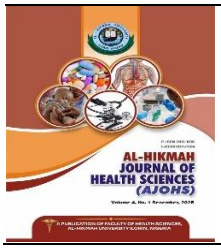
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Original Article

Reproductive Rights Awareness and Factors Affecting the Utilization of Family Planning Services Among Students of Selected Higher Institutions in Ilorin Metropolis

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ABSTRACT

Background: Family-planning awareness may not translate into consistent use. This study assessed awareness, utilisation, associated factors, and reproductive-rights awareness among students in selected higher institutions in Ilorin, Nigeria.

Methods: A cross-sectional survey was conducted among undergraduates at the University of Ilorin, Kwara State Polytechnic and Al-Hikmah University. Of 388 targeted respondents, 380 completed an online questionnaire (97.9%). Data were analysed in SPSS 27 using descriptive statistics, chi-square tests, Welch's t-tests, point-biserial correlation and binary logistic regression ($p < .05$).

Results: Mean family-planning awareness was 3.67 (SD = 0.95); 64.5% had ever used a method, 11.8% always used one, and 34.5% had visited a reproductive-health clinic. Fear of side effects (AOR = 0.71, 95% CI [0.52, 0.97]) and stigma (AOR = 0.76, 95% CI [0.59, 0.99]) were negatively associated with utilisation. Youth-friendly services, social-media influence and positive healthcare-worker attitudes were positively associated. High reproductive-rights awareness was reported by 58.7%, and both rights awareness and family-planning awareness were positively associated with utilisation.

Conclusion: Improving utilisation requires accurate method-specific education, confidential youth-friendly services, action to address stigma and side-effect concerns, and credible digital communication linked to care.

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Introduction

Family planning and reproductive health are important pillars of public health because of their links with maternal health, child survival, fertility regulation and socioeconomic wellbeing. Access to effective family-planning services enables individuals and couples to plan and space pregnancies, avoid unintended pregnancy and reduce exposure to unsafe abortion and sexually transmitted infections. Reproductive rights further emphasise informed, voluntary and non-discriminatory decision-making in sexual and reproductive health (Mbachu *et al.*, 2023; Ayanore *et al.*, 2016).

Despite international commitments to universal access to reproductive health services, unmet need for family planning remains substantial in sub-Saharan Africa. Barriers include sociocultural and religious beliefs, misconceptions, fear of side effects, stigma, partner influence, cost, inadequate privacy and limited access to youth-friendly services. Nigerian evidence similarly

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indicates that contraceptive awareness may be high while utilisation remains comparatively low, demonstrating a persistent knowledge-to-practice gap (Oluwole *et al.*, 2016; Mbachu *et al.,* 2023; Ninsiima *et al.*, 2021).

Students in higher institutions represent an important population for reproductive-health research because many are young adults experiencing increased independence, changing relationships and potential sexual-health risks. Nevertheless, students may face stigma, provider judgement, confidentiality concerns and limited access to acceptable services. In Nigeria, social media and peers may also become major sources of information, which can broaden access but may expose students to incomplete or inaccurate information (Nmadu *et al.*, 2024).

There is limited locally based evidence combining family-planning utilisation, perceived service and social barriers, and reproductive-rights awareness among students across different types of higher institutions in Ilorin metropolis. The present study therefore assessed family-planning awareness and utilisation, identified factors associated with utilisation, examined reproductive-rights awareness, and determined the relationship between reproductive-rights awareness and family-planning utilisation.

Methodology

Study design and setting

A descriptive cross-sectional survey design was used. The study was conducted in Ilorin metropolis, the capital of Kwara State in North-Central Nigeria. The metropolis comprises Ilorin West, Ilorin East and Ilorin South Local Government Areas and is an important educational centre. Three higher institutions were selected to provide representation across federal, state and private institutions: the University of Ilorin, Kwara State Polytechnic and Al-Hikmah University. The study population comprised undergraduate students in the selected institutions.

Sample size and sampling

The study sample size was 388 undergraduate students from the University of Ilorin, Kwara State Polytechnic, and Al-Hikmah University. A multistage sampling technique was used. The institutions were selected to represent federal, state, and private institutions, respectively. The sample was proportionately allocated based on student population, with 216, 120, and 52 students allocated to the respective institutions. Eligible students were stratified by gender, and individuals were selected randomly using official student lists. Questionnaires were distributed via Microsoft Forms, with electronic informed consent obtained before participation. Of the 388 targeted students, 380 provided valid responses, giving a response rate of 97.9%.

