

Trends and Dimensions of Adaptive Family Planning Behaviours among Married Women In Buguma City, Asai- Toru Local Government Area of Rivers State, Nigeria

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Abstract

Family planning is an important component of reproductive health because it enables women and couples to determine the number and spacing of their children and to make informed decisions regarding contraceptive use. However, contraceptive behaviour is not static; women may adopt, continue, and switch, in response to changing reproductive intentions, counselling, side effects, partner support, method satisfaction, and service-related factors. This study assessed the knowledge, utilization trends, and dimensions of adaptive family planning behaviours among married women in Buguma City, Asari-Toru Local Government Area of Rivers State, Nigeria. Specifically, the study assessed the level of knowledge of adaptive family planning methods, determined patterns of family planning utilization methods, and examined adaptive behaviours involving method adoption, continuation, and switching. A community-based descriptive cross-sectional study approach was employed among 398 married women using a structured questionnaire. Data were analyzed using frequencies, percentages and weighted mean scores, with a five-point Likert scale used to assess adaptive family planning behaviours. A mean score of 3.00 was adopted as the decision criterion. The findings showed a generally high level of knowledge of family planning among respondents. Specifically, 330 (82.92%) had heard about family planning methods, 363 (91.21%) recognized that family planning helps to space births, 361 (90.70%) identified condoms as a family planning method, 209 (52.51%) identified injectables as modern methods, and 230 (57.79%) recognized implants as methods for preventing pregnancy. Regarding utilization, 361 (90.70%) reported having ever used a family planning method, whereas only 127 (31.91%) were currently using a method. Reported methods included implants (69.35%), natural methods (68.09%), condoms (82.16%), pills (55.03%), intrauterine devices (39.95%), and injectables (36.68%), among others. The findings therefore demonstrate a marked difference between ever-use and current use, suggesting that family planning utilization involves considerable change over time. Adaptive behaviours were generally favourable. For method adoption, respondents reported adopting family planning after adequate counselling (Mean = 4.15), carefully choosing their current contraceptive method (Mean = 3.96), and receiving husband support for adoption (Mean = 4.17). For method continuation, respondents indicated intention to continue using their current method (Mean = 4.17), acknowledged the influence of consistent counselling on continuation (Mean = 4.18), and perceived the benefits of their current methods as outweighing side effects (Mean = 4.19). Method switching also recorded high mean scores, including changing from one method to another (Mean = 4.25), health-worker assistance in selecting another method (Mean = 4.33), and improved satisfaction following switching (Mean = 4.24). All the assessed items exceeded the 3.00 decision criterion. The study concludes that married women in Buguma City possess substantial knowledge of family planning and demonstrate high levels of adaptive behaviours; however, the lower level of current use compared with ever-use indicates that knowledge and initial adoption do not necessarily translate into sustained utilization. Family planning programmes should therefore move beyond promotion of uptake to emphasize informed choice, continuous counselling, male involvement, side-effect management, method availability, provider-assisted switching, and follow-up support. Strengthening client-centred and responsive family planning services is recommended to promote sustained and satisfactory contraceptive use among married women in Buguma City.

Keywords: Adaptive family planning, contraceptive methods, married women, reproductive health, Buguma City, Asari-Toru Local Government Area; Rivers State, Nigeria.

1.0 Introduction

Family planning is one of the major effective public health intervention mechanisms that seek to improve reproductive health outcomes, reducing maternal and child mortality, preventing unplanned pregnancies, and promoting socioeconomic development (UNFPA, 2026; Abubakar & Abubakar, 2024). It enables couples and individuals to determine the number and spacing of their children through the voluntary use of contraceptive methods and informed reproductive choices. The World Health Organization emphasizes that access to sexual and reproductive health services, including contraception and family planning, is an essential component of universal health coverage and contributes to improved health outcomes, gender equality and wider development (WHO, 2025; UNFPA, 2026). More so, WHO's 2025 contraceptive recommendations also explicitly cover initiation; continuation; correct use; management of problems; IUDs; implants; hormonal methods; fertility-awareness methods; sterilization. Internationally, the use of modern contraceptive methods has increased over recent decades due to improved health education, expanded reproductive health services, policy reforms, and technological innovations in contraception (Canon, 2026; Benson et al., 2018). However, disparities persist between developed and developing countries, with sub-Saharan Africa continuing to experience relatively low contraceptive prevalence rates and high unmet needs for family planning. These disparities are often associated with socioeconomic inequalities, cultural beliefs, gender norms, religious influences, limited access to health facilities, and inadequate health information systems (Teshale, 2022; UNFPA, 2007).

Nigeria, the most densely inhabited country in Africa, continues to face considerable reproductive health challenges characterized by high fertility rates, maternal mortality, adolescent pregnancy, and unmet need for contraception. The 2024 Nigeria Demographic and Health Survey (NDHS) indicates that among currently married women aged 15–49 years, contraceptive use has increased from 6% in 1990 to approximately 20% in 2023–2024, while modern contraceptive use has increased from 4% to 15%. Total demand for family planning has also risen to 41%; however, approximately 21% of married women still have unmet needs for family planning, indicating persistent barriers to service utilization. Urban women generally exhibit higher utilization than rural women, while educational attainment and household wealth remain strong determinants of contraceptive uptake (NDHS, 2024). Consequently, adaptive family planning refers to the dynamic pattern through which women initiate, continue, switch, discontinue, and re-adopt contraceptive methods in response to changing reproductive intentions, health status, partner support, socio-economic conditions, and service accessibility (WHO, 2022). Disparate conventional family planning indicators reveals that of primarily measure contraceptive prevalence whereas adaptive family planning examines the continuity and flexibility of contraceptive behaviour over time. This concept aligns with the World Health Organization's rights-based approach to reproductive health, which emphasizes informed choice, voluntary decision-making, and access to a broad range of contraceptive options (WHO, 2022; UN, 2010).

Universally, family planning services have expanded substantially over the past three decades. According to the United Nations Population Division, the World Contraceptive Use 2024 database reveals continued increases in the proportion of women whose need for family planning is satisfied with modern methods, reflecting sustained global investment in reproductive health services and monitoring under Sustainable Development Goal (SDG) 3.7. In addition, increased uptake of long-acting reversible contraceptives (LARCs) such as implants and intrauterine devices (IUDs); growing method switching as women adapt contraception to changing reproductive needs; increased integration of family planning into primary healthcare; expansion of community-based and self-care contraceptive services; greater emphasis on informed choice and rights-based reproductive healthcare (Nivi, *n.d.*).

Worldwide, adaptive family planning is increasingly measured through: a. contraceptive continuation b. contraceptive discontinuation c. contraceptive switching d. informed choice; method satisfaction e. unmet need for family planning. These indicators provide a more comprehensive understanding of reproductive behaviour than contraceptive prevalence alone (NDHS, 2024). However, in Nigeria, modern contraceptive use by married women between aged 15-49years has 15%, unmet needs for family planning by married women has 21%, total demand for family planning by currently married couples was 41% while awareness of modern methods by women was 92%, and informed choices of modern contraceptives users was 60%. Discontinuation rates by method occurred as 56% (Pills), 52%

(Injectables), and 18% (Implants) respectively (*ibid*; Figure 1; Table 1). The Federal Ministry of Health also reported that modern contraceptive use among married women increased from 12% (2018) to 15% (2024), demonstrating gradual national progress, although this remains below previous national targets.

