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Systemic Effects on Access to and Utilization of Quality Contraceptive Services by Women of Reproductive age During Covid-19 Pandemics in Oyo State, Nigeria

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Abstract

The indirect health impacts include diversion or depletion of resources to provide routine care and decreased access to routine care resulting from an inability to travel due to restriction, fear, or other factors. This paper presents the findings of a cross-sectional quantitative study exploring systemic effects on access to and utilization of quality contraceptive services by women of reproductive age during the Covid-19 pandemic in Oyo State, Nigeria. A purposive sampling technique was used to select 471 users of users of MNCH services (postnatal clinic and family planning services and immunization uptakes) that responded to 43 structured questionnaires that included socio-demographical characteristics, knowledge of contraceptive products and service availability, contraceptive supplies, access and utilization, health system opportunities and challenges amidst Covid-19 pandemics. Of the 471 respondents, the mean age of respondents was 29.63± 3.29years, with (34.2%) within 26-30 years age group. Majorly self-employed/business (74.9%), (91.1%) Yorubas ethnicity. Only 49.2% accessed contraceptive services during restrictions; due to overwhelming fear of Covid-19 by (31.7%), and disruption of services (31.1%). Others mentioned cost, restriction in movement, and difficulty in seeing caregivers. With 65.4% of the total respondents currently obtained a method with easy in restrictions. The Chi-square test, on the relationship between respondents' access to and utilization of contraceptive services with systemic factors shows a significant relationship with p =0.004 during the pandemic. It becomes highly imperative that the family planning program be redesigned to improve the health system as part of the preparedness measures to address gaps due to the Covid-19 restrictions.

Keywords: *Access and Utilization, Contraceptives, Covid-19 Pandemic, Effects, Systemic.*

Introduction

The health system consists of various elements involved in healthcare delivery, including human resources for health, service delivery, and supply chain and governance systems [1]. At the community level, the health system can be said to comprise "a set of local actors, relationships, and processes engaged in producing, advocating for, and supporting health in communities, but existing in relationship to establishing health structures" [2]. However, in the context of the Covid-19 pandemic, part of the responses to the pandemic included government-imposed travel bans on an unprecedented scale to contain the transmission, closing their borders, and implementing mandatory screening of citizens returning from heavily affected areas. In addition, many countries enforced partial or complete lockdowns, restricting the movement of their citizens to places in which attempts of clients to receive contraceptive services were no

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exemption. Governments also introduced stringent population-based interventions, such as physical distancing, surveillance with testing and contact tracing, quarantine, and isolation, to slow the rate of transmission, thereby avoiding a surge of demand on and availability of the already-strained healthcare systems [3].

Likewise, the Covid-19 pandemic is already having adverse effects on the supply chain for contraceptive commodities by disrupting the manufacture of key pharmaceutical components of contraceptive methods or the manufacture of the methods themselves (e.g., condoms), and by delaying transportation of contraceptive commodities [4]. In addition, equipment and staff involved in the provision of sexual and reproductive health services may be diverted to fulfill other needs, clinics may close, and people may be reluctant to go to health facilities for sexual and reproductive health services. In many countries, governments are restricting people's movements to stem the spread of the virus, and providers are being forced to suspend some sexual and reproductive health services that are not classified as essential, thus denying people this time-sensitive and potentially life-saving service [5,6], the health systems worldwide seek to reduce facility visits to protect the health workforce and clients from the spread of Covid-19. Individuals' health-seeking behaviour was changing, too, as they avoided facilities or sought care from alternate sources because of fear of acquiring the infection, respect for distancing measures, and/or mobility restrictions.

