

Knowledge and Use of Emergency Contraceptives among Female Undergraduate Students of the Polytechnic, Ibadan, Nigeria

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Abstract

Unintended pregnancy and unsafe abortion constitute a major challenge to the reproductive health of young women in developing countries. Emergency Contraceptives (EC) offer a second chance in preventing unwanted pregnancy and other reproductive health consequences. This study was conducted to assess the knowledge and use of emergency contraceptives among female undergraduate students of the Polytechnic, Ibadan. A cross-sectional study was conducted among female undergraduate students of the Polytechnic, Ibadan, Nigeria in 2017. Respondents were selected using stratified sampling technique and a self-administered questionnaire was used for data collection. Data were analysed using SPSS version 21. The mean knowledge score was 8.7 (SD 1.5), and respondents who scored higher were categorized as having good knowledge. Association between variables was determined using the Chi square test at the 5% level of significance. The mean age of respondents was 20.1 (SD 2.2 years). Majority (97.1%) were never married. Sixty-five percent of respondents were aware of EC and friends (52.0%) were the commonest source of information. Sixty percent of respondents had good knowledge of EC. The mean age at first sexual intercourse was 18.4 (2.0 years). Only 16.9% had ever used EC, and pharmacy (11.4%) was the commonest place of purchase. About sixty-four percent used EC during their last sexual intercourse and Postinor © (13.7%) was the commonest type used. Respondents who had good knowledge of EC were more likely to have used EC in their last intercourse $p < 0.05$. Respondents had good knowledge and low use of emergency contraceptives. There is a need to improve knowledge and promote use of EC among sexually active adolescent girls to prevent unwanted pregnancy and abortion.

Keywords:

Knowledge,
Use,
Emergency contraceptives,
Female undergraduates

La Connaissance et l'utilisation des contraceptifs d'urgence chez les étudiantes de premier cycle de l'école polytechnique, Ibadan, Nigéria.

Résumé

Les grossesses non désirées et les avortements à risque constituent un défi majeur pour la santé reproductive des jeunes femmes dans les pays en voie de développement. Les contraceptifs d'urgence (CU) offrent une seconde chance dans la prévention des grossesses non désirées et d'autres conséquences sur la santé reproductive. Cette étude a été menée pour évaluer la connaissance et l'utilisation des contraceptifs d'urgence chez les étudiantes de premier cycle de l'École polytechnique d'Ibadan. Une étude transversale a été menée auprès d'étudiantes de premier cycle de l'École polytechnique d'Ibadan, au Nigéria, en 2017. Les répondants ont été sélectionnés à l'aide d'une technique d'échantillonnage stratifié et un questionnaire auto-administré a été utilisé pour la collecte de données. Les données ont été analysées à l'aide de la version 21 de 'SPSS'. Le score moyen de connaissances 8,7 (SD 1,5), les répondants qui ont obtenu un score plus élevé ont été classés comme ayant de bonnes connaissances. L'association entre les variables a été déterminée à l'aide du test du Chi carré à $\alpha = 5\%$. L'âge moyen des répondants était de 20,1 ans (SD 2,2 ans). La majorité (97,1%) n'a jamais été mariée. Soixante-cinq pour cent des répondants connaissaient la CU et les amis (52,0 %) étaient la source d'information la plus courante. Soixante pour cent des répondants avaient une bonne

Mots-clés:

connaissances,
utilisation,
contraceptifs d'urgence,
premier cycle,
féminin

connaissance de la CU. L'âge moyen au premier rapport sexuel était de 18,4 ans (2,0 ans). Seulement 16,9 % avaient déjà utilisé la CU et la pharmacie (11,4 %) était le lieu d'achat le plus courant. Environ soixante-quatre pour cent ont utilisé la CU lors de leur dernier rapport sexuel et Postinor® (13,7 %) était le type le plus couramment utilisé. Les répondants qui avaient une bonne connaissance de la CU étaient plus susceptibles d'avoir utilisé la CU lors de leur dernier rapport sexuel $p < 0,05$. Les répondants avaient une bonne connaissance et une faible utilisation de la contraception d'urgence. Il est nécessaire d'améliorer les connaissances et de promouvoir l'utilisation de la CU chez les adolescentes sexuellement actives pour avertir les grossesses non désirées et l'avortement.