1.1 Aim of the Study

The aim of this study is to determine the trends and dimensions of adaptive family planning methods among married women in Buguma City, Asai-Toru Local Government Area of Rivers State, Nigeria.

1.2 Specific Objectives of the Study

To achieve this, three (3) specific objectives were formulated *vis-à-vis*:

1. To assess the level of knowledge of adaptive family planning methods among married women in Buguma City, Asari-Toru Local Government Area of Rivers State.
2. To determine the trends in the utilization of family planning methods among married women in Buguma City.
3. To examine the dimensions of adaptive family-planning behaviour, particularly method adoption, continuation and switching among married women in Buguma City.

1.3 Construct

Thus, for the purpose of this study, adaptive family-planning behaviour refers to the dynamic process by which women initiate, continue, switch, discontinue, or re-adopt contraceptive methods in response to changing reproductive intentions, preferences, perceived benefits and side effects, partner circumstances, counselling, and service accessibility. The construct is operationalized in this study through adoption, continuation, and switching.

2.0 Implication for Rivers State and by Extension Buguma Cy

In Rivers State and by implications for Buguma City, published evidence from Rivers State demonstrates generally high awareness of family planning among women attending health facilities, but knowledge does not always translate into sustained contraceptive use because of socio-cultural, economic, and health-system barriers. For Buguma City in Asari-Toru Local Government Area, there is no recent peer-reviewed study that provides representative statistics specifically on adaptive family planning among married women. This lack of local evidence constitutes a significant research gap. Yet, Buguma's riverine setting suggests several contextual factors likely to influence adaptive contraceptive behaviour: dependence on waterways for transportation; seasonal flooding and difficult access to health facilities; periodic shortages of contraceptive commodities; cultural expectations regarding fertility and family size; partner influence on reproductive decisions; and limited availability of specialist reproductive health services.

3.0 Material and Method

The methodology is designed to generate valid, reliable, and contextually relevant evidence regarding adaptive contraceptive behaviours among married women in a riverine setting. It is informed by

Table 1: Summary Table: Global, Regional, and Nigerian Trends

Level	Key Statistics	Implication
Global	Increasing satisfaction of family planning needs with modern methods; greater emphasis on informed choice and method switching	Family planning is becoming more client-centred and adaptive.
Sub-Saharan Africa	Gradual increase in modern contraceptive use but persistent unmet need and urban–rural disparities	Access, continuity, and quality of care remain major challenges.
Nigeria	15% modern contraceptive prevalence among married women; 21% unmet need; 41% total demand; 92% awareness; pill discontinuation 56%, injectable	High awareness has not translated into sustained use, emphasizing the importance of adaptive family

	discontinuation 52%, implant discontinuation 18%	planning.
Rivers State/Buguma	Limited Buguma-specific evidence; facility-based studies show good knowledge but contextual barriers persist	A locally focused study is needed to understand adaptive contraceptive behaviours in riverine communities.

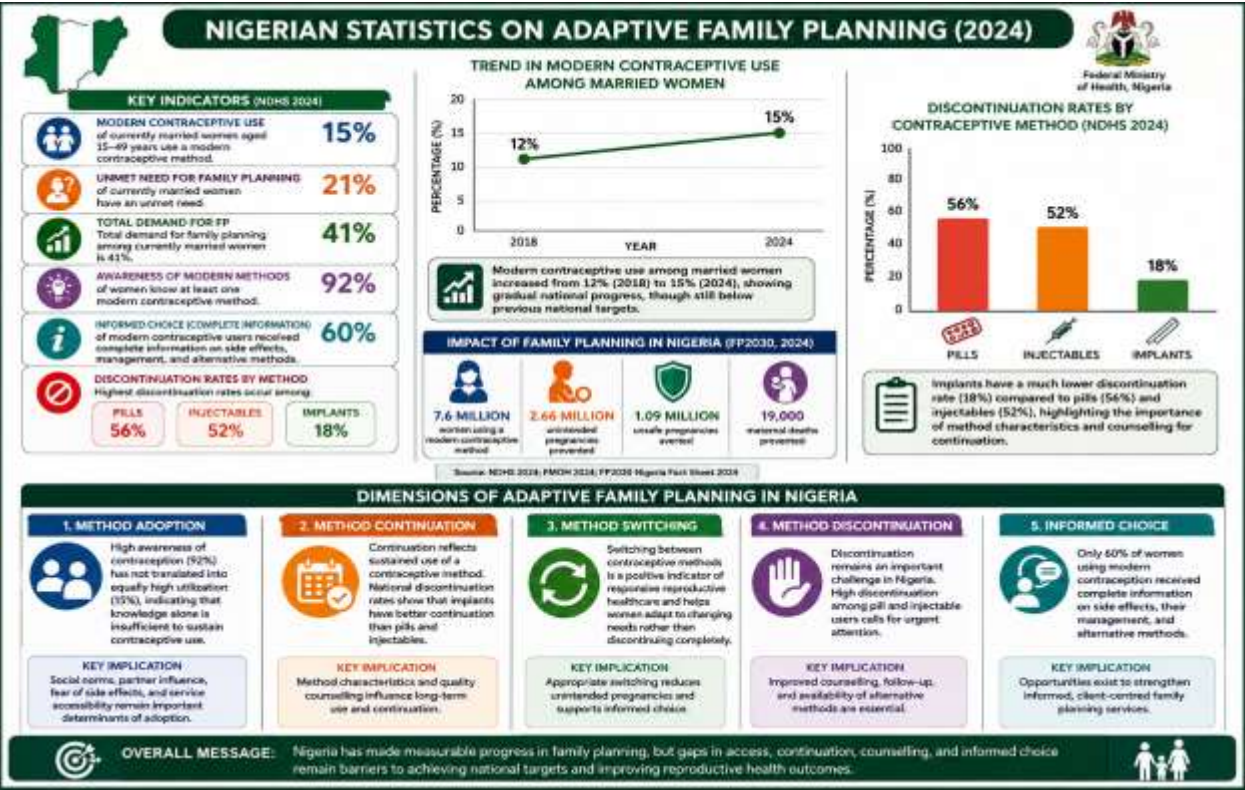


Figure 1: Nigerian Statistics on Adaptive Family Planning. Source: The Authors improved FP2030 Nigeria Country Fact Sheet (2024) recommendations for observational health research and survey methodology (Creswell & Creswell, 2023; WHO, 2022). These background realities justify the need for the present study to generate empirical evidence specific to Buguma City rather than relying on state-wide or national estimates.

3.1 Research Philosophy

The study is anchored on the pragmatic research philosophy, which recognizes that no single research method is sufficient to address complex public health phenomena. Pragmatism emphasizes selecting methods that best answer the research questions and allows the integration of quantitative and qualitative approaches (Creswell & Creswell, 2023). More so, adaptive family planning is influenced by demographic, socio-economic, cultural, behavioural, and health-system factors.

3.2 Research Design

The study adopted a community-based descriptive cross-sectional study (i.e., quantitative study). The quantitative component employs women aged 15–49 years residing in Buguma City by estimating the prevalence of adaptive family planning behaviours; identifies associated socio-demographic and health-system factors; examines relationships among study variables at one point in time; and allows hypothesis testing using inferential statistics). This design is appropriate because it is often widely used in reproductive health research because of efficiency for assessing population characteristics and behavioural patterns (Creswell & Creswell, 2023).

