



The Challenges of the Healthcare System in Nigeria and the Fight against Coronavirus.

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Abstract

Received: 15 Jul 2022

Accepted: 8 Oct 2022

Keywords:

Health care system
Health services
Coronavirus
Health disparity

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Introduction: The Nigerian healthcare system faces a shortage of healthcare workers, facilities, and equipment. Moreover, massive corruption has been found to bedevil the healthcare system, i.e., the little resources allocated to the health sector are often embezzled by those saddled with the responsibility of implementation. The objective of this study is to examine the current state of the country's health sector and how it combats the Coronavirus.

Methods: A one-time survey was adopted in this study; 60 hospitals comprising public and private were randomly selected from the six geopolitical zones, and questionnaires were administered to 3000 purposively selected respondents comprising health workers and patients. One hundred fifty in-depth interviews were conducted with 100 in-patients and 50 health workers.

Results: The findings revealed that the problem of inadequate healthcare facilities, such as hospital buildings, bed spaces, hospital equipment, and personal protective equipment for health workers and patients, inadequate health workers characterized almost all the health facilities investigated either at maximum or minimum degrees.

Conclusion: Therefore, it was recommended that the government at all levels of authority prioritize investing funds in the health sector and increasing the coverage of the health insurance scheme.

Introduction

Nigeria has the worst health indicator in the world (1). The rate of infant mortality is 114 in every 1000 babies born, the rate of child mortality is 150 in every 1000 babies born, and maternal mortality stands at 814 per 100,000 live births. Only 38% of births in the country are attended to by skilled health workers owing to a shortage of health workers, and the life expectancy of Nigerians is 52 years. Nigeria currently has a 3.2% adult HIV prevalence level (2). The country also has a substantial infectious disease burden and is bedeviled with an inadequate and deplorable healthcare system (3).

Health is an essential aspect of every society (4). A

healthy society can be said to be a wealthy society (5).

The state of a country's healthcare system determines the extent to which such a country can deal with emergency cases of health, such as an epidemic or a pandemic (6). The primary healthcare system is the bedrock of any country's healthcare system, and any government that wishes to provide accessible healthcare services for its citizens must invest in its country's primary healthcare system (7). The health care system's attention varies from country to country (8-11). While governments of countries in Europe and the United States of America tend to give greater attention and priority to their health institutions, the



same cannot be said of developing countries and their healthcare systems that are in a deplorable state due to the government's lack of attention and corruption in the sector (12-14).

Coronavirus was first discovered in Wuhan, China, in 2019 and later spread to other continents (15). Coronavirus spreads quickly through respiratory droplets, released when a person who is infected coughs, sneezes, or talks among people nearby, i.e., two meters, and it comes with several health challenges (16-18). The Coronavirus outbreak placed a considerable burden on the healthcare systems of various countries (19, 20). High-income countries saw their healthcare systems stretched beyond their capacities to handle the number of infected people who needed healthcare (21). Countries in Western Europe and the United States of America were the worst hit because of the high rate of their aged population, who tend to be the most vulnerable group to the effect of Coronavirus (22). Studies revealed that the effect of Coronavirus almost overstretched health institutions in developed and high-income countries, and more threatening is the effect on poor developing countries (1, 6-8).

The healthcare system in Nigeria is grossly inadequate in meeting the health needs of Nigerians and combating the deadly Coronavirus (7, 8). Statistics from the Demographic Health Survey of Nigeria (5) show that the country currently has about 33,303 general hospitals, 20,278 primary health centers, 59 teaching hospitals, and federal medical centers (6, 7, 21). Many health facilities are deplorable as they lack the required medical equipment and personnel to function (6-8, 23). Nigeria can boast 40,000 medical doctors to serve an estimated population of 200 million people. The number of registered doctors stands at 74,543, and therefore, the ratio of doctors to the Nigerian population is 36.6 per 100,000, the ratio of nurses stands at 88.1 per 100,000, the ratio of midwives stands at 58.9 per 100,000, the ratio of pharmacists stands at 12 per 100,000 and other aligned medical examiners are also grossly inadequate (6-8, 24).

