

Knowledge, Attitude, and Practice(KAP) Survey in Ikwuano and Umunneochi LGA in Abia State on the COVID-19 Pandemic: A cross-sectional, descriptive study.
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RESEARCH ARTICLE

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A cross-sectional, descriptive study

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KAP SURVEY IN IKWUANO AND UMUNNEOCHI LGAS IN ABIA STATE ON THE COVID-19 PANDEMIC

Abstract

The Severe Acute Respiratory Syndrome Coronavirus 2 (COVID 19) has plagued the world with about 115, 289,961 confirmed cases of COVID-19, including 2,464,560 deaths(<https://covid19.who.int/>) as of March 5, 2021, and 158, 042 confirmed cases and 1,954 deaths in Nigeria (ncdc.gov.ng).The purpose of this cross-sectional, descriptive study was to assess the Knowledge, Attitude, and Practice (KAP) of COVID-19 protocols in Abia-State, Nigeria.The knowledge, Attitude, and Practices (KAP) people hold towards this novel disease underscores its acceptance and adherence to safety protocol. A total of 380 respondents were randomly selected using the multi-stage sampling technique from the two selected local government areas in Abia State - Ikwuano and Umunneochi. The data analysis processes involved eliciting responses from interviewer-administered, pretested questionnaires. Data were entered into Excel and exported to SPSS version 21 for analysis.Of all 380 respondents,(52.6%) were men compared to 47.4% females with a mean age of 39.9+12.8 years.

However, Ikwuano LGA respondents were predominantly females (52.6%) and were younger - 37.8+12.5 years. (58.7%) were married and (49.2%) had tertiary education. A proportion of the married respondents and those with tertiary education were from Umunneochi, 63.7% and 50.5%, respectively.The result showed that though 50% of respondents regarded contracting COVID-19 as a severe illness, their risk perception was low because only 27% rated their chance of getting infected with COVID 19.Based on the exponential spread of COVID-19, findings suggest the need for continuous and multi-dimensional increased risk communication through health education and public awareness on COVID-19. Sensitization is paramount to preclude stigmatization and encourage positive preventive safety practices to stem transmission and reducedmortality during the second phase of the pandemic.

INTRODUCTION

The Coronavirus Disease 2019 (COVID-19) is recently identified as a fatal respiratory problem caused by the novel coronavirus subtype SARS-CoV-2 (Severe Acute Respiratory Syndrome Coronavirus, 2). On the last of December 2019, a cluster of pneumonia cases appeared in Wuhan, a highly populated city in Central China, where more than 11 million population reside. The highly contagious disease is characterized by fever, cough, dyspnea, fatigue, myalgia, and anosmia (Tamang et al., 2020).

Although facts on COVID-19 are rapidly evolving, it is now known that there can be a PR symptomatic, symptomatic, and asymptomatic transmission. It can also be transmitted through other sites apart from the respiratory route (Mbachu et al., 2020). In some countries, new variants have emerged while many others are experiencing the second wave. However, most infected persons experience mild to moderate respiratory illness and recuperate without requiring special treatment, but the elderly and those with underlying medical problems such as cardiovascular disease, diabetes, HIV, chronic respiratory disease, and cancer are more likely to develop severe illness (<https://covid19.who.int/>).

In Nigeria, the first confirmed case was on February 27, 2020. Vaccines have been developed along with some non-pharmaceutical interventions to help prevent the disease amongst susceptible individuals (Reuben et al., 2020). Without a permanent immunity to control the exponential transmission of COVID-19, several countries, including Nigeria, adopted some public health measures such as:

- Enforcement of use of face masks in public
- Constant handwashing under running water with soap for at least 20 seconds and use of alcohol-based sanitizer if unavailable
- Maintain at least 2 meters (6 feet) distance between yourself and anyone
- Maintaining good respiratory hygiene: Cover your mouth and nose properly with tissue paper when sneezing or coughing. Avoid touching your eyes, nose and mouth with your hands. You may also cough into your elbow if a tissue is not available.
- Obey national and state directives on avoiding large gatherings.
- Get vaccinated at the various designated vaccination center's nationwide (Ngwenwondo et al., 2020).

According to the NOA DG, Garba Abari, despite the government's efforts, the lackadaisical attitude of the Nigerian public towards COVID 19 portends grave danger with the current spike in community transmissions and increased mortality (<https://nigeriannewsdirect.com/noa-to-enforce-covid-19-safety-measures-in-fct/>). The KAP theory proffers that success in controlling a pandemic can only be guaranteed by people's adherence to control measures, which is primarily affected by their knowledge, attitudes, and practices (KAP) towards COVID-19 (Zhong et al., 2020). Therefore, to facilitate outbreak management of COVID-19 in Abia State, Nigeria, the current study evaluates the public's awareness and practice of COVID-19 in Abia State.