3.3 Participants

This includes: a. Family planning service providers b. Community health officers c. Nurses and midwives d. Traditional leaders e. Religious leaders f. Women's leaders. The qualitative findings

explain the reasons underlying contraceptive adoption, continuation, switching, discontinuation, and re-adoption among married women.

3.4 Justification for Mixed Methods

A quantitative research design was adopted for this study because the study seeks to objectively measure the trends and dimensions of adaptive family-planning behaviours among married women in Buguma City, Asari-Toru Local Government Area of Rivers State, Nigeria. The quantitative approach is also appropriate because the study aims to determine the magnitude, distribution and patterns of family-planning behaviours among the respondents.

3.5 Study Area

The study Buguma City, is the headquarters of Asari-Toru Local Government Area (LGA) of Rivers State, South-south Nigeria. Asari-Toru LGA is one of the twenty-three local government areas in Rivers State and is located within the Kalabari Kingdom of the Niger Delta. It is predominantly a riverine area characterized by creeks, mangrove forests, estuaries, and interconnected waterways. Many communities are accessible primarily by water transport, although Buguma itself also has road connections. Asari-Toru LGA lies approximately between Latitude 4°43'N and 4°58'N and Longitude 6°46'E and 7°05'E. It is bounded by Akuku-Toru LGA to the north, Degema LGA to the west, Port Harcourt City to the east, and the Atlantic coastal zone to the south. According to the 2006 National Population Census, Asari-Toru LGA had a population of 149,279. Given annual population growth, the current population is expected to be substantially higher, although updated official census figures are not yet available. Buguma City is the administrative, commercial, and educational centre of the LGA. The predominant occupations include: fishing; fish processing; farming; trading; public service; and some artisanal work. Buguma city is served by a primary healthcare centre; a general hospital, private clinics; pharmacies and patent medicine vendors; maternal and child health services. Family planning services are provided through government primary healthcare facilities and some private providers.

3.5 Study Population

The target population comprises currently married women aged 15–49 years residing in Buguma City during the study period. Women within this age range constitute the standard reproductive age group used in demographic and reproductive health surveys, including the Nigeria Demographic and Health Survey (NDHS), FMoHSW/NPC/ICP (2025) and WHO reproductive health studies (WHO, 2022).

3.6 Sample Size

Eligible married women aged 15–49 in Buguma City were used. The Taro Yamen formula is used [$S = \sqrt{N} \{1 + N(e)^2\}$ where N =Population of female eligible married women (72,900) (NPC, 2016); S = sample size; @ 95% confidence level; $e = 0.05$. Therefore, $S \approx 398$.

3.6 Inclusion Criteria

The respondents must for the study include a. be legally or traditionally married b. be aged between 15- and 49-years c. have resided in Buguma City for at least six months and d. provide informed consent to participate.

3.7 Exclusion Criteria

The following categories were excluded a. unmarried women b. visitors or temporary residents c. women who are seriously ill during data collection and d. women who decline participation.

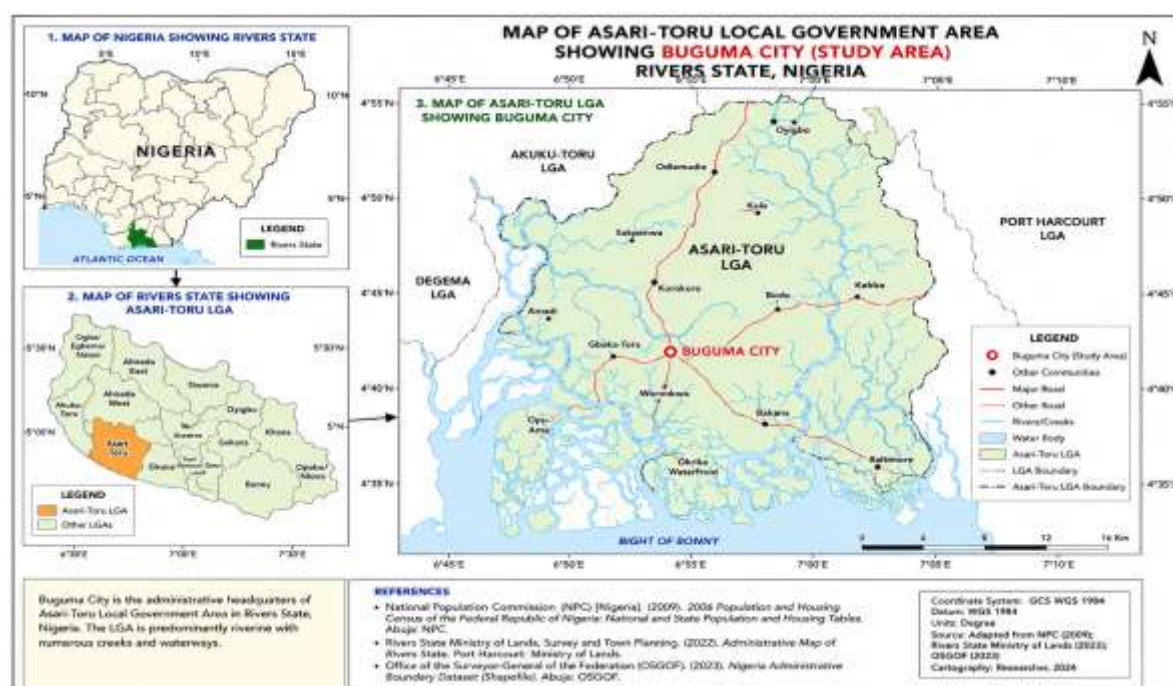


Figure 2: Map of Asari-Toru LGA SHOWING Buguma City

The map illustrates the spatial location of the study area in relation to surrounding communities, waterways, and administrative boundaries, thereby providing the geographical context for the study (NPC, 2009; OSGOF, 2023).

3.8 Unit of Analysis

The primary unit of analysis is the currently married woman of reproductive age (15–49 years).

3.9 Instrument for Sample Collection

A well-structured questionnaire in line with the specific objective and the research topic was drafted and set my supervisors for expert inputs. The questionnaire was made in sections *vi-a-vis* section A: Socio demographic characteristics. Section B: Knowledge of Adaptive Family Planning Methods, Section C: Trends in the Utilization of Family Planning Methods d. Adaptive Family Planning Behaviours respectively.

4.0 Result

4.1 Socio-Demographic Characteristics

In Table 4.1, the characteristic respondents by age revealed that 39 (9.80%) represent age bracket between 15-19years, 90 (22.60%) represents age bracket between 20-24years, 78 (19.60%) represent age bracket between 25-29years, 64 (16.08%) represent age bracket between 30-34years, 55(13.82%) represent age bracket between 35-39 years while 44 (11.06%) represent age bracket between 40-44years, and 28 (7.04%) represent age bracket between 45-49years respectively. Again, 188 (47.24%) represent Christian religion, 22 (5.53%) represent Islamic religion, 169 (42.46%) represent traditional religion, and 19 (4.77%) represent other religion correspondingly. More so, 15 (3.77%) of the respondents had no formal education, 180 (45.23%) undergo primary education while 114 (28.645) undergo secondary education, and 89 (22.36) attain tertiary educational levels.