Studies have shown that the capacity of Nigeria to combat infectious diseases and the outbreaks of Cholera, Diarrhea, Chickenpox, and Guinea worm is insufficient due to the inadequacy of its healthcare system (25). Few hospitals have molecular laboratories where samples for infectious diseases can be tested (6, 26, 27). The World Health Organization (WHO) projected Nigeria to face many challenges in its fight against Coronavirus thanks to its high poverty rate and the weak healthcare system, and therefore the existing burden of communicable diseases within the country (1).

No current study on the investigation of the state of healthcare and its ability to combat the outbreak of Coronavirus was conducted in Nigeria, and this study intends to fill the above gap in Nigeria. The study is based on the conflicting theoretical perspective of health, which links the status of health of members of a given society to the capacity of the society's healthcare system. (28, 29)

This study aimed to evaluate the standard of the Nigerian healthcare system and its capacity to combat Coronavirus in the year 2021. The specific objectives include:

1. To describe the condition of the healthcare system in Nigeria.
2. To investigate the challenges faced by the Nigerian healthcare system in the fight against Coronavirus.

Methods

The study was a descriptive survey using quantitative and qualitative methods conducted in the six geopolitical zones in the country. The geopolitical zones had 480 public and private hospitals, comprised of federal teaching hospitals, federal medical centers, state hospitals, and private hospitals, from which 60 hospitals were randomly selected using a simple random sampling technique. Ten hospitals from each geopolitical zone comprised one federal hospital, a teaching hospital, or a federal medical, two state specialist hospitals, four state general hospitals, and three private hospitals; a total of 60 hospitals from the six geopolitical zones were selected for the study.

Purposive non-probability sampling was used to select 3000 respondents who comprised out-patients from departments such as Ophthalmology, Dentistry, and, Gynecological/Obstetrics. The Purposive non-probability sampling was used because most hospitals used for the study did not have adequate records of patients and healthcare workers from which a probability sampling would be drawn.

A structured questionnaire was used to reach more participants, particularly the out-patients who were the highest population of those who utilize healthcare services. The questionnaire included questions on information about the socio-demographic characteristics of the respondents. In addition, it contained questions that measured other variables such as their views on the adequacy of the general state of health facilities in the studied hospitals, bed spaces for patients, oxygen and ventilators, personal protective equipment for health workers, and health workers and their suggested recommendations for the effective functioning healthcare system. Questions were arranged on the Likert Scale, ranging from very



adequate to grossly inadequate.

To determine the content validity of the questionnaire and unstructured questions for the in-depth interviews, ten healthcare workers consisting of two senior consultants, two senior nursing officers, two laboratory scientists, two radiologists, and two pharmacists from a federal teaching hospital, namely University College Hospital, Ibadan and a state specialist hospital namely, Edo State Specialist Hospital approved the questionnaire and interview guides. The reliability of the questionnaire was confirmed using an alpha coefficient of 0.95, which indicated the internal consistency as acceptable.

- Three thousand questionnaires were administered to purposively selected out-patients in the order below:
- 1200 (40%) questionnaires, 200 from each federal teaching hospital of its equivalent and federal medical center;
- 600 (20%) questionnaires, 50 from each state specialist hospital;
- 840 (28%) questionnaires, 35 from each of the state general hospitals;
- 360 (12%) questionnaires, 20 from each private hospital.

Thus, of the 3000 questionnaires administered, 2400 were returned and acceptable for analysis, while 600 questionnaires either needed to be returned or correctly filled.

One hundred and fifty in-depth interviews were conducted. Of the above number, 100 were in-patients, 30 of whom were from federal teaching hospitals; 12 from state specialist hospitals; 48 from state general hospitals, and ten were from private hospitals. Fifty

in-depth interviews were conducted with healthcare workers from 50 hospitals out of the 60 randomly selected hospitals, with one health worker from each hospital. Health workers from the selected private hospitals declined the interviews because they did not want to say anything that would put their hospitals in a negative perspective. The interviewed health workers comprised senior consultants, resident doctors, senior and junior nursing officers, laboratory scientists, pharmacists, radiologists, and cleaning officers. The interview guide, which contained unstructured questions, was used to elicit responses from the interviewees. The interview with each interviewee lasted for 20 minutes.