Introduction

Adolescents and young adults are possibly the most important group in most developing countries considering their size and population (1). Most young adults go through their reproductive years with very little or no access to sexual and reproductive health information and services (2). In Nigeria, about 20-50% of adolescents have initiated sexual activity with age at first sexual intercourse ranging from 14-18 years (3). Majority are exposed to unplanned and unprotected sexual intercourse leading to unwanted pregnancy and sometimes unsafe abortion (4). High occurrence of sexual activity with its outcome of early pregnancy and induced abortions among adolescents have become a major concern in developing countries (4, 5).

Abortion is illegal in Nigeria unless the woman's life is threatened by the pregnancy (6). However, most induced abortions are carried out by "quacks" and are frequently unsafe (7). This contributes 13% to Maternal Mortality Rate (MMR) in Nigeria with the country as the second largest contributor to MMR in the world (8). Adolescent girls with unintended pregnancies obtain unsafe abortion and some others carry their pregnancy to term, incurring risk of maternal and fetal morbidity and mortality higher than those for adult women (9). According to a study by Akinrinola *et al.*, an estimated 1.25 million induced abortions occurred in Nigeria in the year 2012, equivalent to a rate of 33 abortions per 1,000 women aged 15-49. The estimated unintended pregnancy rate was 59 per 1,000 women aged 15-49, of which 56% were resolved by abortion (10).

According to WHO, Emergency Contraceptive (EC) refers to methods of contraception that can be used to prevent pregnancy in the first five days after sexual intercourse (11). It is intended for use following unprotected intercourse, contraceptive failure or misuse (such as forgotten pills, or breakage or slippage of condoms), rape or coerced unprotected sex. It is the use of any drug or device used to prevent pregnancy following unprotected sexual intercourse or potential contraceptive failure (12). Among the various types of contraceptives, EC is the only one that can be used after sexual intercourse conveniently, offering a second chance to prevent unwanted pregnancy. It is a safe, effective and relatively inexpensive way to prevent pregnancy and

it is of paramount importance to adolescents since they have affinity for risky unprotected sexual intercourse (13).

Previous studies have documented that awareness of contraceptives among adolescents is generally high but there is varying knowledge of emergency contraceptives and its utilization among this population in Nigeria (14). According to a research conducted by Onasoga *et al.*, among young females in Amassoma Community which houses a university, in Niger Delta Region, 30.5% of the participants reported using EC, and most of the participants were from the university (13).

Given the high prevalence of adolescent pregnancy, use of interventions such as emergency contraceptives to lower the rate of unintended pregnancy among this population will go a long way in reducing the outcome and impact of unwanted pregnancy on adolescents (13).

This study was conducted to assess the knowledge and use of emergency contraceptives among female undergraduate students of the Polytechnic, Ibadan, Oyo State, Nigeria.

Materials and Methods**Study Setting**

The study was conducted at the Polytechnic, Ibadan. It is an institution of higher learning in Ibadan, Oyo State, Nigeria. The institution was founded in 1970, established to provide an alternative higher education to universities, particularly in technical skill acquisition. The total number of students for the 2016/2017 academic session was 11,789 and the total number of female students was 8,302.

Study Design

A cross sectional study design was employed.

Study Population

All female undergraduate students of the Polytechnic, Ibadan, Nigeria constituted the study population.

Sample Size Determination

The Leslie-Kish formula for a single proportion was used for sample size calculation. (15) The minimum sample size calculated was approximately 360.

$$n = \frac{z^2 p(1-p)}{d^2}$$

Where, n= Sample size

$Z\alpha^2$ - Statistics level corresponding to 95% confidence interval= 1.96

p= Proportion of female undergraduates who had knowledge of emergency contraception (69.9%) in a study by Ayang *et al.*, at University of Calabar. (16)

q= 1-p

d-precision level= 5% (0.05)

The minimum sample size was 322.

Assuming a non-response rate of 10%, it was 354.

Sampling Technique

Stratified sampling technique was used in selecting study participants. There are five faculties and twenty-five departments in the institution. Each faculty and department represent a stratum. Number of participants to be selected from each faculty was determined using proportional allocation. Thereafter, the number of participants to be selected in each department for the study was again determined by proportional allocation approach.

