

Knowledge, Attitude and Practice of Emergency Contraception among Students of a Tertiary Institution in Northwestern Nigeria

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ABSTRACT

Background: Unintended pregnancies pose a major challenge to the reproductive health of young adults in developing countries. Tertiary institution students are an important high-risk group in any society and emergency contraceptives (EC) can prevent unintended pregnancies and its consequences in this high risk group.

Aim: To assess the knowledge, attitude and practice of emergency contraception among female undergraduates in a tertiary institution in Kaduna state, Nigeria.

Methodology: A cross-sectional descriptive study was carried out using a pretested interviewer-administered questionnaire. A total of 289 female students were selected using a multi-stage random sampling technique. Data was collected and analyzed using SPSS version 23 and results were presented using tables.

Results: The mean age of the respondents was 21 ±2.8 years. Only 37.9% of the respondents were aware of emergency contraception. Combined oral contraceptive pill was the most commonly identified (74.5%) emergency contraceptive. Only 37.9% of respondents had good knowledge on emergency contraception and about half (50.9%) of the respondents showed positive attitude towards emergency contraception. Among the respondents that were aware of emergency contraception only 31.1% had used it and Levonorgestrel (Postinor 2) was the most commonly used (81.8%). Almost two-thirds (62.3%) of the respondents' practice of emergency contraception was poor.

Conclusion: This study showed poor knowledge and practice of EC and a fair attitude towards EC. Oral pills were the commonest used method and lack of knowledge about EC was the commonest reason for not using EC. Awareness programmes should be organized by the school management on emergency contraception and other modern contraceptive methods.

Keywords: Emergency contraception, Undergraduate, Knowledge, Attitude, Practice

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INTRODUCTION

Despite the availability of highly effective methods of contraception, many pregnancies are unplanned and unwanted. These pregnancies carry a higher risk of morbidity and mortality, often due to unsafe abortion. Throughout the world, unplanned pregnancies are a considerable social and public health issue, many of these unplanned pregnancies can be avoided using Emergency Contraception (EC).^[1]

EC refers to a group of birth control contraceptive modalities, which is indicated after unprotected sexual intercourse, misuse of regular contraception or non-use of contraception, concerns about possible contraceptive failure, incorrect use of contraceptives, and sexual assault if without contraception coverage.^[2] EC plays a vital role in preventing unintended pregnancy, which in turn helps to reduce unintended childbirth and unsafe abortion, which are major problems affecting maternal health.^[2]

Among the various forms of contraception, EC is the only one that can be used after sexual intercourse, offering a second chance to prevent unwanted pregnancy.^[3] Adolescents and young women are at the greatest risk of unintended pregnancy because they are unlikely to see a family planning provider before or immediately after the sexual activity.^[4] Therefore, preventing unintended pregnancies among them is an important concern.^[4] In many low-income countries, women resort to unsafe abortion due to lack of knowledge about and access to EC.^[5] This contributes to maternal morbidity and mortality.^[5] Improving the knowledge about EC is particularly important in undergraduates because of the high rate of unwanted pregnancies found among young adults. Unsafe abortions are a consequence of unwanted pregnancies and these two continue to be a major reproductive health problem globally, including Africa.^[3] Worldwide, one of the biggest

obstacles to the widespread use of EC is that many women do not know about it.^[3] Millions of women who could benefit from emergency contraception have never heard of it.^[3] When there is increased knowledge of its availability and advantages, women make better choices.^[3]

Adolescents and women who are not married have less access to reproductive health information and services, and are often highly vulnerable to unintended pregnancies which usually end up with safe or unsafe abortions as a result of some form of sexual coercion and violence.^[6] In developing countries, 84% of unintended pregnancies occur among women who have an unmet need for modern contraception, thus, meeting this need is an important strategy to reduce unintended pregnancies and the abortions or unplanned births that often follow.^[7]