Data analysis was done in one stage using SPSS 20 software. Descriptive statistics, i.e., frequency and percentage, were used to describe the data. The in-depth interviews were recorded, replayed, listened to, and identified themes. Accordingly, interpretations were made in instances where the interviews were conducted in Pidgin English or the native dialect of interviewees who could not communicate in English, the official language in the study area. Besides, direct quotations from the interviewees supported the themes in the written report.

This study spanned 12 months of fieldwork, consisting of quantitative and qualitative methods from January 2021 to December 2021.

The Chief Consultants and Chief Matrons in the various departments used for the quantitative and qualitative studies were the gatekeepers who led the researcher to the patients and health workers that participated in the studies.

Results

The demographic characteristics of respondents are presented in Table 1.

Table 1. Respondents' Socio-demographic Characteristics (N- 2400)

Respondents Characteristics	Frequency	Percentage
Age		
18-22 years	120	5%
23-27 years	230	9.6%
28-32 years	250	10.4%
33-37 years	260	10.8%
38-42 years	240	10.0%
43- 47 years	350	14.6%
48-52 years	250	10.4%
53-57 years	350	14.6%
58-65 years	350	14.6%

Continue of Table 1. Respondents' Socio-demographic Characteristics (N- 2400)

Respondents Characteristics	Frequency	Percentage
Gender		
Male	1000	41.7%
Female	1400	58.3%
Religious Affiliation		
Christian	1250	52.1 %
Muslim	1000	41.6 %
Africa Traditional Worshipper	85	3.5 %
Others	65	2.7 %
Occupation		
Doctor, Nurse/Health Worker	450	18.8 %
Teacher	200	8.3%
Engineer	100	4.2%
Accountant	100	4.2%
Trader	550	22.9%
Artisan	300	12.5%
Farmer	200	8.3%
Driver	80	3.3%
Others	420	17.5%
Monthly Income Earn		
20,000 naira and below	260	10.3 %
21,000 naira - 40,000 naira	340	14.2 %
41,000 naira - 60,000 naira	550	22.9 %
61,000 naira – 80,000 naira	350	14.6 %
81,000 naira – 100,000 naira	250	10.4 %
101, 000 naira- 120,000 naira	280	11.7 %
121, 000 naira- 140,00 naira	120	5 %
141,000 naira – 160, 000 naira	160	6.7 %
161,000 naira – 180,000 naira	50	2.1 %
181,000 naira and above	40	1.6 %
Marital Status		
Single	270	11.3 %
Married	1330	55.4%
Divorced	400	16.7 %
Widowed	250	10.3 %
Never Married	150	6.3 %
Nationality		
Nigerian	2335	97.3%
Non-Nigerian	65	2.7%

The findings revealed that 90 % of the respondents, and the majority of interviewees, expressed that healthcare facilities are inadequate and the ones

available are ill-equipped, and also a shortage of healthcare workers, particularly doctors, as shown in Tables 2-7.

Table 2. Distribution of Respondents by Their Perception of the General State of Health Facilities

State of health facilities	Frequency	Percentage
Very good	260	10.8%
Good	350	14.6%
Moderately good	250	10.4%
Poor	820	34.2%
Very Poor	720	30.0%
Total	2400	100%

260 (10.8%) respondents said the general state of healthcare units studied was very good; 720 (30%) respondents said the general state of health facilities studied was very poor. (Table 2)

Table 3. Distribution of respondents by their perception of the adequacy of bed spaces

Adequacy of Bed Space	Frequency	Percentage
Very Adequate	90	3.7%
Moderately Adequate	150	6.3%
Adequate	250	10.4%
Inadequate	988	41.2%
Grossly inadequate	922	38.4%
Total	2400	100%

90 (3.7%) of the respondents perceived that bed spaces in the healthcare units studied were very adequate. In comparison, 922 (38.4%) respondents perceived the bed spaces of the studied healthcare units as grossly inadequate. (Table 3)

Table 4. Distribution of respondents by their perception of the adequacy of ventilators and oxygen

Adequacy of Ventilators and Oxygen	Frequency	Percentage
Very Adequate	7	0.3%
Moderately Adequate	13	0.5%
Adequate	36	1.5%
Inadequate	1000	41.7%
Grossly inadequate	1344	56.0%
Total	2400	100%

