Original

Factors associated with Uptake of Modern Family Planning Methods among Women of Reproductive Age in Mgbuoshimini Community, Rivers State, Nigeria

[1]Chinedu Barbara Nwadiaru, [2]Omosivie Maduka, [2]Daprim Samuel Ogaji

[1]Department of Community Medicine, University of Port Harcourt Teaching Hospital, Alakahia, Port Harcourt.
[2]Department of Preventive and Social Medicine, University of Port Harcourt, Choba, Port Harcourt.

Corresponding author: Barbara Chinedu Nwadiaru, *Department of Community Medicine, University of Port Harcourt Teaching Hospital, Alakahia, Port Harcourt; barbara.nwadiaru@uniport.edu.ng; +2348033382038*

Article history: Received 07 November 2024, Reviewed 02 December 2024, Accepted for publication 05 December 2024

Abstract

Background: Poor uptake of Modern Family Planning Methods (MFPM) is compatible with a high incidence of unintended pregnancies and maternal deaths. This study determined the factors associated with uptake of MFPMs among Women of Reproductive Age (WRA) in Mgbuoshimini community, Rivers State, Nigeria.

Method: A cross-sectional community-based study using the multi-stage sampling technique among 210 WRA in Mgbuoshimini community, Rivers State. All WRA who had lived in Mgbuoshimini community for at least six months and who were living with their partners were included. Data was collected and analyzed using Statistical Package for Social Sciences (SPSS) version 21. The study questionnaire was adapted from the PMA 2020 and NDHS female questionnaires. Findings were summarized using frequencies and proportions. Inferential statistics done included the chi-square test and Fisher's exact test.

Results: Most respondents were married (102, 48.5%), had a secondary level of education (102, 49.5%), and were employed (138, 67.0%) with a monthly income ≤18,000 (93, 45.1%). The uptake of MFPMs in this study was 23.3% (49). The factors associated with the uptake of MFPMs in this study were the partners' income and the religion of respondents.

Conclusion: This study found low uptake of MFPMs. The factors associated with uptake among study respondents were their partner's income and religion. Including family planning messages as part of religious programs may allow health workers to emphasize the benefits of MFPMs and continually dispel misconceptions.

Keywords: Modern Family planning, contraceptive uptake, Women of Reproductive Age

How to cite this article:

Nwadiaru BC, Omosivie M, Ogaji DS. Factors associated with Uptake of Modern Family Planning Methods among Women of Reproductive Age in Mgbuoshimini Community, Rivers State, Nigeria. The Nigerian Health Journal 2025; 25(1):125 – 133.. https://doi.org/10.71637/tnhj.v25i1.900

Introduction

Family planning is an essential aspect of reproductive health that plays a significant role in the well-being of individuals, families, and communities. It involves using various methods to control the number and spacing of children, allowing couples to plan their families according to their personal and socio-economic circumstances.[1] The benefits of family planning extend beyond individual health, contributing to broader public health outcomes such as reduced maternal and child mortality, improved educational and economic opportunities, and overall societal development.[2] The use of Modern Family Planning Methods (MFPM) by couples to freely and responsibly choose the number and timing of their children is effective in preventing unplanned pregnancies, reducing maternal and child mortality rates and unsafe abortions, and improving the overall health of women and families.[3]

MFPMs are products and procedures that prevent conception[3] and encompass a wide range of options, including hormonal contraceptives (such as pills, patches, injections, and implants), intrauterine devices (IUDs), barrier methods (such as condoms and diaphragms), and permanent solutions like male/female sterilization.[4] Each of these methods has its advantages, effectiveness rates, and potential side effects, making it important for individuals to have access to comprehensive information and counselling to make informed choices. Family planning methods are important in the control of population growth and improvement of contraceptive uptake (which is one of the targets of Nigeria's population policy).[5]

Nigeria, with its high fertility rate and significant population growth, faces unique challenges in promoting family planning.[6] While modern contraceptive methods aim to prevent unintended pregnancies, reduce maternal and infant mortality, and improve educational and economic outcomes for women, their uptake remains suboptimal, even in urban areas.[7]