Data Collection

Quantitative method of data collection was employed. A self-administered questionnaire was used for data collection. The questionnaire was divided into three sections; Section A contained the Socio-demographic information of participants; Section B was on the knowledge of Emergency Contraceptives; and Section C bordered on use of Emergency Contraceptives.

Data Management

Data were cleaned and entered into the computer and Statistical Package for Social Sciences (SPSS) version 21 was used for data analysis. Data were computed to know the level of knowledge among respondents. The mean score for level of knowledge derived after computation of questions on knowledge was 8.7; the maximum obtainable score was 10. Hence, respondents who had a score less than 8.7 were categorized as having poor knowledge and respondents who scored higher were categorized as having good knowledge. Descriptive data were summarized using frequency and tables, while associations were explored with chi-square test. Level of significance was set at 5%.

Ethical approval was obtained from the Oyo State Ethical Review Board. The importance of the study was carefully explained to the participants. Their privacy and confidentiality were ensured and written. Informed consent was obtained from the respondents before proceeding with the survey.

Results

Respondents Socio-demographic Information

A total of 343 copies of questionnaire were retrieved out of 360 that were distributed, giving a response rate of 95%. One hundred and thirty-nine (40.5%) respondents were between 14 and 19 years, while two hundred (58.3%) were between 20 and 25 years. The mean age of the respondents was 20.1 (SD 2.19 years). Three hundred and thirty-three (97.0%) of respondents were single and majority, constituting two hundred and eighty-seven (83.7%) were of the Yoruba ethnicity as reflected in Table 1.

Awareness and Knowledge of EC

Two hundred and twenty-four (65.0%) of the respondents had heard of Emergency Contraceptives. Respondents' sources of information about EC included; friends (177, 51.6%), newspaper/magazine (113, 32.9%), health workers (109, 31.8%), radio/television (83, 24.2%), lectures/seminars (57, 16.6%), and relatives (49, 14.3%). Only one (0.3) respondent defined EC as a birth control method that may be used after sexual intercourse to prevent pregnancy. One hundred and thirty-two (38.5%) respondents defined EC as pills used to prevent pregnancy, 184 (53.6%) did not know the definition of EC, while 26 (7.6%) gave other definitions such as EC is an advice given to individuals in prevention of pregnancy, EC is a protection.

Table 1: Socio-demographic information of respondents

Variables	n (%)
Age (years)	
14-19	139(40.5)
20-25	200(58.3)
26-31	4(1.2)
Mean age + SD (years)	20.09±2.19
Programme	
OND	227(66.2)
HND	116(33.8)
Marital status	
Single	333(97.1)
Married	10(2.9)
Ethnicity	
Yoruba	287(83.7)
Igbo	35(10.2)
Hausa	5(1.5)
Others	16(4.7)
Religion	
Christianity	214(62.4)
Islam	129(37.6)

n = 343; SD- Standard Deviation

Table 2: Respondents' Knowledge of Types of Emergency Contraceptives respondents

Variables	n (%)
Don't know	209(60.8)
Postinor	109(31.8)
Pills	9(2.6)
Condom	6(1.8)
Potash	4(1.2)
Injection	2(0.6)
Progestin, levonorgestrel and Postinor	1(0.3)
Bicarbonate	1(0.3)
Dettol and IZAL	1(0.3)
Tablets, salt and warm water	1(0.3)

n = 343

Table 2 shows the knowledge of types of EC reported by respondents. One hundred and nine (31.8%) reported a knowledge of Postinor as EC. Other types of EC reported by respondents were of progestin, levonorgestrel (1, 0.3%), condoms (6, 1.2%), dettol and izal (1, 0.3%), potash (4, 0.3%), while 209 (60.8%) do not know any type of EC.

Knowledge of Use of EC

Eighty-six (25.1%) of the respondents reported that EC should be used immediately after sex, 31 (9.0%) reported EC should be used within 24 hours of sex, and 11 (3.2%) reported EC should be used within 72 hours of sex as shown in Figure 1. Sixty percent (60%) of respondents had good knowledge of EC while 40% had poor knowledge of EC.