7 (0.3%) respondents perceived that ventilators and oxygen in the studied healthcare units were very adequate. In contrast, 1344 (56%) perceived that ventilators and oxygen were grossly inadequate in the studied healthcare units. (Table 4)

Table 5. Distribution of respondents by their perception of the adequacy of personal protective

Adequacy of Personal Protective Equipment	Frequency	Percentage
Very Adequate	110	4.6%
Moderately Adequate	230	9.6%
Adequate	415	17.3%
Inadequate	1100	45.8%
Grossly inadequate	545	22.7%
Total	2400	100%

110 (4.6%) respondents said personal protective equipment for health workers was very adequate in the health units studied, while 545 (22.7%) respondents said personal protective equipment for health workers was grossly inadequate in the studied healthcare units. (Table 5)



Table 6. Distribution of respondents by their perception of the adequacy of health workers

Adequacy of Health Workers	Frequency	Percentage
Very Adequate	32	1.3%
Moderately Adequate	64	2.7%
Adequate	286	11.9%
Inadequate	1100	45.8%
Grossly inadequate	918	38.3%
Total	2400	100%

32 (1.3%) respondents said health workers in the studied healthcare units were very adequate, while 918 (38.3%) said health workers in the studied healthcare units were grossly inadequate. (Table 6)

Table 7. Distribution of respondents by their recommendations for the proper healthcare system in Nigeria

Recommendations	Frequency	Percentage
A. Renovation of Existing Health Care Units	85	3.5%
B. Expanding of Existing Health Care Units	50	2.1%
C. Provision of More Bed Space	100	4.2%
D. Provision of All Necessary Health Equipment	200	8.3%
E. Employing More Health Workers	310	12.9%
F. options A and B	100	4.2%
G. options B and C	90	3.3%
H. options C, D, and E	512	21.3%
I. options D and E	320	13.3%
J. All of the above options	633	26.4%
Total	2400	100%

85 (3.5%) respondents recommended the renovation of existing healthcare units, 50 (2.1%) recommended the extension of existing healthcare units, 100 (4.2%) recommended the provision of more beds, 200 (8.3%) recommended the provision of all necessary equipment in the studied healthcare units, 310 (12.9%) recommended the employment of more health workers, 633 (26.4%) respondents proposed all of the abovementioned recommendations. (Table 7)

Responses from In-depth Interviews

One hundred and fifty in-depth interviews were conducted with 100 in-patients and 50 health workers, including doctors, nurses, lab scientists, and hospital cleaners. The codes P 1 to P100 were used in place of interviewees' real names, i.e., in-patients, while W1 to W 50 were used to replace the real names of health workers. The following themes emerged in the course of the interviews: dilapidated buildings, abandoned and uncompleted structures in most government own hospitals, inadequate medical equipment, and shortage of health workers, particularly doctors, poor toilet facilities, inadequate personal protective equipment, and prompt responses in private hospitals but their level of competence is in doubt.

On the general state of health facilities, below were the consensus responses of ten interviewees from public hospitals, P1 to P10, "there are dilapidated buildings in great need of repairs everywhere." These public hospitals are filled with uncompleted and abandoned structures with only a few buildings in use." The consensus views of P 81 to 100 also collaborated with the above views of P1 to P10. However, P84, P89, and P 92 pointed out the issues of insufficient bed space and toilet facilities. Below were their views, "bed space in most of the government hospitals is insufficient due to the influx of patients, and it is hard to have space to admit new patients." The views of interviewees P 85, P 86, P 88, and P 94 were expressed, "The toilet facilities in government hospitals are so dirty, imagine one coming to the hospital for treating a particular ailment and end up getting toilet infection in the hospital." Interviewees P 51 to P70, who were patients in private hospitals, had this consensus view: "most private hospitals are usually small, they consist of a single building structure, or just a few buildings used to render all the healthcare services, ranging from in-patient and out-patient outlets to pharmaceutical units, laboratories, and others." However, only some of them seem to be

more sophisticated in terms of the size and quality of the structures.”

