

Assessment of Knowledge and Utilization of Modern Methods of Family Planning among Women of Reproductive Age Attending PHCC in Bauchi State, Nigeria

Abubakar Musa,¹ Usman Abba,² John Jesse Gimbason,³ Rilwanu Mohammed,⁴ Mohammed Kabir Abdullahi,⁵ Muhammad Umar Ibrahim.⁶

¹Department of Community Medicine, Abubakar Tafawa Balewa University/Abubakar Tafawa Balewa University Teaching Hospital, Bauchi – Nigeria

²Department of Obstetrics and Gynaecology, Yobe State University Damaturu, Yobe State - Nigeria

³College of Community Health, Department of Community Medicine, Abubakar Tafawa Balewa University Teaching Hospital, Bauchi – Nigeria

⁴State Primary Healthcare Board, Bauchi State-Nigeria

⁵Department of Obstetrics and Gynaecology, Abubakar Tafawa Balewa University/Abubakar Tafawa Balewa University Teaching Hospital, Bauchi – Nigeria

⁶Department of Community Medicine, Abubakar Tafawa Balewa University Teaching Hospital, Bauchi – Nigeria

Abstract

Background: Family planning plays a crucial role in improving maternal and child health by preventing unintended pregnancies and ensuring adequate birth spacing. Despite high awareness levels, utilization of modern contraceptive methods remains low in northern Nigeria, including Bauchi State.

Aim: This study assessed the knowledge and utilization of modern methods of family planning among women of reproductive age attending Tashan Babiye Primary Health Care Centre, Bauchi State, Nigeria.

Methods: A descriptive cross-sectional research design was adopted. A sample size of 232 women was selected using systematic random sampling. Data were collected using a semi-structured interviewer-administered questionnaire and analyzed using SPSS version 26.0, descriptive statistics (frequencies and percentages). Of the 232 questionnaires distributed, 220 were correctly completed and retrieved, giving a response rate of 94.8%.

Results: The findings revealed that 77.3% of respondents had good knowledge of modern methods of family planning. The majority (86.8%) had heard of modern family planning, with health workers (46.4%) serving as the major source of information. Implants (38.2%) and injectable (37.3%) were the best-known methods. Furthermore, 65.0% of respondents were currently utilizing modern methods of family planning. Injectable contraceptives (27.7%) and implants (26.4%) were the most commonly used methods. Fear of side effects (37.3%), partner disapproval (23.2%), and religious beliefs (16.8%) were identified as the major barriers to utilization. Additionally, 85.0% of respondents believed that modern family planning is beneficial, while lack of partner support (27.7%) was the most frequently reported challenge in accessing family planning services.

Conclusion: Women attending Tashan Babiye Primary Health Care Centre generally had good knowledge and a relatively high level of utilization of modern family planning methods. However, misconceptions about side effects, partner influence, religious beliefs, and access-related challenges continued to limit utilization. The study recommends strengthening health education, increasing male involvement in family planning programs, and improving access to affordable and quality family planning services to enhance utilization among women of reproductive age.

Keywords: Knowledge, Utilization, Family Planning, Women of Reproductive Age, Bauchi State

Corresponding Author: Dr. Abubakar Musa, Department of Community Medicine, Abubakar, Tafawa Balewa University Bauchi, Nigeria.

INTRODUCTION

Background of the Study

Family planning refers to the voluntary use of contraceptive methods by individuals or couples to control the number and spacing of their children (World Health Organization [WHO], 2022). Modern methods of family planning include oral contraceptive pills, injectable contraceptives, implants, intrauterine devices (IUDs), condoms, sterilization, and emergency contraception (WHO, 2022). Family planning plays an important role in improving maternal and child health. Studies have shown that effective family planning could prevent about 30% of maternal deaths and 10% of child mortality worldwide (Ahmed et al., 2012). By preventing unintended pregnancies and ensuring adequate birth spacing, family planning significantly improves the health and wellbeing of women and children.

Globally, an estimated 842 million women use modern contraceptive methods, while approximately 270 million women have an unmet need for family planning (United Nations Population Fund [UNFPA], 2023). The global contraceptive prevalence rate for modern methods among married women is estimated at 58%, while about 35% of women do not use any contraceptive method (UNFPA, 2023).

