



## Effect of COVID-19 on the Need for and Access to Family Planning among Nigerian Women: Secondary Analysis of an International Survey

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### Authors' contributions

This work was carried out in collaboration among all authors. Authors OOA, AMO and UTF performed the statistical analysis and analyzed the study. Authors BMO, OOP and AOP wrote the protocol. Author OK wrote the first draft of the manuscript. Authors OK, RAT and UCP' managed the literature searches. All authors read and approved the final manuscript.

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### ABSTRACT

During the lockdown, there was a disruption in the provision of and access to family planning (FP) services in developing countries due to the covid 19 pandemic mostly because of restrictions on transportation, border closures, and closure of some healthcare institutions.

**Aim:** This study examined the impact of covid-19 on the need for and access to family planning among Nigerian women and access to family planning among Nigerian women.

**Methods:** Secondary data was used and the dataset was obtained from the COVID-19 Health Services Disruption Survey 2020 conducted by Institute for Health Metrics and Evaluation (IHME), Bill and Melinda Gates Foundation (B, MGF), and Premise Data Corporation. Respondents were women between 15 - 49 years. Data were collected from 12, 354 respondents, and 391 were from Nigeria. Variables were measured immediately before the pandemic and during the pandemic (December 2019 – June 2020). Analysis was done using the IBM Statistical Package for the Social

Sciences (SPSS) version 26. To summarize data, descriptive analyses such as mean, frequency, and percentages were used. Proportions were calculated to measure the association between the outcome and the independent variables with a 95% confidence interval.

**Results:** 46.5% of the respondents were 25 years old or younger. The proportion of women who reported needing FP services decreased slightly pre and during the pandemic (12.0% to 11.3%) but it was not statistically significant. There was a 4.7% decrease in accessing FP services which was also statistically significant.

**Conclusion:** This study found a slight decrease in the need for FP. This could be due to movement restrictions or a fear of contracting the virus from clinics, which would discourage people from seeking FP services. Anxiety and psychological stress caused by the pandemic would reduce the desire for sex and influence the perceived need for FP.

*Keywords: Needs; access; family planning; Nigerian; women.*

## 1. INTRODUCTION

The novel coronavirus that causes COVID-19 has spread rapidly since its emergence in 2019 and in March 2020, the World Health Organization declared it a global pandemic. Presently over 44 million people have been infected with the disease and over 1.1 million deaths have been recorded. The current fatality rate highlights how severe the pandemic has been. As of Thursday, 9th September 2021, there have been almost 200,000 total cases and nearly 2600 deaths from COVID-19 in Nigeria [1].

The increasing number of COVID-19 cases and deaths creates some difficulty in the healthcare system [2]. A WHO survey of 105 countries reported that as a result of the COVID-19 pandemic health care services have been disrupted in 90% of the countries. Family planning services disruption was one of the most prevalent, with 68 percent of countries reporting service disruptions [3]. Variability was observed in the disruption of family planning services, notably the provision of contraceptives spanning geographies in the early phases of the COVID-19 pandemic in sub-Saharan Africa [4]. This may be due to variations in health system readiness, as other nations, like Burkina Faso, took action to avert shortages of contraceptives by purchasing significant inventories [5].

Additionally, survey results showed that COVID-19 has a direct impact on women's intentions to become pregnant. As a result of the epidemic, 34% of American women said they wished to delay getting pregnant or have fewer children [6]. The COVID-19 pandemic has an impact on women's need for family planning, as evidenced by data from Burkina Faso, Kenya, and the Democratic Republic of the Congo showing between 9% and 14% of women have changed

their minds about becoming pregnant due to COVID-19 worries [5]. One projection even stated that there will be about 60 million fewer contraceptive users in the world [7].

An estimated 51 million women may not have access to contemporary contraceptives if a high level of family planning service disruptions lasts for longer than a year, which might result in 15 million unwanted births and significantly raise maternal, neonatal, and child morbidity and death rates [8-10]. However, the Covid-19 pandemic affects the intentions of women concerning their fertility, it is important to make sure that potential or current users of family planning services continue to have access to a variety of voluntary family planning services, and that evidence-based advocacy and practices remain a priority in family planning programs [11-13].