KAP THEORY

Knowledge, Attitude, and Practice (KAP) surveys are widely used to gather information for planning public health programs in all countries. The current “KAP” study measured the Knowledge, Attitude, and Practices by collecting information on what is known, believed, and done concerning COVID 19 in Abia State to support evaluation, planning, and implementation during the pandemic (Kaliyaperumal, 2004). Ability to identify information commonly known and common attitudes enhance communication processes and sources that are key to defining effective activities and messaging on COVID 19 prevention and control. The KAP survey can identify knowledge gaps, cultural beliefs, problems, and barriers or behavioral patterns that facilitate understanding and COVID 19 response (Kaliyaperumal, 2004; WHO, 2008).

STUDY DESIGN

This current study is a cross-sectional, descriptive study conducted between December 1, 2020, and December 30, 2020, in two purposively selected rural local government areas in Abia State based on the Auto- Visual AFP Detection and Reporting (AVADAR) Strategy. The AVADAR strategy focuses on Ikwuano and Umunneochi LGAs from the 17 LGAs in the state, which underscores the WHO recommended surveillance standard. Abia State is located in one of the five states in South-East Nigeria, with an estimated population of 3.6 million.

Sample Size and Sampling Technique

A total of 380 respondents aged 15 years and above were randomly selected using the multi-stage sampling technique from the two selected local government areas - Ikwuano and Umunneochi. The 19 electoral wards in each of the LGAs were part of the sampling frame. Ten respondents were selected using simple random sampling from each of the 19 electoral wards of the LGAs. A total of 190 persons were selected from each LGA and 380 for the study. From the selected respondents, responses were elicited using an interviewer-administered, pretested questionnaire on their socio-demographic characteristics, awareness, and experience of COVID-19, COVID-19 related knowledge, risk perception, self-efficacy, practices, trust in sources of information and institutions, and conspiracies. Each question in the section on knowledge, Attitude, and practice is a 7-Point Likert Scale. Only individuals who willingly consented to participate in the study were interviewed. Data were entered into MS Excel and exported to SPSS version 21 for cleaning and analysis. All analyses were descriptive analysis using proportions and presented as frequency tables and charts.

RESULTS

Data of 190 respondents who completed the survey in each LGA were analyzed, and the findings are presented below. Most of the respondents were males (52.6%) compared to 47.4% females, and the mean age is 39.9+12.8 years. However, Ikwuano LGA respondents were predominantly females (52.6%) and were younger - 37.8+12.5 years.

Table 1: Age and Sex Distribution of the Respondents

Gender	Ikwuano N (%)	Umunneochi N (%)	Total N (%)
Male	90 (47.4)	110 (57.9)	200 (52.6)
Female	100 (52.6)	80 (42.1)	180 (47.4)
Age (in years)			
≤19	6 (3.2)	3 (1.6)	9 (2.4)
20-29	49 (25.8)	32 (16.8)	81 (21.3)
30-39	57 (30.0)	50 (26.3)	107 (28.2)
40-49	40 (21.1)	52 (27.4)	92 (24.2)
50-59	26 (13.7)	32 (16.8)	58 (15.3)
≥60	12 (6.3)	21 (11.1)	33 (8.7)
Mean+SD	37.8+12.5	41.9+12.8	39.9+12.8

Most of them were married (58.7%) and had tertiary education (49.2%). A proportion of the married respondents and those with tertiary education were from Umunneochi, 63.7% and 50.5%, respectively.

Table 2: Social Status of the Respondents

Marital Status	Ikwuano N (%)	Umunneochi N (%)	Total N (%)
Married	102 (53.7)	121 (63.7)	223 (58.7)
Single/Not married	65 (34.2)	61 (32.1)	126 (33.2)
Widowed/Separated/Divorced	23 (12.1)	8 (4.2)	31 (8.2)
Educational Attainment			
No formal education	1 (0.5)	1 (0.5)	2 (0.5)
Primary	21 (11.1)	13 (6.8)	34 (8.9)
Secondary	77 (40.5)	80 (42.1)	157 (41.3)
Tertiary	91 (47.9)	96 (50.5)	187(49.2)
Health Professional			
No	164 (86.3)	160 (84.2)	324 (85.3)
Yes	26 (13.7)	30 (15.8)	56(14.7)

Table 3: History of Chronic Illness and Financial Situation of the Respondents in the past three months

History of Chronic illness	Ikwuano N (%)	Umunneochi N (%)	Total N (%)
History of Chronic Illness			
Don't know	30 (15.8)	16 (8.4)	46 (12.1)
No	150 (78.9)	172 (90.5)	322 (84.7)
Yes	10 (5.3)	2 (1.1)	12 (3.2)
Financial situation in			

the past three months			
Improved	48 (25.3)	42 (22.1)	90 (23.7)
Remain the same	25 (13.2)	37 (19.5)	62 (16.3)
Worse	94 (49.5)	66 (34.7)	160 (42.1)
Don't know	23 (12.1)	45 (23.7)	68 (17.9)

Only 12 (3.2%) had a known history of chronic illness and were predominantly from Ikwuano LGA (5.3%). About 42% of the respondents suffered worsened financial situation in the past three months, 23.7% reported improved financial situation, while 16.3% did not experience any change in the financial situation within the same period. A higher proportion of Ikwuano LGA (49.5%) experienced a worse financial situation than those from Umunneochi (34.7%). However, a good number of the latter could not describe their current financial situation.