On the adequacy of equipment, the consensus views of twenty interviewees, i.e., P11 to P30, presented thus, “Most of the equipment used are obsolesces, and most of them no longer function;” “laboratory equipment is either non-functional or inadequate.” Federal hospitals seem to be better off than state hospitals in terms of equipment being used, but compared to hospitals in Europe and America, they fall below standards. In emergency cases when patients need oxygen, federal hospitals are short of oxygen, and many of them do not have ventilators, and also power outages, even during surgical operations.”

The consensus views of interviewees P51, P53, P57, and P60 are presented; thus, “Majority of the private hospitals are ill-equipped and do not qualify to operate as hospitals, but corruption in the system still allows them to operate.”

The consensus views of twenty health workers, who were laboratory scientists and other health workers, differed from the above views expressed by the interviewed patients. Below were their views: “We do not enjoy our work in Nigeria because we do not have the needed medical equipment to work while the available equipment is outdated or non-functional.” “Every area of operation in Nigeria hospitals falls short.” “In the face of the dreaded coronavirus, Nigerian health workers cannot boast of standard molecular laboratories, testing kits for coronavirus, and complete personal protective equipment to kit up, and the above reasons have resulted in the small sample of Nigerians tested for coronavirus since its outbreak in the country in 2020, only 2,266,593, and 10% of the population of 200,000,000.”

On the level of adequacy of health workers, below were the consensus views of forty-five interviewees, P1 to P45: “we think healthcare workers are inadequate, particularly doctors, especially in state and federal hospitals with a high influx of patients, it is prevalent to see a long queue of patients assigned to just one doctor even nurses are inadequate.” “We spend the whole day waiting to see a doctor.”

However, the views of five interviewees, P 46 to P50, were different: “we do not think health workers are inadequate in public hospitals,” “the workers are enough to do the work if they want to work, but one will observe that these workers do not do their work,” “most times some are absent from work you find them discussing or trading on wares during working hours, leaving patients to be waiting long hours unattended to.” “Some doctors and nurses have their private hospitals or clinic where they also work,” and they go

to their private hospitals and clinics rather than be on their duty post.”

The consensus views of eight interviewees: P52 to P59, “The private hospitals do not have many health workers, but they give prompt attention to patients; you can hardly find health workers loitering around; they keep patients’ satisfaction as their topmost priority; however, our fears have to do with the high amount they charge and their level of competence in discharging healthcare services; you tend to see one doctor in private hospitals or clinics attending to almost all cases of illness, which might not be such a doctor’s area of specialization.”

The consensus views of ten interviewees, all of whom were medical consultants in public hospitals, were presented below, “Health workers in Nigeria are grossly inadequate, and when the ratio of healthcare workers is compared to the population, there is a shortage of all categories of healthcare workers. A typical Nigerian health worker is overworked; he or she comes to work in the morning only to meet a long queue of patients to be attended to. The consensus view of ten interviews, all of whom were nurses from public hospitals, was presented below, “Nurses are also overworked just as doctors; only those of us in the healthcare system know this fact, those who are not into healthcare services, may on the face value think the work of the doctors is more tedious than those of other health workers, it is not true, all health workers are overworked because healthcare workers are inadequate.”

On the views of interviewees on their suggested recommendations for an efficient and effective healthcare system in Nigeria, the majority of the interviewees were similar in their views, and below were their views: “all Nigerians are asking our government is the provision of the adequate and functional healthcare system, with standard structures, well-equipped laboratories to ensure proper diagnoses, functional medical equipment, adequate trained and motivated health workers, and we believed when these are done, the problem facing the healthcare system in the country today will be gone. The eradication of corruption from government at all levels of authority and from our institutions; when this is done, our institutions will function effectively and efficiently.” Seven interviewees comprised of health workers and in-patients expressed thus, “The government at all levels of power should provide primary healthcare centers in every community in the country to allow for easy access of healthcare by Nigerians and to reduce the influx of people to the tertiary and secondary units of healthcare.”



Discussion

The findings of this study revealed that there is less to be desired about the healthcare system in Nigeria as the results show that the various healthcare units studied, whether the federal or state hospitals, were all fraught with decay in health facilities and inadequate health workers.

This study had these limitations: the inability of the researcher to randomly select the participants for both the quantitative and qualitative aspects of the study due to the non-availability of data of patients and health workers in the various hospitals that were used for the study, hence, the used of purposive nonprobability technique. Besides, inadequate responses in the quantitative aspect of the study were received; 600 questionnaires were returned unanswered. Despite the above limitations, the strength of this study rest on the fact that the study was a novel one as no study had been done to link the challenges in the Nigeria health system to its ability to combat Coronavirus disease in the country.