Despite the availability of MFPMs, their uptake remains low in sub-Saharan Africa, including Nigeria, contributing to high rates of unintended pregnancies, unsafe abortions, and maternal deaths in the region.[8] The country has one of the highest maternal mortality rates in West Africa[5] and the world and improving access to and use of MFPMs is critical to addressing this issue. Despite efforts to improve maternal health, Nigeria's maternal mortality ratio has only increased from 576 per 100,000 live births in 2013 to 814 per 100,000 live births in 2015.[9] Nigeria's rapidly growing population, estimated at over 205 million as of January 2020, exerts immense pressure on the demand for health, education, and economic empowerment services. [10] Its urban population has grown at an average annual growth rate of over 6.5 % without a proportionate increase in social amenities and infrastructure.[10]

The 2018 Nigerian Demographic Health Survey (NDHS) also reported that 17% of currently married women in Nigeria used family planning (FP) methods, 12% of which used a modern method.[11] The survey also found that 19% of currently married women had an unmet need for FP services. This alarming trend underscores the persistent challenges faced by the country in addressing maternal health concerns.

In the Mgbuoshimini community, like many other parts of Nigeria, the uptake of MFPMs maybe influenced by a complex interplay of socio-demographic, economic, and cultural factors. Some of these factors may include socio-demographic characteristics, economic conditions, cultural beliefs, educational levels, and individual perceptions and attitudes toward family planning.[5,12]

Socio-demographic characteristics such as age, marital status, education level, and employment status play a significant role in determining the likelihood of using MFPMs.[5] Younger women, particularly those who are unmarried, may face societal and familial pressures that discourage the use of contraception. Conversely, married women, especially those with higher levels of education and stable employment, are more likely to use MFPMs as they may have better access to information and resources.[5]

Economic factors may also influence the uptake of MFPMs. Women with higher incomes or those whose partners are employed are generally more able to afford modern contraceptives and access healthcare services[5]. Economic stability provides a sense of security that enables couples to plan their families more effectively. In contrast, women from lower-income households may struggle to prioritize family planning over other immediate financial needs, resulting in lower usage rates of MFPMs.[5] In many Nigerian communities, cultural attitudes towards fertility and family size are deeply rooted. Large families are often seen as a sign of wealth and social status, and there may be significant pressure

Print ISSN: 0189-9287 Online ISSN: 2992-345X

on women to have many children.[13] Additionally, misconceptions and myths about the side effects and safety of contraceptives can deter women from using these methods.[13] Women with higher levels of education are more likely to have the knowledge and understanding necessary to make informed decisions about family planning.[5] Education empowers women to seek out information, question traditional norms, and advocate for their own health needs.

Rivers State, located in the southern part of Nigeria, is one of the country's oil-rich regions. It is characterized by its diverse ethnic groups, varying levels of education, and economic disparities. In the state, the Mgbuoshimini community represents a picture of the broader challenges and opportunities in promoting family planning. This urban area provides an interesting case study for examining the factors influencing the uptake of MFPMs among women of reproductive age (WRA).

It is important to focus on urban areas of Rivers State Nigeria for many reasons. First, urban areas typically have a higher population density and, by inference a larger number of women of reproductive age. This allows for a more robust data set and increases the generalizability of the findings from this study. Also, urban communities often host a diverse mix of socioeconomic backgrounds, providing a comprehensive understanding of how different factors influence family planning decisions and maternal health services. These communities usually offer improved access to health services, such as family planning and other maternal health care services. Urban communities may also have different cultural influences compared to rural areas, affecting attitudes and practices related to family planning and maternal health. This study will provide valuable insights into the unique dynamics of an urban community in Rivers State, ultimately improving family planning and maternal health outcomes. Additionally, this research will aid in the development of strategies and policies to improve family planning and overall reproductive health outcomes in the State.

Thus, this study aims to determine factors associated with uptake of Modern Family Planning Methods among Women of Reproductive Age in Mgbuoshimini, an urban Community in Rivers State Nigeria.