University students fall under the sexually active age group and form a high-risk group for unintended pregnancy because a large percentage of them engage in sporadic pre-marital sex, which could be prevented by using EC.^[8] In Nigeria unintended intercourse is the primary cause of unintended pregnancies and induced abortions.^[6] One in five pregnancies in Nigeria is unplanned and unplanned pregnancies are mainly unwanted. About half of women age 15–49 years in Nigeria who have had an unwanted pregnancy have attempted to have an abortion and 10% succeeded. It has been noted that the fear of social reprisal from an out-of-wedlock pregnancy or child birth contributes a great deal to making a pregnancy unwanted and possibly aborted.^[9] Over a million abortions occur annually in Nigeria and this data is most likely a tip of the iceberg as the only data available are those of complications arising from unsafe abortions.^{[10][11]}

Though the unsafe abortion-related mortality ratio has declined worldwide, it continues to pose an

undue risk to women's lives.^[5] The overall burden of unsafe abortion mortality also continues to be highest in Africa.^[5] In spite of Nigeria's highly restrictive abortion law, over a million abortions occur annually.^{[12][13]} This data is most likely a tip of the iceberg as the only data available are those of complications arising from unsafe abortions.^[14]

Emergency contraception is essentially female-driven, so its use and success rest mainly on how women perceive and practice it.^[7] EC, despite being an effective method to prevent unintended pregnancies, it largely remains underutilized.^[2] Many adolescent females, including undergraduate females in higher institutions, are at high risk of unintended pregnancies due to many factors including lack of contraceptives knowledge, limited access to health services, failure of contraceptives among others.^[2] In order to increase the public health benefits of EC, it is imperative that potential users be well informed about the availability and benefits of EC.^{[2][15][16]} In this context, women of childbearing age specifically the adolescents who may account for high rates of teenage and unintended pregnancies must know that EC does exist, know the time limits within which EC may be effective, and know where EC can be obtained from quickly at the time of the need.^[2] Without this knowledge, women will miss the opportunity to access EC.^[2]

Considering the importance of EC in preventing unintended pregnancies, which in turn helps reduce unsafe abortion and its related complications, this study aimed to assess the knowledge, attitude and practice of EC among female undergraduate students in a tertiary institution in Kaduna state.

METHODOLOGY

Study area

Kaduna State University (KASU) was established

under the Kaduna State law promulgated in May, 2004. The University has 2 Colleges, 2 Schools (School of Continuing Education and School of Postgraduate Studies), 12 faculties, with 54 academic departments, 48 undergraduate programmes and 54 postgraduate programmes in the 2 campuses. The main campus where the study was carried out is located in the heart of Kaduna metropolis, in Ungwan Rimi, while the second campus is in Kafanchan. The main campus currently has nine faculties, which are Sciences, Arts and Humanities, Social Sciences, Management Sciences, Pharmaceutical Sciences, Faculty of Basic Medical Sciences, Faculty of Basic Clinical Sciences, Faculty of Clinical Sciences and Faculty of Allied Sciences. As of 2019, the student population of this campus was 16,219, consisting of 8,678 males and 7,541 females.

Study Design

This study was a descriptive cross-sectional study.

Study Population

The study population comprised of female students of Kaduna State University.

Sample Size Estimation

A minimum sample size of 263 was calculated using the formula: $n = z^2 p q / d^2$.^[17] Where p is the proportion of respondents who had good knowledge on EC from a previous study (0.219)^[18]. The final sample size became 289 after adding 10% for non-response.

Sampling Technique

The study population was selected using a multistage sampling technique.

Stage One: Kaduna State University was selected by simple random sampling from a list of all the tertiary institutions in the state by balloting.

Stage two: Four out of nine faculties were selected

using simple random sampling by balloting. They are faculties of Art and Humanities, Management Sciences, Sciences and Social sciences.

Stage Three: Two departments from each faculty were selected to make a total of 8 departments using simple random sampling by balloting. They include departments of Accounting, Business Administration, Computer Science, Chemistry, Economics, English, History and Political Science.

Stage four: The number of respondents in the respective departments was calculated proportionately. In a class containing students in the various departments, a systematic sampling of one in eight female students was done according to the day's sitting arrangement on the day of data collection. This continued until the questionnaires allocated to that department were exhausted.