Furthermore, 56 (14.07%) of the respondents were civil servants, 106 (26.63%) were traders, 36 (9.05%) were fisherwomen, 32 (8.04%) were farmers, 68 (17.08%) were Artisans women while 61 (15.33%) were housewife, and 39 (9.80%) were from other occupation respectively (Table 4.1). On the duration of marriage, 76 (19.10%) of the respondents represent <5years of marriage, 101(25.38%) present 5-9years of marriage, 103 (25.88%) represent 10-14years of marriage while 118 (29.64%) represent 15years and above marriage respectively (Table 4.1). Finally, on the number of living

children per women, 37 (9.30%) represent women who had no living children, 94 (23.62%) represent women who have 1-2 children, 156 (39.20%) women had 3-4 children while 111 (27.88%) women had 5 or more children correspondingly (Table 4.1).

4.2 Knowledge of Adaptive Family Planning Methods

In Table 4.2 and Figure 3, I have heard about family planning methods had 330 (82.92%), while those who have not had about it was represented by 58 (14.57%), and those who do not know about family planning had 10 (2.51%). Respondents who maintained that family planning helps couples determine the number and spacing of children was represented with 363 (91.21%), while those who say no to the item statement 2 was represented by 34 (8.54%) and those who say nothing was represented by 1 (0.25%) respectively. Those who say that modern family planning methods are available in Buguma City had frequency of 208 (52.26%) while those who do not agree to the statement has a frequency of 187 (46.99%), and who says the don't know had 4 (1.01%). Respondents who say that the use of condoms is family planning method had 361 (70.70%) while those who did not agree had 35 (8.79%), and those who do not think so to the item statement had 2 (0.50%) correspondingly. Again, injectables are modern contraceptive methods had frequency of 209 (52.51%) while those disagree had 175 (43.97%) whereas who did not think so had 14 (3.52%). Implants prevents' pregnancy for several years had 230 (57.79%) while those who say no to the item statement had 160 (40.20%) and those who did not think so had 8 (2.01%) (Table 4.2).

Intrauterine devices (IUDs) are effective contraceptive methods percentage frequency of 207 (52.01%) while those who disagree had 189 (47.49%) and those who did not think so had 2 (0.50%). Oral contraceptive pills must be taken regularly had 209 (52.51%) responses while those who disagree had 180 (45.23%) and those who did not think so had 9 (2.26%). More so, family planning can improve maternal health had 246 (61.81%), those who disagree had 144 (36.18%), and those who never thought so had 8 (2.01%) respectively. Respondents who maintained that health workers provide counselling on family planning had 228 (57.29%) while those who disagree had 167 (41.96%), and those who never thought so had 18 (4.52%). Similarly, a woman can switch from one contraceptive method to another safely under medical guidance had support of 211 (53.02%) while those who say no to the item statement had 171 (42.96%), and those who never thought so had 16 (4.02%). Finally, family planning services are available in government health facilities received support of 326 (81.91%) while those who did not agree had 68 (17.09%), and those who never thought so had 4 (1.01%) correspondingly (Table 4.2; Figure 3).

4.3 Trends in the utilization of family planning methods among married women in Buguma City.

In Table 4.3, the percentage frequency of respondents that have used family planning methods was 361 (90.70%) whereas 37 (9.30%) represents those that have not used family planning. Also, 127 (31.91%) of the respondents maintained using current family planning methods while 271 (68.09%) have not (Figure 4). Those who have used Pills had 219 (55.03%) while 179 (44.97%) have not use it, Injectables used had 146 (36.68%) while those that have not used it had 252 (63.32%). Those using Implant had 276 (69.35%) whereas 122 (30.65%) are those who are not using it. In addition, IUD user had percentage

Table 4.1: Socio-Demographic Characteristics of Respondents

S/N	Characteristics	Variables	Frequency (n)	Percentage (%)
1	Age 	 15–19 years	39	 9.80
		 20–24 years	90	 22.60
		 25–29 years	78	 19.60
		 30–34 years	64	 16.08
		 35–39 years	55	 13.82
		 40–44 years	44	 11.06
		 45–49 years	28	 7.04
		Total	398	100.00%
2	Religion 	 Christian	188	 47.24
		 Islam	22	 5.53
		 Traditional Religion	169	 43.46
		 Others	19	 4.77
		Total	398	100.00%
3	Educational Qual. 	 No formal education	15	 3.77
		 Primary education	180	 45.23
		 Secondary education	114	 28.64
		 Tertiary education	89	 22.36
		Total	398	100.00%
4	Occupation 	 Civil service	56	 14.07
		 Trader	106	 26.63
		 Fisher women	36	 9.05
		 Farmer	32	 8.04
		 Artisan	68	 17.08
		 Housewife	61	 15.33
		 Others	39	 9.80
		Total	398	100.00%
5	Duration of Marr. 	 Less than 5 years	76	 19.10
		 5–9 years	101	 25.38
		 10–14 years	103	 25.88
		 15 years and above	118	 29.64
		Total	398	100.00%
6	Number of children 	 None	37	 9.30
		 1–2	94	 23.62
		 3–4	156	 39.20
		 5 or More	111	 27.88
		Total	398	100.00%
Educational Qual. = Educational Qualification; Duration of Marr. = Duration of Marriage.				

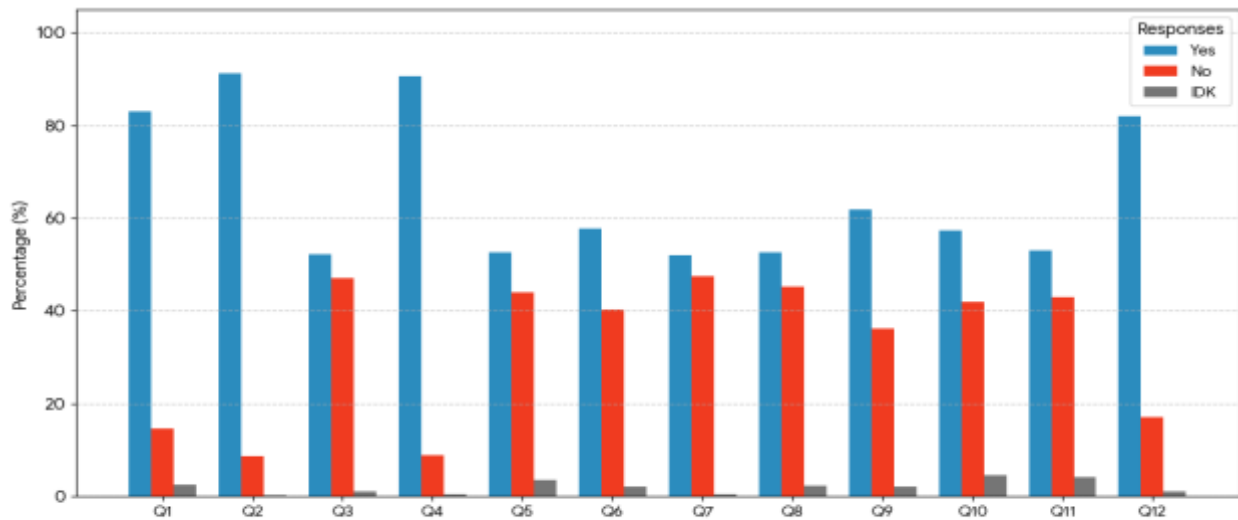


Figure 3: Respondents on Knowledge of Adaptive Family Planning methods.

frequency of 159 (39.95%) whereas those not using it had 239 (60.05%) correspondingly. Condom usage had 327 (82.16%) whereas non-condom usage had 71 (17.84%) respectively. Furthermore, Natural method user had 271 (68.09%) while those who do not use natural method had 127 (31.91%). Those who Permanent method had 07 (01.76%) whereas those not utilizing permanent method had 391(98.24%), and those using other methods outside the listed methods had percentage frequency of 101 (25.38%) while those who not used this method had 297 (74.62%) respectively (Table 4.3; Figure 5).