Method

Study area

This study was conducted in Mgbuoshimini, an urban community in the Obio/Akpor local government area of Rivers State, Nigeria. Mgbuoshimini is a few kilometers away from a primary health care center managed by the state, offering essential maternal and child health services, including family planning. Additionally, the community has several patent medicine vendors and private healthcare facilities that provide a variety of primary care services. The unique demographic composition of Mgbuoshimini is probably because of its proximity to multiple petroleum storage tank farms, a tertiary institution, and a military base. This strategic location results in a diverse population of indigenes and non-indigenes representing various socioeconomic backgrounds.

Study design

This study was conducted in the Mgbuoshimini community using a community-based, descriptive cross-sectional design among women of reproductive age. The minimum sample size, determined using the formula for descriptive studies,[14] was 202 women, but 210 women were ultimately sampled. Participants were women aged 15-49 who had lived in the Mgbuoshimini community for at least six months and were residing with their partners. Women who were menopausal or too ill to participate were excluded from the study.

Following house numbering and identification of houses with women who met the inclusion criteria, eligible women were recruited consecutively from house-to-house starting from the community town hall until the sample size was attained. One eligible woman was selected per house. If two eligible women were present, one was chosen by balloting. If an eligible woman declined, the house was skipped. Thus, a total of 210 houses were selected.

Study instrument and data collection

The study questionnaire was a pretested, validated, semi-structured and interviewer-administered tool. It was adapted from the PMA 2020 female questionnaire[15] and the Nigeria demography health survey.[16] Four female research assistants (medical students) were trained for three days to assist with data collection via verbal and practical demonstrations. In this study, uptake was defined as the proportion of women aged 15–49 years currently using (or whose partners are using) a modern method of contraception, which includes hormonal and barrier methods, sterilization and emergency contraception.[16]

Data analysis

Print ISSN: 0189-9287 Online ISSN: 2992-345X

Data from the structured questionnaire was analyzed using SPSS version 21. Descriptive statistics were performed on socio-demographic data, with frequencies shown in tables and charts. Quantitative data were summarized using mean, standard deviation, median, and range. Ethical approval was obtained from the Research and Ethics Committee of the University of Port Harcourt Teaching Hospital. Written permission was secured from the traditional head of Mgbuoshimini and the local government council. Participants were given consent forms, assured of confidentiality, and informed they could opt out without penalty. Data were password-protected and only accessible to the researcher.

Results

A total of 210 women of reproductive age gave consent, giving a total response rate of 100%. The mean age of study respondents was 29.07±8.00 years and the mean age at marriage was 24.60±4.35.

Sociodemographic characteristics of study respondents and their partners

About 81 (39.3%) of the study participants were within the 25-34 age group, 102 (48.5%) were married, 138 (67.0%) were employed, and 102 (49.5%) had a secondary level of education. About 159 (77.2%) were of Ikwerre ethnic extraction, while 93 (45.1%) earned an income ≤ 18,000.

Concerning the partners of the women, 93 (45.1%) fell into the 25-34 age group, about 119 (57.8%) of them had education above secondary level, 167(81.1%) were employed and 89 (43.2%) earned an income of 19,000-50,000. Tables 1 and 2 below show the socio-demographic characteristics of study respondents and their partners.

Table 1: Socio-demographic characteristics of WRA in an urban community in Rivers state

Variables	Freq N=210	n (%)
Age category		
15 – 24 years	77	37.4
25 – 34 years	81	39.3
35 – 44 years	36	17.5
≥45 years	12	5.8
Marital status		
Never married	101	48.1
Married	102	48.5
Separated/Divorced/ Widowed	7	3.2
Educational level		
None	0	0.0
Primary	4	1.9
Secondary	102	49.5
Above secondary	100	48.5
Occupational status		
Employed	138	67.0
Not employed	47	22.8
Students/Retirees	21	10.2
Ethnicity		
Igbo	2	1.0
Yoruba	5	2.4
Hausa	2	1.0
Ikwerre	159	77.2
Ogoni	4	1.9
Ijaw	4	1.9
Others[1]	30	14.6
Religion		
Christianity	197	93.8
Islam	9	4.3
Traditionalist	4	1.9
Monthly income (NGN)		
≤18,000	93	45.1
19,000 – 50,000	80	38.8
51,000 – 100,000	23	11.2
>100,000	10	4.9