One major way the global Family Planning community is responding to the potential challenges that might be posed by the pandemic was the call to ensure that contraceptive services are constantly available and accessible [9, 12-18]. In nine Sub-Saharan nations, research was conducted to evaluate how the epidemic affected the demand for and use of contraceptives using existing annual data on key reproductive health indicators [19]. The Lagos state of Nigeria was the only state from the nation to have been included and findings therein may not be representative of the entire country.

At the time of this study, no study has been conducted to determine the country-wide effects of the pandemic on the need for and access to FP. An assessment of the effects of the pandemic on these determinants of FP use is needed to inform evidence-based response. We, therefore, sought to determine these effects

using existing data from a multinational smartphone based survey.

By evaluating the demand for family planning services among Nigerian women before and during the COVID-19 pandemic and identifying variations in the proportion of need, this study aims to ascertain the influence of COVID-19 on the need for and access to family planning services among Nigerian women. To investigate changes in the percentage of Nigerian women who have trouble getting family planning services both before and after the COVID-19 outbreak. Additionally, the study will examine the impact of sociodemographic variations on shifts in the demand for and accessibility of family planning during the COVID-19 epidemic.

## 2. METHODOLOGY

### 2.1 Study Design

The Institute for Health Metrics and Evaluation (IHME), the Bill and Melinda Gates Foundation (BMGF), and Premise Data Corporation performed the COVID-19 Health Services Disruption Survey 2020, which served as the source of the data for this study. The poll was carried out utilizing the smartphone-based Premise data gathering technology in 76 countries, including Nigeria and this may imply that most of the respondents will be from the urban setting. The specific dataset utilized was the Premise Women's Health COVID-19 Health Services Disruption Survey 2020 for Nigeria. The study concentrated on changes in the risk of gender-based violence and the degree of interruption to family planning and reproductive health services.

### 2.2 Population and Sample

Members of the general public who identified as women and were aged 15 to 49 made up the survey's respondents. Target quotas were assigned to nations based mostly on the size of their respective Premise user networks. 12,354 respondents gave information, including 391 from Nigeria however convenient sampling method was used to recruit respondents within each country.

### 2.3 Data Collection Instruments

The method of quota sampling was used. A premise-based smartphone application that allows for global data collecting, was used to find

participants for the study. The study recruited Premise network users who met the inclusion requirements and gave their consent. To enlist respondents, Premise used engagement initiatives and focused advertising.

### 2.4 Data Analysis

Analysis was done using the IBM Statistical Package for the Social Sciences (SPSS) version 26. We ran a descriptive analysis on the socio-demographic characteristics knowledge using data aggregation and mining. Reports are represented in a table. We calculated the proportions of respondents who had a 'Need for Family planning' and 'Difficulty in accessing Family Planning Services' before pandemic and during the pandemic and then estimated the change in these proportions between the two periods statistical significance of these changes in proportion was determined using 95% of Confidence Intervals

## 3. RESULTS AND DISCUSSION

### 3.1 Results

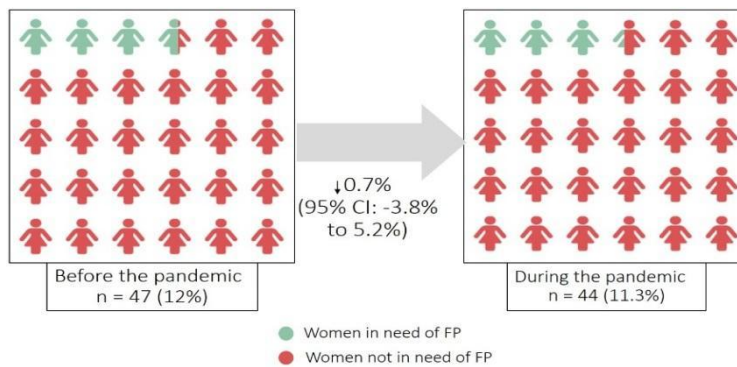
The sociodemographic characteristics are presented in Table 1. Approximately 46.5% of the respondents were 25 years old or younger while 8.2% were between 36-45 years old. In terms of finances, 54.5% were classified as having good financial status. A large percentage (70.2%) had a Tertiary education and above. Those not currently working were 57.3% of the total respondents. Also, 76.5% lived in Peri-Urban/Urban areas as compared to 23.5% in the rural areas. Yoruba-speaking tribes formed the majority (35.3%) of the ethnic groups and 57.8% of all respondents were Christians.

