

ASSESSMENT OF KNOWLEDGE, ATTITUDE, AND PRACTICE OF EMERGENCY
CONTRACEPTION AMONG FEMALE STUDENTS OF FEDERAL COLLEGE OF
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ABSTRACT

Background: Emergency contraception (EC) is an important option for preventing unintended pregnancies. Despite its proven effectiveness, awareness, knowledge, and actual use among young women in Nigeria remain suboptimal. This study evaluated the knowledge, attitudes, and practices regarding EC among female students in Gombe. **Methods:** A descriptive cross-sectional survey was conducted among 304 female students, selected using multistage sampling. Data were obtained through a semi-structured questionnaire and analyzed with SPSS v23. Chi-square tests were applied to explore associations, with significance set at $p < 0.05$. **Results:** Respondents had a mean age of 24.4 ± 6.5 years. Two-thirds (66.4%) were aware of EC, and 75% demonstrated adequate knowledge. Media sources such as newspapers (26.3%) and the internet (22.7%) were the main channels of information, while health workers accounted for 6.9%. The most commonly recognized methods were combined oral contraceptives (31.7%) and Postinor (28.2%). A little over half (57%) expressed positive attitudes, and 57.2% had used EC previously, often following condom breakage or miscalculation of fertile days. Knowledge of EC was the sole factor significantly associated with use ($p < 0.05$). **Conclusion:** Although awareness levels were fair, many respondents lacked accurate knowledge and misconceptions persisted. Since knowledge strongly predicted EC uptake, targeted health education and improved access to EC are essential.

KEYWORDS: Emergency contraception, Knowledge, Attitude, Practice, Students, Gombe, Nigeria.**INTRODUCTION**

Unintended pregnancy remains a major public health concern globally, particularly in low- and middle-income countries where access to reliable contraceptive methods and reproductive health education is limited.^[1] It contributes significantly to unsafe abortion, maternal morbidity, and mortality—outcomes largely preventable through timely and appropriate contraceptive use.^[2,3] Emergency contraception (EC) represents a vital

component of modern reproductive health strategies, serving as a postcoital method to prevent pregnancy after unprotected intercourse, contraceptive failure, or sexual assault.^[3] Despite its effectiveness and safety profile, awareness and utilization of EC remain suboptimal in many developing settings, including Nigeria.^[4]

Emergency contraceptives function primarily by delaying ovulation, preventing fertilization, or inhibiting

implantation, depending on the time of administration within the menstrual cycle.^[5] Available EC methods include levonorgestrel-only pills, ulipristal acetate, and the copper-bearing intrauterine device (Cu-IUD), the latter being the most effective when inserted within five days of unprotected intercourse.^[6] In Nigeria, the levonorgestrel formulation is the most commonly available, marketed under various brand names in pharmacies and healthcare centers.^[7]

Globally, studies have shown that young women—particularly those in tertiary institutions—constitute the group most at risk of unintended pregnancies due to high levels of sexual activity, irregular contraceptive use, and peer influence. Consequently, assessing their knowledge, attitudes, and practices regarding emergency contraception is essential for developing context-appropriate health education interventions aimed at improving awareness, correcting misconceptions, and promoting appropriate utilization.^[9] In many parts of sub-Saharan Africa, including Nigeria, low awareness of emergency contraception (EC) has been consistently documented, often coupled with poor knowledge about its correct timing, mechanism of action, and sources of procurement.^[10] Studies conducted among female undergraduates in Ghana, Kenya, and Ethiopia reported varying awareness levels ranging from 40 % to 80 %, but actual usage was generally below 25 %.^[11,12] This discrepancy between awareness and practice underscores the presence of attitudinal and structural barriers that hinder effective contraceptive behavior.

