

Knowledge, Attitude and Practice of Reproductive Health Medicines Use Among Women in Health Facilities in Benue State, Nigeria

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ABSTRACT

Background: The United Nations Millennium Development Project emphasizes that universal access to Sexual and Reproductive Health (SRH) services, information, and education is essential for reducing child mortality and improving maternal health. Despite concerted efforts to improve Reproductive Health Medicines (RHMs) utilization among women, the prevalence rate of usage has remained abysmally low. **Objective:** This study aims to evaluate the knowledge, attitude, and practice (KAP) on the use of RHMs among women attending different levels of healthcare institutions in Benue State, Nigeria

Method: This was a descriptive cross-sectional study of women of reproductive age who assessed RHMs at selected health care facilities in Benue State. Information on their age, Parity, and KAP regarding RHMs use was obtained using a structured questionnaire. Sociodemographic characteristics were summarized as frequency counts and percentages. One-way ANOVA was performed to determine significant differences among groups of women who visited the health facilities at $P < 0.05$.

Results: The predominant age of women across the health facilities was 21–30 years. Women attending the three health facilities demonstrated moderate knowledge of reproductive health medicines (RHMs), with health care professionals serving as the major source of information. Knowledge of diaphragms differed significantly among respondents, with women attending the General Hospital recording the highest mean knowledge score (2.67 ± 1.24), followed by FSP (2.01 ± 0.65). The attitude towards the use of these medicines among women showed that respondents reported traditional barriers as a major concern. There was higher condom use among respondents from the General Hospital (4.14 ± 0.68). Overall, contraceptive prevalence (tertiary, 27.9%, secondary (9.1%) and primary (7.5%) health facilities), and substance use remained low across all facilities.

Conclusion: Significant differences in knowledge, attitudes, and utilization of contraceptive methods were observed across the three health facilities, particularly regarding diaphragm knowledge, traditional barriers, and contraceptive preferences. Despite the availability of reproductive health medicines, overall contraceptive utilization remained low, highlighting the need for strengthened reproductive health education and targeted interventions to address cultural barriers and improve uptake of family planning services.

Introduction

Fertility is a major driver of population change and an important indicator of national health and development¹. Nigeria has continuously recorded one of the highest Total Fertility Rates (TFR) globally, estimated at 5.4 births per woman², fertility rates are similarly higher among rural women compared with urban women^{3,4}.

Contraceptive utilization is a cost-effective strategy for reducing maternal morbidity and mortality and contributes significantly to the achievement of the Sustainable Development Goals (SDGs)^{5,6}. The Sustainable Development Goals Report released on 14 July 2025 showed that although progress has been made globally in improving maternal and child health, significant

inequalities persist, particularly in low- and middle-income countries⁷. Women who use contraceptives are less likely to experience unintended pregnancies, unsafe abortions, and complications associated with pregnancy and childbirth⁸. Despite the proven benefits of contraceptive use, uptake in Nigeria has remained low over the past decade⁵. Findings from the NDHS 2024 indicate persistent regional inequities in modern contraceptive uptake in Nigeria, with the South-West region recording the highest prevalence and the North-West the lowest among women aged 15–49 years³.

Although Nigeria is the most populous country in Africa, the reduction of maternal and child mortality remains a major public health challenge⁹, with current contraceptive prevalence rates estimated at 17% among single women and 20% among married women². This remains considerably low despite the country's commitment to increasing contraceptive prevalence from 15% in 2013 to 36% by 2018². Nigeria's population of approximately 200 million people, coupled with an annual growth rate of 3.2%, a maternal mortality ratio of 512 per 100,000 live births, and persistently high fertility rates, underscores the urgent need for improved reproductive health interventions¹⁰. Limited access to essential reproductive health medicines (RHMs) continues to threaten the health and well-being of women and families. Reproductive health medicines include contraceptives, medicines for the prevention and treatment of sexually transmitted infections (STIs) and HIV/AIDS, and medicines that support safe pregnancy and delivery. Over the past few decades, a substantial body of scientific evidence and programmatic experience has accumulated on the use of established reproductive health medicines, alongside the development of new life-saving interventions. The WHO Model List of Essential Medicines (21st edition, 2019) introduced heat-stable carbetocin and tranexamic acid (TXA) into the core list of essential medicines for reproductive health. In addition, mifepristone and misoprostol were reclassified from the complementary list to the core list. These medicines are critical in the prevention and management of the leading causes of maternal morbidity and mortality, particularly postpartum haemorrhage and unsafe abortion-related complications¹¹.