The interaction of community and health systems factors has a critical role to play in as far as the success or failure of a given health programme. The indirect impacts of pandemics on the health system therefore can increase morbidity and mortality further. Drivers of indirect health impacts include diversion or depletion of resources to provide routine care and decreased access to routine care resulting from an inability to travel, fear, or other factors. Additionally, fear can lead to an upsurge of the "worried well" seeking unnecessary care, further burdening the healthcare system [7]. Antenatal, delivery and postnatal care may be the only opportunities women have to access contraception. The Covid-19 pandemic has led to the partial and sometimes complete closure of these sexual and reproductive health services in many parts of the world. To make optimum use of these points of care: - there are innovative ways of prenatal care and messages inclusion to counselling on birth-spacing, maternity units across the globe to develop postpartum family planning services such as long-acting contraceptive methods for example, postpartum IUD, which are more effective and reduce the need for return trips for resupplies [8].This is similar to the report by [9] that Covid-19 caused disruptions in reproductive health services such as prenatal and postnatal care, childbirth and abortion services, contraception availability, and the management of sexually transmitted infections.

Contraception is life-saving and an essential component of reproductive health care. The availability and ability to access and continue using contraception improves women's reproductive autonomy, reduces unintended pregnancies, and profoundly impacts both women's and families lives, health, empowerment, and well-being, particularly in times of stress and hardship [10], such as pandemics. On the contrary, a report by [11] suggested a potential decreased demand during the Covid-19 pandemic for products that require face-to-face contact with a health-care provider or that might be more difficult to obtain, including intrauterine devices, implants, and provider-administered injections. Likewise on quality, though majority, 66%, could not associate the Covid-19 pandemic with lower quality of health care but indicated that the pandemic limited their access due to: fear of being infected, compliance to government movement restriction, inability to secure permission from spouse to go out and longer

waiting time to see the available health workers [12].

Evidence has shown that among the 1.9 billion Women of Reproductive Age group (15-49 years) worldwide in 2019, 1.1 billion have a need for family planning; of these, 842 million are using contraceptive methods, and 270 million have an unmet need for contraception [13,14]. Couples are faced with conflicting goals of achieving satisfying sex life and keeping a small family, failure to do so results in unwanted pregnancies and abortions. When abortion seeking is risky, late, or in the hands of unsafe providers or unhygienic conditions, it can lead to both reproductive morbidity and maternal mortality. World over, if contraception is accessible and used consistently and correctly by women wanting to avoid pregnancy, maternal deaths would decline by an estimated 25–35% [15,16]. Likewise, the unavailability of PPEs at service delivery points (SDPs) posed a potentially increased risk of contracting Covid-19 by HCWs and FP clients; hence uptake of FP services sharply declined. This impacted consumption of key commodities which were initially on an upward trajectory prior to the restriction in January 2020 and were seen to have been impacted significantly by April 2020 [17]. Therefore, the community of practice must redesign interventions and build links between the pandemics and women's preventive health measures to suit their contraceptive needs at this critical period, therefore the rationale for this study.

Materials and Methods

The study adopted a cross-sectional survey design which involved a quantitative data collection method. This study design considered the areas with more Covid-19 cases identified as reported by [18] to be in the major urban Local Government Areas (LGAs) that are in the heart of Ibadan, Oyo State capital**.** Ibadan city is the capital of Oyo State and Nigeria's largest city by geographical area. It has a population of over 3 million, with 11 Local government Areas in its metropolis [19]. Therefore, the participation involved data collection from Five (5) major urban LGAs (Ibadan- North, Northwest, Northeast, Southeast, and South West) of Oyo state as the representation of the high-burden areas of the state. The participants were selected by purposive sampling and screened for eligibility to achieve the required sample size.