In the Nigerian context, the pattern is similar. Despite decades of family-planning advocacy, the uptake of EC among sexually active young women remains low.^[13] Cultural and religious norms play a significant role in shaping perceptions toward contraceptive use, with some individuals viewing emergency contraception (EC) as a form of abortion rather than pregnancy prevention.^[14] Furthermore, stigma associated with premarital sexual activity often deters unmarried women from seeking contraception or reproductive-health counseling, resulting in poor utilization of available services.^[15] The Nigeria Demographic and Health Survey (NDHS) 2023–24 reported that contraceptive prevalence among currently married women aged 15–49 years remained low, with only 20% using any contraceptive method and 15% using a modern method. Although emergency contraception is included among modern contraceptive methods, its use remains relatively uncommon compared with other methods such as implants, injectables, and condoms.^[16]

The Federal College of Education (Technical), Gombe, hosts a diverse population of young adults who are at a critical stage of developing sexual and reproductive health knowledge, attitudes, and behaviors. As in many tertiary institutions, increased independence, peer influence, and social interactions may shape students' sexual behaviors and contraceptive practices,

underscoring the need for effective reproductive-health education and access to youth-friendly family-planning services.^[17] The Federal College of Education (Technical), Gombe, hosts a diverse population of young women who are at a formative stage in developing sexual and reproductive-health behaviors. The campus environment, characterized by increasing exposure to modern lifestyles and social interactions, presents both opportunities and risks concerning sexual activity and contraceptive use.^[8,17] Understanding the knowledge, attitude, and practice of EC among this group therefore provides valuable insights for designing targeted educational and counseling programs within tertiary institutions.

Previous studies conducted among Nigerian tertiary students have demonstrated considerable variation in awareness, knowledge, and utilization of emergency contraception. While awareness is generally moderate to high among female undergraduates, actual utilization remains substantially lower, reflecting persistent gaps in knowledge, misconceptions, and access to appropriate reproductive-health information.^[18] Similarly, studies from northern Nigeria have shown that although awareness of emergency contraception was moderate, misconceptions about its mechanism of action, coupled with religious and moral concerns, significantly limited its acceptance and utilization.^[19] These variations highlight the importance of localized research to capture context-specific determinants influencing contraceptive choices.

Against this background, this study was undertaken to assess the knowledge, attitude, and practice of emergency contraception among female students of the Federal College of Education (Technical), Gombe, Nigeria. The study aims to identify gaps in awareness and usage, examine prevailing misconceptions, and explore attitudinal factors influencing EC utilization. Findings from this research are expected to contribute to evidence-based planning of reproductive-health programs in educational institutions, strengthen advocacy for EC accessibility, and ultimately reduce unintended pregnancies and their associated complications among young women in Nigeria.

METHODOLOGY

Background of the Study area

The Federal College of Education (Technical), Gombe, was established in 1977 by the Federal Government of Nigeria as the National Technical Teachers College (NTTC), Gombe. The institution was created with the primary mandate of producing qualified technical, vocational, and science teachers for primary and secondary schools across the country.^[20] Initially, the College commenced academic activities at a temporary site located within the former Gombe Crafts School.^[20] The relocation to its permanent site along Ashaka Road began in 1989 and was completed in 1996.^[20] Following the promulgation of the Federal Colleges of Education

Establishment Decree No. 4 of 1986, the institution was granted autonomy and renamed the Federal College of Education (Technical), Gombe.^[20] Full institutional autonomy became operational in 1990 with the inauguration of its first Governing Council.

The College has continued to expand its academic programmes and currently comprises six schools: the School of Education, School of Primary Education Studies, School of Technical Education, School of Vocational Education, School of Business Education, and School of Science Education.^[20]

Study location

Federal College of Education (T) Gombe

Study design

A descriptive cross-sectional study was conducted.

Study population

The study population comprised all registered female Nigeria Certificate in Education (NCE) students of the Federal College of Education (Technical), Gombe.

Inclusion criteria

All registered female NCE students of Federal College of Education (T) Gombe.