The results of this study indicated that primary healthcare, which is supposed to be the bedrock of healthcare services to Nigerians, is grossly inadequate. This situation has resulted in a high influx of patients to the tertiary and secondary healthcare units, thereby overstressing the facilities in these units. The above findings were in line with the results of Bakare and Olubokun (9), Health Reform of Nigeria (10), Health Insurance Report (12), and Adeyemo (15). Correspondingly, the study of Awosika (17) revealed that the majority of Nigerians who utilize the healthcare system do so with a great deal of stress as they have to travel long distances before they can access healthcare due to the non-availability of primary healthcare units which is supposed to be the closest to the system of healthcare to them.

The capacity of Nigeria to handle the community spread of the Coronavirus is inferior, owing to the prevailing state of its healthcare system, inadequate testing equipment, isolation centers, ventilators, and other resources needed to fight the virus. Fifteen months after the primary patient of Coronavirus was discovered in Nigeria, Nigeria has only been able to test 2,266,593, i.e., a bit above ten percent samples of Coronavirus out of the estimated 200 million populations, as a result of gross adequacy of testing centers and testing kits. Nigeria health workers are exposed to a high level of health risk in rendering

healthcare services to patients due to inadequate personal protective equipment, making them victims of coronavirus infection and other infectious diseases. Inadequate availability of personal protective equipment and improper training of health workers on correct ways of handling coronavirus patients led to a situation whereby many health workers got infected with the virus, and some died as a result of complications from the disease. The above results correlated with the results of Olumade (4), Human Right Watch (7), and Menizibeva (20), which revealed that Nigeria healthcare workers are highly exposed to health risks in the discharge of their services owing to the poor conditions of their work environment. Studies by the United State Agency for International Development (USAID), (1), This-day new, (25), also revealed that some corrupt healthcare workers hoarded hand sanitizers and facemasks donated by the government, non-governmental organizations, and well-meaning spirited Nigerians to hospitals and were later being sold at an exorbitant price to patients.

Nigeria currently can boast of only five communicable disease centers, and only a few teaching hospitals and federal medical centers have molecular laboratories where samples of Coronavirus may be tested. Many states do not have communicable disease centers and standard laboratories to check for Coronavirus. The low death rate that the country has achieved is not a result of adequacy in its healthcare system; instead, it is thanks to the tropical nature of the country's climate, which makes it difficult for the virus to survive under high temperatures. Therefore, the country's demographic pattern is mainly characterized by the youthful population who seem not to be as prone to the disease as would the aged. The above findings are similar to USAID and the Nigeria Center for Disease Control (1, 5).

In addition, the gross inadequacy of healthcare workers in Nigeria, as revealed by this study, has led to overburdening Nigeria healthcare workers, who in every working day were overworked and stressed. Mohammed et al. (19) and Menizibeva (20) found similar study results.

This study also revealed that private hospitals that render healthcare services in Nigeria are mainly driven by the quest to make a profit resulting in the exorbitant fees they charge, and they are also not concerned with raising the standard of their healthcare facilities. The above findings were in line with the results of



Akande and Sakisen et al. (16, 23), who observed that the profit motive of private hospitals is making them charge so much for their services, thereby making them beyond the reach of most Nigerians, who have no other option but to resort to the use of unequipped and non-functioning public healthcare services.

Given the deplorable state of the Nigerian healthcare institutions as a result of the government's lack of commitment to invest in the nation's resources in the health sector, the following recommendations are given as the panacea to the challenges in the health sector:

1. The government should invest a considerable proportion of its Gross Domestic Products in the health sector and ensure an effective monitoring system is put in place to ensure judicious use of the resources.
2. The government should employ more health workers and ensure the proper remuneration and a good working environment be provided for them.
3. The government should increase the number of Nigerians captured in the health insurance scheme.
4. Functional primary healthcare should be provided in every local government area.