The minimum sample size for this study was determined to be approximately 302 using the formula:

$$n = \frac{z^2\, pq}{d^2}$$

Where n = sample size, Z = standard normal deviation set at 95% confidence interval, which corresponds to 1.96, P is the contraceptive prevalence (73.1%) among women in a previous study by [20], and q is the complementary probability of $P = 1 - q$. d=Absolute error or precision (which is taken at 5%). Therefore, considering a dropout rate of 10% and also that this study was conducted in five (5) populated urban LGAs of the study state, the study included 471 eligible respondents that were users of Maternal New-borne and Child Health (MNCH) and contraceptive services since before Covid-19, those initiated use during the pandemic and are currently using during the survey period and with easy in Covid-19 pandemic restrictions, that were interviewed using a structured questionnaire; that contains socio-demographical questions and others that focused on contraceptive products/service availability, contraceptive supplies, health system opportunities, and challenges amidst Covid-19 pandemic in relation to women of reproductive age (WRA) access to and utilization of contraceptives. The data collection considered the Covid-19 precautionary measures; use of facemasks, hand sanitizer and washing, and the social distancing regulations in Nigeria. Ethical approval was obtained from the Ethical Committee of the Oyo state Ministry of Health, Oyo state, Nigeria. The interviewers obtained the oral informed consent of each respondent before the structured questionnaire

was administered to the target population for voluntary participation, assured of confidentiality, and the decision of any participant to quit the study accepted in good faith.

Results

Level of Contraceptive Supplies, Access, and Utilization of Contraceptives by the Respondents

Figure 1 shows that respondents were on the contraceptive method of choice when the Covid-19 pandemic began; the methods of choice as reported by the respondents ranged from many 44.8% of the respondents were on injectable - Intramuscular (a short-acting method), followed by 14.0% on Implants (a long acting method), 9.1% on Intrauterine device (IUD) which is also a long-acting method of contraception), 8.3% on Pill, just 0.4% have male sterilization method, while the results have few others, respondents, on other methods such as male condoms (MC) and female condoms (FC), Lactational amenorrhea (LAM), some were using withdrawal (WM), traditional methods as means of preventing pregnancy, while just 4.9% were not on methods for reasons of either they were not interested, not married or were pregnant as at that time when Covid-19 began. Their sources of contraceptive services were as shown in Table 1, which included 51.3% from hospitals/clinics, 23.4% claimed the did not source for services during Covid-19 for some reason that they continued with methods received before Covid-19, some were pregnant then, some not married yet and not interested, but we had other sources that included 9.8% that claimed self-administration, some 5.3% from private facilities in the neighbourhood (PMV/Chemist), 4.5% from Community Health Extension Workers (CHEWs), while mobile clinic and outreach activities were claimed by 3.6% and 1.9% respondents respectively. In all the respondents, 66.2% mentioned that they were able to get contraceptive information about method availability during the Covid-19 pandemic.

This survey has reported that as Covid-19 was progressing with the restriction of movement, 50.7% of respondents could no longer access method with easy, and just close to half (49.3%) could access methods of choice (figure 2); of which 24.8% accessed injectable-Intramuscular, 6.2% for Implant, 4.9% Pill, and other methods as in figure 3, for methods accessed by respondents during Covid-19 restrictions.

Table 1 shows that 38.2% of the respondents expressed effects of Covid-19 on access; of which overwhelming fear of Covid-19 were mentioned by (31.7%), disruption of services due to the pandemic (31.1%), cost (6.1%), restriction of movement by (19,4%), and some (11.7%) claimed it was difficult to see caregiver. These impacts were claimed to have changed a bit due to some systemic efforts, and some period down the line when the restriction in the movement was lifted and some easy in movement, the respondents who currently obtained method as at the time of this survey was recorded as 65.4% (see Figure 4).