Modern contraceptive prevalence in Sub-Saharan Africa remains relatively low despite gradual improvement, with the proportion of women whose need for family planning is satisfied by modern methods increasing from 52% in 2015 to 58% in 2022¹². Previous studies have linked the suboptimal utilization of contraceptives to poor knowledge, misconceptions, and negative attitudes among women¹³. Knowledge and awareness are important determinants of health-seeking behaviour and influence the

adoption and utilization of reproductive health services.

The health belief model (HBM) is a foundational framework in health behaviour research. It was conceptualized in the 1950s to help understand preventative health behaviour by social psychologists working in the United States public health services (USPHS), specifically 'the widespread failure of people to accept disease preventative or screening tests for the early detection of asymptomatic disease'¹⁴. The model explains health-related decision-making based on individuals' perceptions of a health threat and their beliefs about the effectiveness of actions taken to reduce that threat. It comprises six key constructs: perceived susceptibility, perceived severity, perceived benefits, perceived barriers, self-efficacy, and cues to action, all of which influence behavioural outcomes¹⁵. HBM has been applied in diverse contexts, from chronic disease prevention to health education and promotion to evaluation of the effectiveness of community-based interventions. In the context of reproductive health medicines (RHMs), including contraceptives, the HBM is particularly relevant in explaining women's decisions to adopt or reject modern family planning methods. Applying the HBM to this study provides a useful framework for understanding how knowledge and attitudes translate into practice regarding RHMs among women attending different levels of healthcare facilities in Benue State.

Although several studies have examined knowledge, attitudes, and practices (KAP) regarding contraceptive use among women in Nigeria, there is limited comparative evidence across different levels of healthcare facilities. This study, therefore, aimed to evaluate the knowledge, attitudes, and practices on the use of reproductive health medicines among women attending primary, secondary, and tertiary healthcare institutions in Benue State, Nigeria.

Methods

Study Area

The Federal Medical Centre, Makurdi, operates a decentralised pharmaceutical service alongside a wide range of other clinical/medical activities, including diagnostic advocacy, specialist health consulting services, and medical investigative services. Other departments include the in/out patient, internal medicine, ophthalmology, ear, nose and throat, gynaecology, paediatrics and mental clinic. It is currently a 400-bed hospital. In 2011, due to insufficient space for expansion at the main center following the acquisition of a reasonable portion of land, the hospital was relocated to the permanent site at Apir, which is about 12 kilometers away from the

main hospital, and it runs concurrently with the main Centre at Mission Ward.

The General Hospital is a secondary healthcare facility that provides services to clients from Makurdi, Guma Local Government Area, and neighbouring villages. The hospital has a bed capacity of over 200 and operates several units, including maternity/antenatal care, ophthalmology, and accident and emergency services. The facility is staffed by doctors, ophthalmologists, qualified nurses, and Community Health Extension Workers (CHEWs), who oversee the hospital's day-to-day healthcare activities.

The Family Support Program (FSP) clinic is a primary healthcare centre with an average daily patient attendance of 20–25 clients. The facility has a single ward with a 10-bed capacity. Healthcare services are primarily provided by Community Health Extension Workers (CHEWs), supported by a store officer and a laboratory technician.

Study Design

This study employed a descriptive cross-sectional, facility-based design to investigate the knowledge, attitudes, and practices (KAP) among women of reproductive age between September and December 2024. The study was conducted at the family planning units of the Federal Medical Centre, General Hospital, and Family Support Programme Clinic, all located in Makurdi, Benue State, Nigeria.

Study population and sample size determination

The study sample included 365 women of reproductive age. The required minimum sample size was calculated using the Cochran formula.