In sub-Saharan Africa, the modern contraceptive prevalence rate is much lower, estimated at 29% among married women, compared with over 70% in developed countries (WHO, 2023). Low contraceptive use contributes to high fertility rates and increased maternal mortality. In Nigeria, knowledge of modern methods of family planning is relatively high. According to the Nigeria Demographic and Health Survey (NDHS, 2024), 94% of women aged 15-49 years know at least one contraceptive method, but only 17% use modern contraceptive methods (National Population Commission [NPC] & ICF, 2023). Additionally, about 19% of married women have an unmet need for family planning, meaning they want to delay or avoid pregnancy but are not using contraception (NPC & ICF, 2023).

In northern Nigeria, the situation is more concerning. Modern contraceptive use is estimated to be between 8% and 12%, which is lower than the national average (Adeyemi et al., 2016). Cultural beliefs, limited education, and poor access to reproductive health services contribute to this low utilization. In Bauchi State specifically, studies have reported that over 85% of women have heard about family planning, but only 10-15% actually use modern contraceptive methods (Adeyemi et al., 2016).

Unintended pregnancies remain a major global public

health concern. Globally, approximately 121 million unintended pregnancies occur each year, representing about 48% of all pregnancies (Cleland et al., 2012). Many of these pregnancies occur due to non-use or ineffective use of contraceptive methods. In developing countries, the unmet need for family planning is estimated at around 12-19% among married women, contributing significantly to maternal mortality and unsafe abortions (UNFPA, 2023).

Nigeria continues to experience high fertility rates, estimated at 5.3 children per woman, partly due to low contraceptive use (NPC & ICF, 2023). Despite high awareness levels, only 17% of married women use modern contraceptive methods, while about 73% are not using any method of contraception (NPC & ICF, 2023).

In northern Nigeria, including Bauchi State, the situation is even more challenging. Cultural and religious factors influence reproductive decisions, and women often require approval from their husbands before using contraceptives. Studies show that male partner opposition contributes to about 15-20% of non-use of family planning methods (Adeyemi et al., 2016). Furthermore, fear of side effects is responsible for approximately 25-35% of contraceptive non-use among women in developing countries (WHO, 2022). In Bauchi State, despite increased awareness campaigns, utilization of modern contraceptive methods remains low, estimated at about 12% among women of reproductive age (Adeyemi et al., 2016).

This study therefore focused on the assessment of knowledge and utilization of modern methods of family planning among women of reproductive age attending Tashan Babiye Primary Health Care Center, Bauchi Local Government Area, Bauchi State.

METHODOLOGY

Study Area

The study was conducted at Tashan Babiye Primary Health Care Center, located in Bauchi Local Government Area of Bauchi State, Nigeria. Bauchi State is situated in the North-east region of Nigeria. The Primary Health Care Center provides maternal and child health services, immunization, antenatal care, and family planning services to women within the community. The population of Bauchi State was 4,653,066 as at 2006 Census and Bauchi Local Government Area was 493,810 according to the census carried out in 2006. Therefore, the 2026 projected population of Bauchi State is about 9,281,000 and 1,200,000 for Bauchi Local Government Area respectively (National Population Commission, 2006; Bauchi State LGA data, 2006; Population Projected, 2026).

Study Design

A descriptive cross-sectional research design was used for this study.

Study Population

The target population was women of reproductive age (15-49 years) attending Tashan Babiye Primary Health Care Center during the data collection period.

Sample Size Determination

The sample size of this study was determined using the Cochran formula where minimum sample size (n) was determined using the formula:

$$n = z^2 pq / d^2$$

Where:

- n = minimum sample size
- z = percentage of the standard normal distribution curve, which defines 95% confidence interval (1.96)
- p = prevalence rate from previous study is 70%
- q = complimentary probability = (1 - p) = 1-0.7 = 0.3
- d = maximum sample error allowed (degree of precision) at 95% confidence limit = 0.05 or 5%

Therefore:

- $n = (1.96)^2 \times 0.7(1-0.7) \div (0.05)^2$
- $n = 3.84 \times 0.7(0.3) \div 0.0025$
- $n = 3.84 \times 0.7 \times 0.3$
- **n = 232**

Sampling Method

A systematic random sampling technique was used. The list of women of reproductive age attending the PHCC on antenatal days was obtained. Every 2nd eligible woman attending the facility was selected until the required sample size was reached.

Data Collection

A semi-structured interviewer-administered questionnaire was used. The questionnaire consisted of the following sections: socio-demographic characteristics, knowledge of modern family planning, utilization of modern family planning, and influencing factors for utilization of family planning. A trained research assistant administered the questionnaire over a two-week period. Respondents were interviewed in a private area to ensure confidentiality and privacy.

The questionnaire was pre-tested for clarity and appropriateness.

