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Knowledge, Beliefs and Practices of the Covid-19 Pandemic among Nigerians

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Abstract

Nigeria has adopted unprecedented measures to control the rapid spread of COVID-19 pandemic in the country. Citizens' adherence to control measures is affected by their knowledge, beliefs, and Practices towards COVID-19. This study investigated the knowledge, beliefs and practices of the Covid-19 pandemic among Nigerians. The study adopted a cross-sectional web-based survey. The population of the study comprised Nigeria population of 200,000000 and a sample of 384 was drawn from the population. Data were analysed using descriptive and inferential statistics at 0.05 level of significance. The results of the study revealed that the respondents' knowledge of the pandemic was very high and that the respondents do not have negative beliefs about Covid-19 pandemic. The results further revealed that the respondents were observing most of the Covid-19 rules and protocols. The study concluded that government at all levels should engage in continuous sensitization of the masses targeting both urban and rural communities in order to achieve higher knowledge and maintain safe practices.

Keyword: *Belief, Covid-19, Knowledge, Nigerians, Pandemic, Practices*

Introduction

Coronavirus disease 2019 abbreviated to COVID-19 is a respiratory disease that is caused by a novel coronavirus and was first reported to the World Health Organisation (WHO) on the 31st of December, 2019 in Wuhan, China. The main clinical symptoms of COVID-19 include fever, dry cough, fatigue, myalgia, and dyspnea (Zhong, Luo, Li, Zhang, Liu, Li, & Li, 2020). COVID-19 was declared as a global pandemic by WHO on 12th March 2020 (WHO, 2020). Coronaviruses are zoonotic (normally transmitted between animals and people) and highly infectious. The First case in Nigeria was confirmed on Thursday, February 27, 2020 in Lagos from a traveler who was travelling from Italy to Nigeria (NCDC, 2020).

As of 2rd of August 2020, over 14 million cases of COVID have been reported globally with a death toll of over 600,000 patients. In the initial stage of the pandemic, sub-Saharan Africa reported some of the lowest infection rates of COVID-19 (Abuya¹, Austrian, Isaac, Kangwana¹, Mbushi, Muluve¹, Mwanga, Ngo, Nzioki, Ochako, Pinchoff, Tidwell, & White, 2020). The Numbers began to rise in late March, April, May, June and July 2020, with confirmed cases increasing across the continent, however, this number may reflect a shortage of tests (John Hopkins Coronavirus Resource Center, 2020). The risk to spreading coronavirus is due in large part to deep challenges in practicing social distancing and frequent hand washing in settings of high population density and lack of running water, as well as the non-specific symptoms of COVID-19 that make it difficult to differentiate from endemic illnesses such as malaria and influenza. Global health experts and African governments have expressed concern about the spread of COVID-19 and potential for more than 2 million deaths in sub-Saharan Africa if no action is taken (Walker et al, 2020).

The evolving transmission dynamics of the current coronavirus disease (COVID-19) pandemic has continued to put the global public health system to test. In response to this, different countries across the world have devised diverse strategies to timely detect, isolate and successfully manage cases. Currently, the need to conduct more testing in Nigeria is being advocated due to increased cases of community transmission (NCDC, 2020).

According to the WHO COVID-19 transmission characterisation, four transmission scenarios have been described namely: countries with no cases; countries with sporadic cases; countries with cluster of cases; and countries with community transmission. As of the 2nd of August, 2020, Nigeria has recorded 43,841 confirmed cases with 20,308 persons discharged and 888 deaths recorded. With Lagos State and the Federal Capital Territory (FCT) having the highest number of cases. (NCDC, 2020). On 30th April, 2020, the Director General of the Nigeria Centre for Disease Control (NCDC), Dr. Chikwe Ihekweazu, said that bed spaces for patients of Coronavirus Disease are no longer readily available in Lagos State. Ihekweazu said this on Thursday when he spoke at the daily briefing of the Presidential Task Force on COVID-19 in Abuja. He said although there are about 3,500 bed spaces available across the country, they were insufficient, leaving the NCDC struggling and adopting home isolation.