Exclusion criteria

1. Part-time female students
2. Pre NCE female students

Sample size determination

$$n = Z^2 Pq / d^2$$

Where,

n = Minimum sample size

z = Standard normal deviate (usually 1.96) and corresponds to 95 percent confidence interval

p = 0.715, the proportion of female undergraduate students who were aware of emergency contraception, extrapolated from a study finding in Maiduguri north east Nigeria S.^[21]

$$q = 1 - p$$

d = 0.05, acceptable margin of error for mean being estimated

$$\text{Hence, } n = \frac{(1.96)^2 \times 0.72(1-0.72)}{(0.05)^2}$$

$$n = 276.59$$

10% of the sample size gotten was calculated and added which will take care of the nonresponse that may arise during field work.^[21]

$$\text{Therefore } n = 10/100 \times 276.59 + 276.59 = 304.249$$

therefore, n is approximately = 304

Sampling technique

Multistage random sampling was employed to select a sample of 304 female students at the college. The institution is made up of six schools.

The number of respondents selected from each department was determined using proportionate allocation based on the number of eligible female students in each selected level.

Stage one: From the list of the six schools, four were selected using simple random sampling technique by balloting.

Stage two: From each of the four schools selected, two departments were picked randomly using simple random sampling technique by balloting making a total of eight departments.

Stage three: From each of the eight departments selected, one level was randomly picked by balloting.

Questionnaires were distributed proportionately to each of the level selected.

Data were entered into Microsoft Excel, cleaned, and analyzed using IBM SPSS Statistics version 23. Descriptive statistics were summarized using frequencies, percentages, means, and standard deviations where appropriate. Associations between categorical variables were assessed using the Chi-square test. Variables with p < 0.05 were considered statistically significant at the 95% confidence level.

Ethical consideration

Ethical approval was obtained from the Gombe State Ministry of Health Research Ethics Committee (Approval No: MOH/ADM/621/VOL.I/182. Permission was also obtained from the Provost of the Federal College of Education (Technical), Gombe.

RESULTS

Table 1: Socio-demographic characteristics of female students, Federal College of Education (T), Gombe.

Characteristic	Category	Frequency (n)	Percentage (%)
Age	Below 19	94	30.9
	19–24	86	28.3
	25–29	55	18.1
	30–34	34	11.2
	35 and above	35	11.5
	Total	304	100
Level of study	NCE1	93	30.6
	NCE2	98	32.2
	NCE3	113	37.2

	Total	304	100
Religion	Muslim	176	57.9
	Christian	96	31.6
	Others	32	10.5
	Total	304	100
Tribe	Hausa	93	30.6
	Fulani	80	26.3
	Tangale	44	14.5
	Tera	36	11.8
	Tula	17	5.6
	Waja	18	5.9
	Others	16	5.3
	Total	304	100
Marital status	Single	173	56.9
	Married	74	24.3
	Divorced	43	14.1
	Separated	8	2.6
	Widowed	8	2.6
	Total	304	100
Household arrangement	Parent	151	49.7
	Spouse	50	16.4
	In the hostel	84	27.6
	Rented apartment	19	6.3
	Total	304	100

Of the 304 female students surveyed, nearly one-third (30.9 %) were younger than 19 years. The next largest age group was 19–24 years (28.3 %). Students aged 25–29 years comprised 18.1 %, while those aged 30–34 and 35+ accounted for 11.2 % and 11.5 %, respectively.

In terms of academic level, respondents were fairly evenly distributed: 30.6 % in NCE1, 32.2 % in NCE2, and 37.2 % in NCE3.

Religiously, more than half identified as Muslim (57.9 %), followed by Christians (31.6 %) and others (10.5 %).

Ethnically, the largest groups were Hausa (30.6 %) and Fulani (26.3 %), with Tangale (14.5 %), Tera (11.8 %) and smaller proportions from Tula, Waja, and other tribes.

Most participants were single (56.9 %), while married (24.3 %) and divorced (14.1 %) were the next largest categories; small proportions were separated or widowed (2.6 % each).

Regarding living arrangements, about half lived with their parents (49.7 %), more than a quarter were in hostels (27.6 %), 16.4 % lived with spouses, and 6.3 % lived in rented apartments.

Table 2: Knowledge and information sources regarding emergency contraception (EC) among female students.