Validity and Reliability

Validity: The instrument was reviewed by the supervisor in the College of Community Health, Department of Community Medicine, ATBUTH Bauchi.

Reliability: The questionnaire as an instrument of data collection in this research was administered to the sample; adequate efficiency of reliability was obtained.

Data Analysis

Data were entered into an Excel spreadsheet, coded, cleaned, and analyzed using SPSS version 26.0.

Descriptive statistics: Frequencies, percentages, mean, and standard deviations were obtained.

Inferential statistics: Chi-square test was used to determine association between socio-demographic variables and knowledge and utilization of modern family planning. Significance was set at $p < 0.05$.

Ethical Consideration

Ethical approval was obtained from the Health Research Ethics Committee of Bauchi State Ministry of Health. Permission was secured from the in-charge of Tashan Babiye Primary Health Care Center. Consent of the respondents was obtained; confidentiality and anonymity were ensured throughout the study. Participation was voluntary, and respondents could withdraw at any time during the study.

RESULTS

Response Rate: The response rate was 94.8% (220 out of 232 questionnaires correctly completed and retrieved).

Table1 shows that the majority of respondents, 82 (37.3%), were aged 25–34 years. This was followed by 61 (27.7%) respondents aged 15–24 years, while 55 (25.0%) were between 35–44 years. Respondents aged 45–49 years constituted the least proportion with 22 (10.0%). This indicates that most respondents were within the active reproductive age group.

Regarding marital status, 164 (74.5%) of the respondents were married, making them the majority. 31 (14.1%) were single, while 14 (6.4%) were divorced and 11 (5.0%) were widowed.

Concerning educational level, 88 (40.0%) of the respondents attained secondary education, making it the highest educational level among respondents. Those with primary education accounted for 61 (27.7%), while 40 (18.2%) had tertiary education and respondents without formal education constituted 31 (14.1%).

The findings reveal that 82 (37.3%) of the respondents

Table1: Socio-demographic Characteristics of Respondents

Variables	Frequency	Percentage (%)
Age Group		
15–24 years	61	27.7
25–34 years	82	37.3
35–44 years	55	25.0
45–49 years	22	10.0
Marital Status		
Single	31	14.1
Married	164	74.5
Divorced	14	6.4
Widowed	11	5.0
Educational Level		
None	31	14.1
Primary	61	27.7
Secondary	88	40.0
Tertiary	40	18.2
Occupation		
Farmer	55	25.0
Business	82	37.3
Civil Servant	48	21.8
Others	35	15.9
Number of Living Children		
0–2	75	34.1
3–4	95	43.2
5 and above	50	22.7
Total	220	100

were engaged in business, making it the predominant occupation. Farmers constituted 55 (25.0%), while 48 (21.8%) were civil servants. Respondents engaged in other occupations accounted for 35 (15.9%).

Regarding number of living children, 95 (43.2%) of the respondents had between 3 and 4 living children, representing the highest proportion. Respondents with 0–2 children were 75 (34.1%), while 50 (22.7%) had five or more children.

Table 2 shows that 170 (77.3%) of the respondents had good knowledge of modern methods of family planning, while 50 (22.7%) had poor knowledge. Additionally, 143

(65.0%) of the respondents had a high level of utilization of modern methods of family planning because they were currently using a modern method, whereas 77 (35.0%) had a low level of utilization as they were not currently using any modern family planning methods.

Table 3 shows that the majority of respondents, 191 (86.8%), had heard about modern family planning methods, while 29 (13.2%) indicated that they had not.

The table indicates that 102 (46.4%) of the respondents obtained information on modern methods of family planning from health workers, making them the major source of information. 41 (18.6%) received information

Table2: Level of Knowledge and Utilization of Modern Methods of Family Planning

Level of Knowledge	Frequency	Percentage (%)
Good Knowledge	170	77.3
Poor Knowledge	50	22.7
Level of Utilization		
High Utilization (Currently Using)	143	65.0
Low Utilization (Not Using)	77	35.0

Level of Knowledge	Frequency	Percentage (%)
Total	220	100

through radio, while 31 (14.1%) obtained information from friends. Television accounted for 27 (12.3%), whereas 19 (8.6%) reported other sources.

Regarding specific methods known, 84 (38.2%) of the respondents identified implants as a modern method of

family planning, while 82 (37.3%) knew about injectable. Only 54 (24.5%) identified oral pills.