$n = pq * z^2 / d^2$, where z represents the z-score, p is the estimated proportion of the population, $q = (1 - p)$, and d is the margin of error. Using a 95% confidence interval, a degree of accuracy of 0.05, and the proportion of married women with unmet need for family planning (19%) [10], the calculated minimum sample size for the study was 237 participants. After adjusting for a 10% non-response rate (23.7), the final sample size increased to approximately 260 participants. However, a total of 365 women were successfully recruited for the study

Sampling Method

The respondents for the study were selected using the systematic sampling method. For the Federal Medical Centre, about 50 clients are seen daily. 250 weekly and 1,000 monthly. Sampling interval (k) = N/n

N = Average number of clients seen by the clinic in a month
 n = Estimated sample size of the study

$$K = 1000/260 \\ = 3.85 \approx 4$$

The first participant was selected by simple random sampling from among the first two participants on each clinic day. Subsequently, every fourth patient presenting to the clinic that day who consented to participate in the study was recruited.

This was repeated in the General Hospital, with an interval of 4, but not in the primary health care center, because they saw fewer than 10 clients daily. So, every attendee who had declared an interest in participating was recruited.

Data Collection

A researcher-developed questionnaire comprising two sections. Section A: sociodemographic characteristics and Section B: knowledge, attitudes, and practices [KAP] on the use of reproductive health medicines were used for data collection. Content validity of the instrument was established through expert review. The instrument was reviewed by experts comprising a clinical pharmacist, a public health physician, and a Nurse. These specialists assessed the clarity, relevance, and adequacy of the items in relation to the study objectives. The questionnaire was pretested among 10 women of reproductive age attending a primary health facility, which was not part of the study sites. An alpha Cronbach's reliability index of 0.82 for all the items. The responses were anchored on a 5-point Likert scale: Strongly Agree (SD), Agree(A), Neutral(N), Disagree(D), and Strongly Disagree (SD) and scored 5,4,3,2,1 respectively.

The study objectives were communicated to the respondents and consent was obtained individually from the participants. The Questionnaire was administered by trained research assistants (Interns, Corper pharmacist, and CHEW) and retrieved as soon as it was filled out concurrently.

Inclusion/Exclusion

Women of reproductive age who visited the health facilities between September and December 2024.

Data Analysis

Sociodemographic characteristics were summarized using frequencies and percentages. One-way analysis of variance (ANOVA) was used to determine significant differences among respondents across the study health facilities. Where significant differences were observed ($p < 0.05$), post-hoc mean separation was performed using Tukey's Honestly Significant Difference (HSD) test. Within each row, means

sharing the same superscript letter are not significantly different from each other, while means with different superscript letters indicate statistically significant differences between groups at $P < 0.05$. All statistical analyses were conducted using GenStat statistical software version 17.0.

Ethical approval

Ethical approval was obtained for this study from the Ministry of Health (MOH/STA/204/I/325) and Federal Medical Centre, Makurdi (FMH/FMC/HREC/VOL.1). Consent was obtained before the questionnaire was issued to the participants who participated in the study. Confidentiality of the responses was ensured throughout the study.

RESULTS

Sociodemographic of the respondents

Table 1 shows that a total of 365 women of reproductive age participated in the study. The majority of respondents were aged 21–30 years, comprising 105 (64.4%) in the tertiary facility, 55 (56.7%) in the secondary facility, and 48 (58.5%) in the primary health facility. Regarding religion, Christians constituted the majority of respondents, with 160 (86.5%) in the tertiary facility, 54 (56.2%) in the secondary facility, and 56 (68.3%) in the primary health facility, accounting for over 70% of the total sample. In terms of parity, women with 7–9 children represented the least proportion across all facilities.

Table 1: Demographic variables in the study population

Variables (N=365)	FMC, Makurdi n(%)	General Hospital n(%)	FSP n(%)
Age in years			
Below 20	3(1.8)	3(4.1)	25(30.5)
21-30	105(64.4)	55(56.7)	48(58.5)
31-40	49(30.1)	29(29.9)	9(11.0)
41-50	6(3.7)	9(9.3)	-
Total	163	96	82
Religion			
Christianity	160(86.5)	54(56.2)	56(68.3)
Islam	24(13.0)	42(43.8)	26(31.7)
Others	1(0.5)	-	-
Total	185	96	82
Education			
Junior Secondary	10(5.5)	16(16.8)	17(21.2)
Senior Secondary	67(36.8)	56(58.9)	44(55.0)
Tertiary	105(57.7)	23(24.2)	19(23.8)
Total	182	95	80
Parity			
0-2	123(77.4)	25(26.6)	62(76.5)
3-5	34(21.4)	57(60.6)	17(21.0)
7-9	2(1.3)	12(12.8)	2(2.5)
Total	159	94	81