Data collection instrument and procedure

Data were collected over four weeks using a structured, self-administered questionnaire developed from the study objectives and relevant literature. The questionnaire was administered electronically via Microsoft Forms and comprised five sections: sociodemographic characteristics, family-planning awareness, utilization, factors influencing utilization, and reproductive-rights awareness. Respondents received information about the study, voluntary participation, and confidentiality, and electronic informed consent was obtained before questionnaire completion.

Measurement and reliability

Family-planning awareness was measured using five Likert-scale items scored from 1 (strongly disagree) to 5 (strongly agree). Reproductive-rights awareness was measured using nine similarly scored items. Twelve items assessed perceived factors influencing utilization. Composite awareness scores were classified as low (1.00–2.33), moderate (2.34–3.66) and high (3.67–5.00). A pilot study involving 40 undergraduate students from Kwara State College of Education, Ilorin, was conducted; pilot participants were excluded from the main study. Cronbach's alpha was .847 for family-planning awareness, .710 for utilization factors and .907 for reproductive-rights awareness.

Data analysis

Data were exported from Microsoft Forms to Microsoft Excel and analyzed using IBM SPSS Statistics version 27. Frequencies and percentages summarized categorical variables, while means and standard deviations summarized Likert-scale items and composite scores. Pearson's chi-square test assessed associations between categorical variables and utilization. Independent-samples or Welch's t-tests compared awareness scores between users and non-users. Point-biserial correlations assessed relationships between awareness scores and utilization. Binary logistic regression models examined perceived utilization factors, reproductive-rights awareness, sociodemographic characteristics and family-planning awareness as predictors of utilization. Adjusted odds ratios, 95% confidence intervals and p-values were reported. Model fit was assessed using likelihood-ratio chi-square, Cox and Snell R^2, Nagelkerke R^2, Hosmer–Lemeshow testing and classification accuracy. Statistical significance was set at $p < .05$.

Ethical considerations

Ethical approval for the study was obtained from the Kwara State Ministry of Health Ethical Review Committee (Approval No. ERC/MOH/2026/07/838)

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on 7 August 2026, valid until 6 August 2027. Institutional permission was obtained before data collection. Participation was voluntary, and electronic informed consent was obtained from all respondents before questionnaire completion. Confidentiality and anonymity were maintained throughout the study, and data collection was conducted in accordance with the approved ethical procedures.

Results

Of the 388 targeted respondents, 380 provided valid and usable responses, giving a response rate of 97.9%. There were no missing values for the core sociodemographic variables, utilisation outcome or the two awareness scales. The family-planning methods-known item had 378 valid responses.

Sociodemographic characteristics

Characteristic	Category	n	%
Age	15–19 years	38	10.0
	20–24 years	228	60.0
	25–29 years	85	22.4
	≥30 years	29	7.6
Gender	Male	212	55.8
	Female	168	44.2
Institution	University of Ilorin	214	56.3
	Kwara State Polytechnic	114	30.0
	Al-Hikmah University	52	13.7
Relationship status	Single	233	61.3
	Partnered/current or previous union	147	38.7
Sexual activity	Not sexually active	159	41.8
	Sexually active	221	58.2

Family-planning awareness

Overall family-planning awareness was relatively high. A total of 300 respondents (78.9%) had previously heard about family-planning services. Social media was the most frequently reported first source of information (24.2%), followed by school (23.2%) and hospitals/clinics (22.4%). However, only 214 respondents (56.3%) knew of a reproductive-health or family-planning centre around their institution.

Family-planning awareness item	Mean	SD
Helps prevent unintended pregnancy	3.93	1.13
Important for students	3.83	1.16
Improves reproductive health	3.73	1.21
Methods are safe when properly used	3.54	1.24
I have adequate knowledge	3.35	1.26
Overall awareness score	3.67	0.95

Among known methods, condoms were most widely recognised (90.2%), followed by pills (72.0%) and emergency contraception (58.5%). Awareness was lower for injectables (45.2%), implants (45.0%), withdrawal (43.4%) and intrauterine contraceptive devices (31.5%).

Family-planning utilization

A total of 245 respondents (64.5%) reported ever using a family-planning method, while 135 (35.5%) had never used one. Condoms were the most commonly reported method previously used (24.7% of the total sample), followed by pills (9.5%) and implants (7.4%). Only 45 respondents (11.8%) reported always using a family-planning method; 109 (28.7%) used methods occasionally and 91 (23.9%) rarely. Pharmacies were the most common reported source of services/products (17.6%), followed by hospitals/clinics (15.8%), patent medicine stores (14.7%) and school clinics (14.5%). Only 131 respondents (34.5%) had ever visited a reproductive-health clinic.

