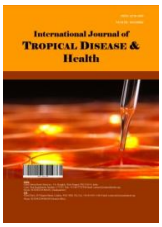

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COVID-19: Parents' Healthcare-Seeking Behaviour for their Sick Children in Nigeria - An Online Survey

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Authors' contributions

This work was carried out in collaboration between both authors. Author BDC conceptualized the study and design, wrote up the drafts, interpreted the data and prepared the manuscript. Author KAK performed the statistical analyses, interpreted the data and revised the manuscript for intellectual content and clarity. Both authors read and approved the final manuscript.

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ABSTRACT

Introduction: The current COVID-19 pandemic has greatly affected the wellbeing of children, either directly or through the effects of the response. Measures are in place to curb the spread of the virus in Nigeria, but little is known of the effect these stringent measures have on the healthcare-seeking behaviour of parents for their sick children.
Aim: This survey sought to describe parents' healthcare-seeking behaviour for their sick children during the COVID-19 lockdown in Nigeria.
Study Design: Descriptive cross-sectional.
Methods: A cross-sectional survey was conducted among Nigerian parents with children less than 18 years of age, via an online Google doc questionnaire administered through WhatsApp instant messaging. Using snowball sampling technique, 260 respondents from affected Nigerian states

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were recruited over one month. Chi-square tested differences between variables in assessing if healthcare-seeking behaviour was affected; statistical significance level was set at p-value <0.05.
Results: The median age was 38 years (IQR:9); 155 (59.7%) were females, 167 (64.2%) had tertiary education, while 83 (31.9%) had low income. Half (50%) of the respondents cited that the lockdown had affected their healthcare-seeking behaviour for their sick children; this did not significantly differ by geopolitical zone of residence (χ^2=3.90, p-value=0.42), and other variables. Thirty-seven 37 (14.3%) agreed their children couldn't get routine immunizations as scheduled.
Conclusion: The COVID-19 pandemic lockdown considerably affected parents' healthcare-seeking behaviour for their sick children in Nigeria. Contextual strategies aimed at health system strengthening and improved accessibility are needed to mitigate the effect of COVID-19 on parental access and utilization of healthcare facilities.

Keywords: COVID-19; parents; healthcare-seeking behaviour; lockdown; child; impact.

1. INTRODUCTION

The global outlook for seeking healthcare services is rapidly changing due to the current pandemic caused by the novel severe acute respiratory syndrome coronavirus (SARS-CoV-2), identified to be responsible for COVID-19 disease [1]. Presently, just about three months since the World Health Organization (WHO) acknowledged the infection as being a pandemic, the Nigerian healthcare system has had to grapple with the realities of the inadequacies in her already weakened capacity to tackle the rapid spread of the infection in almost every state [2]. As at June 21, 2020, the Nigerian Centre for Disease Control reported a total number of 20,244 confirmed cases of COVID-19 and 518 deaths with Lagos, FCT Abuja, Kano, Oyo and Rivers State being the most affected in the country [3]. While the country is now in the community phase of transmission [4], the major drivers of the outbreak appear to be both symptomatic and asymptomatic infected persons [5]. Even though children have been reported to have a rather mild form of COVID-19 disease, a few still have a severe form of the disease [6] and cases in children have been reported in Nigeria [7]. The gradual but steady rise in numbers of infected cases led to a partial restriction of movement and total restriction of travel between states of the country from March to June with a gradual easing done in two phases [8]. This drastic measure to enforce physical distancing, hand washing with soap and water, and respiratory etiquette were mitigating measures to curb the spread. The overwhelming number of new cases recorded daily, pushed healthcare facilities to their limit and unintentionally diverted most of the limited resources and manpower to combating COVID-19. Soon afterwards, it was reported that there was a significant reduction in healthcare facility attendance across the country [9]. These restrictions in movement due to the lockdowns may have accounted for the reduction in patients seeking healthcare despite having unrestricted access to healthcare services.