Variable	Category	Frequency (n)	Percentage (%)
Knowledge of EC	Yes	202	66.4
	No	102	33.6
	Total	304	100
Source of information (among the 202 who knew)	Newspaper	53	26.3
	Magazine	41	20.3
	Internet	46	22.7
	Television	15	7.4
	Friends	14	6.9
	Lecturers	13	6.4
	Health personnel	14	6.9
	Others	6	2.1
	Total	202	100
First time of hearing about EC	6 months and below	2	0.97
	7 to 11 months	73	36.9
	1 to 5 years	116	56.8
	More than 5 years ago	11	5.3

	Total	202	100
Type of EC known	Postinor	57	28.2
	Combined pills (Yuzpe)	64	31.7
	IUCD	35	17.3
	Alcohol	14	6.9
	Douching	6	2.1
	Andrew's liver salt	6	2.1
	Quinine	6	2.1
	Ampicillin	13	6.4
	Others	1	0.5
	Total	202	100
What EC is used for	Prevent unwanted pregnancy	89	44.0
	Prevent sexually transmitted diseases	84	41.6
	Not sure	29	14.4
	Total	202	100
Time limit for effective EC	Within 72 hours	36	17.8
	Within 24 hours	88	43.5
	Immediately after sex	55	27.2
	After cessation of menstruation	23	11.5
	Total	202	100

About two-thirds (66.4 %) of respondents reported knowing about emergency contraception, while one-third (33.6 %) had no knowledge.

Among those who knew EC (n = 202), the most common sources of information were newspapers (26.3 %), internet (22.7 %), and magazines (20.3 %). Less common sources included television (7.4 %), friends (6.9 %), lecturers (6.4 %), and health personnel (6.9 %).

Regarding when they first heard about EC, more than half (56.8 %) did so between 1 and 5 years previously; 36.9 % in the preceding 7–11 months; 5.3 % more than five years ago; only 0.97 % within the last six months.

As for types of EC recognized, combined pills (Yuzpe) were the most known (31.7 %), followed by Postinor (28.2 %) and IUCD (17.3 %). A minority cited unconventional or inappropriate methods such as alcohol (6.9 %), douching (2.1 %), Andrew's liver salt, quinine, and ampicillin.

In terms of the perceived purpose, 44.0 % believed EC is used to prevent unwanted pregnancy, 41.6 % thought it could prevent sexually transmitted diseases, and 14.4 % were unsure.

Concerning the time frame for effectiveness, 43.5 % believed EC must be taken within 24 hours, 27.2 % "immediately" after sex, 17.8 % within 72 hours, and 11.5 % believed it is after cessation of menstruation.

Table 3: Attitude toward the use of emergency contraception.

Variable	Frequency (%) n = 304
Usefulness of EC	
Useful	198(65.1)
Not useful	106(34.9)
Willingness to use EC	
Willing	189(60.9)
Not willing	119(39.1)
Willingness to recommend the use of EC	
Willing	191(62.8)
Not willing	113(37.2)
Safety of EC	
Safe	174(57.2)
Not safe	130(42.8)

The majority of respondents had a positive attitude toward emergency contraception. Overall, (65.1%) considered emergency contraception useful, (60.9%) were willing to use it, and 62.8% (191/304) were willing

to recommend it to others. In addition, (57.2%) perceived emergency contraception as safe, while (42.8%) considered it unsafe.

Table 4: Practice of emergency contraception among female students.

Variable	Category	Frequency (n)	Percentage (%)
Ever used EC	Yes	174	57.2
	No	130	42.8
	Total	304	100
Who recommended EC (among users, n = 174)	Friend	56	32.2
	Partner	34	19.5
	Health professional	58	33.3
	Don't remember	21	12.1
	Others	5	2.9
	Total	174	100
Reason for not using EC (among non-users, n = 130)	Against my religious belief	54	41.5
	Against my cultural belief	35	26.9
	Don't know about it	25	19.2
	Don't know where to get it	13	10.0 ¹
	Others	3	2.3
	Total	130	100
Reason for using EC (users)	Timing miscalculation	52	29.9
	Condom broke or slipped	45	25.9
	Missed pills	24	13.8
	Rape	25	14.4
	Convenience	15	8.6
	Others	13	7.4
	Total	174	100
Form of EC used (users)	Postinor	37	21.3
	Combined pills (Yuzpe)	48	27.6
	IUCD	29	16.7
	Alcohol	19	10.9
	Douching	16	9.2
	Andrew's liver salt	14	8.0
	Quinine	3	1.7
	Ampicillin	6	3.4
	Others	2	1.1
	Total	174	100
Effectiveness as perceived	Very effective	49	28.2
	Effective	78	44.8
	Not effective	39	22.4
	Not sure	8	4.6
	Total	174	100
How soon after sex EC was used	Within 24 hours	80	45.0
	Within 72 hours	60	35.0
	After 72 hours	34	20.0
	Total	174	100