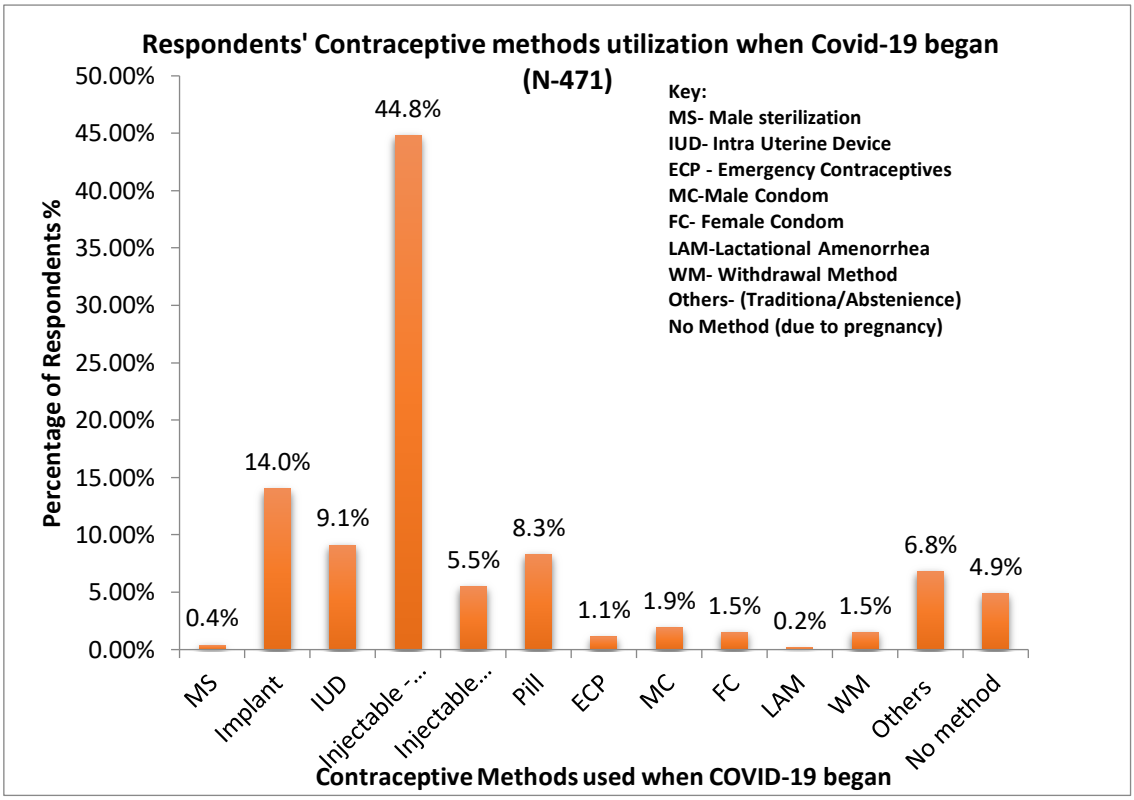

Figure 1. Methods of Contraceptives accessed by respondents when Covid-19 began

Table 1. Level of Contraceptive Supplies, Access, and Utilization of Contraceptives by the Respondents

Level of Contraceptive Supplies, Access, and Utilization	Frequency (N)	Percentage (%)
Are you able to get information about contraceptive method availability during Covid-19 (N-471)		
Yes	312	66.2
No	159	33.8
Total	**471**	**100.0**
Where did you obtain the method during the pandemic restriction? Probe to identify the type of source (N-471)		
Hospital/clinic	243	51.6
Mobile clinic	17	3.6
CHEW	21	4.5
Self-Administered	46	9.8
Community outreach	9	1.9
Private Facilities in The Neighbourhood (PMV/Chemists)	25	5.3
Others (On method, Pregnancy, Not Married)	110	23.4
Total	**471**	**100.0**
Did the Coronavirus (Covid-19) pandemic and the social restrictions affect access and or utilization of your chosen method? (N-471)		
Yes	180	38.2
No	291	61.8
Total	**471**	**100.0**
If yes, please specify how (n-180)		

Fear of Covid-19	57	31.7
Disruption of services due to Covid	56	31.1
Cost	11	6.1
No movement due to lock down	35	19.4
Difficult to see caregiver/No attention	21	11.7
Total	**180**	**100.0**