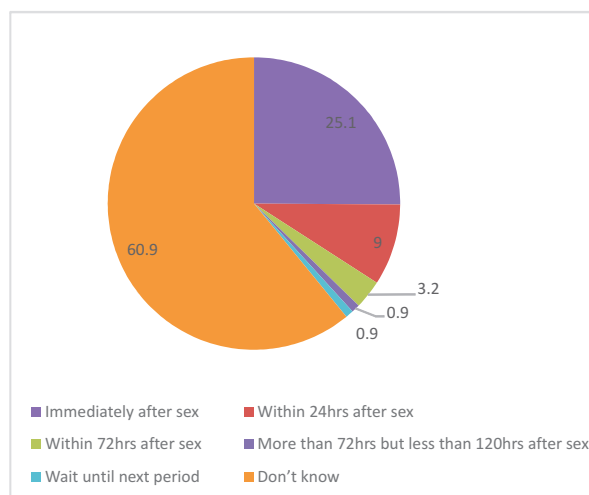
Respondents' Sexual History and Use of Emergency Contraceptive

One hundred and thirty-seven (39.9%) respondents answered yes to the item 'ever had sex'. The mean age at first sexual intercourse was 18.35 (SD 1.95) years.

Twenty of the respondents (5.8%) reported they had been pregnant before. Fifty-eight (16.9%) had ever used EC, and Postinor 47 (81.0%) was the commonest reported type of EC used. Forty-seven (81.0%) of respondents reported using EC within 72 hours of unprotected sex. Thirty-seven (63.8%) used EC during their last sexual intercourse. Among respondents who had ever used EC, only one person (1.7%) procured it from the hospital, 12 (20.7%) collected EC from friends, and thirty-nine (67.2%) of the respondents procured EC from the pharmacy as shown in Table 3.

Barriers to EC Use

Respondents reported lack of self-confidence (127, 37%), religious objections (120, 35%), poor attitude of healthcare providers (110, 32%), fear of side effects (92, 26.8%), and lack of accessibility (52, 15.2%) as barriers to the use of EC as shown in Table 4.

**Figure 1:** Respondents reported knowledge of when to use EC**Table 3:** Respondents' sexual history and use of emergency contraceptive

Variables	n (%)
Sexual history	
Ever had sex before	137(39.9)
Mean age at first sexual intercourse (SD) years	18.35 (1.95)
Had ever been pregnant	20(5.8)
Ever used EC	
Had ever used EC	58(16.9)
Type of EC used (n= 58)	
Postinor	47(81.0)
Post pill	2(0.6)
Don't know	3(0.9)
Others (alcohol, salt & water, injections)	6(1.8)
Place of procurement of EC	
Hospital	1(1.7)
Friends	12(20.7)
Pharmacy	39(67.2)
Cannot remember	6(10.4)
Time of use (n=58)	
Used EC within 72hrs of unprotected sex	47(81.0)
Used EC anytime remembered	11(19.0)
Was EC used in last sexual intercourse (n=58)	
Yes	37(63.8)
No	21(36.2)

SD- Standard Deviation

Association between Knowledge and Use of Emergency Contraceptive

Table 5 shows the relationship between knowledge and use of emergency contraceptive. There is a significant relationship between the use of EC and knowledge of EC among respondents who had ever used EC and those that used EC in their last sexual intercourse. Only 17% of the respondents who had good knowledge of EC had ever used EC ($p < 0.05$) and only 18% of respondents who had good knowledge of EC used EC in their last intercourse

Table 4: Respondents' reported barriers to use of EC

Variables *	Agree n (%)	Uncertain n (%)	Disagree n (%)
Lack of self-confidence	127 (37.0)	205 (59.8)	11 (3.2)
Moral/religious objections	120 (35.0)	206 (60.1)	17 (5.0)
Poor attitudes of healthcare providers	110 (32.1)	206 (60.1)	27 (7.9)
Fear of side effects	92 (26.8)	228 (66.5)	23 (6.7)
Lack of accessibility to health service	52 (15.2)	228 (66.5)	63 (18.4)
Lack of money	43 (12.2)	238 (69.4)	63 (18.4)

*Multiple responses, n= 343

Table 5: Association between respondents' level of knowledge and use of EC

Variables	Knowledge of EC		P value X ²
	Good	Poor	
Ever used EC			
Yes	10(17.2)	195(64.8)	<0.001
No	48(82.8)	90(31.6)	52.496
Used EC in the last intercourse			
Yes	7(18.9)	30(81.1)	0.001
No	198(64.7)	108(35.3)	28.778
Ever been pregnant			
Yes	6(30.0)	14(70.0)	0.005
No	199(61.6)	124(38.4)	7.826

(p<0.05). Respondents who had poor knowledge of EC were more likely to have ever had unintended pregnancy compared to those with good knowledge of EC, p>0.05.