Key: FMC, Makurdi- Federal Medical Centre. General Hospital, North bank
FSP- Family Support/Maternal and Child Clinic

Knowledge on RHMs among women of reproductive age

Table 2 shows that post hoc analysis using Tukey's Honestly Significant Difference (HSD) test revealed that respondents from FMC, Makurdi had significantly lower mean scores for traditional sources of information (1.84 ± 0.99) compared with respondents from the General Hospital (2.36 ± 0.95) and FSP facilities (2.18 ± 0.90) ($P < 0.05$). However, there was no statistically significant difference between the General Hospital and FSP facilities. In addition, no significant differences were observed among the three health facilities with respect to information obtained from health care professionals, radio/television, and print media ($P > 0.05$).

Table 2: Sources of Sex and Reproductive Health Information (N=365)

Item	FMC, Makurdi	General Hospital	FSP	F-value	P-value
Health care professionals	4.38±1.25 ^a	4.31±0.63 ^a	4.34±1.14 ^a	0.10	0.91
Radio/Television	2.80±1.61 ^a	3.13±1.36 ^a	2.66±1.14 ^a	1.17	0.31
Print Media	2.32±1.46 ^a	2.25±0.97 ^a	2.38±0.89 ^a	0.11	0.90
Traditional Sources	1.84±0.99 ^b	2.36±0.95 ^a	2.18±0.90 ^a	4.99	0.008

**Values are expressed as Mean ± Standard Deviation (SD). Within each row, means sharing the same superscript letter are not significantly different from each other, while means with different superscript letters indicate statistically significant differences between groups at $P < 0.05$.

The findings in table 3 showed significant differences in respondents' knowledge of some non-drug methods for preventing unwanted pregnancy across the three health facilities. Knowledge of IUCD/loop was significantly higher among respondents from the General Hospital compared with those from FMC, Makurdi, and FSP facilities ($P < 0.001$). Knowledge of diaphragms differed significantly among respondents across the three facilities, with women attending the General Hospital recording the highest mean knowledge score (2.67 ± 1.24^a), followed by FSP (2.01 ± 0.65^b), while respondents from FMC, Makurdi had the lowest score (1.71 ± 1.00^c). However, knowledge of condoms was similarly high across all facilities, with no statistically significant difference observed ($P > 0.05$).

Table 3: Knowledge of Non-drug sources (N=365)

Item	FMC, Makurdi	General Hospital	FSP	F-value	P-value
IUCD/loop	1.97±1.30 ^b	3.03±1.33 ^a	2.04±0.75 ^b	11.14	<0.001
Condoms	4.02±1.41 ^a	4.05±0.93 ^a	4.19±1.34 ^a	0.48	0.62
Diaphragms	1.71±1.00 ^c	2.67±1.24 ^a	2.01±0.65 ^b	11.63	<0.001

Attitude towards RHMs among Respondents who attend different levels of health facilities

Table 4 shows that respondents from the General Hospital reported significantly higher agreement that traditional values act as barriers to the use of reproductive health methods (2.90 ± 1.47^a) compared with FMC, Makurdi (1.87 ± 1.00^c), and FSP facilities (2.27 ± 0.88^b), with all groups differing significantly from each other. FSP respondents had significantly higher concern that these medicines can cause infertility (3.88 ± 1.35^a) compared with FMC (2.59 ± 1.55^b) and General Hospital respondents (2.42 ± 0.97^b), while no significant difference was observed between FMC and General Hospital.

No significant difference was observed across facilities regarding the perception that Reproductive health medicines were capable of offering protection against HIV/STIs ($p = 0.910$), as all groups shared the same superscript.