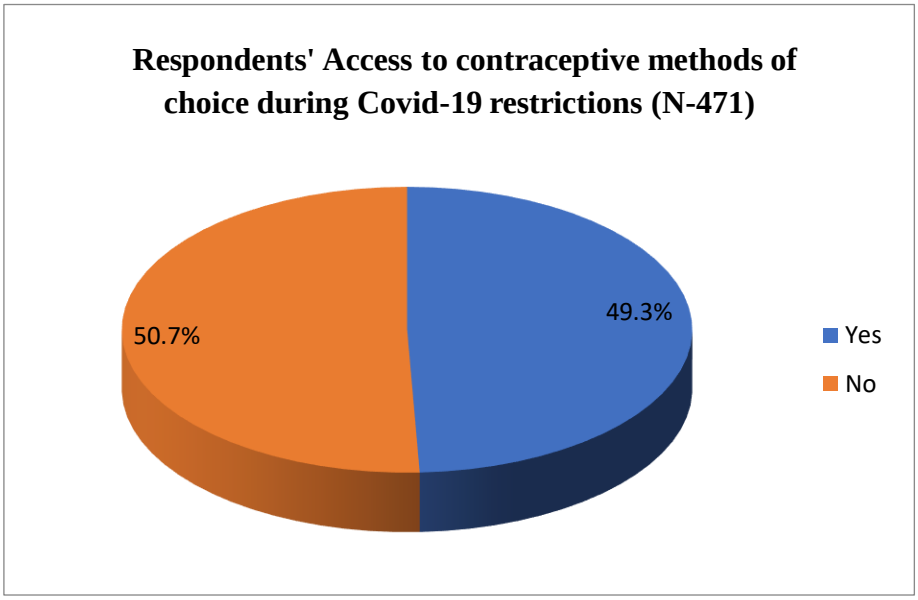

Figure 2. Respondents Accessing Contraceptive Methods of Choice during Covid-19 Pandemic Restrictions