Following best practices through the use of molecular RT-PCR testing, the Nigeria Centre for Disease Control (NCDC) recently published the national testing strategy to rapidly scale diagnostic testing for all 36 States and the FCT. Given the global increasing and competitive demand for testing kits, this is an adaptive testing strategy that will continue to evolve and significantly improve access to testing for the most vulnerable persons (NCDC, 2020).

In order to curtail the spread of COVID-19 in the Nigeria, The Federal government of Nigeria has put several measures in place. The President inaugurated a Presidential Task Force for the control of the novel Coronavirus (COVID-19) headed by the Secretary to Government of the Federation (Ajimotokan, 2020). President Buhari had on March 29th, 2020 declared a total lockdown in Lagos, Ogun and FCT for an initial period of 14 days, Buhari asked all citizens in the affected areas to stay in their homes, adding that travel to or from other states should be postponed. Two weeks after the expiration, the President extended the lockdown on April 13 for another two weeks (Igwe, 2020). The president has also closed all borders (land, air and sea) and has declared a national curfew from 8PM to 6AM each day. Inter-state travels was also banned, social and religious gatherings were suspended.

Even though the National lock down has been eased gradually, the battle against COVID-19 is still ongoing in Nigeria. To guarantee the final success, people's adherence to these control measures are essential, which may largely be affected by their knowledge, beliefs, and practices of the COVID-19 pandemic. The knowledge, beliefs and practices of infectious disease has been associated with level of panic emotion among the population, which can further complicate attempts to prevent the spread of the disease. To facilitate management of COVID-19 outbreak in Nigeria, there is an urgent need to understand the public's knowledge, beliefs and practices of COVID-19 at this critical moment.

Research Objectives

The main objective of the study is to investigate knowledge, beliefs and practices of the COVID-19 among Nigerians. The specific objectives were to:

- i. examine the knowledge of the COVID-19 pandemic among Nigerians;
- ii. determine the beliefs of the COVID-19 pandemic among Nigerians; and
- iii. assess the practices in curtailing the spread of the COVID-19 pandemic among Nigerians.

Research Questions

1. What is the knowledge of the COVID-19 pandemic among Nigerians?
2. What are the beliefs of the COVID-19 pandemic among Nigerians?
3. What are the practices in curtailing the spread of the COVID-19 pandemic among Nigerians?

Research Hypotheses

The following hypotheses were tested at 0.05 level of significance.

1. There is no significant relationship between knowledge and practices in curtailing COVID-19 pandemic among Nigerians.
2. There is no significant relationship between the beliefs of the COVID-19 pandemic and practices in curtailing the spread among Nigerians.

METHODOLOGY

Study Design

This study was designed as a cross-sectional web-based survey. The population of the study comprised Nigeria population of 200,000,000. The estimation of the sample size was done with the aid of a Research Advisor, 2006 at confidence level = 95%, and the (margin of error) = 0.05. The calculated sample size of this study was 384 participants.

This web-based survey was carried out through Facebook and WhatsApp social media platforms. Through the link the participants could view the questions simply by clicking on it and answer the questions. The cover page of the questionnaire included a short introduction regarding the objectives, procedures, the voluntary nature of participation, declarations of confidentiality and anonymity.

The questionnaire was answered by over 403 participants anonymously from the 29th of April to the 29th of May 2020. Demographic variables were recorded along with other factors regarding the populations' knowledge, beliefs and practices of the COVID-19 pandemic.

Questionnaire preparation

The questionnaire consisted of four parts: Section A: Personal Data, Section B: Knowledge of COVID-19 Pandemic, Section C: Beliefs on COVID-19 Pandemic and Section D: Practices towards COVID-19 Pandemic. Personal Data included age, gender, ethnic group, marital status, education, occupation, and residence.

According to guidelines for clinical and community management of COVID-19 by the Nigeria Centre for Disease Control (NCDC) a COVID-19 knowledge questionnaire was developed by the authors. The questionnaire had 15 questions regarding clinical presentation, transmission routes and prevention and control measures. The questions were answered on Yes/No basis.

Section C contained 10 items on Nigerian belief on the Covid-19. The 10 questions were answered on Agree/Disagree scale.

Section D elicited information on the various practices towards the Covid-19 and was scored using the Agree and Disagree scale. The section contained 10 items questions.