Data Analysis

Data was collected, entered and analyzed using Statistical Package of Social Sciences (SPSS) programme version 23. Descriptive summary statistics using mean and standard deviation was done for numeric data while frequencies and proportions were used for categorical data. Chi square test of proportion was used to test for association. Fisher's Exact Test was used where conditions for Chi square test are not met. The level of statistical significant will be set at p- value of <0.05. The questions for knowledge were scored one mark for each correct answer, while incorrect or 'don't know' responses were scored zero. Scores equal to and above the mean were regarded as "good knowledge", while those below the mean were regarded as "poor knowledge". For attitude towards emergency contraceptives, a five-point Likert scale was used with responses from strongly disagree to strongly agree. Each question on attitude had a score that ranged from 1= Strongly disagree, 2= Disagree,

3= Neutral, 4= Agree and 5= Strongly agree. Each question had scores ranging from 0 through to 4 i.e. from least favourable to most favourable attitude score. There were 13 questions and so the maximum possible attitude score was 52. Those who scored 50% were classified as positive attitude and those who scored <50% were classified as negative attitude. For practice, one mark was given for each correct response, while incorrect or 'don't know' responses were scored zero. A score of 50% was regarded as good while 40% -49% was as regarded as fair and <40% as poor.

Ethical Consideration

Ethical approval was sought and obtained from the Ethics and Scientific Committee of Barau Dikko Teaching Hospital, Kaduna. Permission was obtained from the Deans through the heads of the selected departments in the University before the study was conducted. Information about the study was provided to each participant and their anonymity and the confidentiality of their responses, voluntary participation and right to withdraw at any stage were emphasized, following which informed written consent was obtained from each participant.

RESULTS

A total of 287 questionnaires were administered and 280 questionnaires were completely and correctly filled. This gave a response rate of 98%. The mean age of the respondents was 21 ±2.8 years. [Table 1] shows the background information of the students. The age ranges 18-22 years had the highest proportion of respondents. Just over half (56.1%) of the respondents were Muslims, 40.0% were Hausa and majority (78.1%) were single. Less than half (43.9%) of the respondents were sexually active, with the highest proportion having first sexual intercourse

between the ages of 15 and 19 years. The mean age for first sexual intercourse was 18.9 ± 2.7 years. Most respondents have had unprotected sex (84.0%) [Table 2]. About a third (38.0%) of respondents had a history of unintended pregnancy, 53.8% had it only once and forgot to take pills was the commonest reported reason (28.0%) [Table 3]. Only 37.9% of the respondents were aware of emergency contraception and the commonest source of information about EC was the media (63.2%) [Table 4]. Among the identified EC, Oral contraceptive pill (74.5%) was the commonest. About half (52.8%) of the respondents were aware that EC doesn't prevent STIs [Table 4]. About two thirds (68.0%) of respondents cited condom rupture and rape among situations in which EC should be used. Just above a quarter (28.3%) of the respondents knew the recommended maximum time limit to take ECPs [Table 4]. About half (51.9%) of the respondents did not know the recommended dose of ECPs. Less than a quarter (20.8) of the respondents knew the correct recommended time interval between doses of ECPs [Table 4]. Only 37.9% of respondents had good knowledge on emergency contraceptives. With regards to attitude, 41.5% and 19.8% of respondents strongly agreed and agreed respectively that using EC after unsafe sex is useful while 44.3% and 17% of them strongly agreed and agreed that providing free EC will increase the rate of utilization [Table 5]. About half (50.9%) of the respondents showed positive attitude towards EC. Only 31.1% had used EC. Levonorgestrel (Postinor 2) was the most commonly used EC (81.8%). Most (90.9%) respondents bought EC over the counter [Table 6]. Almost two-thirds (62.3%) of the respondents' practice of EC was poor. There was no statistically significant relationship between age, marital status and knowledge of EC among respondents ($p=0.09$ and $p=0.2$ respectively) but there was a statistically significant relationship

between religion and knowledge of EC ($p=0.001$). There was a statistically significant relationship between marital status and practice of EC among respondents ($p=0.04$). There was no statistical significant relationship between current place of residence and practice of EC ($p=0.8$). There was a statistically significant relationship between knowledge and practice of EC ($p=0.001$).