[1]Isoko, Anang, Bini and Etche

Table 2: Socio-demographic characteristics of partners of WRA in an urban community in Rivers state

Variables	Freq N = 210	n (%)
Age category		
15 – 24 years	21	10.2
25 – 34 years	93	45.1
35 – 44 years	52	5.2
45 – 54 years	28	13.6
55 – 64 years	10	4.9
≥65 years	2	1.0
Educational level		
None	0	0.0
Primary	1	0.5
Secondary	86	41.7
Above secondary	119	57.8
Occupational status		
Employed	167	81.1
Not employed	32	5.5
Students/Retirees	7	3.4

Print ISSN: 0189-9287 Online ISSN: 2992-345X

Variables	Freq N = 210	n (%)
Monthly income (NGN)		
≤18,000	54	26.2
19,000 – 50,000	89	3.2
51,000 – 100,000	39	18.9
>100,000	24	11.7

Current use (uptake) of MFPMs among study respondents

The uptake of MFPMs in this study is 23.3%, with 49 women reporting that they or their partners were currently using an MFPM. The male condom was the most used method, with 30 (14.3%) respondents using it, while tubal ligation and foam jelly were the least popular methods, each chosen by 1 (0.5%) respondent.

Table 3: Respondents use of MFPMs

Variables	Freq N = 210	n (%)
Ever used		
Yes	61	29.0
No	149	71.0
Current use (uptake)		
Yes	49	3.3
No	161	76.7

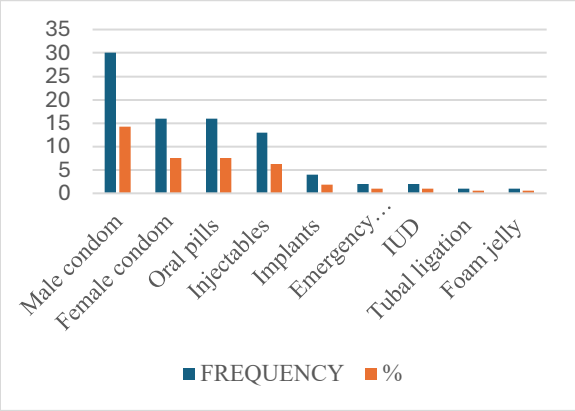

Figure 1: MFPMs used by WRA in Mgbuoshimini community

Knowledge of MFPMs among study participants

Around 205 women (97.6%) of the total knew of these methods, but only 61 (29.0%) had ever used them.

Table 4: Knowledge of MFPMs among WRA in an urban community in Rivers state

Variables	Freq N = 210 (%)
Ever heard about family planning	
Yes	205 (97.6)
No	5 (2.4)
Ever used	
Yes	61 (29.0)
No	149 (71.0)

A Bivariable analysis of the association between the demographic characteristics of respondents and uptake of MFPMs revealed that partner's monthly income (χ^2 =4.624, p=0.035) and religion (χ^2=9.687, p= 0.003) were statistically significantly associated with current use, as demonstrated in table 4 below. Those with partners earning ≤ 50,000 were more likely to use MFPMs, while Christian women showed a stronger preference for MFPMs than non-Christians.

Table 5: Factors associated with current use of MFPM among WRA in Mgbuoshimini community

Variables	Current use of MFPM among respondents		Chi Square	p-value
	Yes - n (%)	No - n (%)		
Perception				
Negative	33 (24.1)	104 (75.9)	0.125	0.737
Positive	16 (21.9)	57 (78.1)		
Age				
<35 years	38 (23.5)	124 (76.5)	0.006	1.000