Table 4: Concern towards Reproductive Health Medicines in women(N=365)

Item	FMC, Makurdi	General Hospital	FSP	F-value	P-value
Traditional Values are barriers	1.87±1.00 ^c	2.90±1.47 ^a	2.27±0.88 ^b	13.62	<0.001
Can Cause infertility	2.59±1.55 ^b	2.42±0.97 ^b	3.88±1.35 ^a	22.56	<0.001
Religious Belief	2.13±1.23 ^b	2.70±1.24 ^a	2.55±1.66 ^a	4.60	0.01
Protect against STD/HIV	2.29±1.41 ^a	2.40±1.32 ^a	2.27±0.85 ^a	0.09	0.910
Should be Married people	2.75±1.52 ^b	3.76±1.28 ^a	2.85±1.17 ^b	12.48	<0.001
Traditional methods are the best	1.64±0.58 ^b	2.10±0.70 ^a	2.03±0.73 ^a	10.64	<0.001

The results in Table 5 showed significant differences in respondents' perceptions of termination of pregnancy across the three health facilities. Women at Federal Medical Centre Makurdi and the primary health facility were more likely than those at the General Hospital to view termination of pregnancy as a crime ($P = 0.018$). Respondents at the primary health facility had the strongest belief that termination of pregnancy is a sin against God, with significantly higher mean scores compared to the tertiary and secondary facilities ($P < 0.001$). There was a significant difference across all the facilities in their perception of termination of pregnancy as a sin against God.

Acceptance of termination of pregnancy in cases of incest was significantly higher among women attending the primary health facility than those at the tertiary and secondary facilities ($P < 0.001$). Similarly, responses from the tertiary and primary health facilities were significantly different to the General Hospital ($P < 0.001$). There was no significant difference between the mean responses of FMC (3.68 ± 1.51^a) and FSP (3.96 ± 0.91^a).

Table 5: Perception on termination of pregnancy(N=365)

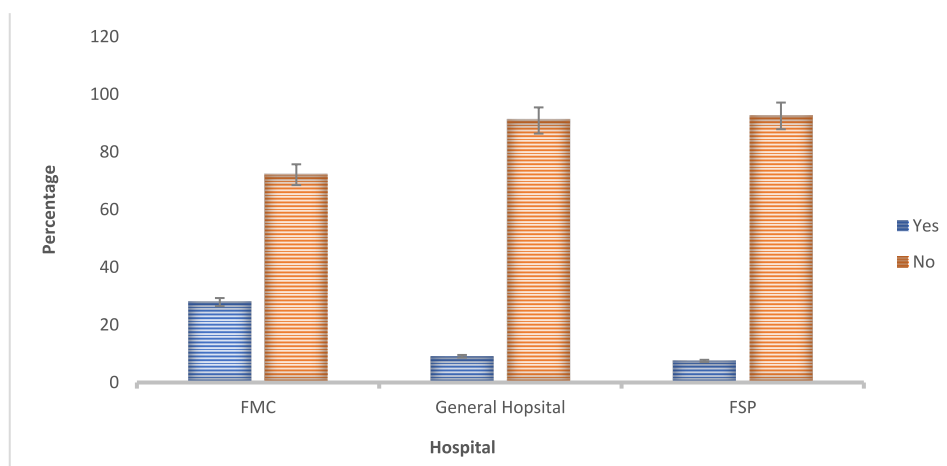
Item	FMC, Makurdi	General Hospital	FSP	F-value	P-value
It is a crime	4.28 ± 1.17^a	3.70 ± 1.27^b	4.18 ± 1.35^a	4.06	0.018
It is a sin against God	4.55 ± 0.92^b	4.09 ± 0.93^c	4.83 ± 0.49^a	14.59	<0.001
Can be carried out as a result of incest	2.12 ± 1.07^b	2.19 ± 0.68^b	2.87 ± 1.04^a	13.81	<0.001
Can be done to save life of Mother	3.68 ± 1.51^a	2.20 ± 0.83^b	3.96 ± 0.91^a	13.83	<0.001
Can be done if still in school	1.79 ± 0.96^b	2.50 ± 0.91^a	2.40 ± 1.07^a	12.53	<0.001
Can be carried out if unmarried only	1.76 ± 0.95^b	2.30 ± 0.98^a	2.43 ± 1.02^a	12.95	<0.001

Practice of use of RHMs among respondents

In Table 6, the findings indicate that awareness or utilization scores for contraceptive methods vary significantly across the three health facilities. General Hospital generally recorded higher mean scores for several modern contraceptive methods, while FSP showed higher scores for abstinence and Postinor-2. FMC Makurdi consistently recorded lower mean values across most methods, suggesting relatively lower uptake or awareness compared to the other facilities.