Conclusion

This study's findings reveal that Nigeria's healthcare system is fraught with a great deal of decay due to the deplorable state of health facilities, the lack of hospital equipment and supplies, and inadequate health workers, among other challenges. The ability of the country's healthcare system to combat the Coronavirus pandemic is almost impossible because of the fragile healthcare system.

The low fatality rate that Nigeria and the continent of Africa have recorded so far during the Coronavirus outbreak is not a result of their standard of the healthcare system. Nevertheless, other factors, like the demographic pattern of the country and the continent being populated by youth with a reduced proportion of the aged population and the tropical nature of the environment, do not encourage the survival of the virus due to the hot weather.

References

1. Global Health Nigeria: Maternal and child health is one of Nigeria's worst critical developmental challenges [Internet]. United State Agency for International Development (USAID). 2020 [last

Declarations

Acknowledgement

The author acknowledged the technical support provided by members of staff of Edo State College of Nursing Sciences Library, from which the literature used in this study was obtained. The author also acknowledged the Commissioner of the Edo State Ministry of Health for approving the study. Acknowledgment is also given to the ethical committees of the various hospitals used for this study for their approval. Also, many thanks go to the hospital patients and health workers for participating in this study.

Conflicts of Interests

None.

Ethical statement

This study has not been submitted to another journal for publishing. The researcher guarantees the integrity of this study from its inception to the point of its publication. The data used for this study will be provided if anyone requires them. All procedures in the study involved human participants and were under the Ethical Standards of the Research Committee of Edo State Ministry of Health and the Nigeria Sociological Association. No financial inducement was given to the participants of the study. The confidentiality of the responses of the participants was maintained. The purpose of the study was explained to the participants before the commencement of the interviewees and administering questionnaires. The study agrees with the regulations of the Edo State College of Nursing Sciences, the affiliated institution of the researcher. Besides, there is no violation of any existing copyright.

Funding and support

None.

Authors' contributions

None.

updated 13th June 2022]. Available from: <https://www.usaid.gov/nigeria/global-health>