Print ISSN: 0189-9287 Online ISSN: 2992-345X

Variables	Current use of MFPM among respondents		Chi Square	p-value
	Yes - n (%)	No - n (%)		
≥ 35 years	11 (22.9)	37 (77.1)		
Marital Status				
Currently married	27 (26.5)	75 (73.5)	1.091	0.296
Currently unmarried	22 (20.4)	86 (79.6)		
Age at marriage (N=102)				
< 30 years	22 (25.3)	65 (74.7)	0.426	0.514
≥ 30 years	5 (33.3)	10 (66.7)		
Education				
Secondary and below	26 (24.5)	80 (75.5)	0.171	1.000
Post-Secondary	23 (22.1)	81 (77.9)		
Employment Status				
Employed	32 (23.2)	106 (76.8)	0.005	0.945
Not employed	17 (23.6)	55 (76.4)		
Monthly Income (NGN)				
≤50,000	39 (22.0)	138 (78.0)	1.063	0.369
>50,000	10 (30.3)	23 (69.7)		
Partner's Age				
<45 years	40 (23.5)	130 (76.5)	0.019	1.000
≥45 years	9 (22.5)	31 (77.5)		
Partner's Education				
Secondary School and below	1 (50.0)	1 (50.0)	**	0.413
Post-Secondary	48 (23.3)	160 (76.7)		
Partner's Employment Status				
Employed	40 (23.5)	130 (76.5)	0.019	1.000
Not employed	9 (22.5)	31 (77.5)		
Partner's Monthly Income (NGN)				
≤50,000	21 (32.8)	43 (67.2)	4.624	0.035*
>50,000	28 (19.2)	118 (80.8)		
Religion				
Christian	14 (45.2)	17 (54.8)	9.687	0.003*
Non-Christian	35 (19.6)	144 (80.4)		
Number of living children				
None/one	22 (27.5)	58 (72.5)	1.254	0.314
More than one	27 (20.8)	103 (79.2)		
Exposure to mass media				
Exposed	43 (26.1)	122 (73.9)	3.202	0.074
Not exposed	6 (13.3)	39 (86.7)		

*Statistically significant **Fisher's Exact

Discussion

The study findings support the hypothesis that sociodemographic factors are significantly associated with the uptake of modern family planning methods (MFPM) among women of reproductive age in the Mgbuoshimini community, Rivers State. The monthly income and religion of the study participant's partner showed statistically significant associations with the uptake of MFPMs.

The overall uptake of MFPMs in the index study was low, a finding similar to that of a survey carried out in Ghana[8] but higher than the country and overall state average,[11] as reported by the NDHS 2018. Poor uptake of MFPMs could have adverse health and economic

Print ISSN: 0189-9287 Online ISSN: 2992-345X

consequences for mothers and children related to high fertility. High fertility increases a woman's exposure to pregnancy-related risks ranging from unsafe abortions and anaemia to maternal death and eventual reduction in female life expectancy. It could also predispose to child malnutrition and mortality due to larger family size, food insecurity and poverty.

The study findings revealed a large gap between the high awareness of MFPMs and their actual usage among women of reproductive age in the community. Despite most participants having heard about family planning, only a few had ever used any method, and an even smaller number were current users. This finding agrees with studies done in Ethiopia[17] and the Niger Delta region[18] and could be due to ongoing enlightenment programs in the state regarding family planning which improve awareness of these methods. It also suggests that awareness alone does not translate into practice, indicating the presence of underlying barriers to uptake. One notable observation in this study is the preference for male condoms, which, like the National report were used by most of the respondents. The availability of various retail outlets in this community could be responsible for this finding. Also, the use of condoms has become more acceptable for STIs/HIV prevention over the years, and this could also be responsible for high uptake among respondents. This could also imply that more emphasis would need to be placed on the consistent use of this method to boost overall CPR and achieve maximum coverage for MFPMs. Other methods, such as female condoms, oral pills, injectables, implants, and intrauterine devices (IUDs), had notably lower usage rates, suggesting potential challenges related to accessibility, perceived side effects, or cultural acceptability. The limited uptake of more permanent methods like tubal ligation and emergency contraceptives further underscores the community's reliance on temporary methods. These findings emphasize the need for targeted educational interventions and improved access to a broader range of family planning options, considering the local context and cultural factors.