The Federal Government of Nigeria has embraced achieving Universal Health Coverage (UCH) to attain affordable access to healthcare services, physically (proximity to healthcare facility), financially (ability to pay) and socially (knowledge and enabling ability to access care) [10]. However, variations in the quality of services and access to care differ across geopolitical regions, whether or not healthcare facilities are government-owned or private-owned and the fact that majority of Nigerians pay for healthcare services as needed out-of-pocket and less than 5% have health insurance coverage, irrespective of where healthcare is sought (public or private) [10–12]. Although according to the constitution of Nigeria, the three levels of healthcare services – primary, secondary and tertiary are responsible for healthcare at the local government; state and federal government respectively, the tripartite levels of government have not been typically confined to their stipulated responsibilities. So, there is a disproportionate distribution of healthcare services across the three-levels and geographical regions of the country [13,14]. A study by Olusesan et al. in 2016 [13], showed that of the total number of health facilities in Nigeria, about 67% are owned by the government and the distribution of primary, secondary and tertiary health facilities per 100,000 population in Nigeria was 16.6, 2.184 and 0.046 respectively. The distributions of public and private facilities were 12.6 and 6.2 per 100,000 population. The study also revealed that although the primary health facilities accounted for 88% of the health facilities in the country and provided basic healthcare services to a majority of the Nigerian populace, the South-South zone

had the lowest density (11.9%) whereas the North-Central zone had the highest (23.3%) density of primary health facilities. Despite the seeming availability of healthcare facilities in Nigeria, a wide variation in utilization of healthcare services exists and is of concern particularly with regards to inequity in terms of physical and financial access, which is now possibly worsened by the COVID-19 pandemic.

Proper healthcare-seeking behaviour of parents/caregivers has been reported to be associated with decreased morbidities and mortality linked with acute illnesses in children [15]. Therefore, even when faced in precarious circumstances like in disasters, parents play a significant role in seeking appropriate healthcare services for their children [16] Similarly, some children may have had their health affected by the on-going pandemic either directly or indirectly because they have to depend on their parents/caregivers who are worried of contracting the virus from either healthcare workers or hospital environs and delay seeking care for those with either respiratory or gastrointestinal-related conditions due to increased suspicion of COVID-19 disease or miss immunization appointments [17]. This study was necessary, to identify challenges the imposed lockdown restrictions being novel to Nigerians, had on parents/caregivers healthcare-seeking behaviour for their children despite having uninterrupted healthcare services available to the citizenry at all levels of healthcare in the country. This study, therefore, sought to know the early effects of the COVID-19 pandemic on the parents' or caregivers' healthcare-seeking behaviour for their children. It also proffers approaches policymakers could adopt to mitigate similar occurrences in the future.

1.1 Literature Review on Healthcare-Seeking Behaviour

Healthcare-seeking behaviour and the health status of a nation are closely linked and are a reflection of the economic development [18]. It is defined as any "action or inaction undertaken by individuals to rectify perceived ill health for purposefully finding a suitable remedy" [19]. As developing countries make some strides at reducing under-five and adolescent mortality rates [20], there remains significant progress to be made despite the challenges of weak healthcare systems, poverty, unemployment and lack of sustainable infrastructure. These point to the possibility that not all cost-effective interventions may be appropriate or work as expected because of interactions with other factors like human behaviour [21]. Several theoretical models including the health belief model [22], the theory of reasoned action [23], pathway model [24], Andersen's behavioural model [25] and the health care utilization model have been put forward to elucidate the concepts of how people engage with the healthcare systems and what factors influence the healthcare-seeking behaviour. Describing healthcare-seeking behaviour would usually entail studies that particularly explored information regarding duration between onset of illness and contact with a healthcare provider, type of healthcare provider sought for help, the extent of compliance with recommended treatments, the reason for the choice of healthcare provider and reasons for not seeking help from healthcare providers. Furthermore, several factors have been identified to affect healthcare-seeking behaviour at both the individual and community (contextual) levels and are broadly classified into three main groups: predisposing, enabling and need factors according to the Andersen's behavioural model of health services utilization [25]. The predisposing factors reflect the individual's propensity to use healthcare services and include the demographic and social factors like age, sex, marital status, educational status, employment status and beliefs; enabling factors are resources that facilitate access to healthcare services and include economic factors like health insurance, availability of services, rural-urban strata, wealth or income, processes or activities that hinder healthcare service use and need factors represent potential needs of health service use and include health outcomes like status evaluated by healthcare provider and self-perceived health factors [26,27]. There is therefore a mixed interplay between the individual and contextual factors on healthcare-seeking behaviour and utilization of healthcare facilities [28]. Studies in both developed and developing countries that have examined the factors affecting healthcare-seeking behaviours predominantly examined predisposing, enabling and need factors mainly at the individual level [27–30], A few studies in Nigeria similarly demonstrated that the low-income earning, less educated, and rural-dwelling people were more likely to have inappropriate healthcare-seeking behaviour because of less-favourable predisposing and enabling factors [31–34]. A few studies among parents and healthcare-seeking