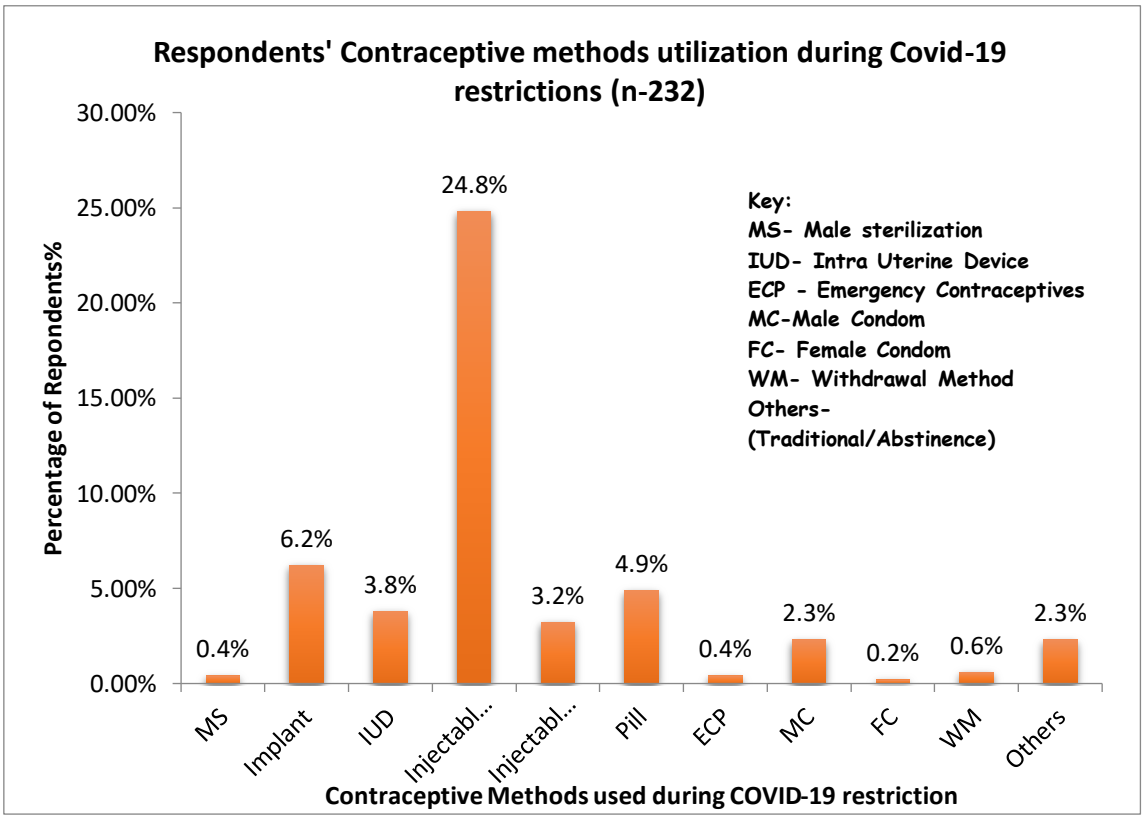

Figure 3. Methods of Contraceptives Accessed by Respondents during Covid-19 Restrictions

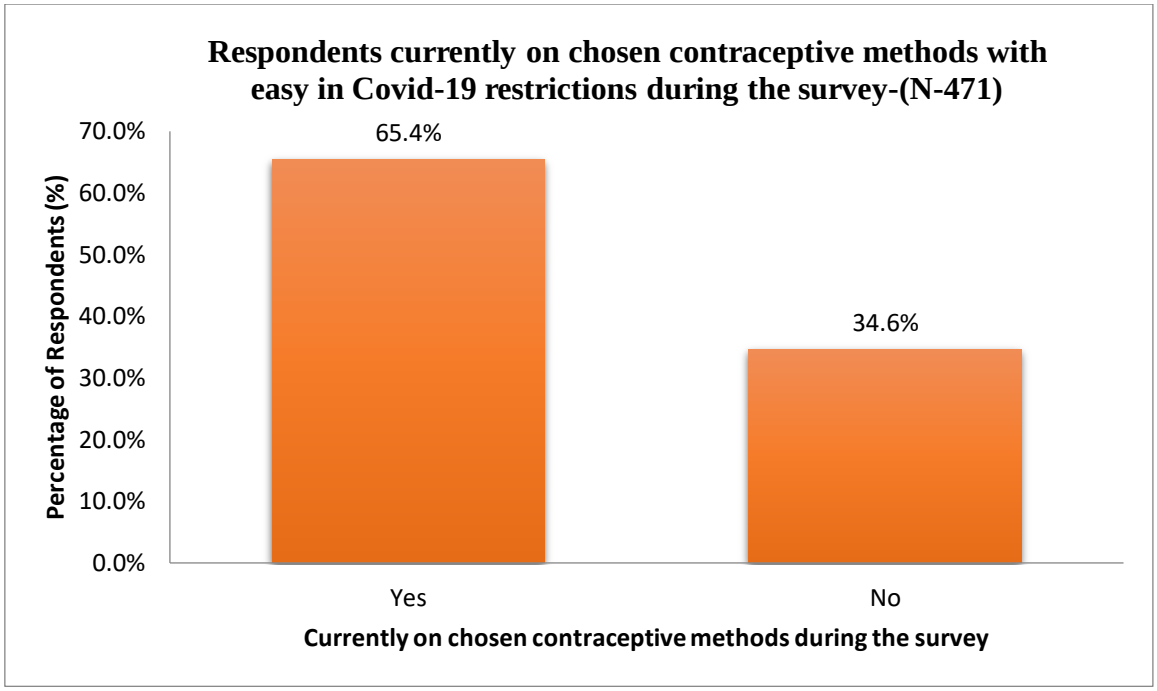

Figure 4: Currently on Chosen Contraceptive Methods with Easy in Restriction during Covid-19 during the Survey