The religion of respondents and the monthly income of their partners were found to associated with uptake of MFPMs in this study. This disagrees with findings from a similar study among postpartum women in Ebonyi state, Nigeria, which showed that lower income was significantly associated with poor uptake of MFPMs.[19]

Implications of the findings of this study: This study buttresses the need for income-sensitive and culturally appropriate family planning programs that address the significant relationship between partners' income and religion and the uptake of MFPMs. Healthcare providers should receive training to offer culturally sensitive counseling addressing misconceptions and barriers to MFPM usage, emphasizing long-term methods beyond condoms. Future research should focus on a qualitative exploration of the influence of religious beliefs and partner dynamics on contraceptive choices.

Strengths and Limitations of the Study: This study's use of a community-based approach provides a realistic picture directly applicable to similar communities. However, its reliance on self-reported data may introduce recall and social desirability biases, potentially affecting the accuracy of the findings. The cross-sectional study design adopted by this study limits the ability to establish causal relationships. Furthermore, the study's focus on a single community may limit the generalizability of the findings to other regions with different sociocultural contexts.

Conclusion

The factors associated with uptake among respondents in this study were partner's income and religion. This finding may suggest that women of low socioeconomic status and Christian faith were more likely to use MFPMs in the study. Including family planning messages as part of religious programs may allow health workers to emphasize the benefits of MFPMs and continually dispel misconceptions.

Declarations

Ethical Consideration: Ethical approval was obtained from the research and ethics committee of the University of Port Harcourt Teaching Hospital. The researchers obtained written informed consent from study participants, assuring them of confidentiality regarding the information given. Participants could withdraw from the study at any point without penalty.

Authors' Contribution: Nwadiaru B.C: Conducted the primary research, including data collection, analysis, and interpretation; Drafted the manuscript, draft of ethical

Print ISSN: 0189-9287 Online ISSN: 2992-345X

clearance and permission letters, integrating feedback from other authors; Finalized the article for submission. Omosivie Maduka: Provided expertise, critical feedback and intellectual inputs throughout the research process Ogaji Daprim: Provided expertise, critical feedback and intellectual inputs throughout the research process

Conflict of interest: The Authors declare no conflict of interest

Funding: No funding was received for this study

References

1. Yohanna A, Nsofor A&, Ugochukwu J. Impact of Socio-economic Factors on Women's Family Planning Decisions in Taraba State, Nigeria. Jalingo journal of social and management sciences. 2023;4(4):262–75. Available from: https://oer.tsuniversity.edu.ng/index.php/jjsms/article/view/230
2. Tilahun T, Coene G, Temmerman M, Degomme O. Couple based family planning education: Changes in male involvement and contraceptive use among married couples in Jimma Zone, Ethiopia. BMC Public Health. 2015;15(1):1–8. Available from: https://link.springer.com/articles/10.1186/s12889-015-2057-y
3. Gebrekidan H, Alemayehu M, Debelew GT. Individual and community level factors associated with modern contraceptive utilization among women in Ethiopia: Multilevel modeling analysis. PLoS One. 2024;19(5). https://doi.org/10.1371/journal.pone.0303803
4. Mulatu T, Sintayehu Y, Dessie Y, Deressa M. Modern family planning utilization and its associated factors among currently married women in rural Eastern Ethiopia: A community-based study. *Obstet Gynecol Int.* 2020; 2020:6096280. doi:10.1155/2020/6096280.
5. Solanke BL. Factors influencing contraceptive use and non-use among women of advanced reproductive age in Nigeria. J Health Popul Nutr . 2017];36(1):1–14. Available from: https://link.springer.com/articles/10.1186/s41043-016-0077-6
6. Shattnawi KK, Khader YS, Al-Sheyab N, Alyahya M, Ready K, Halasa-Rappel YA, et al. Perceived Barriers of Using Modern Family Planning Methods among Women in Jordan: A Qualitative Study. Int J Community Based Nurs Midwifery. 2021;9(4):278–88. Available from: https://pubmed.ncbi.nlm.nih.gov/34604397/
7. Akinyemi AI, Ikuteyijo OO, Mobolaji JW, Erinfolami T, Adebayo SO. Socioeconomic inequalities and family planning utilization among female adolescents in urban slums in Nigeria. Front Glob Womens Health. 2022; 3:838977.
8. Eliason S, Awoonor-Williams JK, Eliason C, Novignon J, Nonvignon J, Aikins M. Determinants of modern family planning use among women of reproductive age in the Nkwanta district of Ghana: A case-control study. Reprod Health. 2014;11(1):1–10.
9. Sageer R, Kongnyuy E, Adebimpe WO, Omosehin O, Ogunsola EA, Sanni B. Causes and contributory factors of maternal mortality: Evidence from maternal and perinatal death surveillance and response in Ogun state, Southwest Nigeria. BMC Pregnancy Childbirth. 2019;19(1):63. Available from: https://bmcpregnancychildbirth.biomedcentral.com/articles/10.1186/s12884-019-2202-1
10. Ankomah A, Anyanti J, Oladosu. Myths, misinformation, and communication about family planning and contraceptive use in Nigeria. Open Access J Contracept. 2011;2011(2):95-105. doi:10.2147/OAJC.S20921
11. National Population Commission (NPC) [Nigeria] and ICF. 2019. Nigeria Demographic and Health Survey 2018. Abuja, Nigeria, and Rockville, Maryland, USA: NPC and ICF. 2018;1–748. Available from: https://dhsprogram.com/pubs/pdf/FR359/FR359.pdf
12. Merera AM, Lelisho ME, Pandey D. Prevalence and Determinants of Contraceptive Utilization among Women in the Reproductive Age Group in Ethiopia. J Racial Ethn Health Disparities. 2022;9(6):2340–50. Available from: https://link.springer.com/article/10.1007/s40615-021-01171-9
13. Ghule M, Raj A, Palaye P, Dasgupta A, Nair S, Saggurti N, et al. Barriers to use contraceptive methods among rural young married couples in Maharashtra, India: Qualitative findings. Asian J Res Soc Sci Humanit. 2015;5(6):18. doi: 10.5958/2249-7315.2015. 00132.X