Discussion

The commonest source of information about Emergency Contraceptive (EC) in this study was friends/peers which is similar to previous studies conducted in Ethiopia and Nigeria (17-19). Health workers were identified as another source of information for this study. Some other studies conducted among female undergraduates reported healthcare workers as sources of information (14, 17, 18). This suggests peer education with technical support from healthcare professionals may be very helpful in creating and strengthening awareness of EC among undergraduate students.

The findings of this study showed that well over half of the respondents had good knowledge of emergency contraceptives. This is similar to the report by Demissie *et al.*, in a study among female college students in Ethiopia (20). However, a higher prevalence was reported in the Niger Delta region of Nigeria (13). This variation in the level of awareness and knowledge of EC among female undergraduate students in Nigeria could be due to disparity in the availability of reproductive health information for young females in different parts of the country and varying level of exposure.

This study showed that slightly above a third of the respondents had ever had sex and mean age at first sexual intercourse was 18.35 (1.95) years. This is consistent with the study conducted by Ebuehi *et al.*, among female undergraduates in Lagos, Nigeria (14). However, this finding is much lower than the findings reported in similar studies by other researchers (14, 16, 21). The Nigerian Demographic Health Survey (NDHS) also reported that by the age of 18 years, half of young women had initiated sexual intercourse and by the age of 20 years, 7 out of 10 had initiated sexual intercourse (3). Early age at first sexual intercourse has been documented to be associated with a number of factors such as low maternal education, high prevalence of sexual initiation among peers, socio-economic situation of the family, peer pressure, alcohol and substance use among others (22-24).

Only 16.9% of the respondents had ever used EC. This is higher than the report by Bello and Okunlola in a study among female undergraduate students of the University of Ibadan. It is much lower than the report by Muhammad and Shanaz among female undergraduates in South Africa and Ebuehi *et al.*, among female undergraduate students of the University of Lagos and Ayang *et al.*, in Port-Harcourt (14, 16, 25, 26). Other studies from Nigeria, Cameroun and Ethiopia reported much lower prevalence (27-29). This low usage could be associated with societal, religious and cultural misconceptions in these environments.

Postinor © was the most used EC in this study with a rate of 13.7%. This is lower than results in previous studies (14, 16). Majority of the respondents who had ever used EC reported purchase of EC from the pharmacy. This is similar to a report from a study by Ayang *et al.*, among female undergraduate students of University of Calabar and Hamidu *et al.*, among female university students in Ethiopia (16, 30). This could be due to the fact that EC is purchased without prescription, hence there is easy access to use it when the need arises.

The level of knowledge of emergency contraceptive among the respondents positively influenced their use of emergency contraceptive. Respondents who had good knowledge of EC had used it and they used it in the last sexual intercourse prior to the survey. Fasanu *et al.*, in a study among tertiary students in Osun State, Nigeria reported that only the participants that had better knowledge about EC used it. Another study by Habitu *et al.*, among female students in a tertiary institution in Ethiopia also reported that EC use was common among students who had good knowledge of EC (30, 31). Respondents who had poor knowledge of EC were more likely to have ever been pregnant compared to respondents with good knowledge of EC. Providing right information and knowledge to young women about EC promotes utilization and favourable outcome.

Respondents identified lack of self-confidence, religious objections, attitude of healthcare providers as barriers to the use of EC. This is consistent with the studies carried out in some parts of Nigeria and in North Carolina in the USA (16, 21, 32). Some religious organizations believe that emergency contraceptive pills are abortifacients which according to their belief is an act of sin. Hence they discourage their congregation from its use. In addition, some women lack the confidence to use EC because they do not want to be referred to as promiscuous or women with low character (33). These serve as a major impediment to the utilization of emergency contraceptives among adolescent girls.

Study Limitations

This study provided more insight into the knowledge of female undergraduates about EC and the reason for poor use. However, the cross-sectional nature of the design prevents establishment of causal relationship.

Future Research

Future research can focus on a prospective study to explore and understand the influence of family, societal and other factors on use of EC among young women.