Systemic Opportunities and Challenges that Impact Respondents' Contraceptive Access and Utilization Amidst Pandemics

The study explored the systemic opportunities and challenges during the Covid-19 pandemic and the expressed effects, as mentioned by the respondents as in Table 2. Of the respondents, just 33.1% claimed that they were able to do follow-up visits during the Covid-19 for services that they received, though many (67.1%) expressed their opinion that the health facilities were having supplies for protective materials (Table 2). On how the period of Covid-19 had impacted the health system, shortage in staff availability by 37.2%, inadequate commodities supply by 28.9%, and poor patronage for services by 34.0%, were mentioned.

There were mixed feelings among the respondents. While some believed that clients were denied services/with changes in clinic hours by 23.4%, 36.5% mentioned an increased cost of services as part of what was experienced with the health system, but 40.1% expressed an increase in demand for contraceptive as what they observed that happened during the Covid-19 pandemic's restriction (Table 2), however, what assisted in ensuring uninterrupted contraceptive information/service availability during the pandemic were identified to include; clinic staff commitment and adherence to protocol by 63.5%, government support/guidelines by 16.6%, social media and Television/Radio respectively by 6.8% and public/community awareness by 6.4% (Table 2). The Chi-square test of the relationship between contraceptive access/utilization and system factors revealed p=0.004, showing a significant relationship (see Table 3). The null hypothesis is therefore rejected.

Table 2. Systemic Opportunities and Challenges that Impact Respondents' Contraceptive Access and Utilization Amidst Pandemics

Systemic Opportunities and Challenges that impact Respondents Contraceptive Access and Utilization amidst pandemics	**Frequency (N)**	**Percentage (%)**
How do you think the Covid-19 pandemics/lockdown has affected the health facilities/hospitals? (N-471)		
Yes	156	33.1
No	315	66.9
Total	471	100.0
Do you think the health facilities' staff have adequate supply of protective materials during the Covid-19 (N-471)		
Yes	316	67.1
No	155	32.9
Total	**471**	**100.0**
What effect (s) do you think your response have on service access/supply? (N-471)		
Client denied of services (changes in clinic hours)	110	23.4
Increase service cost	172	36.5
Others (increase demand/need for service)	189	40.1
Total	**471**	**100.0**
How do you think the Covid-19 pandemics/lockdown has affected the health facilities/hospitals? (N-471)		
Shortage in Staff availability	175	37.2
Inadequate Availability of commodity supplies	136	28.9
Poor patronage for service	160	34.0
Total	**471**	**100.0**
What assisted in ensuring uninterrupted contraceptive information/service availability during the pandemic. Please specify (N-471)		
Social Media	32	6.8
Television/Radio	32	6.8
Public/community awareness Announcement	30	6.4
Government support/Guidelines	78	16.6
Clinics' staff commitment/adherence to protocols	299	63.5
Total	**471**	**100.0**

Table 3. There is no Significant Relationship between Systemic Factors and Contraceptive Access During the Pandemic

Null Hypothesis			
What assisted in ensuring uninterrupted contraceptive information/service availability during the pandemic? Please specify	**Were you able to access your contraceptive method of choice during Covid 19 pandemic**		**Total**
	Yes	**No**	
Social Media	19	13	32
	59.4%	40.6%	100.0%
Television/Radio	12	20	32
	37.5%	-	100.0%

Public/community awareness Announcement	19	11	30
	63.3%	36.7%	100.0%
Government support/Guidelines	50	28	78
	64.1%	35.9%	100.0%
Clinics' staff Adherence to protocols	132	167	299
	44.1%	55.9%	100.0%
Total	232	239	471
	49.3%	50.7%	100.0%

The value for the relationship between respondents' access to contraceptive services and systemic factors p =0.004, df- 4, X2- 15.460