Utilization indicator	n	%
Ever used a family-planning method: Yes	245	64.5
Ever used a family-planning method: No	135	35.5
Always use a method	45	11.8

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Occasionally use	109	28.7
Rarely use	91	23.9
Ever visited reproductive-health clinic: Yes	131	34.5
Services accessible/very accessible	158	41.6
Services poorly/not accessible	114	30.0

Factors affecting utilisation

Healthcare-worker attitudes had the highest mean score among the perceived factors (M = 3.47, SD = 1.30), followed by youth-friendly services and social-media influence (both M = 3.46). Religious beliefs had the lowest mean score (M = 3.13, SD = 1.35).

Predictor	AOR	95% CI	p
Fear of side effects	0.71	0.52–0.97	.031
Stigma	0.76	0.59–0.99	.044
Youth-friendly services	1.36	1.05–1.76	.019
Social-media influence	1.56	1.22–2.00	<.001
Healthcare-worker attitudes	1.41	1.09–1.81	.008
Religious beliefs	0.84	0.64–1.10	.193
Cultural beliefs	0.87	0.66–1.16	.345
Lack of privacy	1.00	0.82–1.22	.986
Cost	0.86	0.65–1.14	.302
Peer influence	1.12	0.92–1.36	.258
Partner influence	0.85	0.64–1.14	.280
Lack of adequate information	1.15	0.85–1.57	.360

The overall perceived-factor model was statistically significant (likelihood-ratio $\chi^2(12) = 162.84$, $p < .001$), with Nagelkerke $R^2 = .479$ and classification accuracy of 80.8%. The Hosmer–Lemeshow test was non-significant ($p = .625$), indicating adequate model fit.

Reproductive-rights awareness

Reproductive-rights awareness was generally high: 223 respondents (58.7%) had high awareness, 125 (32.9%) moderate awareness and 32 (8.4%) low awareness.

Rights-awareness level	n	%
Low	32	8.4
Moderate	125	32.9
High	223	58.7
Total	380	100.0

Reproductive-rights awareness and utilization

Family-planning users had significantly higher reproductive-rights awareness scores (M = 3.97, SD = 0.77) than non-users (M = 3.29, SD = 0.97). Welch's $t(227.32) = -7.03$, $p < .001$, with a large effect size (Cohen's d = 0.81). Point-biserial correlation showed a positive association ($r = .361$, $p < .001$).

Binary logistic regression showed that each one-unit increase in reproductive-rights awareness was associated with approximately 2.42 times higher odds of family-planning utilization (OR = 2.42, 95% CI: 1.86–3.14, $p < .001$). The model was statistically significant (likelihood-ratio $\chi^2(1) = 50.34$, $p < .001$), with Nagelkerke $R^2 = .170$ and classification accuracy of 69.5%.

Family-planning awareness was similarly associated with utilization. Users had a mean awareness score of 3.94 (SD = 0.84), compared with 3.20 (SD = 0.95) among non-users; Welch's $t(249.32) = -7.61$, $p < .001$, Cohen's d = 0.84. The point-biserial correlation was $r = .376$ ($p < .001$). Utilization increased from 32.5% among respondents with low awareness to 51.1% among those with moderate awareness and 79.5% among those with high awareness ($\chi^2(2) = 48.62$, $p < .001$; Cramer's V = .358). Each one-unit increase in family-planning awareness was associated with 2.43-fold higher odds of utilization (OR = 2.43, 95% CI: 1.89–3.14, $p < .001$).

Sociodemographic predictors

The multivariable sociodemographic model was statistically significant (likelihood-ratio $\chi^2(18) = 117.36$, $p < .001$), with Nagelkerke $R^2 = .365$ and classification accuracy of 75.0%; the Hosmer–Lemeshow test was non-significant ($p = .682$). Gender, institution, sexual activity, religion and relationship status were significant predictors after adjustment, whereas age and ethnicity were not. Male respondents had lower adjusted odds of utilization than females.

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Students at the University of Ilorin had substantially higher odds of utilization than students at Al-Hikmah University. Sexually active respondents and those currently or previously partnered had higher odds of utilization. Muslim respondents had lower adjusted odds than Christian respondents. The overall effect of level of study was not significant despite some category-specific contrasts reaching significance.

Discussion

This study found that family-planning awareness was generally high among students, but important gaps remained between general exposure, practical knowledge and service use. Almost four in five respondents had heard about family planning, yet only 56.3% knew of a reproductive-health or family-planning centre around their institution. The mean awareness score was above the midpoint, but the lowest-rated item concerned respondents' confidence in their own knowledge. This supports the distinction between exposure to family-planning messages and usable knowledge about methods, safety, side effects and service locations.