Fig. 1 shows the change in the need for Family Planning among women before and during the pandemic. The proportion of women who reported needing FP services was 12.0% before the COVID-19 pandemic and 11.3% during the pandemic. There was a slight decrease of 0.7% which was not statistically significant.

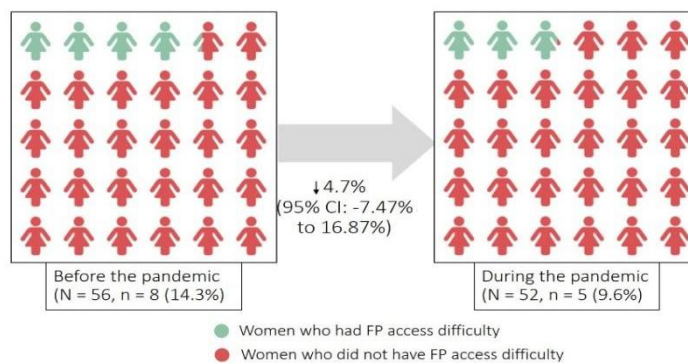
The change in the proportion of women who had FP access difficulty before and during the pandemic is represented in Fig. 2. Before the pandemic, 14.3% of women who sought FP services had difficulty accessing FP services whereas 9.6% of them had difficulty accessing services during the pandemic. There was a 4.7% decrease which was also not statistically significant.

**Table 1. Sociodemographic characteristics (N=391)**

<b>Age</b>		
25 years and below	182	46.5
26 to 35 years old	177	45.3
36 to 45 years old	32	8.2
<b>Financial Status</b>		
Poor	178	45.5
Good	213	54.5
<b>Highest Level of Education (n=376)</b>		
Below tertiary education	112	29.8
Tertiary education and above	264	70.2
<b>Employment Status</b>		
Currently working	167	42.7
Not currently working	224	57.3
<b>Geographical region</b>		
Rural	92	23.5
Peri-Urban/Urban	299	76.5
<b>Ethnicity (n=375)</b>		
Yoruba	138	35.3
Igbo	72	18.4
Hausa	65	16.6
Others	100	25.6
<b>Religion (n=390)</b>		
Christianity	226	57.8
Muslim	164	41.9



**Fig. 1. Women in need of FP (N=391)**



**Fig.2 . Women who had FP access difficulty**

The changes in the need for family planning for the different socio-demographic groups are presented in Table 2. There was a similar decrease ranging from 0.4% to 1.1% in need for family planning in most of the socio-demographic groups as in the total sample population. For respondents who were currently working, the decrease was more pronounced at 2.4%, a slight increase in the need for family planning was observed in women who were not currently working and there was no change in the need for family planning in women aged 36 - 45 years. None of the changes were statistically significant at 95% CI.

In Table 3, the changes in family planning access difficulty for the different socio-demographic groups. The proportion of women reporting difficulty in access to FP marginally reduced for most groups. For women below the age of 25 years, the decreased difficulty in accessing FP services was much larger at 11.5%. Women currently working and women between the ages of 26 and 35 years had a marginal rise in the proportion of women who experienced difficulty in accessing FP. (0.01% and 0.50% respectively).

### 3.2 Discussion

Our study sought to assess the proportions of women who need family planning and that of women who experience difficulties accessing family planning services in the period immediately before and during the early period of the pandemic and to determine the changes in these proportions between the two periods. In

this section, we discuss our findings as it relates to existing knowledge and the possible implications of these findings.

The proportion of women who reported needing family planning both before and during the pandemic was much lower than was reported in a global study where it was reported that over half of women of reproductive age needed family planning [20]. This difference might be due to the higher need for family planning in developed countries. A similar study to ours however reported the proportion of women with a need for family planning before the pandemic to be as high as 74.5% and was even higher during the pandemic [21]. However, the respondents of this study were mostly older with most of them being between the ages of 35 and 49 years while only a small fraction of those in our study was above 35 years. Furthermore, the need for family planning was objectively assessed in this study while it was self-reported in our study.