Discussion

The systemic factors that are supposed to support access to and utilization of contraceptive services were assessed, and just 33.1% of the respondents mentioned that they could do follow-up/next appointment visits at the health facilities for services they received; either for counselling/complaints, though 67.1% of the total respondents believed the health facilities have an adequate supply of protective measures, of the total respondents, 23.4% mentioned changes in the clinic operation hours, increase the cost by 36.5%, with 40.1% stated an increased demand/needs for services amidst the pandemic's lockdown (Table 2). However, the rapid growth of the Covid-19 pandemic has raised global awareness of inadequacies in our public health systems across high-, middle-, and low-income nations such as Nigeria [21]. As healthcare systems are stretched to capacity dealing with the pandemic, there are worries that the delivery of essential health services, including family planning, is being severely compromised. Although this study revealed that the health system was further strained by the pandemic restrictions, respondents mentioned that clinics' staff commitment/adherence to protocols and government support/guidelines by 63.5% and 16.6%, respectively, helped in ensuring the contraceptive service availability and accessibility during the pandemic (Table 2). Marie Stopes International reported that up to 9.5 million women and girls might not get vital family planning services this year because of Covid-19 due to issues both in supply and demand, resulting in tens of thousands of maternal deaths, and on the supply side, there are worries that reduced manufacturing and delivery may affect contraceptive access, and inadequate health care availability due to Covid-19 burdens on health systems may impede access to more effective contraceptives such as IUD and tubal ligation [21]. Likewise, the lessons from the Ebola outbreak exemplify the impacts that can result from an epidemic in the absence of focused responses from governments to protect the gains made in sexual and reproductive health (e.g., contraceptive use, method availability) in contraceptive logistics over the past several decades [22], similarly, from this study, 37.2%, 28.9% and 34.0% of the respondents mentioned that low staff availability, inadequate commodity supplies and poor patronage for services were effects of Covid-19 pandemic's restrictions on health facilities. However, in the face of pandemic, nations face different starting place: different method mixes among its current users, differing roles of the public and private sectors, different levels of stock on hand, and different supply chain barriers, hence Table 1 shows that 9.8% and 5.3% of the respondents still have their way and self-administered or visited the private facilities in their neighbourhood in order to access services, which buttress the fact that the access to self-care methods are likely to come through private sector channels. These channels are well-placed to be nimble and often comprise large networks of pharmacies and shops that allow for easy access to self-care methods. However, this also

presents challenges to ensure both equity and quality [23], and that has to be examined amidst the impacts of Covid-19 on the health system in order to ascertain quality across the outlets participating in making services available. Since risk of increasing unplanned pregnancies is anticipated during the pandemic, it is advantageous to encourage women, healthcare providers, policymakers, and all the society to discuss Sexual and Reproductive Health (SRH) services as a priority service, emphasizing on contraception [24], and with similar government actions and provision of resources during the Covid-19 pandemic to ensure that essential sexual and reproductive health services continue. There should be guidance to policymakers and donors on strengthening the health system, and highlighting the importance of recognizing sexual and reproductive health needs during the pandemic response and recovery periods [25]. Therefore, the interactions of the key actors are important in ensuring resilience access to and utilization of contraceptive services, and the Chi-square analysis reveals p=0.004, showing a significant relationship between the health system and contraceptive access and utilization. (See Table 3).

Conclusion

The study, therefore, concluded that to achieve resilience in access to and utilization of quality contraceptive services by women of reproductive age during the pandemic and beyond; it becomes highly imperative that the family planning programme is redesigned towards improving the health system, with improved protocol in preparedness measures that will address systemic gaps and their impacts, even in the face of Covid-19 restrictions.

Limitations of the Study

1. Part of the data collection was during the festive period (December 21- January ‘22) which interrupted the process. This delay affected the period of data analysis.
2. The Covid-19 protocols slowed down the data collection process, it involved so many guideline considerations.
3. Getting the attention of the stakeholder for qualitative data collection required repeated visits.

Conflict of Interest

The author declares that there is no Conflict of Interest.

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