FULafia Journal of Sociological Studies
Department of Sociology Federal University of Lafia
https://fulafiajss.org
E(Online)ISSN: 3141-1797
Print ISSN: 2580-1760

Knowledge And Utilization Of Modern Family Planning Among Women Of Reproductive Age In Nasarawa Southern Senatorial Zone

[1]**Elizabeth** Njo Obimbua, [2]**David** B. Ugal PhD, [2]**Ibrahim** Usman PhD,
[2]**Dorothy** Akpovye Bage-John PhD, [1]**Akeem** Olalekan Ayub PhD
[1] Department of Sociology, Federal University Gusau, Zamfara State, Nigeria
[2] Department of Sociology, Federal University of Lafia, Nasarawa State, Nigeria

Abstract

Access to accurate and contextually appropriate information on modern family planning (FP) remains a critical determinant of reproductive decision-making among women of reproductive age. This study examined the extent to which awareness influences the utilisation of modern family planning methods among women aged 15-49 years in the Nasarawa Southern Senatorial Zone, Nigeria. A mixed-methods design was employed, integrating quantitative survey data with qualitative insights from key informant interviews to ensure triangulation and contextual depth. A total of 1,067 respondents were selected through a multistage sampling procedure covering all five Local Government Areas in the zone. Quantitative data were collected using structured questionnaires, while qualitative data were obtained through key informant interviews with relevant reproductive health stakeholders. Findings indicate that awareness of modern family planning methods in the study area is moderate, with 46.6% of respondents demonstrating adequate awareness. Although approximately fifteen modern contraceptive options exist, respondents were familiar with only eight key methods, including emergency contraceptive pills, combined oral contraceptives, vaginal rings, injectables, implants, intrauterine devices (IUDs), lactational amenorrhoea method and female sterilisation. Statistical analysis confirms that awareness significantly influences utilisation across most contraceptive methods, indicating that awareness-knowledge is a significant predictor of use, though its effect is method-dependent. Despite this relationship, utilisation remains concentrated in only two methods, injectables and implants, suggesting that awareness does not translate uniformly into diversified contraceptive practice. The study concludes that while awareness exerts a statistically significant influence on utilisation, it is not independently sufficient to ensure comprehensive or optimal use of modern family planning methods. Structural, cultural and service delivery barriers continue to mediate the awareness-behaviour pathway, limiting method choice and uptake. The study recommends strengthened and culturally responsive health communication strategies across healthcare facilities, community platforms and mass media, with emphasis on local language delivery, community theatre and participatory outreach approaches. Improved provider-client counselling and expanded access to a wider range of contraceptive options are essential to reducing unmet family planning needs and enhancing informed reproductive autonomy.

Keywords: Awareness; Contraceptive Methods; Family Planning; Reproductive Health; Utilisation

Introduction

Family planning remains a fundamental component of sexual and reproductive health, with far-reaching implications for women's wellbeing, child health and socio-economic development. It enables women and couples to determine the number and spacing of their children, thereby reducing the risks associated with unintended pregnancies and improving overall quality of life. Despite the availability of a wide range of modern contraceptive methods across many health systems, utilisation continues to vary considerably, particularly in low- and middle-income settings. A central issue underpinning this variation is the extent to which women possess adequate and functional knowledge of available family planning options. Knowledge of modern family planning extends beyond mere awareness of its existence; it involves understanding the types of methods available, their mechanisms, benefits, possible side effects and suitability within specific personal and cultural contexts. Where such knowledge is limited, women may be unable to make informed reproductive choices, even when services are physically accessible.

Kennedy et al. (2011) reported that poor knowledge of family planning services can significantly hinder utilisation. In some contexts, women may have heard about family planning but lack sufficient understanding of the diversity of methods and how to use them effectively, which in turn affects uptake. Khan

et al. (2022) found that both awareness and utilisation of temporary contraceptive methods were low among women in Southern India. In contrast, other settings report high levels of awareness without a corresponding level of use, indicating that knowledge alone does not automatically translate into practice (Alenezi & Haridi, 2021). This suggests that the quality and depth of knowledge, rather than simple awareness, are critical in shaping utilisation patterns. Across Africa, family planning programmes have expanded considerably over the years, leading to widespread awareness of contraceptive methods. However, utilisation has not kept pace with this awareness. Alahaji (2018) reports that although many women are familiar with family planning, actual use remains limited. This pattern reflects a broader challenge in which awareness does not necessarily equate to informed choice or consistent use. In several contexts, women's knowledge is often restricted to a few commonly known methods, while other options remain poorly understood. Such limitations can constrain method choice and contribute to low uptake or discontinuation.

Nigeria reflects this broader pattern, where awareness of family planning is relatively high, yet utilisation of modern contraceptive methods remains comparatively low. Studies have shown that although many women report having heard about family planning, only a smaller proportion demonstrate adequate knowledge or actively use modern methods (Anate et al., 2021). At the same time, evidence suggests that where women possess better knowledge of contraceptive options, utilisation tends to improve (Orji et al., 2023). National data further indicate only modest progress in contraceptive uptake. The National Demographic and Health Survey reports a slight increase in overall contraceptive use among married women, yet modern contraceptive prevalence remains low at 12% among women aged 15-49 years (NDHS, 2018). This persistent gap highlights the need to interrogate not only whether women are aware of family planning, but also the extent and nature of their knowledge. In response to these challenges, the Nigerian government and its partners have implemented various programmes aimed at increasing awareness and improving access to family planning services through health facilities, community outreach and media campaigns. While these efforts have contributed to improved visibility of family planning, they have not sufficiently addressed issues such as misconceptions, limited method-specific knowledge and socio-cultural barriers that shape reproductive decision-making. As a result, many women may still lack the necessary information to make informed choices from the full range of available contraceptive options.