Table 1: Background Information of respondents

Variables	Frequency (n=280)	Percent (%)
Age (in years)		
18-22	201	71.8
23-27	65	23.2
28-32	13	4.6
>32	1	0.4
Total	280	100.0
Religion		
Christianity	121	43.2
Islam	157	56.1
Traditional	2	0.7
Total	280	100.0
Tribe		
Hausa	112	40.0
Fulani	39	14.0
Yoruba	23	8.2
Igbo	9	3.2
Others	97	34.6
Total	280	100.0
Marital status		
Single	219	78.2
Married	55	19.6
Divorced	4	1.4
Widowed	2	0.7
Total	280	100.0
Age at Marriage (n=55)		
18	16	29.0
>18	39	71.0
Total	55	100.0
Number of children (n=51)		
1	23	45.0
2-3	27	53.0
>3	1	2.0
Total	51	100.0

Table 2: Respondents' Sexual history

Variables	Frequency (n=280)	Percent (%)
Ever had sex		
Yes	123	43.9
No	157	56.1
Total	280	100.0
Age at first sexual contact		
10-14	4	3.3
15-19	72	58.5
20-24	45	36.6
>24	2	1.6
Total	123	100.0
Ever had unprotected sex		
Yes	103	84.0
No	20	16.0
Total	123	100.0
Number of times of unprotected sex (n=123)		
Less than 5 times	35	40.0
More than 5 times	68	66.0
Total	103	100.0
Reason(s) for unprotected sex (n=103)		
Condom rupture	17	16.5
Pressure by partner	22	21.4
Rape	9	8.7
Marriage	55	53.4
Total	103	100.0

Table 3: Respondents' unintended pregnancy history

Variables	Frequency (n=103)	Percentage (%)
Ever had unintended pregnancy		
Yes	39	38.0
No	64	62.0
Total	103	100.0
Number of unintended pregnancies	(n=39)	
One	21	53.8
More than one	18	46.2
Total	39	100.0
Reason(s) for unintended pregnancy		
Condom rupture	4	10.0
Forgotten usual monthly pills	11	28.0
Failure of withdrawal method	5	13.0
Rape	5	13.0
Contraceptive failure	6	15.0
Lack of knowledge about EC	8	21.0
Total	39	100.0
Ways respondents dealt with unintended pregnancies		
Abortion	23	59.0
Gave birth	16	41.0
Total	39	100.0

Table 4: Knowledge of emergency contraception among respondents

Variable	Frequency	Percent
Aware of EC	106	37.9
Source of information		
School	66	62.3
Media	67	63.2
Health worker	50	47.2
Friends/Relatives	62	58.5
Knowledge on types of EC		
Oral pills	79	74.5
IUD	38	36.0
Implants	61	57.5
Injectables	61	57.5
Condoms	74	70.0
Levonorgestrel(Postinor)	57	53.8
Mifepristone	25	23.6
Ulipristil acetate (Ella)	22	20.8
Antibiotics	34	32.1
Don't know	6	5.7
When to use EC		
Condom rupture	72	68.0
Forgot daily pills	54	50.9
Rape	72	68.0
Failure of withdrawal method	64	60.4
Maximum time limit for EC		
Correct (within 72 hours)	30	28.3
Incorrect	76	71.7
Recommended dose of EC		
Correct	26	24.5
Incorrect	25	23.6
Don't know	55	51.9
Time interval between doses		