In contrast to the expected effect of the pandemic on the need for family planning, [22, 23] our study revealed a slight decrease in the need for family planning services during the covid-19 pandemic. There was a 5.8% increase in the need for family planning services in Lagos and other African countries [23-25]. Again, this may be explained by the higher average age of the respondents in this study. The reduction in the need for family planning in our study could have been a result of anxiety or psychological stress thereby reducing the urge for sex and the perceived need for FP.

**Table 2. Sociodemographic differences of change in need for FP (N = 391)**

Socio-demographic categories	Change in need for contraceptive	95% Confidence Interval
<b>Age</b>		
Under 25	1.10%	-3.46% to 5.66%
26-35	0.50%	-3.79% to 4.79%
36 – 45	0.00%	-5.09% to 5.09%
<b>Financial Status</b>		
Poor	0.60%	-4.14% to 5.34%
Good	0.90%	-3.37% to 5.17%
<b>Highest level of education (n = 376)</b>		
Below tertiary education	0.90%	-3.44% to 5.24%
Tertiary education and above	0.40%	-4.29% to 5.09%
<b>Employment Status</b>		
Currently working	2.40%	-2.15% to 6.95%
Not currently working	-0.40%	-4.85% to 4.05%
<b>Geographic region</b>		
Rural	1.10%	-4.15% to 6.35%
Peri-Urban/Urban	0.70%	-3.51% to 4.91%

**Table 3. Sociodemographic differences of change in FP access difficulty**

<b>Socio-demographic categories</b>	<b>Change in FP access difficulty</b>
<b>Age</b>	
Under 25	11.5%
26-35	-0.50%
36 – 45	0.00%
<b>Financial Status</b>	
Poor	0.10%
Good	0.00%
<b>Highest level of education</b>	
Below tertiary education	0.14%
Tertiary education and above	0.02%
<b>Employment Status</b>	
Currently working	-0.01%
Not currently working	0.10%
<b>Geographic region</b>	
Rural	0.11%
Peri-Urban/Urban	0.02%

Our study also revealed that marriage, the highest level of education, and employment status were not statistically significant in predicting the need for family planning services during the pandemic. This is in contrast to another study done in Nigeria where they were found to be statistically significant and were associated with a higher unmet need for family planning during the pandemic [26]. The difference here can be due to the small sample size in our study and may not be a true representative. Also, the study involved both men and women while including ours were just women of reproductive age.

Our study also found an unexpected decrease in the proportion of women who experienced difficulty accessing family planning. Previous studies revealed an increased difficulty with access to family services [27] which are in contrast to our study. The decreased difficulty in access to FP in our study may not be representative of the true picture of the population due to the limited sample size. Moreover, the initial lockdowns in the country were restricted to Lagos, Ogun, and Abuja, and the national movement restrictions at the time assessed in our study were limited to nighttime. The difficulty in access to FP services may have changed as the pandemic worsened and restrictions toughened.

A study had similar results to ours with more than half of women reporting that lockdowns and social restrictions did not affect their ability to access family planning services [28]. The difference here could be due to the fact data

obtained in this study was by interviews and ours was by questionnaire.

The slight decrease in the need for family planning cut across all socio-demographic groups except among women who were not in employment. The need for family planning increased slightly in contrast to the employed who showed a higher decrease in the need for family planning services than in any other socio-demographic group. The need for family planning reduced with increasing age and increasing educational level in Lagos [29]. The small sample size of the dataset used may be responsible for the difference in findings.

**4. LIMITATION**

Due to the small sample size, it is difficult to interpret and show the effect of COVID 19 on the observed level of decreased need for and access to family planning services. Also, this study could not identify the confounding factors that could affect access and use of family planning services as the characteristics of the respondents might have changed during the period of data collection pre and the COVID-19 lockdown

**5. CONCLUSION**

The findings from our study suggest that despite the slight decrease in the number of women reporting a need for FP and in the number of women who had difficulty in accessing FP during the pandemic, this could be due to movement restrictions or a fear of contracting the virus from clinics, which would discourage people from

seeking FP services. Anxiety and psychological stress caused by the pandemic would reduce the desire for sex and influence the perceived need for FP. The onus is on the government to prepare for the possible increase in demand for FP as has been recommended by experts in the field.

## CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

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## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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