Just over half of respondents (57.2 %) reported ever using emergency contraception; 42.8 % had never used it.

Among users, recommendations for EC were almost equally from health professionals (33.3 %) and friends (32.2 %), followed by partners (19.5 %). A minority (12.1 %) could not remember who recommended it.

For those who had never used EC, reasons included religious beliefs (41.5 %), cultural beliefs (26.9 %), lack of awareness (19.2 %), and not knowing where to access EC (10.0 %).

When examining motivations among users, the most common reason was timing miscalculation (29.9 %), followed by condom failure (25.9 %), rape (14.4 %), missed pills (13.8 %), and convenience (8.6 %).

Regarding the forms of EC used, combined pills (27.6 %) and Postinor (21.3 %) were the most common, while IUCD (16.7 %) also featured. Worrisomely, some used non-recommended substances: alcohol (10.9 %), douching (9.2 %), Andrew's liver salt (8.0 %), quinine (1.7 %) and ampicillin (3.4 %).

On perceived effectiveness, 44.8 % believed that EC was "effective," and 28.2 % rated it "very effective."

However, 22.4 % considered it not effective, and 4.6 % were not sure.

Regarding timing, 45.0 % used EC within 24 hours, 35.0 % within 72 hours, and 20.0 % after 72 hours.

Overall, though many students have used EC, there remain misconceptions in both the substances used and timing, which may impact actual efficacy.

Table 4A: Associations between selected socio-demographic factors and uptake of EC.

Variable	Yes (%)	No (%)	χ^2	df	p-value
Age group			9.531	4	0.49
19 & below	45 (47.9)	49 (52.1)			
20–24	51 (59.3)	35 (40.7)			
25–29	37 (67.3)	18 (32.7)			
30–34	25 (73.5)	9 (26.5)			
35+	19 (54.3)	16 (45.7)			
Level of study			3.308	2	0.191
NCE1	59 (63.4)	34 (36.6)			
NCE2	50 (51.0)	48 (49.0)			
NCE3	68 (60.2)	45 (39.8)			
Religion			5.197	2	0.74
Muslim	95 (53.1)	81 (46.9)			
Christian	58 (60.4)	38 (39.6)			
Others	24 (75.0)	8 (25.0)			

From Table 4A, age group, level of study and religion were **not** statistically significant ($p > 0.05$).

Table 4B: Associations of ethnic and marital factors with EC use.

Variable	Yes (%)	No (%)	χ^2	df	p-value
Tribe			3.167	6	0.788
Hausa	57 (61.3)	36 (38.7)			
Fulani	44 (55.0)	36 (45.0)			
Tangale	29 (65.9)	15 (34.1)			
Tera	19 (52.8)	17 (47.2)			
Tula	8 (47.1)	9 (52.9)			
Waja	11 (61.1)	7 (38.9)			
Others	9 (56.3)	7 (43.7)			
Marital status			1.979	4	0.740
Single	104 (60.1)	69 (39.9)			
Married	40 (54.1)	34 (45.9)			
Divorced	24 (55.8)	19 (44.2)			
Separated	6 (75.0)	2 (25.0)			
Widowed	3 (50.0)	3 (50.0)			

From Table 4B, neither tribe nor marital status was significantly associated with EC usage ($p > 0.05$).

Table 4C: Associations of residence and knowledge level with EC use.

