.

9. Greene M, Biddlecome A. Absent and problematic men: Demographic accounts of male reproductive roles. Population Development Review. 2000; 26:81-115.

10. International Institute for Population Sciences (IIPS) and Macro International.2007. National Family Health Survey (NFHS-3), 2005-06. India: Volume 1. Mumbai: IIPS.

11. Ahmed S, Li Q, Liu L, Tsui AO. "Maternal deaths averted by contraceptive use: An analysis of 172 countries." The Lancet. 2012; 380 (9837): 111-125.

12. Family Health International. Men's involvement in emergency contraceptive use in Ghana. 2011. http://www.fhi360.org . Accessed 12/4/14

13. US National Library of Medicine. Male access to over-the-counter emergency contraception. 2009 http://www.ncbi.nlm.nih.gov. Accessed 20/4/17

14. Corbett PO, Mitchell CP, Taylor JS, Kemppainen J. Emergency contraception: Knowledge and perceptions in a University population. Journal of the American Academy of Nurse Practitioners. 2006; 18: 161-168.

15. Cochran WG. Sampling Techniques, 3rd Edition. New York: John Wiley and Sons. 1977

16. Kongnyuy EJ, Ngassa P, Fomulu N, Wiysonge CS, Kouam L, Doh AS. A survey of knowledge, attitudes and practice of emergency contraception among University students in Cameroon. BMC Emergency Medicine. 2007; 7(7): 1-7.

17. Ijadunola MI, Abiona TC, Ijadunola KT, Afolabi OT, Esimai OA, OlaOlorun FM. Male Involvement in Family Planning Decision Making in Ile-Ife, Osun State, Nigeria. African Journal of Reproductive Health. 2010; 14(4): 45-52.

18. Obiechina NJA, Mbamara SU, Ugboaja JO, Ogelle MO, Akabuike JC. Knowledge, attitude and practice of emergency contraception among students in tertiary schools in Anambra State Southeast Nigeria. International Journal of Medicine and Medical Sciences.2010; 2(1): 001-004.

19. Mankaa WE, Kollo B, Doh AS. Knowledge, attitudes and practice of contraception amongst secondary school students in Yaounde, Cameroon: A study of perception differences between males and females. Clinics in Mother and Child Health. 2005; 2 (2): 365-368.

20. Family Health International. Men's Involvement in Emergency Contraceptive Use in Ghana.2009 http://www.fhi.org/en/Topics/gender.htm Accessed 3/5/17

21. Ogunjuyigbe PO, Ojofeitimi EO, Liasu A. Spousal Communication, Changes in Partner Attitude, and Contraceptive Use Among the Yorubas of Southwest Nigeria. Indian J Community Med. 2009; 34(2): 112–116.

22. Oyediran KA, Isiugo-Abanihe UC. Husband-Wife Communication and Couple's Fertility Desires among the Yoruba of Nigeria. African Population Studies. 2002; 17(2): 61-80.

23. Department of reproductive health and research, WHO. Unsafe Abortion: Global and Regional Estimates of the Incidence of Unsafe Abortion and Associated Mortality. 2011. www.who.int/reproductivehealth/publcations/unsafe_abortion . Accessed 3/5/17

24. Khan ME, Patel BC. Male involvement in family planning: A KABP study of Agra District Uttar Pradesh. The Population Council India. New Delhi. 1997; 01-38.