

Utilisation and Preference of Contraceptives among Women of Reproductive Age in Rural Communities of Jos North, Plateau State, Nigeria

Shikpup, Nadyen Jordan; Mangdik, Chritiana Emmanuel; Idoko, Sarah; Dalyop, Kaneng Mary; Mwolchet, Shekarau; Lishika, Adams; Daniel, Grace; Ramyil, Mary Seljul; Babatunde, Bulndi Lydia

Veröffentlichungsversion / Published Version
Zeitschriftenartikel / journal article

Empfohlene Zitierung / Suggested Citation:

Shikpup, N. J., Mangdik, C. E., Idoko, S., Dalyop, K. M., Mwolchet, S., Lishika, A., ... Babatunde, B. L. (2024). Utilisation and Preference of Contraceptives among Women of Reproductive Age in Rural Communities of Jos North, Plateau State, Nigeria. *Path of Science*, 10(1), 12007-12013. <https://doi.org/10.22178/pos.100-42>

Nutzungsbedingungen:

Dieser Text wird unter einer CC BY Lizenz (Namensnennung) zur Verfügung gestellt. Nähere Auskünfte zu den CC-Lizenzen finden Sie hier:
<https://creativecommons.org/licenses/by/4.0/deed.de>

Terms of use:

This document is made available under a CC BY Licence (Attribution). For more Information see:
<https://creativecommons.org/licenses/by/4.0>

Utilisation and Preference of Contraceptives among Women of Reproductive Age in Rural Communities of Jos North, Plateau State, Nigeria

Nadyen Jordan Shikpup¹, Chritiana Emmanuel Mangdik², Sarah Idoko³, Kaneng Mary Dalyop², Shekarau Mwolchet², Adams Lishika², Grace O. Daniel¹, Mary Seljul Ramyil⁴, Bulindi Lydia Babatunde⁵

¹ *University of Jos*

P. M. B 2084, Jos, Nigeria

² *College of Nursing and Midwifery*

Vom Road, Wang 930101, Plateau, Nigeria

³ *Jos University Teaching Hospital*

WX43+JVP, Katon Rikkos 930105, Plateau, Nigeria

⁴ *Plateau State Specialist Hospital*

2a Gomwalk Rd, Jos 930105, Plateau, Nigeria

⁵ *Edith Cowan University*

270 Joondalup Drive, Joondalup, WA 6027, Australia

DOI: [10.22178/pos.100-42](https://doi.org/10.22178/pos.100-42)

LCC Subject Category: R5-920

Received 30.11.2023

Accepted 28.01.2024

Published online 31.01.2024

Corresponding Author:

Mary Seljul Ramyil

crownramyil@yahoo.com

© 2024 The Authors. This article is licensed under a Creative Commons Attribution 4.0 License



Abstract. Despite the high population growth and fertility rate of women in Nigeria, contraceptive prevalence is one of the lowest in the world at 15%; however, every year, nearly 16 million teenagers aged 15-19 years give birth, and 95% of these births take place in resource-limited countries. Contraception is the act of intentionally preventing pregnancy using various devices such as good sexual practices, chemicals, drugs, or surgical procedures. This study aimed to assess the utilisation and contraceptive preference among women of reproductive age in Jos North, Plateau State, Nigeria. A cross-sectional survey that adopts the multi-staged sampling technique to select 396 women and data collected through an informed structured questionnaire between September 2021 to March 2022 and after that analysed with the statistical package for social sciences (SPSS) version 21 presented in contingency tables, charts and percentages while inferential statistical analysis was done using Spearman Rho ranked order correlation to test for statistical significance of variables based on $p < 0.05$. Most (84.8%) of the respondents were married, and 40.2% fell between 20-29. Most (88.1%) women had one form of formal education.