The persistence of low utilisation despite widespread awareness raises important questions regarding the relationship between knowledge and the use of modern family planning methods. In particular, there is a need to move beyond general measures of awareness to examine whether women are adequately informed about different contraceptive methods and how this influences their utilisation behaviour. This concern is especially relevant in settings characterised by both rural and urban populations, where access to information and services may vary significantly. It is within this context that this study examines the knowledge and utilisation of modern family planning methods among women of reproductive age in the Nasarawa Southern Senatorial Zone. The study is motivated by the need to understand how levels of awareness influence utilisation patterns and to identify potential gaps in knowledge that may hinder effective use. Specifically, the study seeks to assess the level of awareness of modern family planning methods and analyse its effect on their utilisation among women in the study area.

Research Objectives

i. To assess the level of awareness of modern family planning methods among women of reproductive age in Nasarawa Southern Senatorial Zone.
ii. To identify the specific modern contraceptive methods women of reproductive age are aware of in the study area.
iii. To examine the modern family planning methods commonly utilised by women of reproductive age in Nasarawa Southern Senatorial Zone.
iv. To determine the relationship between awareness of modern family planning methods and their utilisation among women of reproductive age in the study area.

Hypothesis

i. H_0: There is no significant relationship between the level of awareness of women and modern family planning method and use.

Literature Review

Family planning remains a core component of global reproductive health policy, particularly in relation to reducing unintended pregnancies, improving maternal outcomes and enhancing women's autonomy. Recent global evidence indicates that while awareness of modern contraceptive methods is nearly universal in many regions, utilisation continues to lag behind knowledge, particularly in low- and middle-income countries. The World Health Organization (WHO, 2023) reports that unmet need for contraception remains significant among women of reproductive age, especially in sub-Saharan Africa, where structural and informational

barriers persist. Similarly, United Nations Population Fund (UNFPA, 2023) emphasises that awareness alone is insufficient unless accompanied by accurate, method-specific knowledge and accessible services. These global perspectives highlight a persistent disconnect between information exposure and behavioural adoption. However, they are often limited by aggregated global indicators that fail to explain intra-country variation in awareness depth and method-specific utilisation patterns, creating an analytical gap that necessitates context-specific empirical investigation.

In South Asia, recent empirical evidence demonstrates that contraceptive awareness does not automatically translate into utilisation. A study conducted by Khan et al. (2022) in Pakistan using a cross-sectional household survey found that although over 85% of women reported awareness of at least one contraceptive method, only 37% reported current usage. The study employed multivariate logistic regression and identified education and spousal approval as key predictors of utilisation. While methodologically robust, the study operationalised awareness broadly without distinguishing between types of contraceptive knowledge. This limits its explanatory precision regarding method-specific adoption patterns. The study therefore reinforces the argument that awareness is multidimensional, requiring deeper conceptualisation beyond simple recognition. Its findings are relevant to the present study as they highlight the importance of examining not only whether women are aware of contraception but also which specific methods they understand and how this shapes utilisation behaviour.

In East Africa, a study by Teshome et al. (2022) in Ethiopia examined family planning awareness and utilisation among reproductive-age women using a community-based cross-sectional design. The study found that although 92% of respondents had heard of at least one modern contraceptive method, only 41% were current users. The analysis revealed that exposure to health extension workers significantly increased utilisation, suggesting that interpersonal communication plays a stronger role than passive awareness. However, the study is limited by its reliance on self-reported awareness measures, which may overestimate actual knowledge levels. It also does not disaggregate awareness across different contraceptive technologies. This creates a methodological gap in understanding whether women are truly informed about method diversity or merely familiar with general terminology. The implication for the present study is that awareness must be examined at a disaggregated level to accurately capture its behavioural influence. In West Africa, particularly Ghana, evidence from Agyemang et al. (2023) shows that contraceptive utilisation is shaped by both awareness and socio-cultural constraints. Using a nationally representative survey, the study found that although awareness of modern contraceptives exceeded 90%, only 52% of women reported current use. The study employed logistic regression modelling and identified partner communication and religious norms as significant predictors of uptake. A key limitation is that awareness was treated as a binary variable, which does not reflect variation in depth of understanding across methods. This weakens the ability to explain why certain methods are preferred over others. The study's findings highlight an important contradiction: high awareness does not eliminate behavioural resistance, particularly in contexts where reproductive decision-making is socially negotiated. This gap supports the need for method-specific analysis of awareness and utilisation.