Table 4.2: Respondents on Knowledge of Adaptive Family Planning Methods

S/No.	Questionnaire Items	Yes	No	IDK
1.	I have heard about family planning methods.	330 (82.92%)	58 (14.57%)	10 (2.51%)
2	Family planning helps couples determine the number and spacing of children.	363 (91.21%)	34 (8.54%)	1 (0.25%)
3.	Modern family planning methods are available in Buguma City.	208 (52.26%)	187 (46.99%)	4 (1.01%)
4.	Condoms are family planning methods.	361 (90.70%)	35 (8.79%)	2 (0.50%)
5	Injectables are modern contraceptive methods.	209 (52.51%)	175 (43.97%)	14 (3.52%)
6.	Implants prevent pregnancy for several years.	230 (57.79%)	160 (40.20%)	8 (2.01%)
7.	Intrauterine devices (IUDs) are effective contraceptive methods	207 (52.01%)	189 (47.49%)	2 (0.50%)
8.	Oral contraceptive pills must be taken regularly.	209 (52.51%)	180 (45.23%)	9 (2.26%)
9.	Family planning can improve maternal health	246 (61.81%)	144 (36.18%)	8 (2.01%)
10	Health workers provide counselling on family planning.	228 (57.29%)	167 (41.96%)	18 (4.52%)
11	A woman can switch from one contraceptive method to another safely under medical guidance.	211 (53.02%)	171 (42.96%)	16 (4.02%)
12	Family planning services are available in government health facilities.	326 (81.91%)	68 (17.09%)	4 (1.01%)

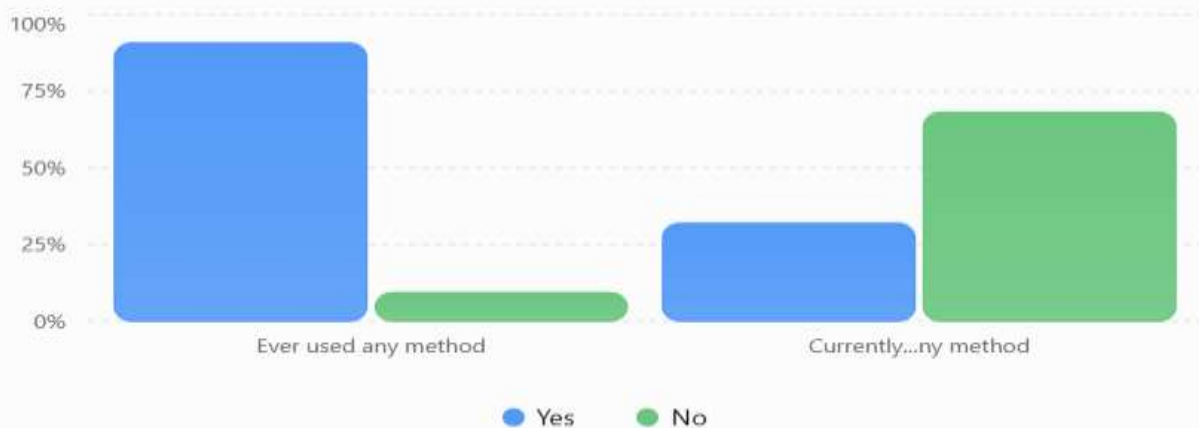
IDK = I don't know

Table 4.3: Trends in the Utilization of Family Planning Methods

S/N	Questionnaire Items	Yes (%)	No (%)
1.	Have you ever used any family planning methods?	361 (90.70%)	37 (09.30%)
2.	Are you currently using any family planning method?	127 (31.91%)	271 (68.09%)
3.	Which method are you using?		
	a. Pills	219 (55.03%)	179 (44.97%)
	b. Injectables	146 (36.68%)	252 (63.32%)
	c. Implant	276 (69.35%)	122 (30.65%)
	d. IUD	159 (39.95%)	239 (60.05%)
	e. Condom	327 (82.16%)	71 (17.84%)
	Natural method	271 (68.09%)	127 (31.91%)
	Permanent method	07 (01.76%)	391(98.24%)
	Others	101 (25.38%)	297 (74.62%)
4	Where was your current family planning method administered to you?		
	a. Government Hospital	158 (39.70%)	240 (60.30%)
	b. Primary Health Centre	359 (90.20)	39 (09.80%)
	c. Private Hospital	12 (03.02)	386 (96.98%)
	d. Pharmacy	-	398 (100%)
	e. Others	3 (00.75%)	395 (99.25%)

Utilization of Family Planning Methods

Percentage distribution of respondents who have ever used and are currently using a family planning method.



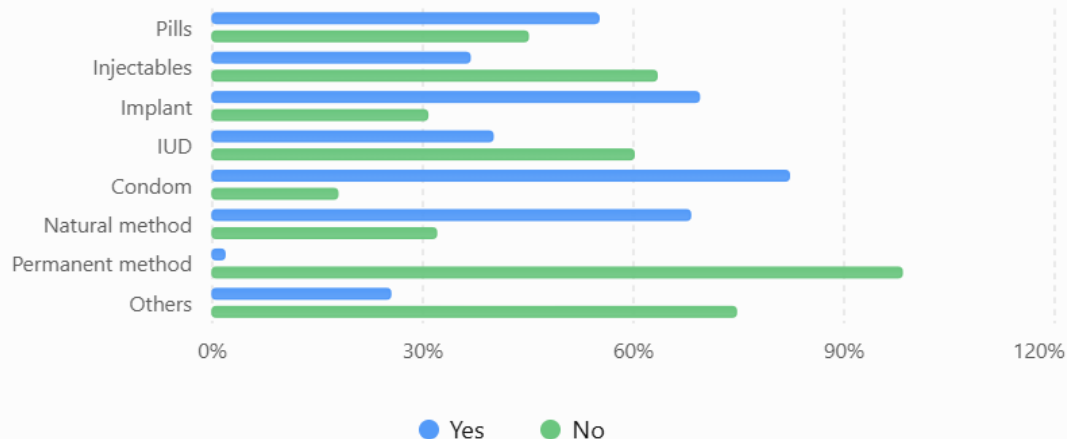
Source: Field Survey, 2026

Figure 4. Utilization of Family Planning Methods

On where the current family planning methods where administered, Table 4.3 and Figure 6 were utilized for the study. Current family planning methods administered in Government Hospital had percentage frequency of 300 (75.38%) while non- governmental hospital had 98 (24.62%),

Types of Family Planning Methods Used

Percentage distribution of respondents according to the family planning methods reported.



Source: Field Survey, 2026

Figure 5: Types of Family Planning Method used

Primary Health Centre had 359 (90.20) while non-primary health centre had 39 (09.80%), Private Hospital had 12 (03.02%) while non-private centre had 386 (96.98%). Non went to Pharmacy having a percentage frequency of 398 (100%), and others had 3 (00.75%) and non- others had 395 (99.25%) respectively (Figure 6).