Variable	Yes (%)	No (%)	χ^2	df	p-value
Place of residence			3.330	3	0.343
With parents	90 (59.6)	61 (40.4)			
With spouse	24 (48.0)	26 (52.0)			
In hostel	53 (63.1)	31 (36.9)			
Rented apartment	10 (52.6)	9 (47.4)			
Level of knowledge of EC			31.026	1	0.001*
Adequate knowledge	103 (75.0)	31 (25.0)			
Inadequate knowledge	74 (44.0)	94 (56.0)			

Among the factors tested, only level of knowledge of EC showed a statistically significant association with use ($p < 0.05$). Other factors (place of residence, age, level of study, religion, tribe, marital status) were not statistically significant in this analysis.

DISCUSSION

This study assessed the knowledge, attitude, and practice of emergency contraception (EC) among female students of the Federal College of Education (Technical), Gombe. Findings from the research revealed moderate awareness,

generally positive attitudes, and relatively high reported utilization of EC. However, important misconceptions regarding its indications, timing, mechanism of action, and appropriate methods were identified. Knowledge of EC was the only factor significantly associated with its utilization, underscoring the importance of accurate reproductive health education in promoting appropriate contraceptive practices.

Most of the participants were below 25 years of age, unmarried, and fairly distributed across the three NCE levels. This demographic pattern is typical of tertiary educational institutions and is consistent with reports from studies among female undergraduates in Nigeria and other countries in sub-Saharan Africa, which have similarly shown that the student population is predominantly composed of adolescents and young adults within the reproductive age group.^[18,21,22] Female students in tertiary institutions are an important population for reproductive health programmes because they are at a stage of life when sexual and reproductive health needs are increasing. However, many continue to encounter barriers to obtaining accurate contraceptive information and accessing youth-friendly reproductive health services. These challenges may increase their risk of unintended pregnancy and underscore the importance of targeted health education and improved access to reproductive healthcare.^[3,9]

Approximately two-thirds (66.4%) of respondents reported being aware of emergency contraception. Although this level of awareness is encouraging, it remains below the optimal level expected among tertiary students. The finding is comparable to previous Nigerian studies that reported moderate to high awareness among university students but considerably lower than awareness levels reported in some urban tertiary institutions where reproductive health campaigns are more established.^[4,18,21] Similar observations have been reported in Ghana and Ethiopia, where awareness was found to exceed 60% despite substantial deficiencies in accurate knowledge of EC.^[11,12] The persistence of incomplete knowledge despite fairly reasonable awareness suggests that exposure to information does not necessarily translate into correct understanding of emergency contraceptive methods.

An important finding of this study was that newspapers, the internet, and magazines constituted the principal sources of information on EC, whereas healthcare workers accounted for only a small proportion of information sources. This pattern differs from expectations because healthcare professionals should ideally serve as the most reliable source of contraceptive information. Evidence from studies conducted in different African countries similarly indicates that students depend largely on mass media, online platforms, and friends for information on emergency contraception, while healthcare providers contribute comparatively less to information dissemination.^[9,11] Reliance on informal

information channels may contribute to misinformation regarding the mechanism of action, effectiveness, adverse effects, and appropriate timing of emergency contraception. Strengthening health education programmes within tertiary institutions and increasing the involvement of healthcare professionals may therefore improve the quality of information available to students.

Despite the moderate level of awareness, most of the respondents demonstrated considerable misconceptions regarding emergency contraception. Although 44.0% correctly identified EC as a method for preventing unwanted pregnancy, a substantial proportion incorrectly believed that it prevents sexually transmitted infections. Furthermore, only a minority correctly recognized the recommended time frame for optimal effectiveness, while several respondents considered inappropriate substances such as alcohol, douching, quinine, ampicillin, and Andrew's Liver Salt as emergency contraceptive methods. These findings indicate important knowledge gaps and are consistent with previous studies from Nigeria, Ethiopia, and other African countries that documented widespread misconceptions regarding EC among adolescents and young adults.^[9,10,12] Such misconceptions may reduce the effectiveness of EC use and increase the risk of unintended pregnancy.