Table 5: Respondents' attitude towards Emergency Contraception

Variable	Attitude (n=106)				
	Strongly agree Freq (%)	Agree Freq (%)	Not sure Freq (%)	Disagree Freq (%)	Strongly disagree Freq (%)
ECPs can cause harm if conception has already occurred	24 (22.6)	48(45.3)	22(20.8)	8 (7.5)	4(3.8)
Widespread use of ECPs may promote HIV/AIDS and STIs	20 (18.9)	25(23.6)	34(32.1)	19 (17.9)	8 (7.5)
Provision of ECPs after an episode of unprotected sex can prevent unplanned pregnancy	25 (23.6)	44(41.5)	30(28.3)	7 (6.6)	0(0.0)
All females have the right to access ECPs	26 (24.5)	36 (34)	21(19.8)	17 (16)	6 (5.7)
ECPs promotes promiscuity	21 (19.8)	28(26.4)	43(40.6)	10 (9.4)	4 (3.8)
EC is a method of abortion	12 (11.3)	30(28.3)	22(20.7)	27 (25.5)	15 (14.2)
It is a sinful act to use EC					
EC use will cause infertility in a woman	13 (12.3)	37(13.2)	33(31.1)	16 (15.1)	7 (6.6)
EC will affect ongoing regular methods of contraception negatively	8 (7.5)	29(27.4)	44(41.5)	20 (18.9)	5 (4.7)
Providing EC free of charge will increase the rate of its utilization	18 (17.0)	47(44.3)	22(20.8)	14 (13.2)	5 (4.7)
EC is much better than the regular Contraceptive methods in preventing unintended pregnancy	11 (10.4)	25(23.6)	40(37.7)	23 (21.7)	7 (6.6)

Table 6: Respondents' practice of emergency contraception

Variable	Frequency (106)	Percent
Ever used EC	33	31.1
Type of EC used		
Levonorgestrel	27	81.8
Combined oral pills	8	24.2
Mifeprestone	11	33.3
IUD	4	12.1
Ulipristal Acetate(Ella)	4	12.1
Source of EC		
Prescription	3	9.1
Over the counter	30	90.9
Current use of EC		
Currently using	20	50.6
Not currently using	13	39.4
Types of EC used currently		
Levonorgestrel	9	45.0
Combined pills	7	35.0
Mifepristone	1	5.0
IUD	1	5.0
Ulipristal acetate	2	10.0
Future EC use		
Will use in future	43	40.6
Will not use in future	63	59.4
Reason for not using EC		
Fear of side effects	13	21.0
Against my religion	12	19.0
Don't want to be seen buying it	2	3.1
Don't know where to get it		
Partner's disapproval	4	6.0
Don't know much about it	5	7.9
	24	43.0

DISCUSSION

Unintended pregnancy is still a major issue despite technological advancement in modern contraceptive methods, but this can be reduced with EC.^[19] In this study, the mean age of the respondents was 21 ±2.8 years which was similar to the mean age of 21.4 years and 20.7 years obtained in studies conducted in Maiduguri, Nigeria and central India respectively.^{[3][20]}

As observed from the results of this study, majority of respondents were single, similar to what was found in Maiduguri, Nigeria and Laos, southeast Asia.^{[3][21]} It was also found in this study that two-fifth of the respondents were sexually active. This finding is comparable to a study that was done in Ekiti, Nigeria, but higher than the findings in Wachamo and Harari.^{[5][22][23]} This difference could be due to the higher proportion of respondents that were married, divorced and widowed in this study. The respondents with a history of first sexual contacts between the ages of 15 and 19 years had the highest proportion in this study. Early sexual initiation is associated with some high risk behaviors and negative health outcomes. This include, having multiple sexual partners, unprotected sex, Sexually Transmitted Infections (STIs), psychosocial problems, unwanted pregnancies and undesirable sexual outcomes.^{[24][25][26]} The mean age for first sexual intercourse found in this study was 18.9 years, which was similar to the findings of the Ethiopian studies.^{[5][8]} This study further revealed that most respondents, who were sexually active, had unprotected sex and about a third of respondents had a history of unintended pregnancies. These findings are higher than what was found in Harar, Ethiopia.^[27] The difference could be because the respondents in this study are university students while those in the Harar study are secondary school students. Women above secondary level in Ethiopia are more likely to have unplanned pregnancy and subsequently unsafe abortion.^[27]

About a third of the respondents had a history of unintended pregnancy and missed oral contraceptive pill was the commonest reason given by them. Forgetting to take one to three oral contraceptive pills per cycle occurs commonly among 15–51% of users, generally, adolescents and this can result in 'escape ovulations' and, possibly, unintended pregnancy.^[28] In this study, just over half of those who had a history

of an unintended pregnancy had had an induced abortion, which is higher than the finding in Kwazulu-Natal.^[29] The fear of the stigma associated with pregnancy outside marriage in Nigeria contributes to a large extent in making a pregnancy unwanted and possibly aborted.^[9]