Similarly, 95.4% of their partners had formal education, indicating that most had secondary school education as their highest educational qualification, and so did their partners. In comparison, most (93.4%) of the respondent women had between 1-5 children per family, with the majority (44.9%) having either one or two children, of which 89.9% had used family planning methods before with 71.0% of them currently using these methods rated to be moderately good. In comparison, the majority (81.3%) of the participants had plans to continue using these methods. This study revealed that rural women of reproductive age in the Jos North Local government area have been using, would still and intend to use contraceptives in the future to prevent maternal morbidity. The choices made by them preferred the hormonal injection methods as a matter of priority to increase the satisfactory utilisation of planned parenthood. Thus, nurses should be aware of particularly the preferred contraceptive choice of the women in rendering health care services to improve their level of utilisation.

Keywords: Contraceptives; Contraceptive use; Preference; Reproductive age; Utilisation; Women.

INTRODUCTION

Family planning may not directly bring about the desired reduction in maternal mortality rates but could bring about a significant reduction of morbidity that could lead to mortality. In 2017, 308 million inadvertent pregnancies were prevented, as projected by the use of modern contraceptives, believing that an additional 67 million unplanned pregnancies would be prevented when all the women's needs for modern contraceptive methods are met [1, 2]. In almost all regions of the world, contraceptives are used by most women who are of reproductive age, either married or in a union, as a means of deterring conception using various devices such as good sexual practices, chemicals or drugs and surgical procedures. In Europe, Latin America, the Caribbean and North America, contraceptive use was above 70 % but is below 25 % in middle and Western Africa [1]. Statistics from the National Health Demographic Survey [3] revealed that the prevalence rate of contraceptive use in Nigeria is 17% among women of reproductive age who are currently married. In contrast, amongst sexually active unmarried women, contraceptive use is 37% [4, 5].

By the year 2030, unplanned pregnancies will be a significant health problem globally because of their association with increased risk of maternal death, ill-health, social burden including cost and short birth intervals, particularly among those with less than 24 months of birthplaces newborns and their mothers [3, 6].

Nigeria is the most populated nation in Africa and the seventh most populated in the world, with the highest Total Fertility rate (TFR) in the Northwest of Nigeria, with 6.6 children per woman. 40.1% of the total population in Nigeria is poor, according to the measurements of the National Bureau of Statistics [7], which could imply that if families had fewer members to cater for, then a smaller percentage of individuals or families would be poor. Maternal mortality rates for sub-Saharan Africa range from 511 to 652 deaths per 100,000 live births (average 546). This is still a long way from the proposed target for the sustainable development goal of reducing maternal mortality, which is less than 70 deaths per 100,000 live births [3, 8, 9].

It is against this backdrop that this study aimed to assess the utilisation of contraceptives by women. These factors influence the use of contraceptives and identify the contraceptives pre-

ferred by women of reproductive age in the most populated local community of Jos North, Plateau state, which adopted the multi-staged sampling technique to arrive at the respondents to be recruited.

METHODS

Jos North is one of 17 local government areas of Plateau state with an area of about 285kmsquare and a population of 643,200 people as projected by the United Nations population projections of 2022, making it the most populous local government in the entire state with a population density of 2,489 people per km² [10]. This was a cross-sectional descriptive survey that adopted the multi-staged sampling technique to arrive at recruiting 384 respondents calculated to be involved in the study using Cochran's formula for the sample size for an unknown total population with a 10% attrition rate, where 422 questionnaires were eventually distributed with 95% (396) retrieval rate. The study population was comprised of women of reproductive age drawn from various communities within Jos North local government. Jos North has 20 wards under the Primary Health Care Unit, so simple random sampling was employed to select the wards for the study involving the selection of households and individual women of reproductive age recruited using Cochran's formula for calculating the unknown total population. Data was collected through an informed structured questionnaire designed for women, including socio-demographic characteristics, utilisation of contraceptives, and preferred form of contraception between September 2021 to March 2022 and after that, analysed with the statistical package for social sciences (SPSS) version 21 optimised for data presentation using contingency tables, charts and percentages while inferential statistical analysis was done using Spearman Rho Ranked order correlation to test for statistical significance of variables based on $p < 0.05$ considered as the cutoff value.

RESULTS AND DISCUSSIONS

Socio-demographic. In Table 1, the majority (84.8%) of the respondents were married, and most (40.2%) of the respondents fall within the ages of 20-29 years, with only a few (2.0%) below 20 years.