In Nigeria, recent empirical research continues to demonstrate a persistent gap between awareness and contraceptive use. A study by Olatunji et al. (2023) using Nigeria Demographic and Health Survey data found that while over 95% of women had knowledge of at least one contraceptive method, only 17% were using modern contraception. The study applied multilevel logistic regression and identified education, wealth index and urban residence as key determinants. However, its limitation lies in the aggregation of awareness into a single indicator, which conceals variation across contraceptive types. This is particularly important in Nigeria, where method preference is often concentrated around injectables and oral pills. The study therefore fails to explain how awareness distribution across methods influences utilisation choices, creating a critical gap that the present study addresses through method-specific assessment. Evidence from northern Nigeria by Yusuf et al. (2022) demonstrates that interaction with the health system plays a decisive role in translating awareness into contraceptive use, as women who received structured counselling at health facilities were significantly more likely to adopt modern methods. The study further revealed that misconceptions, fear of side effects and partner disapproval often undermine utilisation despite awareness. However, its facility-based sampling limits generalisability to community populations and the absence of method-specific disaggregation constrains insight into differential uptake. At the policy level, evaluations by the Federal Ministry of Health (2022) indicate that although family planning programmes have expanded through primary healthcare integration and community outreach, modern contraceptive prevalence remains below national targets. The report highlights a persistent gap between awareness campaigns and behavioural outcomes but provides limited empirical explanation for this disconnect.

Theoretical Framework

This study is anchored on Social Cognitive Theory (SCT), developed by Bandura (1986), as a middle-range sociological framework for explaining the relationship between awareness and utilisation of modern family planning methods among women of reproductive age. SCT conceptualises human behaviour as the result of a dynamic and reciprocal interaction between personal cognitive factors, behavioural patterns and environmental influences. In health behaviour research, SCT has been widely applied to explain why health knowledge does not automatically translate into practice, particularly in reproductive and sexual health contexts where social and structural constraints are significant (Bandura, 1986). Within the framework of SCT, awareness of modern family planning methods represents the cognitive component of behaviour change. It includes knowledge of contraceptive options, understanding of their use, perceived benefits and perceived risks. However, SCT emphasises that knowledge alone is insufficient to produce behavioural change unless reinforced by self-efficacy, which refers to an individual's belief in their ability to successfully perform a behaviour under specific conditions (Bandura, 2004). In this study, utilisation of modern family planning methods is conceptualised as the behavioural outcome, while awareness functions as an initial cognitive input that interacts with environmental and personal determinants.

The environmental dimension of Social Cognitive Theory is central to understanding contraceptive behaviour in low-resource settings, where access to services, quality of counselling, partner dynamics, religious norms and socio-cultural expectations can either enable or constrain the translation of awareness into utilisation. Evidence indicates that even where awareness is relatively high, utilisation remains limited when structural barriers such as weak service delivery systems and socio-cultural resistance persist (World Health Organization, 2023), reinforcing the view that behaviour is shaped through interaction between cognition and environment rather than knowledge alone. Observational learning further explains how women acquire contraceptive knowledge through peers, community interactions and healthcare providers, with socially shared experiences shaping perceptions of safety and acceptability (Bandura, 1986). Self-efficacy also plays a decisive role, as women may be aware of contraceptive methods but lack the confidence to access services, manage side effects or negotiate use within intimate relationships, particularly in contexts marked by gendered power imbalances. This helps explain the preference for provider-controlled methods such as injectables and implants over user-dependent options. The principle of reciprocal determinism captures this dynamic interplay, where awareness influences utilisation, while lived experiences and social feedback continuously reshape knowledge and behaviour over time.

In relation to the objectives of this study, SCT provides a structured explanation for understanding how awareness of modern family planning methods translates into utilisation behaviour. It demonstrates that awareness is necessary but not sufficient for contraceptive use, as behavioural outcomes are shaped by the interaction of cognitive understanding, self-efficacy and environmental constraints. This makes the theory particularly suitable for explaining method-specific differences in utilisation observed among women in Nasarawa Southern Senatorial Zone. Social Cognitive Theory offers a comprehensive middle-range sociological framework for this study by integrating cognitive, behavioural and environmental determinants of contraceptive use. It explains the persistent gap between awareness and utilisation of modern family planning methods and highlights the importance of contextual and psychological factors in shaping reproductive behaviour. This theoretical lens therefore provides a strong analytical foundation for examining contraceptive knowledge and utilisation patterns in the study area.

Methodology

A cross-sectional survey design was adopted due to its suitability for generating population-level data at a single point in time. This design facilitated efficient assessment of knowledge and utilisation of modern family planning methods among women of reproductive age, while reducing time and cost constraints. A mixed-methods approach was integrated to enhance analytical depth and enable triangulation of quantitative and qualitative evidence. The study was conducted in Nasarawa Southern Senatorial Zone, comprising five Local Government Areas (Awe, Doma, Keana, Lafia and Obi), all of which were included to ensure full geographical coverage. Based on 2006 census projections, the 2023 estimated population of women aged 15-49 years was 101,350, forming the sampling frame. The minimum sample size was determined using Cochran's formula $n_0 = (Z^2pq) / e^2$, where Z is 1.96 at 95% confidence level, p is 0.5 to maximise variability, q is 1 – p and e is 0.03 margin of error. This computation produced an initial estimate that was adjusted to 1,067 respondents to improve statistical reliability, representativeness and accommodate potential non-response, given the heterogeneous nature of the population. Multistage sampling was employed. The five LGAs served as primary clusters, followed by random selection of five wards per LGA, yielding 25 wards in total. Proportional allocation was then applied to distribute respondents across LGAs

based on population size, resulting in 143 (Awe), 177 (Doma), 108 (Keana), 445 (Lafia) and 194 (Obi), summing to 1,067 participants. In the fourth stage, the allocated sample for each LGA was evenly distributed across its five selected wards, producing an average range of approximately 22 to 89 respondents per ward depending on population weight. Households within each ward were selected using systematic sampling with a fixed interval of every third household from a central reference point. In the final stage, one eligible respondent per household was selected; where multiple eligible women aged 15-49 years were present, simple random selection was applied, while households with a single eligible respondent were included directly.