behaviour for their children suggested that poor knowledge of danger signs, financial constraints and poor services at the healthcare facilities were the notable constraints to improved healthcare-seeking behaviour [35–37].

Policymakers, therefore, need to understand the numerous drivers of healthcare-seeking behaviour in the population. Contextual strategies, therefore, would focus on strengthening existing healthcare services by improving physical, social and financial access to more disadvantaged groups of the population. Certain studies in rural areas in developing countries including Nigeria [30,32,38], suggested that a synchronized effort to improve the quality of care and infrastructural status of the healthcare facilities, strengthening of the overburdened and understaffed workforce and provision of mobile clinic services for the areas with difficult access to healthcare facilities.

2. METHODOLOGY

The 36 states including the Federal Capital Territory in Nigeria are divided into six geopolitical zones as follows: South-East (Abia, Anambra, Ebonyi, Enugu, Imo), South-South (Akwa Ibom, Bayelsa, Cross River, Rivers, Delta, Edo), South West (Ekiti, Lagos, Ogun, Ondo, Osun, Oyo), North-East (Adamawa, Bauchi, Borno, Gombe, Taraba, Yobe), North-Central (Benue, Kogi, Kwara, Nasarawa, Niger, Plateau, Federal Capital Territory), North-West (Jigawa, Kaduna, Kano, Katsina, Kebbi, Sokoto, Zamfara).

The study was done on the internet through an instant message via WhatsApp Application and using Google Doc Form. A survey link was generated and distributed to individuals and WhatsApp groups.

This study was a descriptive cross-sectional survey, conducted from May 9 to June 8, 2020 (during the time of the national COVID-19 pandemic lockdown with interstate travel restrictions, school and market closures). Our study involved parents or caregivers who had children within the paediatric age group (0-18 years).

2.1 Inclusion Criteria

Parents residing in any state in Nigeria affected by COVID outbreak that had experienced either partial or total lockdown, owned a smartphone with access to the internet and had the WhatsApp application installed.

2.2 Exclusion Criteria

Respondents without children within the paediatric age group were excluded from the study.

The sample size was estimated using the Cochran formula for proportions $N_0 = Z^2pq/ e^2$. We assumed p = 22.1% obtained from the prevalence of parents' healthcare-seeking behaviour for their children in a previous study [16]. N_0 = sample size, Z = 1.96 and e = 6%, hence, N_0 = 184. To adjust for 20% non-response an estimated minimum sample size of 230 was calculated.

Snowball (non-probability) sampling method was employed to recruit 260 participants; respondents assisted in further recruitment of other subjects among their acquaintances and contacts, by sharing the survey link to their contacts and various groups to keep the survey widely distributed as far as possible since face-to-face interviewer administration of questionnaires was not possible due to the on-going lockdown measures.