Table 1 – Socio-demographic characteristics of respondents

Variable	Frequency	%
Age (years)		
<20	8	2.0
20-29	159	40.2
30 – 39	150	37.9
40 – 49	79	19.9
Marital Status		
Single	22	5.6
Married	336	84.8
Separated/Divorced	20	5.1
Widow	18	4.5
Educational Qualification		
No Educational	47	11.9
Primary Education	95	24.0
Secondary Education	183	46.2
Tertiary Education	71	17.9
Husband/Partner Educational qualification		
No Educational	27	6.8
Primary Education	51	12.9
Secondary Education	180	45.5
Tertiary Education	138	34.8
Religion		
Christianity	316	79.8
Islam	80	20.2
Employment type		
Salary-employment	88	22.2
Self-employed	260	65.7
Unemployed	48	12.1
Husband/Partner Employment type		
Salary-employment	155	39.1
Self-employed	223	56.3
Unemployed	18	4.5
Number of children		
None	26	6.6
1 - 2 Children	178	44.9
3 - 4 Children	143	36.1
5 or more children	49	12.4

On the educational level of the women, 88.1% had one form of formal education or the other, with only 11.9% having no formal education. Similarly, most (95.4%) of their partners had formal education. On the employment types of the respondents, most (65.7%) of them were self-employed, with only 22.2% under salary employment. Similarly, most (56.3%) of their partners were self-employed, with only 4.5% being unemployed, as opposed to 12.1% being un-

employed women. Most women (48.4%) have between 3-5 children, followed by 1-2 (44.9%) children. This suggests that most (93.4%) of the respondent women had 1-5 children per family.

Based on the utilisation of contraception, this study revealed that the majority (89.9%) of the respondents had used family planning methods before, with 71.0% of them currently using these methods rated to be moderately good. At the same time, the majority (81.3%) of the participants had plans to continue to use these methods in the future, as seen in Table 2.

Table 2 – Utilisation of Contraceptives among the women of reproductive in Jos North LGA

Utilisation of Contraceptives	Frequency	%
I have used family planning before		
Yes	356	89.9
No	40	10.1
I am using the family planning method now		
Yes	281	71.0
No	115	29.0
I plan to use family planning in the future		
Yes	322	81.3
No	61	15.4
Undecided	13	3.3

However, the level of utilisation of contraceptives currently stands at 71% as compared with a previous study conducted by [11] on the predictors of modern contraceptives used, where a vast majority of the respondents had used contraceptives in the past. The results obtained agreed with that of this study. Findings from our study tallies with that a survey [12] carried out in Oman on the prevalence and socio-demographic determinants of contraceptive use where most respondents were previous users of contraceptives. The same findings were observed from the work [13], whose study was conducted in Nigeria on the use of traditional and modern contraceptives among childbearing women. Previous use of contraceptives was found to be high, according to the findings.

On current contraceptive use, our study noted that the majority of the respondents are currently using contraceptives, placing this side-by-side with findings from the work [14]. There is no

contrast, though their work attempted to compare contraceptive use among employed and unemployed women. In the same way, findings from this study agreed with the survey conducted in the United States among Muslim women by [15, 16] in Nigeria on determining factors of contraceptive use among women. However, the prevalence in the latter study was shared between modern and traditional methods. The study observed that the use of the contemporary method was slightly higher than that of the conventional method. The high prevalence of contraceptive use, as noted in this study, could be a result of the selected location for the study within the metropolis, thus enabling the resident's access to information as well as health facilities that provide these services.

The preferred choice of contraceptives by the women in Jos North LGA revealed that Injectables (21.2%) were the primary choice made by the women, followed by safe period or calculation (20.2%), and the last choice among the contraceptives was the Tubal ligation (2.3%). Though some women made more than one choice of contraceptives, this does not alter their choice of contraceptive utilisation, as seen in Figure 1.

