

The effects of reduced human mobility on accessibility to healthcare and personal health management during the COVID pandemic era in Nigeria: A Survey

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ABSTRACT

Background: COVID 19 ravaged the world and indeed its effects, though reduced, can still be felt globally. There has been a high premium placed on covid-19 prevention and treatment which has pushed focus off diseases that previously were high priority. The purpose of this study is to refocus the attention of health care givers to the needs of the populace despite the prevailing COVID pandemic.

Method: The study was a cross-sectional survey of individuals in a highly populated market in Oshogbo, Nigeria. Random sampling was used in selecting the respondents for the study after sample size was calculated. Data was collected during a health outreach organized to help ascertain the state of health of the marketers and how their health have been affected by the COVID 19 pandemic.

Results: The results showed that access to health services was reduced during the pandemic when compared to before the pandemic ($p = .000$) which would be critical for those with underlying illnesses. Respondents were also confronted with financial challenges (43.4%) but were well informed and most (94.7%) adhered to COVID 19 protocols for prevention.

Conclusion: Access to quality health care reduced as Nigerians navigated the COVID 19 pandemic and most of the respondents faced financial challenges in meeting their basic needs and health care needs during the pandemic.

1. Introduction

COVID 19 affects all spheres of our lives and there is the need to always ensure safety protocols at all times¹. However, this doesn't take away the fact that many people, have different health disabilities they manage. During the height of the first wave of the pandemic, the health system of most developed countries were overwhelmed while operating full capacity, on the other hand, in most

developing countries especially in Africa the health systems under-performed and could not relieve the burden of the disease. With this in the picture, one would wonder how the health system would manage effectively accompanying diseases of patients who report at the health facilities¹⁻⁴. It has been noted by Garfin *et al.* that the stress induced by the implementation of the health measures to curb the Covid-19 pandemic can affect those managing chronic diseases⁵. This is the reason the World Health

Organisation has provided a template on how to manage stress for those with chronic illnesses⁶⁻⁷. The commonest of these diseases are arthritis, insomnia, hypertension and diabetics. Blacks are prone to hypertension and diabetes and this can be related to the socioeconomic factors like consumption of food with high salt content, sedentary lifestyle, little or no physical exercises, obesity and poverty⁸.

An outreach was conducted to serve as a reminder and to create awareness of other healthcare challenges that existed before Covid-19, so that adequate attention could also be placed on their management. In fact, comorbidities such as hypertension, HIV, cancer and diabetes have been reported to increase the complications due to Covid-19 leading to more fatalities⁹. The purpose of the outreach was to create awareness and educate the respondents on the need to always undertake basic health checks regularly.

According to WHO, the African community suffers high fatality rates from basic diseases and illnesses due to their lack of knowledge or awareness of these conditions and these awareness program would enlighten people to the end that slowly but progressively these people are reoriented in seeking medical care¹. In 2020, Africa in perspective got into a major dilemma due to the Covid-19 virus spread and this unexpected outbreak came on an unprepared nation and as a result of that, the numbers of lives claimed to this viral outbreak were alarming¹⁰. The effects of COVID-19 can be seen in several aspects of our lives and as regards this, safety protocols should be adhered to at all times. However, this doesn't take away the fact that many people in the Nigerian population have different health challenges they manage. Some of these include, Arthritis, Hypertension, Diabetics and Insomnia. Hence, the study was carried out to help a recovering nation protect her citizens from the present pandemic and prepare for future situations by providing useful information to the public to make better choices.

2. Method

The study was a cross-sectional survey of individuals in a highly populated market in Oshogbo, Nigeria. The respondents were randomly selected from the 157 individuals present for the health outreach. The sample size used was 113 determined using Krejcie and Morgan method for calculating sample sizes¹¹. The respondents were chosen based on their willingness to participate in the study. A set of pretested questionnaire adapted from the

study of Afful *et al.* were administered to the respondents to obtain data which was collected to ascertain the state of health of the marketers and how their health have been affected by the Covid-19 pandemic¹². The questionnaire elicited demographic information of the respondents and obtained information about how the respondents managed their health during the pandemic, the diseases they managed and also precautions taken to prevent the spread of COVID 19. The results were analysed with descriptive statistics like frequencies and percentages. McNemar Related Samples Test was used to draw inference on the results ($p < 0.05$).