Data were collected using a structured questionnaire divided into four sections: socio-demographic characteristics, socio-economic status, knowledge of modern family planning methods and utilisation patterns. To complement the quantitative data, Key Informant Interviews (KIIs) were conducted to provide contextual insights. A total of 15 participants (three per LGA) were purposively selected from among women with experience in using modern contraceptive methods. The interviews, guided by a semi-structured instrument, allowed for in-depth exploration of knowledge, perceptions and utilisation experiences. Each session lasted approximately 45 minutes and was audio-recorded with supplementary note-taking. Data collection was carried out by the researcher with the assistance of five trained research assistants familiar with the local context. Quantitative data were analysed using the Statistical Package for Social Sciences (SPSS) version 26. Descriptive statistics, including frequencies, means and standard deviations, were used at the univariate level, while the chi-square test was employed at the bivariate level to examine associations between variables. Qualitative data were transcribed verbatim and analysed using content analysis, with emerging themes used to complement and interpret the quantitative findings.

Results

Table 1: Level of awareness of modern contraceptives among women

Extent of awareness of modern family planning	Frequency	Percent
Highly aware	228	22.4
Moderately aware	478	46.6
Low awareness	319	31.1
Total	Total	Total

Source: Field Survey, 2025

Table 1 shows that awareness of modern contraceptives is largely moderate (46.6%), with only 22.4% reporting high awareness and 31.1% demonstrating low awareness. While this may suggest some level of information diffusion, the low proportion of highly aware women indicates limited depth and comprehensiveness of knowledge. In this context, moderate awareness likely reflects partial or selective understanding rather than informed familiarity with the full range of methods and their use. The sizeable proportion of low awareness further reveals persistent informational gaps, suggesting that existing communication strategies have not achieved broad or equitable reach. This pattern underscores a critical limitation in the effectiveness of awareness as currently constituted, with implications for informed decision-making and contraceptive uptake. The qualitative evidence provides further insight into the nature of this "moderate awareness." Narratives from the Key Informant Interviews reveal that women's knowledge is often confined to a few widely known methods, particularly oral contraceptives and emergency pills. For instance, a 28-year-old participant noted:

> "I don't know much about the different types of modern contraceptives that are out there but I am well aware of the emergency contraceptive pills and combined oral contraceptive... I have not approached any clinic for family planning."

Similarly, a 42-year-old respondent emphasised the dominance of oral pills in local knowledge systems:

> "Oral pills are the most common method that a lot of women know in this community. It is what people have been hearing about for a long time and what is mostly discussed when family planning is mentioned. Compared to other methods, it is more familiar and easier for women to recognise."

The findings indicate that awareness of modern contraceptive methods is uneven and shaped by accessibility and informal information channels. Easily accessible and commonly discussed methods tend to dominate knowledge, while provider-dependent options such as implants and intrauterine devices are less well understood. This suggests limited engagement with formal health services and constrains the depth of contraceptive knowledge. As a result, awareness is largely passive, with many women recognising methods without the confidence or guidance to use them. This gap highlights that awareness alone is insufficient to drive utilisation and must be complemented by deeper understanding and supportive health system structures.

Table 2: Modern Methods of Family Planning Women are Aware of (Multiple Response)

S/N	Variable	Frequency (N)	Percentage (%)
1	Female condom	83	8.1
2	Contraceptive sponge	64	6.2
3	Spermicides	22	2.1
4	Diaphragms	186	18.1
5	Cervical caps	222	21.7
6	Intrauterine devices (IUDs)	589	57.5
7	Emergency contraceptive pills	847*	82.6
8	Oral contraceptive pills	869	84.8
9	Contraceptive patch	111	10.8
10	Vaginal ring	566	55.2
11	Injectable	873	85.2
12	Lactation amenorrhoea	934	91.2
13	Implants	637	62.1
14	Female sterilisation	702	68.5
15	Standard days method	444	43.3

Source: Field Survey, 2025

The evidence presented in Table 2 reveals a clearly stratified and method-dependent pattern of awareness of modern contraceptive methods among women in the study area. Although fifteen contraceptive options were included in the assessment, awareness is heavily concentrated in a small subset of methods, reinforcing the earlier observation that overall awareness is moderate but substantively uneven and limited in scope. Awareness is highest for lactation amenorrhoea (91.2%), injectable contraceptives (85.2%) oral contraceptive pills (84.8%) and emergency contraceptive pills (82.6%). This clustering around a narrow range of methods suggests that women's knowledge is largely shaped by routine exposure within maternal and child health services as well as informal pharmaceutical access points. The dominance of these methods indicates that awareness is not evenly distributed across the contraceptive spectrum but is instead structured by accessibility, frequency of clinical promotion and social circulation of information.