The table also reveals that 102 (46.4%) of the respondents indicated that the major purpose of modern family planning is spacing pregnancies. 68 (30.9%) believed it is

Table3: Knowledge of Modern Methods of Family Planning

Variables	Frequency	Percentage (%)
Heard about MMFP		
Yes	191	86.8
No	29	13.2
Source of Information		
Health Worker	102	46.4
Television	27	12.3
Radio	41	18.6
Friends	31	14.1
Others	19	8.6
Modern Methods of FP Known		
Oral Pills	54	24.5
Injectable	82	37.3
Implants	84	38.2
Purpose of Modern Methods of FP		
Spacing Pregnancies	102	46.4
Limiting Family Size	68	30.9
Reduce Maternal/Infant Mortality	50	22.7
Knowledge of Side Effects		
Yes	170	77.3
No	50	22.7
Side Effect Known		
Weight Gain	75	34.1
Irregular Bleeding	102	46.4
Difficult to Reverse	43	19.5

used for limiting family size, while 50 (22.7%) stated that it helps in reducing maternal and infant mortality.

Furthermore, 170 (77.3%) of the respondents were aware that modern methods of family planning may have side effects, while 50 (22.7%) were not aware. Among those aware, 102 (46.4%) identified irregular bleeding as the most common side effect, 75 (34.1%) mentioned weight gain, while 43 (19.5%) believed that family planning modern methods are difficult to reverse.

Table4 reveals that 143 (65.0%) of the respondents were currently using a modern method of family planning, while 77 (35.0%) were not.

Injectable contraceptives with 61 (27.7%) were the most commonly used modern family planning method

among respondents, followed closely by implants with 58 (26.4%). Condoms accounted for 34 (15.5%), pills for 31 (14.1%), IUCD for 24 (10.9%), while 12 (5.4%) used other methods.

Regarding duration of use, 89 (40.5%) of the respondents had been using modern methods of family planning for 1–3 years, representing the largest proportion. 68 (30.9%) had used the methods for less than one year, while 63 (28.6%) had used them for more than three years.

Concerning decision-making, 118 (53.7%) of the respondents indicated that the decision to use modern method of family planning was made jointly with their partners. 61 (27.7%) reported making the decision themselves, while 41 (18.6%) stated that the decision was made by their partners.

Table4: Utilization of Modern Methods of Family Planning

Variables	Frequency	Percentage (%)
Currently using any MMFP		
Yes	143	65.0
No	77	35.0
Modern Methods Used		
Pills	31	14.1
IUCD	24	10.9
Injectables	61	27.7
Implants	58	26.4
Condoms	34	15.5
Others	12	5.4
Duration of Use		
Less than 1 Year	68	30.9
1–3 Years	89	40.5
Above 3 Years	63	28.6
Decision Maker for MMFP		
Self	61	27.7
Partner	41	18.6
Both	118	53.7
Reason for Choice of MMFP		
Reversible	75	34.1
Less Side Effects	61	27.7
Long Acting	84	38.2
Reason for Non-Utilization		
Fear of Side Effects	82	37.3
Religious Beliefs	37	16.8
Partner Disapproval	51	23.2
No Need	31	14.1
Others	19	8.6
Perception of Benefits of FP		
Yes	187	85.0
No	33	15.0
Challenge in Accessing MMFP		
Distance	48	21.8
Cost	44	20.0
Lack of Partner Support	61	27.7
Inadequate Information	37	16.8
None	30	13.7

The findings also indicate that 84 (38.2%) of the respondents chose their preferred family planning method because it was long-acting. 75 (34.1%) preferred methods that were reversible, while 61 (27.7%) selected methods because they were believed to have fewer side effects.

Regarding reasons for non-utilization, 82 (37.3%) of the respondents reported fear of side effects as the major reason for not utilizing modern family planning methods. 51 (23.2%) cited partner disapproval, while 37 (16.8%) attributed non-utilization to religious beliefs. 31 (14.1%)

stated that they had no need for family planning, whereas 19 (8.6%) gave other reasons.

Perception of benefits showed that 187 (85.0%) of the respondents believed that modern family planning is beneficial, while 33 (15.0%) did not.

The findings reveal that 61 (27.7%) of the respondents identified lack of partner support as the major challenge in accessing modern family planning services. 48 (21.8%) reported distance to health facilities, while 44 (20.0%) mentioned cost as a barrier. 37 (16.8%) cited inadequate

information, whereas 30 (13.7%) reported no challenges.