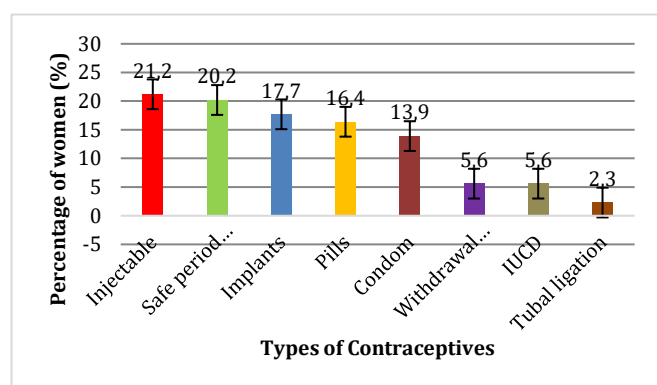


Figure 1 – Preferred choice of contraceptives utilisation

There was low utilisation of contraceptives in a study conducted in the Southeast region of Ethiopia on the determinants of family planning use among married women by [17] as against what our study revealed. Moreover, a survey carried out in a rural community of Northwest Ethiopia by [18] found that the prevalence and determinants of family planning use among married women contradict the findings of our study, which revealed that contraceptive use was high. In contrast, their study reported a low contracep-

tive utilisation. This implies that, in the same country, there might be differences in results due to the availability of healthcare facilities and access to care by the residents.

Based on intention to use contraceptives, the majority of respondents from our study have intentions to use contraceptives in the future as compared to the findings of focusing on grand multiparous women who revealed similar association of intention to use contraceptives in the future. The preferred choice of contraceptives in our study area revealed that most women preferred hormonal injections. This was in line with studies conducted by, who had similar findings in their research where the most preferred contraceptive was the hormonal injections.

According to [22], safe period calculation covering fertility awareness methods was identified as a traditional method of contraception. Still, in our study, Tuba ligation (female sterility) was the least preferred method. However, studies conducted by [23, 24] discovered that respondents preferred and utilised traditional methods and pills rather than any other form of contraceptives.

The Spearman-Rho correlation revealed the strength of the relationship between social demographic variables and current contraceptive use and the statistical significance, utilising the P-value at a confidence interval of 0.05. it was observed that there was a weak (0.115) positive relationship between a Woman's educational qualification and Current contraceptive use and a weak (0.052) positive relationship between Marital status and Current contraceptive use. In contrast, a fragile (- 0.008) negative relationship between Age and Current contraceptive use; furthermore, analysing the strength of the relationship, there is a weak negative relationship between Religion and Current use of contraceptives (0.142), a fragile negative relationship between the Woman's Employment type and Current contraceptive use (- 0.034), another fragile negative relationship between her Husband/Partner's Employment type and her Current use of contraceptives (-0.011), and finally a fragile negative relationship between the number of children she has and Current contraceptive use (-0.056). For statistical significance, contraceptives are not used with age ($p= 0.870$) or marital status ($p= 0.304$). Still, there is significant use of contraceptives with a Woman's Educational Qualification ($p=0.022$), Husband/partner educational qualifi-

cation ($p=0.007$), as well as religion ($p=0.005$). There also is no significant use of contraceptives with Woman's Employment Type ($p=0.497$), nor

is there any considerable use with Husband/partner employment Type ($p=0.8270$) or number of children ($p=0.264$) (Table 3).

Table 3 – Spearman Rho Correlation between Demographic Characteristics of Respondents and Utilisation of Contraceptives

Variables	Current Contraceptive Use	Correlation Coefficient	P-Value
Current Contraceptive Use	1.000		
Age		-0.008	0.870
Current Contraceptive Use	1.000		
Marital Status		0.052	0.304
Current Contraceptive Use	1.000		
Women's Educational Qualification		0.115	0.022*
Current Contraceptive Use	1.000		
Husband's Educational Qualification		0.134	0.007*
Current Contraceptive Use	1.000		
Religion		-0.142	0.005*
Current Contraceptive Use	1.000		
Employment Type		-0.034	0.497
Current Contraceptive Use	1.000		
Husband's Employment type		-0.011	0.829
Current Contraceptive Use	1.000		
Number of children		-0.056	0.264

Notes: * - Significant p-value <0.05

CONCLUSIONS

This study revealed that rural women of reproductive age in Jos North Local government area have been using, would still and intend to use contraceptives in the future to prevent maternal mortality and morbidity in order of priority the choices made by them preferred the hormonal injection methods followed by safe calculated fertility awareness method, implants, pills, and condoms to increase satisfiable utilisation of planned parenthood and contraception in women of reproductive age. Thus, nurses should be aware of particularly the preferred contraceptive choice of the women in rendering health care

services to increase their level of utilisation and give them a satisfactory experience.