3. Results

Upon surveying, it was discovered that there were four times more females than males within the group that was interacted with, with about 80.5% females present in the demography. Given the nature of the research and survey, it was expected that there would be more adults than there would be children. This is proven with the percentage of adults, aged 26 and above, recorded at 78.8%, with the age range (40 - 65) recorded as the highest, at 46.9% (Table 1).

It was also discovered that a large portion of those who participated in the survey were adherent to the Muslim faith, with about 68.1% claiming to be Muslims. Also, about 85.8% of the participants were married, while a further 83.2% were traders. In alignment with the aforementioned statistics, majority of the respondents were not graduates from tertiary institutions with almost half of them only finishing secondary school (49.6%) and 25.7% had a diploma (Table 1).

With respect to health related issues, 80.5% of the respondents had access to medical centre and therefore health services before the pandemic. A large percentage also had access to check their blood pressure level (86.7%), while about half of them checked their blood sugar levels (50.4%) before the pandemic. A further 34.5% indicated they had underlying health conditions before the pandemic (Table 2).

Table 1: Demographic characteristics of the Respondents

Variables		Frequency (N)	Percentage (%)
Age (years)	16	1	0.9
	18-25	9	8.0
	26-40	36	31.9
	41-65	53	46.9
	≥65	14	12.4
			113
Gender	Male	22	19.5
	Female	91	80.5
		113	100.0
Religion	Christianity	36	31.9
	Islam	77	68.1
		113	100.0
Marital status	Single	14	12.4
	Married	97	97
	Divorce	2	1.8
		113	100.0
Profession	Civil servants	4	3.5
	Traders	94	83.4
	Others	15	15
		113	100.0
Qualification	Bachelor degree	11	9.7
	Diploma	29	25.7
	Primary school	11	9.7
	Secondary school	56	49.6
	None	6	5.3
		113	100.0

Table 2: Health Management before and during Covid-19 Pandemic

Variables		Frequency (N)	Percentage (%)
Medical center (Before Covid)	No	22	19.5
	Yes	91	80.5
		113	100.0
Blood pressure check (Before Covid)	No	15	13.3
	Yes	98	86.7
		113	100.0
Sugar level check-up (Before Covid)	No	56	49.6
	Yes	39	50.4
		113	100.0

Underlying Health condition (Before Covid)	No	73	64.6
	Yes	39	34.5
	I don't know	1	0.9
		113	100.0
Access to drugs (During Covid)	No	43	38.1
	Yes	43	38.1
	I don't know	27	23.9
		113	100.0
Access to Health care professionals (During Covid)	No	70	61.9
	Yes	36	31.9
	I don't know	7	6.2
		113	100.0

It was found out that while only 83.2% (1.75±0.591) believed in the existence of the Covid-19 virus, a further 94.7% (1.93±0.320) observed Covid-19 protocols¹². With an equal percentage (94.7%, 1.93±0.320) declaring that they wore masks when going out, and about 98.2% (1.96±0.265) washed hands when returning to their homes. Also, 90.3% (1.88±0.372) observed social distancing when found outside the home, while majority listened to directives from the government and local authorities (95.6%, 1.93±0.346). About half of the study group stayed back at home when sick with flu-like symptoms (49.6%, 1.42±0.637), while 71.7% (0.98±0.534) did not come in contact with anyone coughing. Also, 74.3% (1.69±0.568) claimed they'd take the vaccine if made available (Table 3).

Table 3: Covid-19 Belief and Prevention

Variables		Frequency (N)	Percentage (%)
Do you believe there's Covid-19?	No	4	3.5
	Yes	107	94.7
	I don't know	2	1.8
		113	100.0
Do you observe Covid-19 protocol?	No	4	3.5
	Yes	107	94.7
	I don't know	2	1.8
		113	100.0
Do you wash your hands?	Yes	2	1.8
	I don't know	111	98.2
		113	100.0
Observe physical distancing	No	9	8.0
	Yes	102	90.3
	I don't know	2	1.8
		113	100.0

Listened to directives from authorities	No	2	1.8
	Yes	108	95.6
	I don't know	3	2.7
		113	100.0
Stay at home when sick	No	48	42.5
	Yes	56	49.6
	I don't know	9	8.0
		113	100.0
Will you take the vaccine	No	23	20.4
	Yes	84	74.5
	I don't know	6	5.3
		113	100.0
Challenges from the pandemic	No	53	46.9
	Yes	59	52.2
	I don't know	1	0.9
		113	100.0
Contact with anyone coughing	No	81	71.7
	Yes	15	13.3
	I don't know	14	12.4
		113	100.0

When asked about challenges faced due to the lockdown, 52.2% said they faced challenges which varied from financial challenges (40.7%) and health challenges, majorly ulcer (8.0%), hypertension (7.1%) and diabetes (5.3%). Also, during the pandemic fewer people had access to medical services (15.0%, 1.15±0.359), blood pressure check (24.8%, 1.25±0.434) and blood sugar check (15%, 1.15±0.359) (Table 4). When the results of access to health care services were compared before and during COVID 19 pandemic using McNemar Related Samples Test, a significant difference was observed ($p = .000$).