DISCUSSION

The findings of this study revealed that the majority of respondents (77.3%) had good knowledge of modern methods of family planning. This suggests that awareness of modern methods of family planning among women attending Tashan Babiye Primary Health Care Centre is relatively high. The high level of knowledge observed may be attributed to continuous health education provided during antenatal care, postnatal care, immunization clinics, and other maternal and child health services. This finding is consistent with the Nigeria Demographic and Health Survey (NDHS), which reported that over 90% of women of reproductive age are aware of at least one modern contraceptive method, although utilization remains lower than awareness (NPC & ICF, 2023). It also agrees with the findings of Oye-Adeniran et al. (2006), who reported high awareness of family planning among Nigerian women following sustained reproductive health education programmes.

The study also found that health workers (46.4%) were the major source of information on modern methods of family planning. This finding highlights the critical role of healthcare professionals in promoting reproductive health education and influencing positive health-seeking behavior. Women who receive accurate counseling from trained health workers are more likely to understand the benefits, effectiveness, and possible side effects of modern contraceptive methods. This finding agrees with the World Health Organization (2022), which emphasizes that quality counseling by healthcare providers significantly improves acceptance and continuation of contraceptive use. It is also consistent with the findings of Blackstone et al. (2017), who reported that health workers remain the most trusted source of family planning information in many developing countries.

The findings further revealed that implants (38.2%) and injectable contraceptives (37.3%) were the most commonly known modern methods of family planning. This may be because these methods are commonly available in primary healthcare facilities and are frequently promoted during family planning counseling sessions. Their long duration of action and effectiveness make them attractive options for many women. This finding agrees with reports by the World Health Organization (2022) and the United Nations Population Fund (2022), which indicate that long-acting reversible contraceptives are increasingly preferred because of their high effectiveness and convenience.

Regarding utilization, the study showed that 65.0% of respondents were currently using a modern method of family planning. Although this utilization level is higher than the national average reported by the NDHS, it demonstrates that family planning services at the study area may be relatively accessible and acceptable. However, the difference may also be explained by the fact that this study was conducted among women attending a primary healthcare facility where family planning services are readily available. This finding is consistent with studies by Adebowale et al. (2011) and Adedini et al. (2019), which reported that access to healthcare facilities and regular contact with health professionals significantly increase contraceptive utilization.

The study also revealed that injectable contraceptives and implants were the most commonly used methods among respondents. Many women preferred these methods because they are long-acting, effective, reversible, and require less frequent hospital visits. This finding agrees with WHO (2022) reports, which indicate that long-acting reversible contraceptives have higher continuation rates and lower failure rates compared with short-term methods when used correctly.

Despite the relatively high level of utilization, fear of side effects (37.3%), partner disapproval (23.2%), and religious beliefs (16.8%) remained the major barriers to the utilization of modern methods of family planning. Fear of side effects may result from inadequate counseling, misinformation, or previous negative experiences. Similarly, opposition from male partners and religious influences continues to affect women's reproductive decisions in many Nigerian communities. These findings are consistent with previous studies by Blackstone et al. (2017) and Oye-Adeniran et al. (2006), which identified fear of side effects, cultural beliefs, and lack of partner support as significant predictors of low contraceptive uptake in sub-Saharan Africa.

Furthermore, the majority of respondents (53.7%) reported that decisions regarding the use of modern family planning methods were made jointly with their partners. This finding suggests that male involvement plays a significant role in reproductive health decision-making. Couples who discuss family planning together are more likely to adopt and continue contraceptive use than women making decisions alone. This finding supports the recommendation of the World Health Organization (2022) that male involvement should be strengthened in family planning programs to improve contraceptive acceptance and continuation.

The study also found that most respondents believed modern methods of family planning contributes to improved maternal and child health through pregnancy spacing and the prevention of unintended pregnancies. This finding agrees with Ahmed et al. (2012), who reported that increased contraceptive use substantially reduces maternal deaths, unsafe abortions, and infant mortality while improving family well-being.

Finally, inadequate partner support, long distance to health facilities, and cost were identified as the major challenges affecting access to modern family planning services. These barriers may discourage women from initiating or continuing contraceptive use, particularly in rural communities. This finding agrees with Adebowale et al. (2011) and WHO (2022) reports, which emphasize that improving accessibility, affordability, and community support are essential for increasing contraceptive uptake and achieving better reproductive health outcomes.

CONCLUSION

Based on the findings of this study, it is concluded that women attending the Primary Health Care Centre generally have good knowledge of modern methods of family planning, and a substantial proportion currently utilize these methods. However, utilization remains affected by misconceptions regarding side effects, inadequate partner support, religious beliefs, and accessibility challenges. Strengthening health education, involving male partners in reproductive health programs, and improving access to affordable family planning services will enhance the acceptance and utilization of modern methods of contraception.