Acknowledgement

We are grateful to the respondents, who were women of reproductive age in the rural communities of Jos North and were instrumental in their involvement in the research.

Conflict of interest

The authors declared no conflicting interests whatsoever that could lead to bias.

REFERENCES

1. WHO. (2022). *Contraception*. Retrieved from https://www.who.int/health-topics/contraception#tab=tab_1
2. WHO. (2011, January 1). *Preventing early pregnancy and poor reproductive outcomes among adolescents in developing countries*. Retrieved from <https://www.who.int/publications/i/item/9789241502214>
3. National Population Commission, Abuja, Nigeria (2018). *Demographic and Health Survey*. Retrieved from <https://dhsprogram.com/pubs/pdf/FR359/FR359.pdf>

4. Jain, R., & Muralidhar, S. (2011). Contraceptive Methods: Needs, Options and Utilization. *The Journal of Obstetrics and Gynecology of India*, 61(6), 626–634. doi: [10.1007/s13224-011-0107-7](https://doi.org/10.1007/s13224-011-0107-7)
5. National Population Commission, Abuja, Nigeria (2013). *Demographic and Health Survey*. Retrieved <https://dhsprogram.com/pubs/pdf/fr293/fr293.pdf>
6. Bahamondes, L., Fernandes, A., Monteiro, I., & Bahamondes, M. V. (2020). Long-acting reversible contraceptive (LARCs) methods. *Best Practice & Research Clinical Obstetrics & Gynaecology*, 66, 28–40. doi: [10.1016/j.bpobgyn.2019.12.002](https://doi.org/10.1016/j.bpobgyn.2019.12.002)
7. National Bureau of Statistics. (2012). *National Population Estimates*. Retrieved from <https://nigerianstat.gov.ng/elibrary/read/474>
8. Alkema, L., Chou, D., Hogan, D., Zhang, S., Moller, A.-B., Gemmill, A., Fat, D. M., Boerma, T., Temmerman, M., Mathers, C., & Say, L. (2016). Global, regional, and national levels and trends in maternal mortality between 1990 and 2015, with scenario-based projections to 2030: a systematic analysis by the UN Maternal Mortality Estimation Inter-Agency Group. *The Lancet*, 387(10017), 462–474. doi: [10.1016/s0140-6736\(15\)00838-7](https://doi.org/10.1016/s0140-6736(15)00838-7)
9. Jos North Population. (2022). *Population*. Retrieved from https://www.citypopulation.de/en/nigeria/admin/plateau/NGA032005_jos_north
10. Tekelab, T., Melka, A. S., & Wirtu, D. (2015). Predictors of modern contraceptive methods use among married women of reproductive age groups in Western Ethiopia: a community based cross-sectional study. *BMC Women's Health*, 15(1). doi: [10.1186/s12905-015-0208-z](https://doi.org/10.1186/s12905-015-0208-z)
11. Al Kindi, R. M., & Al Sumri, H. H. (2019). Prevalence and sociodemographic determinants of contraceptive use among women in Oman. *Eastern Mediterranean Health Journal*, 25(7), 495–502. doi: [10.26719/emhj.18.064](https://doi.org/10.26719/emhj.18.064)
12. Ajayi, A. I., Adeniyi, O. V., & Akpan, W. (2018). Use of traditional and modern contraceptives among childbearing women: findings from a mixed methods study in two southwestern Nigerian states. *BMC Public Health*, 18(1). doi: [10.1186/s12889-018-5522-6](https://doi.org/10.1186/s12889-018-5522-6)
13. Islam, A. (2016). Prevalence and Determinants of Contraceptive use among Employed and Unemployed Women in Bangladesh. *International Journal of MCH and AIDS*, 5(2). doi: [10.21106/ijma.83](https://doi.org/10.21106/ijma.83)
14. Budhwani, H., Anderson, J., & Hearld, K. R. (2018). Muslim Women's use of contraception in the United States. *Reproductive Health*, 15(1). doi: [10.1186/s12978-017-0439-6](https://doi.org/10.1186/s12978-017-0439-6)
15. Jeremiah, I., Dambo, N., & Wallymahmed, A. (2017). Determinants of contraceptive use by women in the central senatorial zone of Bayelsa State, Nigeria: A cross-sectional survey. *Nigerian Medical Journal*, 58(1), 26. doi: [10.4103/0300-1652.218409](https://doi.org/10.4103/0300-1652.218409)
16. Gonie, A., Wudneh, A., Nigatu, D., & Dendir, Z. (2018). Determinants of family planning use among married women in bale eco-region, Southeast Ethiopia: a community based study. *BMC Women's Health*, 18(1). doi: [10.1186/s12905-018-0539-7](https://doi.org/10.1186/s12905-018-0539-7)
17. Alemayehu, G. A., Fekadu, A., Yitayal, M., Kebede, Y., Abebe, S. M., Ayele, T. A., Gizaw, Z., Wubeshet, M., Muchie, K. F., Gelagay, A. A., Azmeraw, T., Birku, M., Alemu, K., Tariku, A., Derso, T., Tesfahun, A., Tebeje, N. B., Tigabu, Z., Gebeyehu, A., ... Biks, G. A. (2018). Prevalence and determinants of contraceptive utilization among married women at Dabat Health and Demographic Surveillance System site, northwest Ethiopia. *BMC Women's Health*, 18(1). doi: [10.1186/s12905-018-0611-3](https://doi.org/10.1186/s12905-018-0611-3)
18. Solanke, B. L., Banjo, O. O., Oyinloye, B. O., & Asa, S. S. (2018). Maternal grand multiparity and intention to use modern contraceptives in Nigeria. *BMC Public Health*, 18(1). doi: [10.1186/s12889-018-6130-1](https://doi.org/10.1186/s12889-018-6130-1)
19. Kungu, W., Agwanda, A., & Khasakhala, A. (2020). Trends and determinants of contraceptive method choice among women aged 15-24 years in Kenya. *F1000Research*, 9, 197. doi: [10.12688/f1000research.22481.1](https://doi.org/10.12688/f1000research.22481.1)