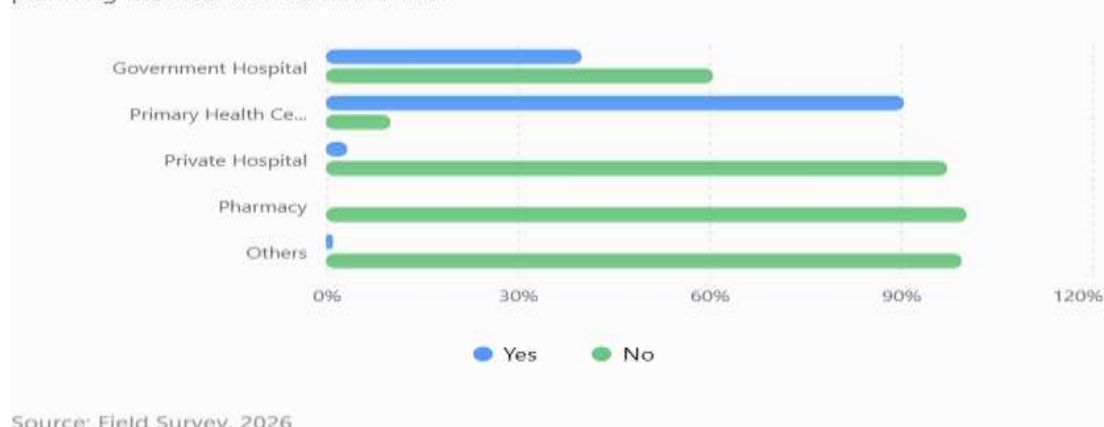
Figure 6: Place where Family Planning Method was Administered

4.4 Dimensions of Adaptive Family Planning Behaviours (method adoption, continuation, switching, discontinuation, and re-adoption) among married women in Buguma City

Table 4.4 examined adaptive family planning behaviours among the 398 respondents across three dimensions: method adoption, method continuation, and method switching. The five-point Likert scale ranged from 1 = Strongly Disagree to 5 = Strongly Agree, with a decision criterion of 3.00. Therefore, mean scores of 3.00 and above were regarded as accepted. The item-by-item analysis designates that item one statement, I adopted family planning after receiving adequate counselling recorded a total weighted score (TWS) of 1,650 and a mean score of 4.15, indicating strong agreement with the statement. Of the 398 respondents, 210 (52.76%) strongly agreed and 90 (22.61%) agreed, giving a combined positive response of 300 respondents (75.37%). In contrast, 56 (14.07%) were undecided, while 42 (10.56%) disagreed or strongly disagreed. The second item, "I carefully chose my current contraceptive method," recorded a TWS of 1,577 and a mean of 3.96. A total of 158 (39.70%) strongly agreed and 116 (29.15%) agreed, representing 274 respondents (68.85%) who expressed a positive response. Meanwhile, 90 (22.61%) were undecided, while 34 (8.54%) disagreed or strongly disagreed. Even though this item recorded the lowest mean score among the method-adoption indicators, its mean of 3.96 remains well above the acceptance criterion (Table 4.4; Figure 7). The third item assessed the role of spousal support: "My husband supported my decision to adopt family planning." It recorded a TWS of 1,660 and a mean score of 4.17. Based on the corrected percentages, 180 respondents (45.23%) agreed and 163 (40.95%) strongly agreed, giving a combined positive response of 343 respondents (86.18%). Only 25 respondents (6.28%) disagreed or strongly disagreed, while 30 (7.54%) were undecided. The first method-continuation item, "I anticipate continuing to use my current family planning method," produced a TWS of 1,658 and a mean score of 4.17. A total of 178 respondents (44.72%) strongly agreed and 166 (41.71%) agreed, resulting in a

Place of Administration of Family Planning Methods

Percentage distribution of respondents according to where their current family planning method was administered.



combined positive response of 344 respondents (86.43%). Only 36 (9.05%) disagreed or strongly disagreed, while 18 (4.52%) remained undecided. The statement “Consistent counselling encourages me to continue using family planning” recorded a TWS of 1,663 and a mean of 4.18. Specifically, 201 respondents (50.50%) strongly agreed and 107 (26.88%) agreed, giving a combined positive response of 308 respondents (77.38%). A further 58 (14.57%) were undecided, while 32 (8.04%) disagreed or strongly disagreed (Table 4.4; Figure 7).. The statement “The benefits outweigh the side effects of my current method” recorded a TWS of 1,668 and a mean score of 4.19. A total of 199 respondents (50.00%) strongly agreed and 121 (30.40%) agreed, giving a combined positive response of 320 respondents (80.40%). Forty-nine (12.31%) were undecided, while 29 (7.29%) disagreed or strongly disagreed. The first method-switching item, “I have changed from one family planning method to another,” recorded a TWS of 1,690 and a mean of 4.25. A total of 186 respondents (46.73%) strongly agreed and 153 (38.44%) agreed, representing 339 respondents (85.18%) with positive responses. Thirty-eight (9.55%) were undecided, while 21 (5.28%) disagreed or strongly disagreed. The statement “Health workers assisted me in opting for another method” recorded the highest mean score in the entire table, 4.33, with a TWS of 1,724. A total of 207 respondents (52.01%) strongly agreed and 136 (34.17%) agreed, giving a combined positive response of 343 respondents (86.18%). Only 14 (3.52%) disagreed or strongly disagreed, while 41 (10.30%) were undecided. The final item, “Switching improved my satisfaction with family planning,” recorded a TWS of 1,686 and a mean score of 4.24. The results show that 180 respondents (45.23%) agreed and 169 (42.46%) strongly agreed, giving a combined positive response of 349 respondents (87.69%). Thirty-one (7.79%) were undecided, while 18 (4.52%) disagreed or strongly disagreed (Table 4.4; Figure 7).