The awareness of EC observed in this study was low (37.9%) but was higher than the findings in similar studies in Osun state (Nigeria), Alexandria (Egypt), India and Laos.^{[30][21][31][32]} It was lower than the findings of studies done in different parts of Ethiopia.^{[33][34][35][36]} Studies conducted in Nigeria, Cameroon, Ethiopia, South Africa, Mexico, India and USA observed higher awareness of EC than this study.^{[3][37][22][38][31][29][39][40]}

In this study, the major source of information on EC in two-thirds of the respondents was the media, which is similar to the result obtained in Ethiopia and Central India.^{[41][32]} This is in contrast with what was obtained in studies done in Ethiopia, Botswana and Port Harcourt (Nigeria), where participants got information about EC from friends and peers.^{[7][42][43]} Informal sources of information are associated with misinformation and are found to be unreliable, while medical and media sources are associated with more accurate information.^{[21][37]}

The oral contraceptive pill was the commonest identified EC among three-quarter of the respondents in this study. This is similar to the findings in the study carried out in Jimma, Ethiopia.^[1]

Just over two-thirds of the respondents in this study cited condom rupture and rape among the common indications for use of EC. This differs from the Ethiopian study that reported unprotected sex as the commonest indication for EC use.^[27] According to the World Health Organization (WHO) the indications for EC are unprotected intercourse, concerns about possible contraceptive failure, incorrect use of contraceptives, and sexual assault if without

contraception coverage.^[44]

About half the respondents in this study were aware that EC doesn't protect against STIs, which is in contrast to the South African and Laos studies, where majority of the respondents knew that EC does not protect against HIV/AIDS and other STIs.^{[21][45]} The low level of awareness in this study is an indication of a knowledge gap among respondents that needs to be bridged as this could have a negative impact on their health.

Seventy-two hours is the maximum time limit for the administration of emergency contraceptive pills after unprotected sex. Taking EC within 72 hours after unprotected sex or contraceptive failure can reduce the risk of an unplanned pregnancy by 75% to 99%.^[46] In this study only just above a quarter of the respondents knew this. This is similar to the findings in Mizan-Tepi and Jimma, Ethiopia but higher than what was found in Laos.^{[8][21][42]} Not knowing that emergency contraceptive pills can be effective for up to 72 hours or longer represents missed opportunities for higher impact in terms of efficacy.

This study further revealed that about half of the respondents did not know the recommended dose of EC pills, which was higher than the finding in the studies in Port Harcourt and Jimma but lower than that of Mizan-Tepi.^{[6][8][42]} It was found in this study that most of the respondents did not know the maximum time for inserting an IUCD for EC after sex, which is similar to the findings in SetoSemero, Jimma and Harar, (Ethiopia).^{[1][42][27]}

This study further revealed that almost half of the respondents did not know if EC is safe or not. This finding is similar to that of the Ethiopian study but much lower than that of the Indian study where majority of respondents rated EC as safe.^{[2][8]} This striking difference could be related to a high level of awareness among the respondents in the Indian study. Just over a quarter of the respondents in this study

knew that prescription is not required to procure EC. This is similar to what was found in South Africa but in contrast with the finding in the Indian and another South African study where majority of the respondents were aware that EC can be procured without prescription.^{[2][29][45]}

Only about a third of the respondents in this study had good knowledge on EC which is similar to the studies conducted in Osun and Ekiti, (Nigeria), Cameroon, Kwazulu-Natal and Laos.^{[30][21][37][22][29]} It could be due to the conservative nature of Nigeria, especially northern Nigeria, where sensitive issues like contraception are hardly discussed. The dearth of youth-friendly clinics also constitutes a barrier to the access to reproductive health services by youths in Nigeria.^[47] One of the goals of adolescence youth friendly services is to improve reproductive health knowledge.^[48]