Table 6: Methods used to prevent pregnancy (N=365)

Item	FMC, Makurdi	General Hospital	FSP	F-value	P-value
Abstinence	3.06 ± 1.58^b	2.81 ± 1.33^b	3.73 ± 1.45^a	5.83	0.003
Condoms	3.22 ± 1.69^b	4.14 ± 0.68^a	3.46 ± 1.54^b	7.97	<0.001
Noristerate depot	1.72 ± 0.95^c	3.36 ± 1.55^a	2.49 ± 1.41^b	26.46	<0.001
Intra uterine devices	1.59 ± 0.76^c	2.37 ± 1.21^a	1.88 ± 0.67^b	0.17	<0.001
Spermicides	1.56 ± 0.65^b	2.06 ± 0.81^a	1.92 ± 0.76^a	9.0	<0.001
Postinor 2	2.14 ± 1.40^b	2.61 ± 1.20^b	3.58 ± 1.53^a	25.88	<0.001
Combination 3	1.71 ± 0.94^b	2.06 ± 0.80^a	2.01 ± 0.84^a	3.30	0.04
Withdrawal	2.21 ± 1.45^b	2.96 ± 1.37^a	3.03 ± 1.55^a	8.99	<0.001
Others (Specify)	1.39 ± 0.72^b	2.75 ± 1.36^a	2.17 ± 1.25^a	15.13	<0.001



Key:

FMC – Federal Medical Center

FSP – Family Support Programme Clinic

Figure 1: Contraceptive prevalence among women

The prevalence of contraceptives used were 27.9%, 9.1% and 7.5% for tertiary, secondary and primary facilities, respectively, showing low utilization among women of reproductive age who visit these facilities.

Concurrent use of Reproductive health medicines and substances

This table 7 shows respondents response to the use of reproductive health medicines and substances. Across the facilities, the use of substance was low with not significant difference observed across facilities or among substances.

Table 7: Substances used by respondents

Item	FMC, Makurdi	General Hospital	FSP	F-value	P-value
Alcohol	0.16±0.54 ^a	0.32±0.72 ^a	0.29±0.66 ^a	2.38	0.09
Cigarette	0.01±0.11 ^a	0.05±0.21 ^a	0.05±0.26 ^a	1.27	0.28
Cough syrup	0.28±0.68 ^a	0.23±0.61 ^a	0.11±0.05 ^a	2.00	0.137

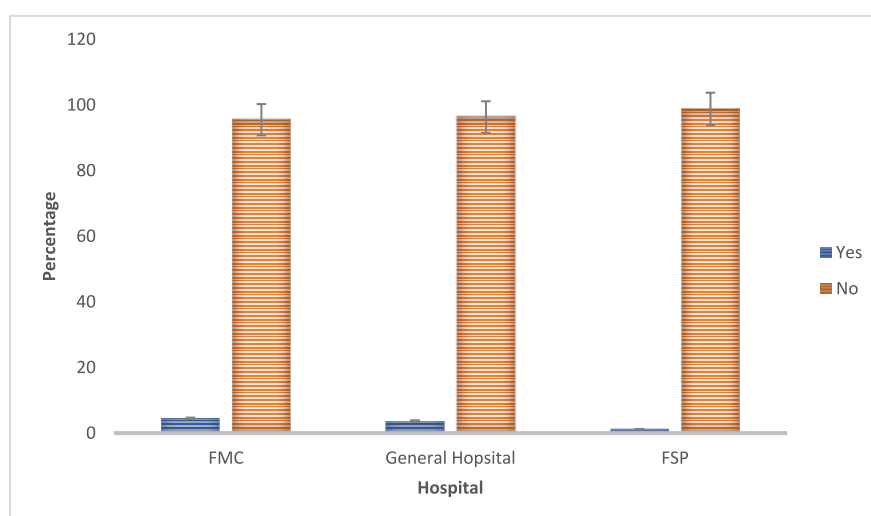


Figure 2. Substance Use Trends Among Respondents

The figure shows respondents' self-reported use of the listed drugs before, during, or after sexual intercourse across the three study locations (FMC, General Hospital, and FSP).