This pattern is further supported by qualitative evidence. A 34-year-old participant explained:

> *"Most of what women talk about here is injection and pills. That is what they usually give at the clinic or what people buy from chemists. Other methods like ring or patch, I have never really heard someone explain them properly in this community."*

Similarly, a 29-year-old respondent noted:

> *"The only ones I can confidently say I know are injection, pills and the one for breastfeeding women. Others, I have seen posters maybe, but nobody really talks about them in detail."*

These accounts indicate that awareness is largely socially reinforced and reinforced through repeated exposure to a limited set of methods, rather than through comprehensive counselling or structured reproductive health education. Moderate awareness is recorded for implants (62.1%), female sterilisation (68.5%), intrauterine devices (57.5%) and vaginal rings (55.2%). Although these values suggest some level of familiarity, they do not necessarily reflect adequate understanding of method use, suitability or side effects. These methods typically require provider-led counselling and clinical interaction, suggesting that the observed awareness may represent recognition rather than informed knowledge. The moderate positioning of these methods further implies that engagement with formal health services is inconsistent and not sufficiently intensive to generate deep contraceptive literacy. At the lower end of the distribution, awareness is critically limited for spermicides (2.1%), contraceptive sponge (6.2%), female condom (8.1%), contraceptive patch (10.8%) and diaphragms (18.1%). This near absence of awareness is analytically significant, as it effectively excludes these methods from women's practical decision-making framework. The implication is a restricted contraceptive repertoire in which only a few methods dominate consideration, thereby limiting autonomy and reducing the possibility of method diversification or switching. Qualitative evidence further clarifies this informational gap. A 41-year-old participant remarked:

> *"When nurses talk, they usually focus on injection and pills. The other methods, I think they are there, but we don't really get proper explanation about them unless you ask questions yourself."*

Another respondent aged 37 added:

> *"Some of those methods like diaphragm or sponge, I only read about them in passing during health talk, but nobody has ever explained how they work in detail."*

The narratives suggest that exposure to

contraceptive information is often incidental rather than systematically delivered through structured counselling, with noticeable differences in how providers communicate contributing to uneven knowledge among women. Awareness is largely concentrated on a few commonly used methods, while many available options remain poorly understood or entirely unknown. This pattern points to a generally limited depth of knowledge, shaped more by accessibility and routine health messaging than by comprehensive reproductive education. As a result, informed choice is constrained and women tend to rely on a narrow set of methods, which in turn influences overall utilisation patterns.

Table 3: Utilisation of Modern Contraceptive Methods among Women of Reproductive Age

S/N	Variable	Often	Not often	None	Mean	Std. Deviation
1	Female condom	45	361	619	1.69	0.549
2	Contraceptive sponge	16	337	672	1.69	0.497
3	Spermicides	19	274	732	1.75	0.472
4	Diaphragms	106	135	784	1.97	0.484
5	Cervical caps	116	178	731	1.94	0.532
6	Intrauterine devices (IUDs)	311	366	348	1.95	0.811
7	Emergency contraceptive pills	34	271	720	1.77	0.494
8	Oral contraceptive pills	345	557	123	1.79	0.915
9	Contraceptive patch	74	344	607	1.62	0.516
10	Vaginal ring	210	469	346	1.75	0.774
11	Injectable	438	408	179	2.08	0.908
12	Lactation amenorrhoea	250	519	256	1.74	0.826
13	Implants	360	336	329	2.02	0.824
14	Female sterilisation	17	77	931	1.94	0.297
15	Standard days method	153	552	320	1.61	0.733

Source: Field Survey, 2025

Table 3 provides a behavioural dimension to the earlier patterns of awareness by examining the actual utilisation of modern contraceptive methods among women of reproductive age in the study area. The results are based on a three-point Likert scale (Often, Not often, None), with mean scores used to determine the intensity of utilisation across the different methods. Overall, all listed contraceptive methods recorded mean scores above the benchmark value of 1.5, indicating that each method is used at least at a minimal level within the population. However, this aggregate interpretation masks significant variation in intensity, consistency and preference across methods. A closer examination of the distribution shows that utilisation is concentrated in a narrow set of methods, particularly injectables ($\bar{x}$ = 2.08) and implants ($\bar{x}$ = 2.02). These two methods stand out as the most frequently used modern contraceptives in the study area, reflecting a clear preference for long-acting or provider-administered reversible contraceptives. This pattern suggests that women may favour methods perceived as more effective, less demanding in terms of daily compliance and requiring less frequent user action. The relatively higher utilisation of these methods may also reflect health provider influence, where counselling often prioritises long-acting reversible contraceptives due to their efficacy and reduced failure rates. Qualitative evidence supports this interpretation. A 32-year-old participant explained:

> *"Most women I know prefer injection because once you take it, you don't need to worry every day. It is what many nurses recommend at the clinic."*

Similarly, a 38-year-old respondent noted:

> *"Implant is common now, especially for those who don't want many children quickly. After inserting it, you just forget about it for some years."*

These narratives reflect a utilitarian orientation towards contraceptive choice, where convenience, duration of protection and provider recommendation play a stronger role than method diversity or informed preference. In contrast, short-term and user-dependent methods such as contraceptive patch ($\bar{x}$ = 1.62), standard days method ($\bar{x}$ = 1.61), female condom ($\bar{x}$ = 1.69) and contraceptive sponge ($\bar{x}$ = 1.69) recorded comparatively lower utilisation intensities. Despite some level of awareness identified earlier, these methods are rarely used consistently. This suggests that awareness does not necessarily translate into practice, particularly for methods that require regular user adherence or behavioural tracking. It also indicates possible concerns around usability, perceived effectiveness or socio-cultural acceptability. A respondent aged 30 captured this limitation clearly:

> *"I have heard about condom and calendar method, but honestly they are not easy to follow. Most women prefer something the hospital will just handle for them."*

This statement highlights an important behavioural dynamic: a preference for provider-controlled methods over self-managed contraceptives, which may reflect both convenience and limited confidence in managing fertility independently. Moderate utilisation is observed for oral contraceptive pills ($\bar{x}$ = 1.79), emergency contraceptive pills ($\bar{x}$ = 1.77), vaginal ring ($\bar{x}$ = 1.75) and lactation amenorrhoea ($\bar{x}$ = 1.74). These methods occupy an intermediate position, suggesting episodic or inconsistent use rather than sustained adoption. Oral pills and emergency contraception, in particular, appear to be used more reactively than as part of structured contraceptive planning. This pattern may indicate discontinuation challenges, concerns about side effects or irregular adherence linked to forgetfulness and misinformation.

Qualitative accounts reinforce this interpretation:

> *"Some women use pills but they stop when they feel side effects or when they forget. It is not something many can continue for long."* (Respondent, 27 years)
>
> *"Emergency pill is mostly when something happens, not something people plan to use regularly."* (Respondent, 35 years)

The findings indicate that utilisation is largely shaped by situational and pragmatic considerations rather than sustained contraceptive planning, particularly for short-term methods. Although some methods such as intrauterine devices ($\bar{x}$ = 1.95) and female sterilisation ($\bar{x}$ = 1.94) show moderate levels of awareness, this does not translate into proportional utilisation, revealing a persistent disconnect between knowledge and practice. Female sterilisation, in particular, records an extremely high number of non-users (931 respondents), underscoring very low adoption despite awareness and suggesting strong socio-cultural resistance to permanent fertility control in a context where childbearing holds significant social value and reproductive decisions may extend beyond individual autonomy. Across the dataset, utilisation is therefore uneven and concentrated in a narrow range of methods, especially injectables and implants, reflecting a preference shaped by perceived convenience, provider recommendation and method reversibility rather than comprehensive informed choice. The persistence of low uptake across several methods, despite awareness, confirms that knowledge alone is insufficient to drive diversified contraceptive behaviour in the presence of structural, cultural and health system constraints.

Testing of Hypothesis

H_o: There is no significant relationship between awareness of women and modern family planning method and use.

A Chi-square test of independence was conducted to determine the association between awareness and utilisation of modern contraceptive methods among women of reproductive age. The results are presented in Table 4.

Table 4: Chi-Square Test of Awareness and Use of Modern Family Planning Methods among Women

Variable	X²	df	p-value
Female condom	331.423	2	0.000
Contraceptive sponge	39.759	2	0.000
Spermicides	146.398	2	0.000
Diaphragms	602.139	2	0.000
Cervical caps	420.120	2	0.000
IUDs	500.060	2	0.000
Emergency contraceptive pills	490.024	2	0.000
Oral contraceptive pills	610.709	2	0.000
Contraceptive patch	426.970	2	0.000
Vaginal ring	556.121	2	0.000
Injectables	260.359	2	0.000
Lactation amenorrhoea	8.194	2	0.017
Implants	475.550	2	0.000
Female sterilisation	5.647	2	0.059
Standard days method	80.913	2	0.000

Source: Field Survey, 2025

The results in Table 4.0 provide strong statistical evidence that awareness of modern family planning methods is significantly associated with utilisation across most contraceptive categories examined. The chi-square statistics and corresponding p-values demonstrate a systematic rejection of the null hypothesis for the majority of methods, confirming that awareness functions as a statistically significant determinant of contraceptive behaviour rather than a marginal or incidental factor. However, the relationship is not uniform across all methods, but method-sensitive and contextually mediated. Strong associations are observed for oral contraceptive pills ($\chi^2 = 610.709$), diaphragms ($\chi^2 = 602.139$), vaginal ring ($\chi^2 = 556.121$) and intrauterine devices ($\chi^2 = 500.060$), all significant at $p < 0.001$. These findings indicate that awareness is particularly decisive for methods that require prior knowledge, counselling and clinical engagement, where informed awareness effectively determines progression to utilisation.

A similarly significant relationship is observed for implants ($\chi^2 = 475.550$) and injectables ($\chi^2 = 260.359$), although the strength of association varies, suggesting that awareness interacts with other determinants such as service accessibility, provider recommendation and health system integration. In contrast, lactation amenorrhoea ($\chi^2 = 8.194$, $p = 0.017$) shows only marginal significance, while female sterilisation ($\chi^2 = 5.647$, $p = 0.059$) is not statistically significant at the 5% level, indicating that awareness does not meaningfully translate into utilisation for these methods. This divergence reflects the influence of biological conditions in lactation-related contraception and entrenched socio-cultural and reproductive norms surrounding permanent fertility control. The findings demonstrate that while awareness significantly influences utilisation across most contraceptive methods, its effect is conditional and mediated by structural, institutional and socio-cultural factors, confirming that contraceptive behaviour is shaped by a complex interplay of knowledge and contextual constraints rather than awareness alone.