Just over two-thirds of the respondents in this study believed that ECPs can cause harm if conception has already occurred which is similar to what was found in the Botswana study.^[43] Over two thirds also believed that using EC pills after unsafe sexual intercourse can prevent pregnancy which is similar to the southwest Ethiopian study but in contrast with that of the Botswana study.^{[8][43]} Just above half of the respondents in this study believed all females have the right to access EC which was slightly lower than what was in the study that was done in southwest Ethiopia.^[8] This study showed that about a third of the respondents believed that EC promotes promiscuity which was similar to the southwest Ethiopian study but lower than that of the study in Botswana.^{[8][43]} It was also found in this study that just over a third of the respondents believed EC to be a method of abortion which is similar to the southwest Ethiopian study and a quarter believed its use can cause infertility in women which was in contrast to what was found in southwest Ethiopia.^[8] Just below half

the respondents in this study had religious concerns about EC which is less than those that believed that it is a sin to use EC in the southwest Ethiopian study. About half of the respondents in this study showed a positive attitude towards EC, which is higher than the findings in the studies done in Ethiopia and Botswana.^{[5][8][43]}

This study found that only about a third of the respondents ever used EC. This is similar to what was found in an Ethiopian study, but lower than what was found in two other Ethiopian studies.^{[5][27][41]} but higher than what was found in the Osun study.^[30] The level of utilization of EC in this study was higher than what was found in Botswana, South Africa and Cameroon.^{[37][43][45]} Low level of EC utilization could be related to the low level of knowledge on it. Information gap and poor attitude are major constraints to EC use.^[6] Levonorgestrel(Postinor-2^R) and combined pills were the most commonly utilized emergency contraception in this study, just like what was found in the Maiduguri study.^[3] This could probably be because of their ease of use and availability as levonorgestrel-only pills and combined oral contraceptives are the most common emergency contraceptive methods available in Nigeria.^[6]

Half of the respondents in this study were current users at the time of the study. This is in contrast with the findings in the Osun study where only about a quarter of the respondents were current users of EC.^[30] It was also observed in this study that about two-fifths of the respondents were willing to use EC in the future, which is lower than the findings in studies in Laos, Kwazulu Natal and Ethiopia.^{[1][21][29]} Lack of knowledge on EC was the main reason given by the respondents for not using it in the future, which is similar to the finding in the study in North India.^[2] The commonest reason given in the Wachamo University study was inconvenient service time.^[5]

Majority of the respondents in the Laos study did not use EC because they were worried about the side effects.^[21] About two-fifth of the respondents in this study would recommend EC to others. However, higher rates in this regard were reported in Ethiopia and South Africa.^{[1][29]} Less than a quarter of respondents had good practice of EC in this study. It was also low in a studies done in Nigeria.^{[30][49][50]}

Findings from this study showed that there was no statistically significant relationship between respondents' age, marital status and knowledge of EC, which is what was also found in a study in Botswana.^[43] This was in contrast with what was found in studies in Ethiopia, where there was a statistically significant association between age and knowledge of EC.^{[27][33][38]}

A statistically significant association was found between religion and knowledge of emergency contraception among respondents in this study ($p=0.001$) as was found in an Ethiopian study.^[16] There was no statistically significant association found between religion and Knowledge of EC in another study in Ethiopian.^[36]

A statistically significant association was found between marital status and practice of EC among respondents. A study conducted in Dire Dawa, Ethiopia also showed that married women were less likely to use EC compared to unmarried ones.^[51]

Current place of residence had no statistically significant association with knowledge or practice of emergency contraception in this study, unlike what was found in a similar study among female students in Ethiopia.^{[51][16]}

Result from this study showed a statistically significant relationship between knowledge and practice of emergency contraception among respondents ($p=0.001$), which is similar to what was found in multiple studies in Ethiopia and Nigeria.^{[8][51][52][27]}

CONCLUSION

This study revealed poor knowledge and practice of EC with a lot of misconceptions on EC and a fair attitude towards EC. Oral pills were the commonest used method and lack of knowledge about EC was the commonest reason for not using EC. There is a need for carefully designed awareness programmes for the promotion of emergency contraception on campuses by the school management. There is a need to create awareness among these students on EC with emphasis on types and correct timing of use. The use of other modern contraceptive methods especially the barrier method should also be stressed. The school management should establish youth-friendly clinics where students can have access to counseling services on contraception and contraceptive products

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