Conclusion and Recommendation

There is fair knowledge and low use of emergency contraceptive among this study population. Friends and peers were the main source of information about emergency contraceptive. This is worrisome as wrong information may be passed unto these group of people. It is therefore recommended that regular and proper health education be given to students in this vulnerable age. Group and peer education should be strengthened by healthcare providers so that the right and correct information will be circulated among these group of students. This is because peers/friends are the main source of information about emergency contraceptive.

Acknowledgement

The researchers acknowledge the management of the Polytechnique Ibadan and the female undergraduate students for their contributions and participation.

Conflict of interest

The authors declare no conflict of interest.

Funding

The authors received no funding for this study.

References

1. UNICEF. (2020). Adolescence: policy opportunities and challenges [Available from: <https://www.unicef-irc.org/article/1955-how-social-protection-can-work-better-for-adolescents.html>].
2. Samson-Akpan, E. (2008). Attitude of Family Planning Providers towards the Use of Contraceptives by Adolescents in Calabar. *International Professional Nursing Journal*, 8(2):103-10.
3. National Population Commission (NPC) [Nigeria] and ICF International. Nigeria Demographic and Health Survey 2018. Abuja (Nigeria, and Rockville, Maryland, USA) [Available from: www.DHSprogram.com].
4. Kyilleh, J.M., Tabong, PT-N, Konlaan, B.B. (2018). Adolescents' reproductive health knowledge, choices and factors affecting reproductive health choices: A qualitative study in the West Gonja District in Northern region, Ghana. *BMC International Health and Human Rights*, 18(1):6.
5. Paluku, L., Mabuza, L., Maduna, P., Ndimande, J. (2010). Knowledge and Attitude of School Girls about Illegal Abortions in Goma, Democratic Republic of Congo. *African Journal of Primary Health Care and*