Table 4: Access to Health Care during COVID-19 Pandemic

Variables		Frequency (N)	Percentage (%)
Medical Centre	No	96	85.0
	Yes	17	15.0
		110	100.0
Blood pressure check up	No	85	75.2
	Yes	28	24.8
		110	100.0
Sugar level check up	No	53	85.0
	Yes	17	15.0
		110	100.0

4. Discussion

Based on the results garnered, it is seen that a larger percentage of the respondents were women. According to research, market sales in Nigeria are mostly done by women given their relative low employment rate and their maternal desires and roles as home keepers¹³. A large proportion of the respondents were adults which is to be expected, since most of them are caregivers with responsibilities to take care of their families and so are involved with doing business to meet such needs.

Also, as most of these adults are mothers, grandmothers, the apparent lack of education certifications and employment opportunities would leave them with little or no option than to be involved in the business of buying and selling to make ends meet¹⁴.

The religious inclinations of the respondents, coupled with the culture of the land and its economy makes these results tally with the idea that a larger percentage of Nigerians are taking on entrepreneurial ventures, rather than white collar jobs¹⁵. Also, since majority of the respondents had basic level education, it made administration of the research instrument easier.

A good percentage of the respondents, prior to the Covid-19 lockdown, had access to medical centres and health services and as a result could check their blood pressure, sugar level etc. This however was not so during the lockdown, with only a small percentage of them being able to carry out their normal routine check-ups or get access to medical personnel and services which would have made life during the lockdown very difficult for them. Kola-Mustapha *et al.* highlighted the devastating effects of the COVID 19 pandemic on the management of other diseases which could even increase the number of deaths not necessarily associated with COVID 19¹⁶. A large number of them also developed new health challenges or had the ones they are managing aggravated due to the lockdown and inability to access health professionals. Those who developed illness during the lockdown period indicated it affected their lives and business leading to various challenges such as financial constraints, etc.

As expected, a lot of people faced challenges that arose from the lockdown, as they no longer could go about their day-to-day activities of buying and selling, thus providing finances for themselves and their families. This then spiralled down into their health situations as they too often cannot schedule an appointment with a healthcare professional, nor afford to get the necessary drugs for their various health challenges¹⁶.

A good percentage of the respondents adhered to the COVID 19 protocols which was corroborated by the study of Afful *et al.*¹². The study also shows the sensitization efforts by governing bodies and other organizations have been effective and fruitful as a larger percentage of them admitted to believing in the existence of the virus and also showed a willingness to take the vaccines, if and when made available to the general public¹⁷. A study by Saleh corroborates the results obtained on willingness to take the vaccines with over 70% indicating willingness¹⁸. This is good news because this level of awareness of the virus and its effects, adherence to protocols for prevention and willingness to take vaccines when available would prove lifesaving particularly for individuals who already suffer from other health conditions who are more susceptible to complications in combating the virus⁹.

It has become obvious with this study that adequate structure was not put in place to cater for the needs of those who had other underlying illnesses during the pandemic which might have been responsible for the high deaths recorded during the pandemic due to poverty and other health conditions¹⁶. Although, almost no government prepared for the pandemic but because more advanced nations had better health care structures and financial resources committed to such, it was easier for them to adapt to the changing climate of the pandemic. It was a good thing the devastating effects of the COVID 19 virus faced by other nations was not pronounced in Nigeria because the effects would have even been more fatal in a country devoid of a structured and proactive health system.

5. Conclusion

Total lockdown was a novel event to most Nigerians and this affected the way different people responded to the situation. The study revealed that the problem faced by many Nigerians during the lockdown was not only the fear of being infected with the virus but also financial challenges in meeting their basic and health care needs during the pandemic. It can be concluded from the study that there was limited access to health services during COVID 19 pandemic and adequate attention was not given to other health (diabetes and hypertension) and economic needs of the people. Lessons should be learnt from this and better plans and organizations should be in place to make healthcare facilities and professionals accessible to all Nigerians at all times.