Results

Table 1: Age Range

Age Range	Frequency	Percentage
10-20years	74	18.4
21-30years	197	48.9
31-40years	77	19.1
41-50years	33	8.2
51-60years	18	4.5
61years and above	4	1
Total	403	100

Table 1 reveals that majority of the respondents 197(48.9%) were between the age bracket of 21-30 years. This implies that Nigeria has more of youthful population.

Table 2: Gender

Gender	Frequency	Percentage
Male	236	58.6
Female	167	41.4
Total	403	100

Table 2 reveals the response rate by gender. It shows that 236(58.6%) males and 167(41.4%) females responded respectively.

Table 3: Marital status

Ethnic group	Frequency	Percentage
Single	269	66.7
Married	131	32.5
Divorced	0	0
Widow	3	0.7
Total	403	100

Table 3 reveals that majority of the respondents 269(66.7%) were single.

Table 4: Education

Education	Frequency	Percentage
Primary school	0	0
Secondary school	3	0.7
Post-secondary school	41	10.2
Bachelor degree	209	51.9
Post-graduate degree	131	32.5
Others	19	4.7
Total	403	100

Table 4 reveals the educational qualification of the respondents. It reveals that 209(51.9%) of the respondents had Bachelor degree, 131(32.5%) of the respondents had Post-graduate degree, 41(10.2%) had post-secondary school education, 19(4.7%) had other qualifications while 3(0.7%) of the respondents had secondary school education.

Table 5: Residence

Residence	Frequency	Percentage
Urban	336	83.4
Rural	67	16.6
Total	403	100

Table 5 reveals that majority of the respondents 336(83.4%) were urban dwellers.

Table 6: Knowledge of COVID-19 Pandemic (N=403)

S/No	Knowledge of COVID-19 Pandemic	Yes		No		Remark
		F	%	F	%	
1	The main clinical symptoms of COVID-19 are fever, dry cough, and difficulty in breathing.	396	98.3	7	1.7	Knowledgeable
2	Unlike the common cold, stuffy nose, runny nose, and sneezing are less common in persons infected with COVID-19.	245	60.7	158	39.2	Knowledgeable
3	Currently, there is no effective cure for COVID-19.	377	93.5	26	6.5	Knowledgeable
4	Currently, there is no effective cure for COVID-19 patients, but early symptomatic and supportive treatment can help most patients recover from the infection.	397	98.5	6	1.5	Knowledgeable
5	Not all persons infected with COVID-19 will develop to severe cases.	373	92.5	30	7.4	Knowledgeable
6	Only people who are elderly, have chronic illnesses and/or are obese will likely develop to be severe cases.	276	68.5	127	31.5	Knowledgeable
7	Person with COVID-19 cannot transmit the virus to others without a fever.	75	18.6	328	81.4	Knowledgeable

8	COVID-19 virus spreads through respiratory droplets of infected individuals.	384	95.3	19	4.7	Knowledgeable
9	Wearing general medical masks prevents COVID-19 infection.	339	84.1	64	15.9	Knowledgeable
10	It is not necessary for children and young adults to take measures to prevent COVID-19 infection.	74	18.4	329	81.6	Knowledgeable
11	To prevent COVID-19 infection, individuals should avoid going to crowded places such as club houses, religious gatherings, social gatherings and avoid taking public transportations.	396	98.3	7	1.7	Knowledgeable
12	Isolation and treatment of people who are infected with COVID-19 are effective ways to reduce the spread of the virus.	396	98.3	7	1.7	Knowledgeable
13	To prevent infection, people should regularly and thoroughly wash their hands with soap and running water or use alcohol-based hand sanitisers if water is not available.	396	98.3	7	1.7	Knowledgeable
14	To prevent infection, people should avoid touching their eyes, nose and mouth with unwashed hands.	397	98.5	6	1.5	Knowledgeable
15	To prevent infection, people should maintain at least 2 metres distance between themselves and anyone who is coughing or sneezing around them.	398	98.8	5	1.2	Knowledgeable