20. Lasong, J., Zhang, Y., Gebremedhin, S. A., Opoku, S., Abaidoo, C. S., Mkandawire, T., Zhao, K., & Zhang, H. (2020). Determinants of modern contraceptive use among married women of reproductive age: a cross-sectional study in rural Zambia. *BMJ Open*, 10(3), e030980. doi: [10.1136/bmjopen-2019-030980](https://doi.org/10.1136/bmjopen-2019-030980)
21. Rabi, A., & Rufa'i, A. (2018). The role of traditional contraceptive methods in family planning among women attending primary health care centers in Kano. *Annals of African Medicine*, 17(4), 189. doi: [10.4103/aam.aam_60_17](https://doi.org/10.4103/aam.aam_60_17)
22. Shah, R., Kiriya, J., Shibamura, A., & Jimba, M. (2018). Use of modern contraceptive methods and its association with QOL among Nepalese female migrants living in Japan. *PLOS ONE*, 13(5), e0197243. doi: [10.1371/journal.pone.0197243](https://doi.org/10.1371/journal.pone.0197243)
23. Hossain, M., Khan, M., Ababneh, F., & Shaw, J. (2018). Identifying factors influencing contraceptive use in Bangladesh: evidence from BDHS 2014 data. *BMC Public Health*, 18(1). doi: [10.1186/s12889-018-5098-1](https://doi.org/10.1186/s12889-018-5098-1)