- Family Medicine*, 2(1):1-5.
6. Guttmacher Institute. (2022). Abortion in Nigeria [Available from: <https://www.guttmacher.org/factsheet/abortion-nigeria>].
 7. Okonofua, F.E., Hammed, A., Nzeribe, E., Saidu, B., Abass, T., Adeboye, G., *et al.* (2009). Perceptions of policymakers in Nigeria toward unsafe abortion and maternal mortality, 194-202.
 8. United Nations Children's Fund (UNICEF). Maternal mortality—UNICEF data [Available from: <https://data.unicef.org/topic/material-health/maternalmortality>].
 9. Kabiru, C.W., Ushie, B.A., Mutua, M.M., and Izugbara, C.O. (2016). Previous induced abortion among young women seeking abortion-related care in Kenya: A cross-sectional analysis. *BMC Pregnancy and Childbirth*, 16(1):104.
 10. Bankole, A., Adewole, I., Hussain, R., Awolude, O., Singh, S., and Akinyemi J. (2015). Incidence of Abortion in Nigeria. *International Perspective on Sexual and Reproductive Health: A Journal of Peer-reviewed Research Guttmacher Institute*, 41(4):170-81.
 11. World Health Organisation. Emergency Contraception. WHO [Available from: <http://www.who.int>News>Factsheets>].
 12. Baldwin, S., Solorio, R., Washington, D., Yu, H., Huang, Y., and Brown, E. (2008). Awareness and Use of Emergency Contraceptives among Californian Women and Teens. *Women Health Issues*, 18:360-8.
 13. Onasoga, O., Afolayan, J., Asamabiriowei, T., Jibril, U., and Imam, A. (2016). Adolescents' Knowledge, Attitude and Utilization of Emergency Contraceptives in Bayelsa, Niger Delta Region. *Int J MCH AIDS*, 5(1):53-60.
 14. Ebuehi, O., Ekanem, E., and Ebuehi, O. (2006). Knowledge and Practice of Emergency Contraception among female undergraduates in the University of Lagos, Nigeria. *East Africa Med Journal*, 83(3):90-5.
 15. Kirkwood, B., and Sterne, J. (2003). *Essentials of Medical Statistics 2nd Edition*. Blackwell Scientific Publications, 432-33 p.
 16. Ayang, F., Ndep, E., and Adindu, A. (2016). Emergency Contraceptive Use among Female Undergraduate Students at the University of Calabar, Calabar, Nigeria. *Journal of Health, Medicine and Nursing*, 31.
 17. Nasir, T. (2010). Knowledge, Attitude and Practice of Emergency Contraceptive among graduating female students of Jimma University, South West Ethiopia. *Ethiopia J Health Sci.*, 20(2):91-7.
 18. Tilahaun, D., Assefa, T., and Belachew, T. (2010). Knowledge, Attitude and Practice of Emergency Contraceptive among Adama University Female students. *Ethiopia J Health Sci.*, 20(Nov 3):195–202.
 19. Abiodun, O. (2016). Use of Emergency Contraception in Nigeria: An exploration of related factors among sexually active female university students. *Sexual Reproduction Health*, 7:14-20.
 20. Demissie, T.W., Nigatu, A.M., and Beyene, G.M. (2020). Assessment of emergency contraceptives utilization and associated factors among female college students at Debre Tabor town. *Contraception and Reproductive Medicine*, 5(1):33.
 21. Ojule, J., Oriji, M., and Georgewill, K. (2008). Awareness and Practice of Emergency Contraception Among Students of University of Port Harcourt, South-South Nigeria. *The Nigerian Health Journal*, 8(1):6-9.
 22. Durowade, K.A., Babatunde, O.A., Omokanye, L.O., Elegbede, O.E., Ayodele, L.M., Adewoye, K.R., *et al.* (2017). Early sexual debut: prevalence and risk factors among secondary school students in Ido-ekiti, Ekiti State, South-West Nigeria. *Afr Health Sci.*, 17(3):614-22.
 23. Fatusi, A.O., and Blum, R.W. (2008). Predictors of early sexual initiation among a nationally representative sample of Nigerian adolescents. *BMC Public Health*, 8:136-.
 24. Ekundayo, O.J., Dodson-Stallworth, J., Roofe, M., Aban, I.B., Bachmann, L.H., Kempf, M.C., *et al.* The determinants of sexual intercourse before age 16 years among rural Jamaican adolescents. *ScientificWorldJournal*. 2007;7:493-503.
 25. Bello, F., and Okunlola, M. (2009). Perception and Practice of Emergency Contraceptive among female undergraduates of the University of Ibadan, Nigeria. *Journal of Reproduction and Contraception*, 20(2):113-21.
 26. Hoque, M., and Ghuman, S. (2012). Knowledge, Practices and Attitudes of Emergency Contraception among female University students in KwaZulu-Natal, South Africa. *Public Library of Science*, 2012;7(9):e46346.
 27. Kongnyuy, E., Ngassa, P., Fomulu, N., Wiysonge, C., Kouam, L., and Doh, A. (2007). A survey of knowledge, attitudes and practice of emergency contraception among university students in Cameroun. *BMC Emergency Medicine*, 7(7).
 28. Abasiattai, A., Umoiyoho, A., Basse, E., Etuk, S., and Udoma, E. (2007). Misconception of emergency contraception among tertiary school students in Akwa Ibom, South south Nigeria. *Niger J Clin Pract.*, 10(1):30-4.
 29. Tamire, W., and Enqueselassie, F. (2007). Knowledge, attitude and practice on emergency contraceptive among the female university students in Addis Ababa, Ethiopia. *Ethiopia J Health Dev.*, 2(2):111-6.
 30. Habitu, Y., Yeshita, H., Dadi, A., and Galcha, D. (2018). Prevalence of and Factors Associated with Emergency Contraceptive Use among Female Undergraduates in Arba Minch University, Southern Ethiopia; A cross sectional study. *International Journal of Population Research*.
 31. Fasanu, A., Adekanle, D., Adeniji, A., and Akindele, R.

- (2014). Emergency Contraception: Knowledge and Practices of Tertiary Students in Osun State, South Western Nigeria. *Gynecol Obstet*, 4:196.
32. Corbett, P., Mitchell, C., Taylor, J., and Kemppainen, J. (2006). Emergency Contraception: Knowledge and Perceptions in a University Population. *Journal of the American Academy of Nurse Practitioners*, 18(4):161 -8.
33. Grindlay, K., Dako-Gyeke, P., Ngo, T.D., Eva, G., Gobah, L., Reiger, S.T., *et al.* (2018). Contraceptive use and unintended pregnancy among young women and men in Accra, Ghana. *PLOS ONE*, 13(8):e0201663.



Publication of the Faculty of Public Health, College of Medicine, University of Ibadan, Nigeria. (All rights reserved © 2022)
Volume 1 June, 2022 - pp 99-106

Discoveries
in Public Health