Table 6 reveals the respondents knowledge of COVID-19 Pandemic. It reveals that the respondents were knowledgeable of Covid-19 disease clinical presentation, transmission routes and the prevention and control measures. The respondents' knowledge of the pandemic was very high. The finding of a high correct rate of COVID-19 knowledge among Nigerians was unexpected, because this survey was conducted during the early stage of the epidemic in Nigeria. The researchers consider that this is primarily due to the sample characteristics: 209(51.9%) of the respondents had a Bachelor's degree. Because of the serious situation of the pandemic and the overwhelming news reports on this public health emergency, this population would actively learn knowledge of this infectious disease from various channels of information such as social media, NCDC.gov.ng, the official website of the Nigeria Centre for Disease Control, SMS from NCDC, daily briefing by the Presidential Task Force (PTF), Radio and Television jingle among other

sources. This finding aligns with that of Zhong, et al. (2020) who reported high knowledge of Covid-19 among residence of China. The results also agrees with the study of Erfani, Shahriarirad, Ranjbar, Mirahmadizadeh & Moghadami (2020) which investigated the Knowledge, Attitude and Practice toward the Novel Coronavirus (COVID-19) Outbreak in Iran and reported that overall 90% had correct rate for knowledge of Covid-19.

Table 7: Beliefs on COVID-19 Infection (N=403)

S/No	Beliefs on COVID-19 Infection	Agree		Disagree		Remark
		F	%	F	%	
1	Black men are immune to COVID-19.	66	16.4	337	83.6	Disagreed
2	The hot climate in Nigeria will not allow the virus to spread.	95	23.6	308	76.4	Disagreed
3	It is un-African not to shake hands with elders even during a pandemic.	156	38.7	247	61.3	Disagreed
4	COVID-19 is God's way of punishing the sins of humanity.	140	34.7	263	65.3	Disagreed
5	Children of God can never be infected by COVID-19.	65	15.5	338	84.5	Disagreed
6	Closing down religious worship centres has provoked God and escalated the spread of COVID-19.	52	12.9	351	87.1	Disagreed
7	Fasting and praying is all that is required to overcome COVID-19.	160	39.7	243	60.3	Disagreed
8	Covid-19 is mainly targeting the elites, particularly politicians.	63	15.6	340	84.4	Disagreed
9	5G technology is responsible for COVID-19.	56	13.9	347	86.1	Disagreed
10	COVID-19 is a hoax and a ploy to steal money by corrupt politicians.	122	30.3	281	69.7	Disagreed

Table 7 reveals the belief of Nigerians on Covid-19 infection. Majority of the respondents 337(83.6%) disagreed with the belief that black men are immune to Covid-19, 308(76.4%) disagreed with the belief that the hot climate in Nigeria will not allow the virus to spread, 247(61.3%) disagreed with the belief that it is un-African not to shake hands with elders even during a pandemic, 263(65.3%) disagreed with the belief that Covid-19 is God's way of punishing the sins of humanity, 338(84.5%) disagreed with the belief that children of God can never be

infected by Covid-19, 351(87.1%) disagreed with the belief that closing down religious worship centres has provoked God and escalated the spread of Covid-19, 243(60.3%) disagreed with the belief that fasting and praying is all that is required to overcome Covid-19, 340(84.4%) disagreed with the belief that Covid-19 is mainly targeting the elites, 347(86.1%) disagreed with the belief that 5G technology is responsible for Covid-19, while 281(69.7) disagreed with the belief that Covid-19 is hoax and a ploy to steal money by corrupt politicians. This result is encouraging because most of the respondents disagreed with most of the negative belief among Africans. They also disagreed with some of the conspiracy theories which have linked Covid-19 to 5G technology. This finding is buttressed by that of Georgiou, Delfabbro and Balzan (2020) which revealed the issue of “fake news” and misinformation and the extent to which erroneous beliefs can reduce the potential effectiveness of public health campaigns.

Table 8: Practices towards COVID-19 Infection (N=403)

S/No	Practices	Agree		Disagree		Remark
		F	%	F	%	
1	Social distancing is a precautionary practice to avoid contacting COVID-19.	392	97.3	11	2.7	Agreed
2	Regular washing of hands with soap and running water prevents contamination.	392	97.3	11	2.7	Agreed
3	Wearing of face masks in public helps to prevent contacting COVID-19.	387	96.0	16	4.0	Agreed
4	Avoiding crowded places is a precautionary measure to prevent contacting COVID-19.	397	98.5	6	1.5	Agreed
5	Regular use of alcohol-based hand sanitizer prevents contamination.	391	97.0	12	3.0	Agreed
6	Covering ones mouth and nose with bent elbow or tissue when coughing or sneezing prevents the spread of COVID-19 virus.	387	96.0	16	4.5	Agreed
7	Avoiding touching one’s eyes, nose, and mouth with unwashed hands can prevent COVID-19 infection.	376	93.3	27	6.7	Agreed