Recommendations

Based on the findings of the study, the following recommendations are made:

1. Intensifying health education on modern family planning methods and their benefits to address misconceptions, cultural, religious barriers and fears regarding side effects and government should ensure regular availability of family planning commodities in all primary health care facilities to improve access and continuity of services.
2. Men should be actively involved in reproductive health education to encourage joint decision-making and reduce partner disapproval as a barrier to utilization and retraining of healthcare workers to improve the quality of family planning counseling and service delivery, ensuring that women receive accurate information about all available methods.

Limitations of the Study

The study was limited to women of reproductive age attending one Primary Health Care Centre; therefore, the findings may not be generalized to all women in Bauchi State or the country. Future studies should consider a larger, more diverse sample across multiple health facilities and communities.

REFERENCES

1. Adebowale, S. A., Fagbamigbe, F. A., & Bamgboye, E. A. (2011). Contraceptive use among Nigerian women: A multilevel analysis. *Journal of Biosocial Science*, 43(2), 165-181.
2. Adedini, S. A., Omisakin, O. A., & Somefun, O. D. (2019). Trends and determinants of contraceptive use in Nigeria. *African Population Studies*, 33(2), 4713-4727.
3. Adeyemi, A., Olugbenga-Bello, A., Adeoye, O., Salawu, M., Aderinoye, A., & Agbaje, M. (2016). Contraceptive prevalence and determinants among women of reproductive age in Nigeria. *Journal of Obstetrics and Gynaecology*, 36(5), 650-656.
4. Ahmed, S., Li, Q., Liu, L., & Tsui, A. O. (2012). Maternal deaths averted by contraceptive use: An analysis of 172 countries. *The Lancet*, 380(9837), 111-125.
5. Blackstone, S. R., Nwaozuru, U., & Iwelunmor, J. (2017). Factors influencing contraceptive use in sub-Saharan Africa. *Open Access Journal of Contraception*, 8, 21-40.
6. Cleland, J., Conde-Agudelo, A., Peterson, H., Ross, J., & Tsui, A. (2012). Contraception and health. *The Lancet*, 380(9837), 149-156.
7. Darroch, J. E., Singh, S., & Weissman, E. (2017). *Adding it up: The costs and benefits of investing in sexual and reproductive health 2017*. New York: Guttmacher Institute.
8. Federal Ministry of Health. (2020). *National Family Planning Blueprint (2020-2024)*. Abuja: FMOH.
9. National Population Commission (NPC) [Nigeria] & ICF. (2023). *Nigeria Demographic and Health Survey 2024*. Abuja, Nigeria, and Rockville, Maryland, USA: NPC and ICF.
10. Oye-Adeniran, B. A., Adewole, I. F., Umoh, A. V., et al. (2006). Community-based study of contraceptive behaviour in Nigeria. *African Journal of Reproductive Health*, 10(2), 90-104.
11. United Nations. (2016). *Sustainable Development Goals*. New York: United Nations.

12. United Nations. (2022). *World Contraceptive Use 2022*. New York: United Nations.
13. United Nations, Department of Economic and Social Affairs, Population Division. (2019). *Contraceptive use by method 2020: Data booklet*. New York: United Nations.
14. United Nations Population Fund. (2021). *State of World Population*. New York: UNFPA.
15. United Nations Population Fund. (2022). *State of World Population 2022: Seeing the unseen*. New York: UNFPA.
16. United Nations Population Fund. (2023). *State of World Population 2023*. New York: UNFPA.
17. World Bank. (2022). *World development report: Gender equality and development*. Washington DC: World Bank.
18. World Health Organization. (2022). *Family planning/contraception methods*. Geneva: WHO.
19. World Health Organization. (2023). *Contraception factsheet*. Geneva: WHO.
20. World Health Organization. (2023). *Maternal mortality: Key facts*. Geneva: WHO.
21. World Health Organization. (2023). *Trends in maternal mortality: 2000 to 2020*. Geneva: WHO.

Cite this article: Dr. Abubakar Musa, et al. *Assessment of Knowledge and Utilization of Modern Methods of Family Planning among Women of Reproductive Age Attending PHCC in Bauchi State, Nigeria* Era Journal of Public Health and Community Medicine (EJPHCM) 2026; 3(1): 70-78.

Copyright: © 2026. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.