2. Ashis-Talukder NJS, Akhtuural MD. Prevalence and factors associated with under-5 mortality in



- Nigeria. Nigerian Demographic Health Survey. 2021; 3(4):154–161. doi: <http://dx.doi.org/10.2991/dsahmj.k.211101.001>
3. Kazeem Y. Across Africa, a reliance on the informal sector threatens effective coronavirus lockdowns [Internet]. Quartz. 2020 [cited 2022 Aug 5]. Available from: <https://qz.com/africa/1831785/coronavirus-citizens-in-africas-informal-economy-try-to-survive/>
 4. Olumade TJ, Adesanya OA, Fred-Akintunwa IJ, Babalola DO, Oguzie JU, Ogunsanya OA, et al. Infectious disease outbreak preparedness and response in Nigeria: history, limitations and recommendations for global health policy and practice. *AIMS Public Heal.* 2020; 7(4):736-757. doi: 10.3934/publichealth.2020057.
 5. Nigeria center for disease control. 2020. [cited 2021 Jan 5]. Available from: <http://www.covid19.ncdc.gov.ng>
 6. Nigeria demographic and health Survey. 2018. [Cited 2021Dec 12]. Available from: <http://dhsprogram.com/pubs/pdf/FR359/FR359.pdf>
 7. Human Right Watch report 2020. Nigeria COVID-19 Cases on the Rise. [Internet]. Nigeria Medical Association. [Cited 2021 Oct 5]. Available from: hrw.org/news/2020/03/25/nigeria-covid-19
 8. Nigeria Health Watch: Top Ten News Items on Health 6th November, 2020 [Internet]. Available from: nigeriahealthwatch.com/tag/current-health-news-in-nigeria/
 9. Bakare AS, Olubokun S. Health care expenditure and economic growth in Nigeria. *The Emerging Trends Journal in Eco and Mgmt Sci.* 2011 ;(2): 83-87. Available from: https://www.researchgate.net/publication/285860765_Health_care_expenditure_and_economic_growth_in_Nigeria_An_empirical_study
 10. Health reform foundation of Nigeria [Internet]. Health Reform Foundation of Nigeria. [Cited 2020 Nov 23]. Available from: https://iphce.org/acadp_listings/health-sector-reform-foundation-in-nigeria-herfon-nigeria/
 11. Meribole EC, Makinde OA, Oyemakinde A, Oyediran KA, Atobatele A, Fadeyibi FA, et al. The Nigerian health information system policy review of 2014: the need, content, expectations and progress. *Health Info Libr J.* 2018; 35(4):285-297. doi: 10.1111/hir.12240.
 12. Health insurance report. Repositioning the national health insurance scheme (NHIS) for effective take-off: From policy to Action. *Quart Health Insur J.* 2005; 7:1–4.
 13. Nurudeen A, Usman A. Government expenditure and economic growth in Nigeria, 1970-2008; A Disaggregated Analysis. *Bus Eco J.* [Internet]. 2010 [cited 2022 Nov 14]; (4): 1-11. Available from: <https://www.hilarispublisher.com/abstract/government-expenditure-and-economic-growth-in-nigeria-19702008-a-disaggregated-analysis-29819.html>
 14. Adekola, L. Health insurance in Nigeria 2015 [Internet]. Medical World Nigeria. [Cited 2021 August 16]. Available from: <https://medicalworldnigeria.com/post/health-insurance-in-nigeria-by-dr-lawumi-adekola?pid=7483>
 15. Adeyemo DO. Local government and health care delivery in Nigeria: A case study. *J Hum Ecol.* 2005; 18:149–60. doi: 10.1080/09709274.2005.11905822
 16. Akande TM, Monehin JO. Health management information system in private clinics in Ilorin, Nigeria. *Nig Med Pract.* 2004; 46(5):102–107. doi: 10.4314/nmp.v46i5.28739
 17. Awosika L. Health insurance and managed care in Nigeria. *Ann Ibadan Postgrad Med.* 2005; 3(2):40–51. doi: 10.4314/aipm.v3i2.39066
 18. Manye F. An Appraisal of National Health Insurance Scheme of Nigeria. *Common Wealth Law Bulletin.* 2006; 32(3): 415-427. doi: 10.1080/03050710601074450
 19. Mohammed S, Soares A, Bermejo JL, Sauerborn R, Dong H. Performance evaluation of health insurance in Nigeria using optimal resources and health care providers perspectives. *BMC Health Services Research.* 2014; 14 (127): 1-14. doi: 10.1186/1472-6963-14-127
 20. Menizibeva SW. The Nigerian health care system needs for integrity, adequate medical intelligence and surveillance. *J Pharm Bioiollid Sci.* 2011; 3 (4): 470-478. doi: 10.4103/0975-7406.90100
 21. Nnamuchi O. The right to health in Nigeria. *SSRN Electronic Journal.* 2007; 1-26. doi: 10.2139/ssrn.1622874
 22. Onwujekwe O, Onoka C, Uguru N, Nnenna T, Uzochukwu B, Eze S, et al. Preferences for benefit



- packages for community-based health insurance: An exploratory study in Nigeria. *BMC Health Serv Res.* 2010; 10(162): 1-7. doi: 10.1186/1472-6963-10-162
23. Sakisena P, Hans B, Evans W. Financial risk protecting universal health coverage evidence and measurement challenges. *Plus Med.* 2014; 11(9):e1001701. doi:10.1371/journal.pmed.1001701.
 24. Health planning, research and statistics. [Internet] Federal Ministry of Health. [Cited 2020 Nov 10]. Available from: <https://fmohconnect.gov.ng/>
 25. Coronavirus Outbreak, Round-the-clock Updates (II) Report, 2020. CBN Assesses Funding Request for Nigerian-made COVID-19 Vaccines. Available from: <https://www.thisdaylive.com/index.php/2020/05/04/coronavirus-outbreak-round-the-clock-updates-ii/>
 26. Martins G.M. Understanding of health capital and healthcare demand. *J Pol Eco.* 2005; 80(2): 223-255.
 27. Omolase CO, Ihemedu CO, Ogunleye OT, Omolase BO. The use of internet for health information amongst medical practitioners in Nigerians. *Taf Prev Med Bull.* 2010; 9: (3) 93–98.
 28. Giddens A. *Sociology.* 2009. 6th ed. Polity Press: Cambridge.
 29. Haralambos, M & Holborn, M. *Sociology: themes and perspectives.* 2013. 8th ed. HarperCollins: Hammersmith.