The questionnaire used in this study was designed by the authors. It was designed following a focus group discussion of healthcare workers which highlighted specific challenges being encountered by parents and children. Five thematic areas were identified that suggested key issues affecting the health of children during the partial restrictions and curfews during the early phases of the COVID-19 lockdown and included parental anxiety related to contracting the virus, transportation, shortage of medicines and supplies, health providers attitude to children with chronic conditions like asthma pneumonia and challenges with child immunizations at healthcare facilities. The questionnaire was first reviewed by senior health professionals for content validity. Pilot testing was done among seven randomly selected health workers (doctors) and six non-doctors (members of a religious gathering) and feedback retrieved, ambiguous questions were corrected. This was done to observe the ease of self-administration of the questionnaire. Data from the pilot study were not included in the final analysis.

A two-part semi-structured questionnaire was used to collect the data. The first part asked

about the respondents' socio-demographic characteristics and also asked if they were presently experiencing any type of lockdown within or ~~without~~ outside their state of residence and the second part asked questions in two categories; question A asked if the lockdown due to the COVID-19 outbreak had affected seeking healthcare for a sick child, and question B assessed how the COVID-19 restrictions affected the parents' healthcare-seeking behaviour for their children or adolescents using a 6-item questionnaire which was answerable using a 5-point Likert scale ranging from "1" strongly disagree to "5" strongly agree. The reliability of the 6-item questionnaire was good (Cronbach's alpha .817).

2.3 Operational Definitions

Operational definitions used in the study were adapted from previous studies [39,40]. 1. Parents/Caregiver: defined as either mother or father or any other family member who were primarily responsible for attending to their child's healthcare needs. 2. Healthcare-seeking behaviour is defined as any activity undertaken by parents/caregivers who perceived their child(ren) to have a health problem or to be ill to find an appropriate remedy and whose intention was to access either a private or public healthcare facility. 3. Healthcare-seeking behaviour not affected: was defined as parents or caregivers either not having any child(ren) who is perceived to have a health problem or who did not have any challenges seeking healthcare at either a private or public healthcare facility. Respondents average monthly income earnings were categorized into three groups, adapted from a survey by Renaissance Capital [41]; Less than N100, 000 = low income; N100,000 - N499,999 = Middle income; and N500,000 and above as high-income earners.

2.4 Data Analyses

Completed questionnaires were automatically imported to Excel spreadsheet and analysed using SPSS version 26 (SPSS Inc., Chicago, Illinois, USA). Simple frequencies and cross tables were performed and relevant tables were developed. The variables were presented as frequencies and proportions; whether or not healthcare-seeking behaviour was affected was compared among the variables using the chi-square (χ^2) test. Level of statistical significance was set at a probability value (p-value) less than 0.05, and the level of confidence was set at 95%.

3. RESULTS

A total of 272 respondents filled the online survey but 12 of these were excluded for either incomplete or inconsistent responses.

3.1 Demographic Characteristics of Respondents

The median age of all 260 respondents was 38.0 years (IQR=9), females represented 155 (59.6%) of the respondents, 239 (91.9%) were married, 167 (64.2%) had tertiary level of education, 131 (50.4%) had three to four children as seen in Table 1. Although respondents from all six geopolitical zones in Nigeria were represented as seen in Table 1, the majority of them were from the South-South (171, 65.8%) and North-Central (27, 10.4%) geopolitical zones. The least represented regions were the North-West (9, 3.5%) and North-East (0, 0.0%) geo-political zones.

3.2 Respondents and Healthcare-Seeking Behaviour for their Children

Half (50%) of the respondents cited that the COVID-19 had affected their health-seeking behaviour for their children. The socio-demographic characteristics (such as sex, educational status, marital status, number of children or income levels, the geopolitical zone of residence) of the respondents whose health-seeking behaviour were affected by the COVID-19 pandemic were not significantly different from respondents unaffected as demonstrated in Table 2.