Discussion

The discussion of findings is anchored on the study objective, which examined the relationship between awareness of modern family planning methods and their utilisation among women of reproductive age in Nasarawa Southern Senatorial Zone. The analysis is further interpreted through Social Cognitive Theory, which emphasises that behavioural outcomes are shaped through the interaction of cognitive awareness, environmental conditions and perceived self-efficacy (Bandura, 1986; Bandura, 2004). The results are therefore not treated as isolated statistical outputs but as behavioural evidence situated within broader empirical and theoretical debates on contraceptive uptake. The finding that awareness is predominantly moderate rather than high aligns with broader empirical patterns in family planning scholarship, where awareness is often widespread but uneven in depth and specificity. This outcome is consistent with evidence from Olubodun et al. (2020), who reported that women in rural Nigerian settings exhibited general awareness of family planning but lacked detailed comprehension of available methods. Similarly, Orji et al. (2023) observed that awareness among women in primary healthcare settings in Abuja was high in nominal terms but did not translate into comprehensive knowledge. The current finding extends these studies by demonstrating that awareness in Nasarawa South is not merely generalised but structurally concentrated at a moderate level, indicating partial cognitive penetration of family planning information within the population.

The distribution of awareness across specific contraceptive methods further refines this pattern. High awareness of injectables oral contraceptive pills, implants and lactational amenorrhea suggests that knowledge diffusion is uneven and method-selective. This finding is consistent with Eze et al. (2023), who documented that contraceptive awareness in Southern Nigeria is disproportionately concentrated around commonly promoted clinical methods. It also aligns with Anate et al. (2021), who found that postpartum women in Southwest Nigeria were more familiar with injectables and pills than with barrier or less frequently discussed methods. The present study extends these findings by showing that awareness inequality is not incidental but systematic, reflecting how health communication

channels prioritise certain contraceptive technologies over others in routine counselling and service delivery. The observed pattern of utilisation reveals a pronounced gap between awareness and actual contraceptive practice. Although respondents demonstrated knowledge of multiple methods, utilisation remains concentrated primarily on injectables and implants. This outcome strongly reflects the broader national situation described in the Nigeria Demographic and Health Survey (2018), where modern contraceptive prevalence remains low despite relatively high awareness levels. Afolabi et al. (2023) similarly established that contraceptive use in Nigeria is influenced by socio-economic constraints, partner dynamics and service accessibility rather than awareness alone. The current study reinforces these conclusions while adding methodological specificity by showing that utilisation is not only low but selectively structured around a narrow range of acceptable methods.

At both regional and global levels, the awareness-utilisation gap identified in this study reflects a consistent structural pattern across diverse contexts. Cleland et al. (2022) emphasise that unmet contraceptive need persists globally despite rising awareness, largely due to non-cognitive constraints such as cultural norms and service accessibility barriers, while Khan et al. (2022) demonstrate that awareness alone does not translate into utilisation where household decision-making structures limit women's autonomy over reproductive choices. Similarly, Legese and Nigussie (2024) confirm across sub-Saharan Africa that contraceptive uptake is shaped by a multidimensional interplay of socio-economic, institutional and contextual factors rather than knowledge in isolation. Within this broader framework, the statistically significant relationship observed in the present study further reinforces that awareness functions as an enabling but insufficient determinant of contraceptive behaviour. This finding is consistent with the Nigeria Demographic and Health Survey (2018) and Eze et al. (2023), which both show that contraceptive use in Nigeria is mediated by socio-cultural and relational influences beyond awareness. The present study advances this evidence by demonstrating that the strength of association varies by method type, with stronger effects observed for clinical and provider-dependent methods such as injectables and implants, indicating that structured health system engagement plays a critical role in translating awareness into actual utilisation.

From a theoretical perspective, these findings substantively reinforce Social Cognitive Theory, particularly its emphasis on the interaction between cognition, environment and behavioural capability (Bandura, 1986; Bandura, 2004). The observed moderate awareness reflects incomplete cognitive acquisition, while the selective pattern of utilisation indicates that environmental reinforcement and institutional accessibility significantly shape behavioural outcomes. Higher uptake of injectables and implants suggests stronger health system reinforcement and perceived efficacy, whereas weaker utilisation of other methods reflects limited reinforcement and reduced perceived control. Policy implications indicate partial alignment with the Federal Ministry of Health (2022) framework on expanding access and informed choice; however, persistent gaps between awareness and utilisation suggest implementation constraints. UNFPA (2023) similarly emphasises that effective family planning outcomes depend on both awareness and structural enablement. The present findings extend this position by demonstrating that uneven distribution of awareness across methods continues to constrain reproductive autonomy and limits the realisation of policy objectives.

Conclusion and Recommendations

The study concludes that modern family planning behaviour among women of reproductive age in the study area reflects a patterned imbalance between cognitive exposure and behavioural adoption. Although awareness of contraceptive methods exists, it is unevenly distributed and concentrated around a limited set of commonly promoted options, indicating partial diffusion of reproductive health information rather than comprehensive understanding. This constrained awareness structure is mirrored in utilisation patterns, where actual contraceptive practice is largely restricted to injectables and implants despite the availability of multiple alternatives. The findings therefore point to a reproductive health landscape where knowledge does not automatically translate into broad-based utilisation, as decision-making is shaped by method familiarity, perceived convenience and service delivery influence. The central implication is that contraceptive behaviour in the study context is not primarily a function of awareness alone but of how awareness interacts with structural access, provider influence and socio-relational dynamics that govern reproductive choices.