5. Discussion

5.1 Knowledge of Adaptive Family Planning Methods among Married Women in Buguma City

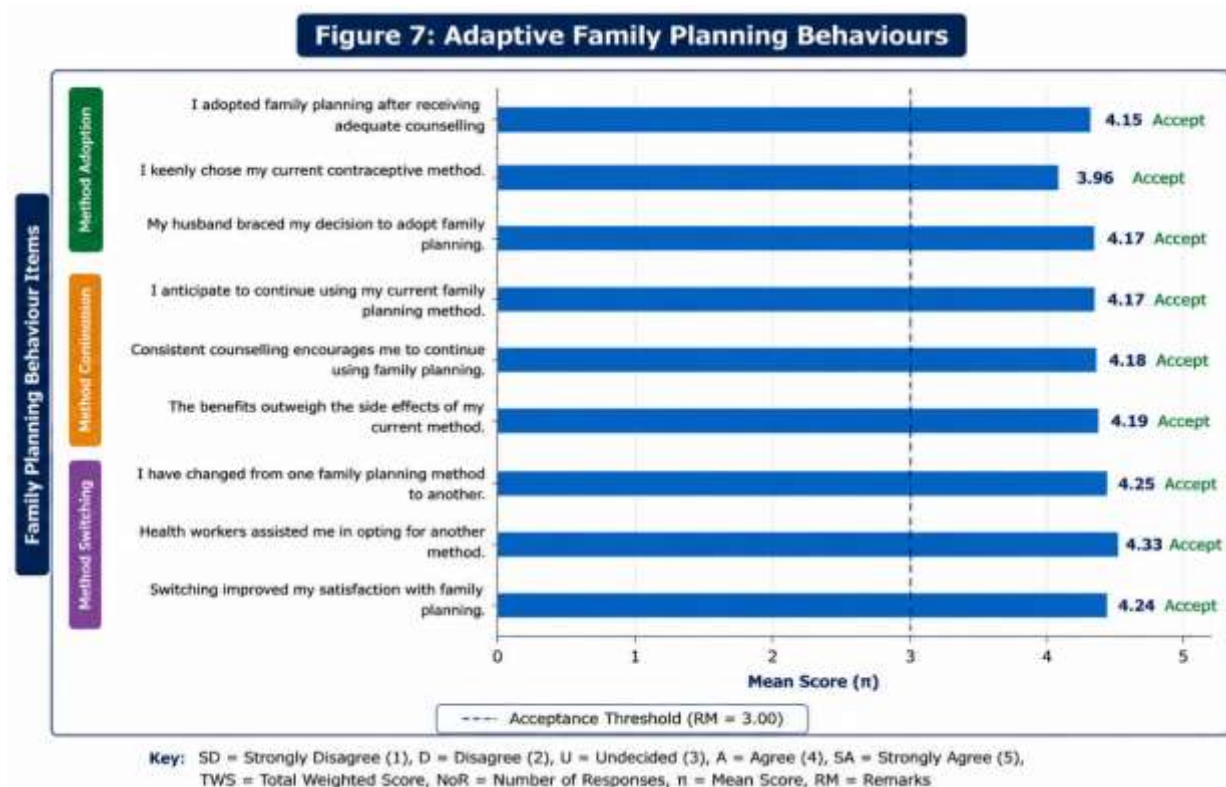
According to the World Health Organization (WHO), “Family Planning” allows individuals and couples to do in advance and attain their desired number of children and the spacing and timing of their births (Briggs & Abo 2024; Matovu et al., 2017; Wanyenze et al., 2013). Family planning is achieved through contraceptive methods and the treatment of involuntary infertility (Elizabeth et al., 2002). The first objective assessed the level of knowledge of adaptive family planning methods among married women in Buguma City. The findings indicate a generally high level of awareness and knowledge. A large majority, 330 (82.92%), reported that they had heard about family planning methods, while 363 (91.21%) recognized that family planning helps to space births. Similarly, 361 (90.70%) identified condoms as a family planning method, 209 (52.51%) recognized injectables as modern contraceptive methods, and 230 (57.79%) identified implants as methods that prevent pregnancy.

Table 4.4: Adaptive Family Planning Behaviours

Meth .	Item Statement	SD (1)	D (2)	U (3)	A (4)	SA (5)	TW S	No R	Mea n (x̄)	Decisio n
Met. Ado.	I adopted family planning after receiving adequate counselling	12 (3.02%)	30 (7.54%)	56 (14.07%)	90 (22.61%)	210 (52.76%)	1650	398	4.15	Accepte d
	I carefully chose my current contraceptive method.	15 (3.77%)	19 (4.77%)	90 (22.61%)	116 (29.15%)	158 (39.70%)	1577	398	3.96	Accepte d
	My husband supported my decision to adopt family planning.	15 (3.77%)	10 (2.51%)	30 (7.54%)	180 (43.37%)	163 (45.23%)	1660	398	4.17	Accepte d
Me. C.	I anticipate continuing to use my current family planning method.	22 (5.53%)	14 (3.52%)	18 (4.52%)	166 (41.71%)	178 (44.72%)	1658	398	4.17	Accepte d
	Consistent counselling encourages me to continue using family planning.	08 (2.01%)	24 (6.03%)	58 (14.57%)	107 (26.88%)	201 (50.50%)	1663	398	4.18	Accepte d
	The benefits outweigh the side effects of my current method.	16 (4.02%)	13 (3.27%)	49 (12.31%)	121 (30.40%)	199 (50.00%)	1668	398	4.19	Accepte d
Me. Sw.	I have changed from one family planning method to another.	08 (2.01%)	13 (3.27%)	38 (9.55%)	153 (38.44%)	186 (46.73%)	1690	398	4.25	Accepte d
	Health workers assisted me in opting for another method.	06 (1.51%)	08 (2.01%)	41 (10.30%)	136 (34.17%)	207 (52.01%)	1724	398	4.33	Accepte d
	Switching improved my satisfaction with family planning.	08 (2.01%)	10 (2.51%)	31 (7.79%)	180 (45.23%)	169 (42.46%)	1686	398	4.24	Accepte d

Meth. = Method, Met. Ado. =Method Adoption, Met. C.=Method Continuation, Met. Sw.=Method Switching, SD=Strongly Disagree, D=Disagree, U=Undecided, A=Agree, SA=Strongly Agree., TWS=Total weighted score, NoR=Number of respondents, Mean ($\bar{x}$)=Mean score., Decision criterion: Mean ≥ 3.00 = Accepted; Mean < 3.00 = Not Accepted

The high proportion of respondents who had heard about family planning and understood its role in birth spacing suggests that basic awareness of contraception is relatively widespread in the study population. This is important because informed knowledge is a prerequisite for exercising meaningful reproductive choice. WHO emphasizes that contraceptive information and services are fundamental to reproductive health and human rights and that method selection should take account of women's preferences, needs and circumstances (WHO, 2025). The finding concerning birth spacing is particularly important. More than nine out of ten respondents recognized the role of family planning in spacing births. This indicates that respondents generally understood one of the central purposes of contraception. Such knowledge can facilitate reproductive decision-making and may contribute to the adoption of methods when women are adequately supported to translate knowledge into practice. However, the knowledge findings also reveal variation across specific contraceptive methods. While recognition of condoms was very high at 90.70%, knowledge of injectables was considerably lower at 52.51%, and recognition of implants was 57.79%. This difference suggests that knowledge is not necessarily uniform across all contraceptive options. Women may be familiar with commonly discussed or readily visible methods but have less comprehensive knowledge of long-acting or provider-dependent methods. This distinction is important in interpreting the study because high general awareness does not automatically imply comprehensive contraceptive knowledge. This current study is in line with study carried out by (Ewemooje et al., 2025; Gebremariam et al., 2025; Imtishal et al., 2023).



A woman may know that family planning exists but may not know the relative advantages, disadvantages, duration, effectiveness, possible side effects, eligibility considerations, or switching options associated with individual methods. WHO's current contraceptive guidance emphasizes the

importance of appropriate information and counselling in supporting safe and effective initiation and continuation of contraceptive methods. The present finding is also consistent with the broader Nigerian situation, although national data demonstrate that knowledge and actual use remain different issues. The 2024 Nigeria Demographic and Health Survey reported that among married women, 15% were using modern contraceptive methods, while 21% had unmet need for family planning. It also found that 41% of married women had a demand for family planning (DHS 2024).
thod switching and discontinuation, as well as the importance of professional counselling

5.2 Trends in the Utilization of Family Planning Methods

One of the most striking findings was the difference between ever-use and current use. While 361 (90.70%) respondents reported that they had ever used a family planning method, only 127 (31.91%) reported current use. Thus, there exist a substantial gap between ever-use and current use. This substantial difference is an important finding for the present study because it demonstrates that family planning utilization is not simply a question of whether women have ever adopted contraception. Rather, contraceptive use appears to change over time. The difference between ever-use and current use is consistent with the conceptualization of family planning behaviour as a dynamic process involving initiation, continuation, switching and, potentially, discontinuation and re-adoption. The method-specific findings further demonstrate this diversity. Condoms were reported by 327 (82.16%), implants by 276 (69.35%), natural methods by 271 (68.09%), pills by 219 (55.03%), IUDs by 159 (39.95%), and injectables by 146 (36.68%). Permanent methods were reported by only 7 (1.76%), while 101 (25.38%) reported other methods. These findings indicate that respondents did not rely on a single contraceptive option. Instead, a range of methods was utilized, reflecting different preferences, experiences, reproductive intentions and circumstances. WHO recognizes a broad range of contraceptive options, including short-acting, long-acting reversible, barrier, fertility-awareness and permanent methods, with method selection appropriately guided by individual needs and preferences (WHO, 2025).