3.3 How the COVID-19 Lockdown Affected Respondents' Healthcare-Seeking Behaviour for a Sick Child

When asked how the COVID-19 pandemic affected respondents' healthcare-seeking behaviour, 108 (41.5%) of the respondents agreed or strongly agreed about being worried their child may contract the coronavirus in the health facility as shown in Table 3, Q1. Sixty-two (23.9%) of the respondents agreed or strongly agreed about being unable to get their children's drugs because of the lockdown or drugs were unavailable at the health facility as shown in Table 3, Q2. Only 24 (9.2%) of them agreed or strongly agreed that their children were turned back from seeing a doctor at a health facility during the COVID-19 lockdown as seen in Table 3, Q3. Fifty-seven (21.9%) of respondents

agreed or strongly agreed they were unable to seek healthcare for their children because the roads were blocked during the lockdown as seen in Table 3, Q4. Whereas 17 (6.6%) agreed or strongly agreed that their children were refused admission for suspicion of COVID-19 related symptom like asthma following presentation at a healthcare facility as seen in Table 3, Q5, 37 (14.3%) agreed or strongly agreed that their child was unable to get their routine immunizations as scheduled, as seen in Table 3, Q6.

4. DISCUSSION

This study set out to explore Nigerian parents' healthcare-seeking behaviour for their sick children during the on-going COVID-19 pandemic but particularly during the lockdown with partial intra-state restrictions and total bans on inter-state travels in the country. This paper demonstrates the considerable reduced healthcare-seeking behaviour of parents for their sick children during the COVID-19 pandemic as half (50%) of the respondents reported their health-seeking behaviour to be affected across the various political zones. Similar findings have been reported in other studies during the COVID-19 pandemic in other countries and also in settings of disaster [16,42]. The study also showed that there were no significant differences in the socio-demographic variables between parents who reported that their health-seeking behaviour was affected and those who were unaffected, thus buttressing the fact that the on-going pandemic in the country affected parents' healthcare-seeking behaviour for their sick children, irrespective of the socio-demographic factors of the parents.

Table 1. Sociodemographic characteristics of respondents

Variables	Frequency	Percent (%)
Gender		
Female	155	59.6
Male	105	40.4
Marital status		
Married	239	91.9
Single	10	3.8
Separated	9	3.5
Divorced	2	0.8
Educational status		
Tertiary	167	64.2
Secondary and below	93	35.8
Number of children under respondents' care		
1-2	112	43.1
3-4	131	50.4
More than 4	17	6.5
Age categories of respondents' child(ren) **		
0-4 years	156	60.0
5-9 years	150	57.7
10-14 years	90	34.6
15 - 18 years	43	16.5
Monthly income		
Low income	83	31.9
Middle income	141	54.2
High income	36	13.8
Geopolitical zones of respondents		
South-south	171	65.8
South-east	18	6.9
South-west	35	13.5
North-central	27	10.4
North-west	9	3.5
North-east	0	0.0

*** Multiple responses apply*

Table 2. Sociodemographic characteristics of respondents with healthcare-seeking behaviour affected compared to those unaffected by COVID-19 lockdown

	Healthcare seeking affected (%)	Healthcare seeking not affected (%)	Chi-square	*p-value*
Gender of respondents				
Female	72 (46.5)	83 (53.5)		
Male	58 (55.2)	47 (44.8)	1.93	0.16
Educational status				
Tertiary	78 (46/7)	89 (53.3)		
Secondary and below	52 (55.9)	41 (44.1)	2.03	0.16
Geopolitical zone of residence				
South-South	83 (48.5)	88 (51.5)		
South-East	12 (66.7)	6 (33.3)		
South-West	20 (57.1)	15 (42.9)		
North-Central	11 (40.7)	16 (59.3)		
North-West	4 (44.4)	5 (55.6)	3.90	0.42
Number of children under respondent's care				
1-2	50 (44.6)	62 (55.2)		
3-4	70 (53.4)	61 (46.6)		
More than 4	10 (58.8)	7 (41.2)	2.43	0.30
Income level				
High income	15 (41.7)	21 (58.3)		
Middle income	71 (50.4)	70 (49.6)		
Low income	44 (53.0)	39 (47.0)	1.31	0.52

