

## EXTENDED SUMMARY

According to 2017 estimates, 214 million women of reproductive age in developing regions have an unmet need for contraception. (WHO factsheet). The unmet need for family planning services in Nigeria is about 19%. Contraceptive prevalence rate (CPR) in Nigeria increased from 6% in 1990 to 17% in 2018. Despite this increase in CPR, it is still one of the lowest in the world, with about half of the population residing in rural communities. (NDHS 2018, FP 2020]

Nigeria is the most populous African nation and seventh most populous nation of the World with a current estimated population of over 200 million and projected to reach 285 million by 2050 (World Bank 2019). This large population can be attributed to the high fertility rate of the country. Total fertility rate (TFR) has been on a gradual decline over time, from 6.0 children per woman in 1990 to 5.3 in 2018. There has been a similar decline among women in both rural areas (from 6.3 to 5.9) and urban areas (from 5.0 to 4.5) during the same period. In the last three NDHS surveys (2008, 2013, and 2018), the age-specific fertility rate has been highest among women aged 25-29. The TFR by state ranges from 3.4 children per woman in Lagos to 7.3 children per woman in Katsina. (NDHS 2018)

In a country with such large population, the fertility rate is an important demographic factor to consider in achieving the sustainable development goals (SDGs) of improving reproductive health and female education, which will in the long run reduce global population. (Adebowale 2019)

Out of the 17% of married women aged 15-49 years that use any method of family planning, 12% use a modern method and 5% use a traditional method. Use of modern methods of family planning among married women varies by residence, wealth, and state, and is higher among urban women (18%) than rural women (8%). (NDHS 2018)

Although there has been increased effort by government and non-governmental organizations to increase access to family planning services, contraceptive uptake generally is still low and fertility high, suggesting that there could be undetermined factors affecting the effectiveness of present strategies.

This study compared family planning and fertility trends in urban and rural communities of Lagos State in Nigeria, to generate reliable and credible data on the status of family planning. This information would be useful in assessing the responsiveness of reproductive health services in controlling fertility levels and the complementary effort of family planning in reducing maternal mortality in Lagos State.

## **Materials and Methods**

### **STUDY LOCATION**

This descriptive community-based comparative survey was conducted in Lagos State which is one of the most populous states located in the south-west geopolitical area of Nigeria. It is known as the economic nerve centre of the country with an estimated population of 23,437,435 for the year 2018. (*Lagos Bureau of Statistics 2018*)

The **study population comprised of 1445** women within reproductive age group (15-49 years) recruited from households of community clusters in 6 Local government area (LGA) of the state (4 urban and 2 rural) by multistage sampling technique. This survey was fielded in September 2020 and lasted for 4 weeks with all necessary COVID-19 protocols observed by research assistants and participants.

### **Sample size determination**

The minimum sample size for the study was determined using the formula for comparison of two proportions. (Araoye 2008)

$$n = \frac{(Z\alpha + Z\beta)^2 \{ [P_1(1-P_1)] + [P_2(1-P_2)] \}}{[P_1 - P_2]^2}$$

n = minimum sample size required for each group

Z $\alpha$ = 1.96, the critical ratio or standard normal deviate at significant level of 5%

Z $\beta$ = 0.84, the critical ratio or standard normal deviate at desired power of 80%.

$P_1$  = the estimated prevalence of women using a family planning method in a rural community of Nigeria was 17.2 % (0.172) (Etokidem et al 2017)

$P_2$  = the estimated prevalence of women using a family planning method in an urban community of Nigeria was 47.3% (0.473) (Jagun OE 2017)

The calculated minimum was 34 respondents for each LGA and this was increased to 250 per LGA to improve the validity and generalisability of the study.

Community entry and engagement were conducted through a well-planned entry program involving community leaders, medical officers of health and representatives of community groups.

**Data Collection tool:** A Pre-tested, semi-structured interviewer-administered electronic questionnaire using Kobo collect. The questionnaire was developed from a review of literature on the subject in tandem with the objectives of the study and was pre-tested for validity prior to use in a community reasonably distant from the selected survey communities, and reliability testing was also done.

The questionnaire was thereafter modified as appropriate and administered to women of reproductive age (15–49 years) within the communities. The questionnaire inquired the respondents' socio-economic and demographic details in section A, pattern of family planning (section B), factors affecting family planning pattern (section C). Section D elicited information on uptake and satisfaction with family planning services from skilled providers, waiting time upon arrival to seeing a health professional if ever, reasons for choice of and discontinuation of contraceptive method where applicable. Also, respondents supplied information on their fertility and maternal health experiences (section E).

Participation was voluntary and informed consent was obtained at recruitment.

A total of 12 Data collectors (2 per LGA) were selected and trained over 2 days to ensure lexical coherence and understanding of the research objectives. Data collectors were 18 years of age and above having successfully completed secondary education possessing a minimum of GCE Ordinary level certificates or its equivalent in order to build capacity.

## Data analysis

Descriptive and inferential statistical analysis were carried out using SPSS statistical software for the quantitative analysis. Tests of statistical significance were conducted for bivariate and multivariate analyses with level of significance set at  $p < 0.05$ . Multiple logistic regression analysis was conducted.

## Ethical considerations

Ethical clearance was obtained from the Health Research and Ethics committee of the Lagos State University Teaching Hospital. Informed consent was obtained from the participants with the option of withdrawing from the study at any point.

## References

1. Adebowale A.S. Ethnic disparities in fertility and its determinants in Nigeria. *Fertility Research and Practice*, 2019, 5:3. <https://doi.org/10.1186/s40738-019-0055-y>
2. Araoye, M.O. *Sample Size Determination in Research Methodology with Statistics for Health and Social Sciences*. Nathadex Publishers, Ilorin, 2004, 115-121
3. Etokidem AJ, Ndifon W, Etowa J, Asuquo EF. Family planning practices of rural community dwellers in cross River State, Nigeria, 2017, Vol. 20, Iss.6: 707-715
4. *Family Planning: A Global Handbook for Providers*. 2018. World Health, rganization and Johns Hopkins Bloomberg School of Public Health.
5. JAGUN OE. Family Planning and Contraceptive Practices among Parturients in a Cottage Hospital in South-West Nigeria, 2017, Vol 29 [1-2] Jan-June
6. Lagos Bureau of Statistics. "[2019 Abstract of Local Government Statistics](#)" (PDF). Retrieved 1 January 2021.
7. National Population Commission (NPC) [Nigeria] and ICF. 2019. *Nigeria Demographic and Health Survey 2018*. Abuja, Nigeria, and Rockville, Maryland, USA: NPC and ICF.