The relatively high reported use of condoms is noteworthy. Condoms provide pregnancy prevention and are also the only contraceptive method that provides protection against sexually transmitted infections, including HIV (WHO, 2025). The high reported ever-use of family planning compared with current use may reflect discontinuation, switching, changing reproductive intentions, method dissatisfaction, side effects, partner-related factors, access problems or movement between methods. The study's adaptive behaviour findings reinforce this interpretation because respondents reported high levels of method switching and provider-assisted movement from one method to another. At the national level, the 2024 NDHS similarly demonstrates that contraceptive utilization remains substantially lower than the underlying demand for family planning. Among married Nigerian women, 20% were using any contraceptive method, comprising 15% using modern methods and 5% using traditional methods, while 21% had unmet need (DHS, 2024). The utilization findings consequently support the argument that family planning programmes should not evaluate success solely by initial uptake. Current use, sustained use, satisfaction, switching, discontinuation and re-adoption provide a more complete picture of contraceptive behaviour.

5.3 Dimensions of Adaptive Family Planning Behaviour

The quantitative findings supplied in Table 4.4 directly assess adoption, continuation and switching. The method-adoption findings were favourable. Adoption after adequate counselling recorded a mean of 4.15, while careful choice of the current contraceptive method recorded 3.96, and husband support for adoption recorded 4.17. The mean of 4.15 for counselling indicates that respondents perceived adequate counselling as an important component of their decision to adopt family planning. This is consistent with the WHO emphasis on informed contraceptive choice and quality counselling as components of effective contraceptive services (WHO, 2025). The mean of 3.96 for careful method choice, although the lowest within the adoption dimension, remained above the 3.00 decision criterion. This suggests that most respondents considered their choice of method deliberate. Nevertheless, the lower score compared with counselling and spousal support suggests that individual method choice may still be influenced by availability, provider recommendations, perceived side effects, cost, convenience, partner preferences and other contextual factors. Husband support recorded a mean of 4.17, with 86.18% agreeing or strongly agreeing. This finding demonstrates the relevance

of male involvement in contraceptive decision-making among married women. The 2024 NDHS similarly reported that 67% of married women make the decision to use or not use family planning, including 37% deciding alone and 29% deciding jointly with their husband or partner (DHS, 2024).

The continuation dimension also produced consistently high scores. Intention to continue using the current method recorded a mean of 4.17, consistent counselling recorded 4.18, and the perception that benefits outweigh side effects recorded 4.19. These findings suggest that continuation is influenced not merely by initial adoption but by women's subsequent experiences with the method. In particular, the high score for consistent counselling indicates that family planning services need to remain available after method initiation. Counselling can help users understand expected side effects, address concerns and determine whether continued use or switching is most appropriate. WHO identifies fear of side effects, misinformation, social opposition and poor-quality services among barriers that may discourage contraceptive use (WHO, 2025). Thus, the relatively high mean of 4.19 suggests that most respondents had a favourable perception of their current methods, but the respondents who were undecided or disagreed should not be overlooked.

Similarly, Method switching was the strongest dimension in the available Table 4.4 findings. Changing from one method to another recorded a mean of 4.25, health-worker assistance in selecting another method recorded the highest overall mean of 4.33, while improved satisfaction following switching recorded 4.24. These findings are particularly significant to the concept of adaptive family planning. Switching should not automatically be interpreted as contraceptive failure or inappropriate use. Rather, it may represent a rational response when a woman's reproductive needs, preferences, satisfaction or tolerance of a method changes. The mean of 4.33 for health-worker assistance demonstrates the importance of providers in facilitating this adaptation. WHO's current Selected Practice Recommendations (SPR) emphasize safe and effective contraceptive initiation and continuation, management of problems during use, and implementation considerations across a range of contraceptive methods (WHO, 2025). The high score of 4.24 for improved satisfaction following switching further suggests that method switching can improve contraceptive experience. This has important implications for service delivery: women should have access to a range of methods and should be able to change methods when the current option does not meet their needs.

6. Summary of Findings

The study involved 398 respondents and utilized a structured questionnaire covering socio-demographic characteristics, knowledge, utilization and adaptive family planning behaviours. The major findings were as follows:

1. Knowledge of family planning was generally high.
2. Knowledge of method switching was moderate.
3. Previous family planning utilization was very high.
4. Current utilization was considerably lower.
5. Several methods were reported as utilized.
6. Primary Health Centres were important sources of family planning services.
7. Method adoption was positively reported.
8. Continuation behaviour was favourable.
9. Switching was a prominent adaptive behaviour.
10. Overall, the findings demonstrate that adaptive family planning is an important dimension of contraceptive behaviour in Buguma City.

7. Conclusion

Based on the findings of the study, it can be concluded that married women in Buguma City possess relatively high general awareness of family planning, but this knowledge does not correspond proportionately with current contraceptive utilization. The very high proportion of women who had previously used family planning compared with the relatively low proportion currently using a method demonstrates a substantial gap between exposure and sustained utilization. This finding indicates that increasing awareness alone may not be sufficient to achieve sustained contraceptive use. Furthermore, adaptive family planning behaviour is evident among married women in Buguma City, particularly through method adoption, continuation and switching. Counselling and health-worker support appear to be important driver elements of this process, while partner support also plays a

noteworthy role in method adoption. Thus, findings support a paradigm shift from viewing family planning as exclusively in terms of contraceptive prevalence to understanding it as a dynamic process of informed method selection, continuation, switching and adjustment to changing reproductive needs.

8. Recommendations

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

1. Strengthen comprehensive family planning counselling
2. Promote continuous rather than one-time counselling
3. Strengthen the role of Primary Health Centres
4. Promote informed method choice
5. Institutionalize safe method switching
6. Increase male/partner involvement
7. Address the knowledge gaps concerning specific contraceptive methods
8. Strengthen community-based family planning services
9. Improve continuity and follow-up mechanisms
10. Improve availability of contraceptive commodities
11. Strengthen reproductive health education at community level
12. Conduct further research on discontinuation and re-adoption
13. Undertake analytical studies on determinants of adaptive family planning
14. Develop a Buguma-specific adaptive family planning programme

9. Practical and Policy Implications

The findings have important implications for reproductive health policy and practice in Rivers State. The major policy message is that high awareness should not be interpreted as equivalent to successful family planning utilization. The difference between the 90.70% who had ever used a method and the 31.91% who were currently using one demonstrates the importance of examining continuity and adaptation. At the service-delivery level, family planning programmes should therefore be evaluated not only by the number of new contraceptive users but also by indicators such as continuation, satisfaction, switching, informed choice and access to alternative methods.

10. Conflict of Interest

Authors maintained no conflict of interest

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