**statistically significant*

Table 3. How the lockdown due to COVID-19 affected respondents' healthcare-seeking behaviour for a sick child

		Strongly agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly disagree (%)
1.	I am worried my sick child may contract the virus in the health facility	43 (16.5)	65 (25.0)	68 (26.2)	43 (16.5)	41 (15.8)
2.	I cannot get my sick child's drugs because of the lockdown or drugs were not available at the health facility	14 (5.4)	48 (18.5)	77 (29.6)	66 (25.4)	55 (21.2)
3.	My sick child was turned back from seeing a doctor at the health facility	10 (3.8)	14 (5.4)	76 (29.2)	94 (36.2)	66 (25.4)
4.	I could not go because the roads were blocked	17 (6.5)	40 (15.4)	88 (33.8)	57 (21.9)	58 (22.3)
5.	My sick child was refused admission at a health facility for suspicion of COVID-19 related symptom like asthma	2 (0.8)	15 (5.8)	85 (32.7)	73 (28.0)	85 (32.7)
6.	My child could not get his routine immunizations as scheduled	16 (6.2)	21(8.1)	88 (33.8)	71 (27.3)	64 (24.6)

How the COVID-19 pandemic had affected healthcare-seeking behaviour was highlighted in this study. Many of the respondents (41.5%) agreed that being worried that their child may contract the coronavirus in the health facility affected their seeking healthcare for their sick children. Similarly, a study by Sun et al. [42] in China reported that 91.89% of parents who responded to a phone survey about their healthcare-seeking behaviour for their children, believed that their children being exposed to a hospital environment had a higher risk of virus infection. The proportion of respondents in this study who agreed that they were worried about their children contracting the virus in the health facility, is much lower than the proportion observed in the China study [42] where the high fatality and deleterious effect of COVID-19 in the earlier days of the pandemic may have brought untoward fear to many parents in China. When observed in isolation, the proportion in this study is high and may be due to misconceptions and lack of knowledge of COVID-19 among parents in Nigeria. These concerns have become evident in Nigeria and some government and private-owned hospital facilities have resorted to online consultations via telemedicine/ virtual clinics and review of only very sick children because of the 'community fear' of being infected with the virus with a consequent but significant reduction in patients' attendance to outpatient clinics.

About a quarter (23.9%) of respondents agreed about being unable to get their children's drugs because of the lockdown or drugs were unavailable at the health facilities. Drug shortages and or stock-outs have been envisaged and reported as a likely challenge to children especially those with debilitating diseases [11,43]. Most parents in the Nigerian contextual setting, pay-out-of-pocket and drug stock-outs would mean spending more to purchase prescribed medications at private-owned patent medicine stores at inflated prices or even purchase alternative over-the-counter, less expensive and less efficacious medications.

The majority of the respondents (61.6%) disagreed that they were turned back from seeing a doctor at health care facilities. This is likely because the lockdown in Nigeria was in phases and intermittent. Many states in Nigeria, employed only partial lockdown restrictions. Therefore, while the restrictions were enforced, parents with sick children were still allowed to consult a medical doctor, if they wished. However, surprisingly, about a tenth (9.2%) of parents agreed that they had their sick child turned back from seeing a doctor at a health facility during the COVID-19 lockdown. Our finding of the rejection of sick children at hospitals was similarly reported by the Nigerian Minister of Health, who also raised an alarm that these patients were being abandoned and or rejected by hospitals due to the fear of contracting the virus and surge in COVID-19 cases [9]. With the lack of widespread screening in the community, more of such reports would likely be on the increase with needless deaths occurring since the number of infected cases continues to rise with delays between testing for COVID-19 and obtaining results and allowing other equally life-threatening diseases, to thrive.