Print ISSN: 0189-9287 Online ISSN: 2992-345X

14. Betty R. Kirkwood, Jonathan A.C. Sterne. Essential Medical Statistics. Second. United Kingdom: Blackwell science; 2003. 420–421
15. Centre for Population and Reproductive Health (CPRH), University of Ibadan; Centre for Research ER and D (CRERD);, Population and Reproductive Health Program (PRHP), Obafemi Awolowo University (OAU); Bayero University Kano (BUK), he Bill & Melinda Gates Institute for Population and Reproductive Health at The Johns Hopkins Bloomberg School of Public Health; and Jhpiego. Performance Monitoring for Action (PMA) Household and Female Survey Phase 1, PMA2017/Nigeria-P1-HQFQ. 2020 Female Questionnaire [Internet]. [cited 2021 Jul 19]. Available from: https://pma.ipums.org/pma/resources/questionnaires/hhf/PMA2014_KER2_F_Questionnaire_28Feb2016.pdf
16. Steed C, Westerltrnd D, National Population Commission Npc Nigeria, Icf Macro, National Population Commission (NPC)[Nigeria] and ORC Macro, Commission N population, et al. 2013 Nigeria Demographic and Health Survey (NDHS) South East. Demogr . 2013;31(1):13–4.
17. Bogale B, Wondafrash M, Tilahun T, Girma E. Married women's decision-making power on modern contraceptive use in urban and rural southern Ethiopia. BMC Public Health. 2011;11.
18. Tettehfio PSA, Okumagba MT, Oyibo PG, Ntaji M, Awunor NS. Socioeconomic and Sociocultural Predictors of Family Planning Uptake amongst Females (15–49 Years) in Delta State Central Senatorial District. Journal of the Medical Women's Association of Nigeria [Internet]. 2022;7(2). Available from: https://journals.lww.com/jmwa/fulltext/2022/07020/socioeconomic_and_sociocultural_predictors_of.4.aspx
19. Anaba R, Ugwa EA, Agbor IE, Nwali MI, Orji B. Knowledge, Attitude, and Contraceptive Preferences Among Postpartum Women in Izzi, Ezza South, and Ikwo Local Government Areas of Ebonyi State, Nigeria. Hosp Pract Res. 2018;3(1):11–5.

Print ISSN: 0189-9287 Online ISSN: 2992-345X