8	Avoiding religious gathering is a precautionary measure to avoid contacting COVID-19.	379	94.0	24	6.0	Agreed
9	Avoiding social gatherings is a precautionary measure to avoid contacting COVID-19.	394	97.8	9	2.2	Agreed
10	Use of personal protective equipment (PPE) by frontline health workers is a precautionary practice to prevent contacting COVID-19 by health workers.	398	98.8	5	1.2	Agreed

Table 8 reveals the practices of Nigerians towards Covid-19 infection. It reveals that majority of the respondents 392(97.3%) are practicing social distancing, 392(97.3%) are practicing regular washing of hands with soap and running water, 397(98.5%) are avoiding crowded places among other prevention practices. This result shows that the respondents are observing most of the Covid-19 rules and protocols. Observance of these protocols and guidelines are very crucial to flattening the Covid-19 curve. This results is in agreement with the study of Erfani, Shahriarirad, Ranjbar, Mirahmadizadeh & Moghadami (2020) which reported that Iranian population demonstrated decent knowledge, appropriate practice, and positive attitude towards COVID-19 at the time of its outbreak.

Research Hypothesis One: There is no significant relationship between knowledge and practices in curtailing COVID-19 pandemic among Nigerians.

Table 9: Test of Significant Relationship between Knowledge of COVID-19 and Practices in Curtailing COVID-19 Pandemic among Nigerians

Variable	N	Mean	SD	r-value	P	Decision
Practices in curtailing COVID-19	403	0.84	0.256	0.782**	0.000	Rejected
Knowledge of COVID-19	403	0.82	0.153			

Source: Computed Data, 2020

** Correlation is significant at the 0.01 level (2 tailed)

Table 9 show the significant relationship between knowledge of COVID-19 and practices in curtailing COVID-19 among Nigerians. The mean score of knowledge of COVID-19 is Mean = 0.82, SD = 0.153 while the mean score of practices in curtailing COVID-19 (Mean = 0.84, SD = 0.256) among Nigerians is found to be significant at $p < 0.05$. Thus, the means of knowledge of COVID-19 ($r = 0.782^{**}$, $N = 403$, $p < 0.05$) had significant relationship on practices in curtailing COVID-19. Therefore, the null hypothesis is rejected.

Research Hypothesis Two: There is no significant relationship between the beliefs of the COVID-19 pandemic and practices in curtailing the spread among Nigerians.

Table 10: Test of Significant Relationship between Beliefs of COVID-19 and Practices in Curtailing COVID-19 among Nigerians

1. Variable	N	Mean	SD	r-value	P	Decision
Practices in curtailing COVID-19	403	0.84	0.256	0.538**	0.000	Rejected
Beliefs of COVID-19	403	0.29	0.341			

Source: Computed Data, 2020

** Correlation is significant at the 0.01 level (2 tailed)

Table 10 show the significant relationship between beliefs of COVID-19 and practices in curtailing COVID-19 among Nigerians. The mean score of beliefs of COVID-19 is Mean = 0.29, SD = 0.341 while the mean score of practices in curtailing COVID-19 (Mean = 0.84, SD = 0.256) among Nigerians is found to be significant at $p < 0.05$. Thus, the means of beliefs of COVID-19 ($r = 0.538^{**}$, $N = 403$, $p < 0.05$) had significant relationship on practices in curtailing COVID-19. Therefore, the null hypothesis is rejected.

Conclusion

The findings of this study have suggested that Nigerians have demonstrated good knowledge, positive belief and reasonable practices regarding COVID-19 pandemic. Furthermore, based on the significant positive relationship among knowledge, beliefs, and practices in our study, continuous sensitization of the masses targeted at both urban and rural communities are vital for achieving higher knowledge and maintain safe practices. Hopefully, by increasing knowledge through public health policy-makers, and the cooperation of the Nigerian government and the general population, optimistic control and elimination of the Covid-19 disease can be anticipated.

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