Restrictions in movement, which is a mitigating measure to curb the spread of COVID-19 has adversely affected the healthcare-seeking behaviour of parents for their sick children as is cited by about a fifth (21.9%) of respondents who agreed to be unable to seek healthcare for their children since the roads were blocked during the lockdown. Impediments in movements with a threat of being arrested or fined heavily would most likely make parents seek healthcare outside of the hospital, resort to self-medication of their children or patronize patent drug dealers and traditional healers, which may eventually cause harm to their children.

A minority of the respondents (6.6%) reported having agreed that their children were refused admission for suspicion of COVID-19 related symptom like asthma following presentation at a healthcare facility. It is known that there is considerable overlap between the clinical manifestations of respiratory conditions like pneumonia and asthma and COVID-19. Therefore, with increasing community transmission of COVID-19, the likelihood of obtaining a history of a known contact with a confirmed case becomes very unlikely**.** Although the screening for COVID-19 is necessary for any child who comes to medical attention with worsening cough or shortness of breath [44], in most Nigerian healthcare facilities, this is not readily available and may contribute to undue delays in care, referrals and even death.

The fact that about one-seventh of respondents agreed that their children were unable to get their routine immunizations as scheduled is worrisome. A likelihood of further widening the gap already made by vaccination efforts in Nigeria is very likely and would, therefore, make

more children at risk of dying from vaccine-preventable diseases due to interruption in immunization scheduled programmes. A preliminary report by the Paediatric Association of Nigeria revealed a disruption of immunization services with a total absence of campaigns and outreaches with very limited fixed sessions and an overall increase in dropout rates [45]. The benefit of sustaining vaccine immunization programmes in Nigeria, and indeed Africa, out-weighs the risk of dying from the COVID-19 disease [46]. Therefore frantic efforts must be made with contextualized country-specific strategies employed to mitigate the adverse impact of COVID-19 on access and uptake of immunization services in Nigeria [47].

The study was an exploratory survey that attempted to understand the ways the lockdown in Nigeria due to the COVID-19 pandemic affected parents'/caregivers' health-seeking behaviour for their children, as the wellbeing of children often lags due to prevailing circumstances that often are beyond their control. The study, however, has several limitations and interpreting results for the study should be done with caution. The findings are limited to parents who reside in Nigeria with considerable knowledge in the use of the internet, who had internet access on their mobile devices, and who could read and understand in the English Language. Although data collection cut across the six geopolitical zones in Nigeria, the sample size was very small with an unequal representation across the zones, hence, findings may not be generalizable. It is however known that parental responses to child health surveys have very high non-response rates and this study was a preliminary exploration during such a unique moment in history. Alternative remedies during the lockdown were not also assessed. Larger longitudinal research needs to be done to adequately and appropriately assess the healthcare-seeking behaviour of parents for their children during the lockdown. Also, the study was done at a time when there were varying degrees of lockdowns and movement restrictions and these were not wholly considered.

5. CONCLUSION

The COVID-19 pandemic lockdown considerably affected parents' healthcare-seeking behaviour for their sick children in Nigeria. Contextual strategies aimed at health system strengthening, improved accessibility, health education and promotion are needed to mitigate the effect of COVID-19 on parental access and utilization of healthcare facilities.

6. RECOMMENDATION

The authors recommend that policymakers should endeavour to formulate specific strategies aimed at parents/caregivers to improve their healthcare-seeking behaviour in the face of the ongoing pandemic. The suggested plausible contextual strategies include full implementation of the Universal Health Coverage Scheme to improve access to healthcare by improving its affordability via enrollment of parents/caregivers in the national health insurance scheme, improved healthcare systems strengthening by supporting primary healthcare facilities through the provision of available transportation such as free ambulance services, online consultation platforms linked to primary healthcare facilities and reactivation of a functioning EMS code; building the capacity of secondary and tertiary healthcare systems to be able to continue with healthcare delivery amid a pandemic; supplementing routine immunization services by providing mobile immunization posts and improving health education and promotion.

CONSENT

A pre-information about the research aims was given at the start of the questionnaire and confidentiality was assured. All respondents were anonymous, unknown to the authors, and were informed explicitly that going on to fill the survey implied consent had been given.

ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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