Overall, the use of these drugs around sexual intercourse was very low in all settings. Only 4.5% of respondents at FMC, 3.7% at the General Hospital, and 1.2% at FSP reported having used the drugs. In contrast, an overwhelming majority reported non-use, accounting for 95.5%, 96.3%, and 98.8% at FMC, General Hospital, and FSP, respectively.

The pattern indicates a consistent dominance of "No" responses across facilities, with the lowest reported use at FSP. This suggests that the practice of using these drugs before, during, or after sexual intercourse is uncommon among the study population, possibly reflecting limited awareness, cultural or religious norms, fear of side effects, or lack of perceived need.

DISCUSSIONS

In many cultures, fertility and motherhood are not only biological milestones but are also deeply rooted in social identity and status. While these aspects are often celebrated, it is essential to recognize that maternal health must be prioritized alongside cultural values (as a healthy mother is likely to raise healthy children), women must be encouraged to seek prenatal and postnatal care, practice family planning, and prioritize their mental and physical health. Empowering women with knowledge and access to reproductive health services ensures they can make informed decisions about their bodies and futures.

The utilization of reproductive health medicines (RHMs) among women of reproductive age remains a cornerstone of public health interventions aimed at reducing maternal morbidity and mortality.

The findings from the study reveal that women who accessed RHMs were predominantly young, married, and multiparous, with a significant majority of respondents aged between 21 and 30 years, with distribution rates of 64.4%, 56.7%, and 58.5% across the primary, secondary, and tertiary levels, respectively. This demographic trend aligns with global reproductive health patterns, where younger women are more likely to seek maternal and contraceptive services due to heightened fertility awareness and reproductive activity. However, the concentration of this age group at tertiary healthcare facilities suggests a possible preference for perceived quality and comprehensiveness of care, or perhaps a reflection of referral patterns within the health system. Studies conducted in other regions revealed that facility users in rural western Sierra Leone were between the ages

of 21 and 30 years⁸, while a slightly higher mean age, 34.2 ± 8.4 years, was reported among women utilizing contraceptive services in Southwest Nigeria¹⁶. This age discrepancy may be attributed to differences in study populations, geographic scope, and healthcare access patterns.

Knowledge emerged as a critical determinant of RHMs' utilization. Women with tertiary education were significantly more represented at tertiary health institutions, indicating that higher educational attainment may enhance health literacy, autonomy, and informed decision-making. This is corroborated by existing literature, which consistently demonstrates that educated women are more likely to adopt modern contraceptive methods and engage proactively with reproductive health services. The study by Jimoh *et al.* found that 75.9% of clients who adopted modern contraception had tertiary education¹⁷, a similar trend in Saudi Arabia, where High school and University levels were positively associated with contraceptive uptake¹⁸.

This study found no significant variation in the level of knowledge regarding reproductive health medicines (RHMs) across the three tiers of Nigeria's healthcare delivery system. However, a significant difference was observed only in relation to traditional sources, where FMC differed from the other levels of care. This is suggestive of a relatively uniform dissemination of information irrespective of facility level.

However, the sources of this knowledge were notably concentrated. Healthcare professionals and mass media platforms, particularly radio and television, emerged as the most influential sources of reproductive health information. A study conducted in North Central Nigeria showed that awareness of contraception among Nigerian women was largely obtained through the media and healthcare¹⁹. This report likely reflects similarity in study population, educational attainment, and the self-selected nature of clinic attendees. Our study revealed that direct engagement with health workers, Radio/television, and print media were identified as the leading sources of information. A recent study conducted across three U.S. states: Arizona, New Jersey, and Wisconsin, revealed a broad and diversified interest among women in accessing contraceptive services through multiple modalities²⁰. More than 50% of respondents expressed a preference for obtaining contraception via traditional in-person provider interactions, such as doctor visits or walk-in clinic appointments. Equally notable was the substantial interest

in telehealth options, including mobile applications and online ordering systems that facilitate either pharmacy pickup or home delivery. Additionally, pharmacies, whether accessed with or without a prescription, emerged as a popular point of service in some states in the United States of America [20]. The implications of these findings are as follows. First, they underscore the importance of leveraging trusted communication channels, especially healthcare providers and media outlets, to enhance public knowledge and correct misconceptions surrounding RHMs. Second, they highlight the need to leverage on health education campaigns that are culturally sensitive, linguistically accessible, and tailored to diverse demographic groups. Strengthening these knowledge pathways can foster informed decision-making, improve uptake of RHMs, and ultimately contribute to better reproductive health outcomes among women of reproductive age.