The study recommends a reorientation of family planning interventions from generalised awareness campaigns towards method-specific, behaviourally informed strategies that deepen understanding of the full range of contraceptive options available. Health education should be redesigned to move beyond surface-level messaging and focus on comprehensive counselling that enhances informed choice and corrects method-specific misconceptions. In addition, primary healthcare delivery systems should strengthen client-centred counselling that actively promotes balanced method mix rather than over-reliance on a narrow set of contraceptives. Community-based

interventions should also be intensified to address socio-cultural and relational barriers that shape contraceptive decision-making, particularly male partner influence and normative perceptions around fertility regulation. Furthermore, policy implementation should prioritise service accessibility and method availability across rural and urban settings to reduce structural constraints that limit choice.

References

Afolabi, R. F., Adebayo, A. M., & Adekunle, O. O. (2023). Determinants of modern contraceptive use among women of reproductive age in Nigeria: Evidence from the 2018 NDHS. *BMC Public Health, 23*(1), 1-12. https://doi.org/10.1186/s12889-023-15021-3

Alahaji, A. A. (2018). Family planning services in Africa: The successes and challenges. *IntechOpen*. https://doi.org/10.5772/intechopen.72224

Alenezi, G. G., & Haridi, H. K. (2021). Awareness and use of family planning methods among women in Northern Saudi Arabia. *The Middle East Fertility Society Journal, 26*, 8. https://doi.org/10.1186/s43043-021-00053-8

Anate, B. C., Balogun, M. R., Olubodun, T., & Adejimi, A. A. (2021). Knowledge and utilization of family planning among rural postpartum women in Southwest Nigeria. *Journal of Family Medicine and Primary Care, 10*(2), 730-737. https://doi.org/10.4103/jfmpc.jfmpc_1312_20

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall.

Bandura, A. (2004). Health promotion by social cognitive means. *Health Education & Behavior, 31*(2), 143-164.https://doi.org/10.1177/10901981042 63660

Cleland, J., Harbison, S., & Shah, I. H. (2022). Unmet need for contraception: Issues and challenges. *Studies in Family Planning, 53*(2), 123-140. https://doi.org/10.1111/sifp.12195

Eze, P. U., Okafor, C. N., & Nwafor, J. I. (2023). Patterns and determinants of contraceptive use among women in Southern Nigeria. *African Journal of Reproductive Health, 27*(1), 45-58.

Federal Ministry of Health (Nigeria). (2022). *National family planning blueprint (2022-2026): Scaling up family planning services in Nigeria*. Abuja: FMoH.

Kavanaugh, M. L., & Pliskin, E. (2022). Use of contraception among reproductive-aged women in the United States. *Guttmacher Institute Research Report*. https://www.guttmacher.org

Khan, S., Mishra, V., & Arnold, F. (2022). Contraceptive use and unmet need in Pakistan: Analysis of demographic and health survey data. *Reproductive Health, 19*(1), 1-13. https://doi.org/10.1186/s12978-022-01345-6

Legese, H., & Nigussie, T. (2024). Modern contraceptive use and associated factors in sub-Saharan Africa: A multilevel analysis of DHS data. *PLOS ONE, 19*(2), e0298123. https://doi.org/10.1371/journal.pone.0298123

National Population Commission (NPC) & National Bureau of Statistics (NBS). (2006). *Population census of the Federal Republic of Nigeria*. https://unmaskingbokoharam.com/wp-content/uploads/2019/12/nbspopulationcensus2006.pdf

National Population Commission (NPC) & National Bureau of Statistics (NBS). (2006). *Nasarawa State population estimates*. https://citypopulation.de/en/nigeria/admin/NGA026__nasarawa/

Nigeria Demographic and Health Survey (NDHS). (2018). *Nigeria demographic and health survey 2018*. https://dhsprogram.com

Olubodun, T., Balogun, M. R., & Ogunsilu, E. A. (2020). Awareness and practice of family planning among women residing in two rural communities in Ogun State, South West Nigeria. *Annals of African Medicine, 19*(4), 246-251. https://doi.org/10.4103/aam.aam_62_19

Orji, E. O., Igwe, C. A., Eze, O. M., Ikechukwu-Orji, C., & Nnabu, R. C. (2023). Prevalence and knowledge of family planning among women of reproductive age group in primary healthcare centers in Abuja, Nigeria. *Texila International Journal of Public Health, 11*(1), 18. https://doi.org/10.21522/TIJPH.2013.11.01.Art018

Teshome, A., Gelaw, Y., & Ayano, G. (2022). Knowledge and utilization of modern contraceptives among reproductive-age women in Ethiopia. *BMC Women's Health, 22*(1), 1-10. https://doi.org/10.1186/s12905-022-01785-4

Tukue, D., Gebremeskel, T. G., Gebremariam, L., Aregawi, B., Hagos, M. G., Gebremichael, T., Tesfay, H. N., & Arefaine, Z. G. (2020). Prevalence and determinants of modern contraceptive utilization among women in the reproductive age group in Edaga-hamus Town, Ethiopia. *PLOS ONE, 15*(3), e0227795. https://doi.org/10.1371/journal.pone.0227795

UNFPA. (2023). *State of world population 2023: 8 billion lives, infinite possibilities*. https://www.unfpa.org

World Health Organization. (2023). *Family planning/contraception methods*. https://www.who.int/news-room/fact-sheets/detail/family-planning-contraception