The predominance of condoms and pills in respondents' knowledge is notable, while awareness of intrauterine devices was considerably lower. This pattern may reflect the visibility and relative accessibility of short-acting methods through pharmacies and retail outlets, whereas long-acting reversible methods commonly require contact with trained providers. The finding is consistent with Nigerian evidence showing that awareness may be high despite persistent misconceptions and lower uptake (Oluwole et al., 2016; Nmadu et al., 2024).

Ever-use of family planning was reported by 64.5% of respondents, but only 11.8% reported always using a method and just 34.5% had ever visited a reproductive-health clinic. Thus, ever-use should not be interpreted as evidence of consistent or optimal utilization. The reliance on pharmacies and other retail sources may provide convenience and anonymity, but it can also reduce opportunities for comprehensive counselling, informed method choice, management of side effects and follow-up.

Fear of side effects and stigma were independent negative predictors of utilization. These findings are consistent with evidence from sub-Saharan Africa identifying fear of side effects, social judgement, inadequate privacy and provider-related barriers as recurring obstacles to youth access to reproductive-health services (Ninsiima et al., 2021; Chola et al., 2023). Importantly, the present findings suggest that increasing commodity availability alone is unlikely to eliminate barriers if students remain concerned about stigma or adverse effects.

Youth-friendly services, social-media influence and positive healthcare-worker attitudes were positively associated with utilization. This supports the importance of confidential, accessible, acceptable and non-judgmental services for young people. Social media was also the most commonly reported first source of family-planning information, highlighting its potential as a cue to action. However, digital communication should be institutionally verified and linked to reliable services so that increased exposure results in accurate and actionable information.

Reproductive-rights awareness was positively associated with family-planning utilization. Users had substantially higher rights-awareness scores than non-users, and each one-unit increase in the composite rights score was associated with more than twice the odds of utilization. A plausible explanation is that students who understand confidentiality, informed choice and non-discrimination may feel more entitled and confident to seek services. However, because the study was cross-sectional, the direction of this relationship cannot be established. Service contact may also improve rights awareness through counselling.

The family-planning awareness score was strongly and positively associated with utilization. Importantly, the single question asking whether respondents had ever heard of family planning was not statistically associated with utilization, whereas the composite awareness scale was. This suggests that simply hearing about family planning is insufficient; more substantive knowledge may be required to support behaviour.

The Health Belief Model provides a useful interpretation of these findings. Recognition of the benefits of family planning reflects perceived benefits, while fear of side effects and stigma represent perceived barriers. Social media and health education may act as cues to action, while rights awareness and supportive providers may strengthen self-efficacy. At the same time, institutional, religious and provider factors demonstrate the limits of an exclusively individual-level explanation and indicate that reproductive-health behaviour is also shaped by organizational and sociocultural context.

Limitations

The study relied on self-reported information about sensitive reproductive-health behaviours, creating the possibility of recall and social-desirability bias. The cross-sectional design prevents causal inference and does not establish whether awareness preceded utilization. The study was conducted in three selected higher institutions in Ilorin metropolis, so findings may not be generalizable to all tertiary institutions in Kwara State or Nigeria. In addition, the principal

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utilization outcome measured ever-use rather than current, consistent or correct use.

Conclusion

Students in the selected higher institutions had relatively high awareness of family planning and reproductive rights, but awareness did not consistently translate into regular or clinic-supported utilization. Fear of side effects and stigma were important barriers, whereas youth-friendly services, positive healthcare-worker attitudes and social-media influence were associated with greater utilization. Both substantive family-planning awareness and reproductive-rights awareness were positively associated with utilization. These findings indicate that improving utilization requires more than general awareness campaigns; it requires accurate method-specific education, confidential and non-judgmental services, practical rights education and interventions that reduce stigma and address concerns about side effects.

Recommendations

Higher institutions should establish or strengthen clearly identified, confidential and youth-friendly reproductive-health service points offering counselling, a broad contraceptive method mix, referral and follow-up.

Campus health providers should receive periodic training in respectful, non-discriminatory and rights-based care, with emphasis on confidentiality, communication with young and unmarried students, side-effect counselling and avoidance of provider bias.

Family-planning education should move beyond general awareness to method effectiveness, correct use, side effects, long-acting methods and the location of trusted services.

Institutions and health authorities should use verified social-media platforms to provide accurate reproductive-health information and direct students to appropriate services.

Targeted interventions should address stigma and fear of side effects through confidential question-and-answer sessions, myth-correction materials and clear information on side-effect management.

Institutional and state health authorities should monitor service accessibility, student satisfaction, contraceptive availability and continuation, with results appropriately disaggregated to identify service gaps.

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