The majority of respondents demonstrated a favourable attitude towards emergency contraception. More than half considered EC useful, safe, and indicated willingness both to use and recommend it to others. These findings suggest increasing acceptance of emergency contraception among young women despite prevailing sociocultural and religious influences. Similar positive attitudes have been reported among university students in Ethiopia and Ghana, where increasing awareness was associated with improved acceptance of EC.^[8,11] Nevertheless, the proportion of respondents who still perceived EC as unsafe indicates the persistence of myths regarding its safety profile. Current evidence demonstrates that levonorgestrel emergency contraception is both safe and effective, with no evidence that it disrupts an established pregnancy or adversely affects future fertility.^[3,5]

More than half of the respondents reported previous use of emergency contraception. This utilization rate is higher than that reported in several Nigerian and East African studies, where utilization generally ranged between 20% and 40%.^[11,12,18] The relatively high utilization of emergency contraception observed in this study may be attributed to improved access to over-the-counter levonorgestrel preparations, increased exposure to reproductive health information, and a gradual shift toward greater acceptance of contraceptive use among young women. However, this finding should be interpreted with caution because the information was self-reported. As a result, some respondents may not have accurately recalled their previous use of emergency

contraception, while others may have provided responses they considered socially acceptable rather than reflecting their actual experiences. Among respondents who had used emergency contraception, timing miscalculation, condom failure, missed oral contraceptive pills, and sexual assault were the principal reasons for use. These findings are consistent with the recognized indications for emergency contraception recommended by the World Health Organization.^[3] However, the identification of convenience as a reason for EC use suggests that some respondents may be substituting emergency contraception for regular family planning methods. Such practice is inconsistent with international recommendations, which emphasize that EC should serve as a backup rather than a routine contraceptive method.^[3]

Religious beliefs, cultural norms, and lack of awareness were the major reasons reported by respondents who had never used emergency contraception. These findings agree with previous Nigerian studies that identified religious teachings, perceived moral objections, fear of stigma, and misconceptions regarding abortion as major barriers to contraceptive uptake among unmarried women.^[13,14,19] In northern Nigeria particularly, cultural and religious expectations surrounding premarital sexuality continue to influence contraceptive behaviour and may discourage young women from seeking reproductive health services even when such services are available. Addressing these barriers requires culturally sensitive health education involving educational institutions, healthcare providers, parents, community leaders, and faith-based organizations.

Although utilization of emergency contraception was relatively high, inappropriate practices remained evident. The use of alcohol, douching, antibiotics, quinine, and other ineffective substances as emergency contraception is particularly concerning because these methods provide no proven protection against pregnancy and may delay access to effective EC within the recommended time frame. Similar inappropriate practices have been documented in several African settings and highlight the need for comprehensive reproductive health education that clearly differentiates scientifically approved emergency contraceptive methods from ineffective traditional practices.^[9,10]

Knowledge of emergency contraception was the only factor significantly associated with EC utilization in this study. Respondents with better knowledge were significantly more likely to report previous use of emergency contraception than those with poor knowledge. This finding is consistent with reports from Nigeria, Ghana, and Ethiopia, where knowledge has consistently emerged as one of the strongest predictors of contraceptive utilization.^[11,12,18] Conversely, age, religion, tribe, marital status, level of study, and place of residence were not significantly associated with EC use. These findings suggest that accurate information may

have greater influence on contraceptive behaviour than socio-demographic characteristics alone. Improving reproductive health literacy among female students may therefore increase the appropriate utilization of emergency contraception while reducing misconceptions and unsafe practices.^[23]

CONCLUSION

This study found that female students of the Federal College of Education (Technical), Gombe, had moderate knowledge and generally positive attitudes toward emergency contraception; however, important misconceptions regarding its indications, mechanism of action, timing, and approved methods persisted. Although more than half of the respondents reported previous use of emergency contraception, inappropriate practices, including the use of ineffective substances and incorrect timing of administration, were identified. Knowledge of emergency contraception was the only factor significantly associated with its utilization, while socio-demographic characteristics showed no significant relationship.

Recommendations

1. Incorporate EC education into student health programs.
2. Provide confidential reproductive health counseling services within schools.
3. Make WHO-approved EC methods easily available in campus health facilities.
4. Engage peer educators and digital platforms to counter myths.
5. Conduct periodic evaluations to monitor changes in knowledge and practice.

Conflict of Interest

None declared.

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