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Competing interest statement:

The authors declare no conflict of interest.

References

1. World Health Organization and the United Nations Children's Fund (UNICEF) 2020: Community-based health care, including outreach and campaigns, in the context of the COVID-19 pandemic. https://www.who.int/publications/i/item/WHO-2019-nCoV-Comm_health_care-2020.1. Accessed September 15, 2021.
2. Elston JW, Cartright C, Ndumbi P and Wright J (2016). The health impact of the 2014-15 Ebola outbreak. *Public Health* 143:60-70. <https://doi.org/10.1016/j.puhe.2016.10.020>
3. Parpia AS, Ndeffo-Mbah ML, Wenzel NS and Galvani AP (2016). Effects of response to 2014-2015 Ebola outbreak on deaths from malaria, HIV/AIDS, and tuberculosis, West Africa. *Emerg Infect Dis* 22(3):433-441. <https://doi.org/10.3201/eid2203.150977>
4. Brodin RKJ, Saulnier DD, Eriksson A and Von Schreeb J (2016). Effects of the West Africa Ebola virus disease on health-care utilization — a systematic review. *Front Public Health* 4:222. <https://doi.org/10.3389/fpubh.2016.00222>.
5. Garfin DR, Silver RC and Holman EA (2020). The novel coronavirus (COVID-2019) outbreak: Amplification of public health consequences by media exposure. *Health Psychology* 39(5):355-357. <https://doi.org/10.1037/hea0000875>
6. World Health Organization 2020: Mental health and psychosocial considerations during the COVID-19 <https://www.who.int/docs/default-source/coronaviruse/mental-health-considerations.pdf>. Accessed September 2, 2021
7. World Health Organization 2020: Interim guidance <https://www.who.int/csr/resources/publications/puton-takeoff>. Accessed August 16, 2021
8. Mensah GA (2013). Descriptive epidemiology of cardiovascular risk factors and diabetes in sub-Saharan Africa. *Prog Cardiovasc Dis* 56:240-50.
9. Osibogun A, Balogun M, Abayomi A, Idris J, Kuyinu Y, Odukoya O, *et al.* (2021) Outcomes of COVID-19 patients with comorbidities in southwest Nigeria. *PLoS ONE* 16(3): e0248281. <https://doi.org/10.1371/journal.pone.0248281>
10. Okolie-Osemene J (2021). Nigeria's security government dilemma during the covid-19 crisis. *South African journal of political studies* 48(2).
11. Krejcie RV and Morgan DW (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement*. <https://doi.org/10.1177/001316447003000308>
12. Afful CO, Annor-Darko A, Adusah E, Atta Snr, BA, Mensah EO, Acheampong F and Amprofi G (2021). COVID-19 Case Count and the Observance of COVID-19 Safety Protocols: A Comparative Study. <https://doi.org/10.13140/RG.2.2.28012.69765>.
13. WFP and USAIDS 2017: Empowering women in West African markets: Case studies from Kano, Katsina (Nigeria) and Maradi (Niger). VAM Gender and Markets Study 7.
14. ASPE 2007: (2007). The effect of marriage on health: a synthesis of research evidence. <http://aspe.hhs.gov/hsp/07/marriageonhealth/index.htm>. Accessed September 4, 2021.
15. Metu AG and Nwokoye ES (2014). Entrepreneurship development in Nigeria: prospect and challenges. 1-14. <https://www.doi.org/10.13140/RG.2.1.1158.6727>. Accessed August 13, 2021
16. Kola-Mustapha AT, Ubani-Ukoma U, Ilomuanya O and Nnamani PO (2021). The COVID-19 response in Nigeria: Adequate protection of a fragile healthcare delivery system. *Nigerian Journal of Pharmacy*. 55(1):13-19. <https://doi.org/10.51412/psnnpj2021.2>
17. Emokpae OA, Osemwenkhae PO, Odigie OF, Omoregiev ON, Erhagbe B and Benneth BA (2021). Modulating inflammation in COVID-19 viral disease: The emerging role for dexamethasone. <https://doi.org/10.51412/psnnpj.2021.16>
18. Statista 2021: Willingness to take a Covid-19 vaccine in African countries 2020. Health, Pharma and Medtech <https://www.statista.com/statistics/1221141/willingness-to-accept-a-covid-19-vaccine-in-african-countries/>. Accessed August 15, 2021