The choice of contraceptive methods among women of reproductive age reflects a complex interplay of cultural norms, accessibility, education, and individual preferences. In this study, condoms emerged as the most prevalent non-pharmacological method for preventing unintended pregnancies, surpassing the use of intrauterine contraceptive devices (IUCDs), loops, and diaphragms. The preference for condoms may be attributed to their ease of use, accessibility, affordability, and dual protection against both pregnancy and sexually transmitted infections. In Uganda²¹ and the Philippines²², respondents were aware of contraception, with oral emergency contraceptives identified as the most commonly known method. This widespread awareness emphasizes the effectiveness of the ease of access to products and services, as well as the role of oral pill use as a primary contraceptive option.

Conversely, findings from a study assessing contraceptive use across different tiers of healthcare in southwestern Nigeria revealed a contrasting trend. The IUCD was identified as the most frequently utilized method, accounting for 45.5% and 51.5% of users in primary and tertiary healthcare settings, respectively²³, demonstrating their long-term efficacy, reversibility, and minimal maintenance requirements. This suggests that while condoms may be more widely known and accessible, IUCDs are preferred in clinical settings where professional insertion and follow-up care are available. These findings emphasize the importance of context-specific

contraceptive counseling and service delivery. While condoms offer immediate and user-controlled protection, IUCDs provide long-term, provider-managed solutions. Health systems must therefore ensure that women are equipped with comprehensive information and access to a range of contraceptive options tailored to their reproductive goals, health status, and socio-cultural environment. The prevalence of contraceptive use across healthcare tiers demonstrated a marked gradient, with tertiary institutions exhibiting the highest rate at 27.9%, followed by secondary (9.1%) and primary (7.5%) health facilities. This pronounced disparity may be due to differential uptake patterns potentially influenced by institutional capacity, patient demographics, and service delivery models. Notably, the prevalence rate observed in the tertiary facility within the present study substantially exceeds the 9.7% reported in a prior investigation assessing knowledge, attitude, and practice (KAP) among antenatal attendees at the University of Port Harcourt Teaching Hospital (UPTH)²⁴. The most recent data from the 2023–2024 Nigeria Demographic and Health Survey indicate that the modern contraceptive prevalence rate (mCPR) among currently married women stands at 15%, reflecting a modest increase from 12% reported in 2018, but remaining substantially below the national target of 27% set by the Federal Ministry of Health²⁵. The tertiary facility prevalence rate of 27.9% observed in this study approximates this national target, while the rates at secondary (9.1%) and primary (7.5%) facilities fall substantially short, underscoring the need for targeted interventions at lower tiers of the health system.

Though substance use (alcohol, cigarettes, cough syrup) was reported among some respondents, a formal analysis of its association with RHM utilization was beyond the scope of this study and is recommended for future research. Studies have shown that drinking habits were negatively associated with contraceptive use. Participants who had a drinking habit were four times less likely to use contraception compared with women who did not have a drinking habit²⁶. This study provides comparative data with previous studies, thereby contributing to a better understanding of knowledge, attitude, and practice related to the utilization of reproductive health medicines. Nevertheless, the study relied on self-reported data, which may have introduced recall bias and affected the accuracy of participants' responses. Although the sampling method used (for PHC) differed from the initial plan, the approach and results are valid and do not compromise the validity of the findings.

CONCLUSIONS

The study demonstrated significant variations in the knowledge, attitudes, and practices regarding reproductive health medicines among women attending tertiary, secondary, and primary healthcare facilities in Benue State. However, statistically significant differences were observed in specific sub-dimensions: utilization of injectable contraceptives, awareness of the diaphragm, and use of Noriesterat depot and IUD as pregnancy preventive methods, across all three facilities. The prevalence of reproductive health medicine; contraceptives use among women assessing health care facilities was 27.9%, 9.1%, and 7.5% in the tertiary, secondary, and primary health care facilities, respectively, indicating suboptimal utilization when compared to the targets proposed by the Sustainable Development Goals (SDGs).

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