Table 4: Awareness and experience of COVID 19 infection

Ever being infected with COVID-19	Ikwuano N (%)	Umunneochi N (%)	Total N (%)
No	177 (93.2)	189 (99.5)	366 (96.3)
Yes	13 (6.8)	1 (0.5)	14 (3.7)
Severity of Infection			
Mild	8 (57.1)	1 (100.0)	9 (60.0)
Severe	6 (43.9)	0 (0.0)	6 (40.0)
Confirmed by Test			
Yes	1 (7.1)	0 (0.0)	1 (6.7)
No	13 (92.9)	1 (100.0)	14 (93.3)
Aware of any community member infected with COVID-19			
No	172 (90.5)	189 (99.5)	361 (95.0)
Yes	18 (9.5)	1 (0.5)	19 (5.0)
Aware of any community member who died of COVID-19			
No	183 (96.3)	190 (100.0)	373 (98.2)
Yes	7 (3.7)	0 (0.0)	7 (1.8)

Fourteen (7.4%) of them reported ever being infected with COVID-19 however only one of them (7.1%) was confirmed by test. Among those who claimed to be infected most (57.1%) of them suffered mild infection. Eighteen (9.5%) and 7 (3.7%) respondents were aware of a community member who was infected or died of COVID-19 respectively.

Table 5: Health Literacy of the Respondents

How Easy or Difficult Would You Say It Is To		Very difficult	Difficult	Slightly Difficult	Not Applicable	Slightly Easy	Easy	Very Easy
Find the information you need related to COVID-19?	Ikwuano	19 (10.0)	8 (4.2)	11 (5.8)	1 (0.5)	17 (8.9)	30 (15.8)	104 (54.7)
	Umunneochi	19 (10.0)	8 (4.2)	14 (7.4)	6 (3.2)	42 (22.1)	37 (19.5)	64 (33.7)
	Total	38 (10.0)	8 (4.2)	25 (6.6)	7 (1.8)	59 (15.5)	67 (17.6)	168 (44.0)
Understand information about what to do if you think you have COVID-19?	Ikwuano	21 (11.1)	5 (2.6)	12 (6.3)	17 (8.9)	25 (13.2)	42 (22.1)	68 (35.8)
	Umunneochi	14 (7.4)	2 (1.1)	15 (7.9)	3 (1.6)	50 (26.3)	40 (21.1)	66 (34.7)
	Total	35 (9.2)	7 (1.8)	27 (7.1)	20 (5.3)	75 (19.7)	82 (21.6)	134 (35.3)
Judge if the information about COVID-19 in the media is reliable?	Ikwuano	13 (6.8)	11 (5.8)	48 (25.3)	14 (7.4)	23 (12.1)	33 (17.4)	48 (25.3)
	Umunneochi	14 (7.4)	8 (4.2)	14 (7.4)	11 (5.8)	41 (21.6)	42 (22.1)	60 (31.6)
	Total	27 (7.1)	19 (5.0)	62 (16.3)	25 (6.6)	64 (16.8)	75 (19.7)	108 (28.4)
Understand restrictions and recommendations of authorities regarding COVID-19?	Ikwuano	16 (8.4)	12 (6.3)	15 (7.9)	21 (11.1)	26 (13.7)	37 (19.5)	63 (33.2)
	Umunneochi	12 (6.3)	11 (5.8)	18 (9.5)	3 (1.6)	42 (22.1)	48 (25.3)	56 (29.5)
	Total	28 (7.4)	23 (6.1)	33 (8.7)	24 (6.3)	68 (17.9)	85 (22.4)	119 (31.3)
Follow the recommendations on how to protect yourself from COVID-19?	Ikwuano	5 (2.6)	7 (3.7)	15 (7.9)	5 (2.6)	36 (18.9)	38 (20.0)	84 (44.2)
	Umunneochi	4(2.1)	1 (0.5)	7 (3.7)	5 (2.6)	41 (21.6)	41 (21.6)	91 (47.9)
	Total	9 (2.4)	8 (2.1)	22 (5.8)	10 (2.6)	77 (20.3)	79 (20.8)	175 (46.1)
Understand recommendations about when to stay at home from work/school, and when not to?	Ikwuano	12 (6.3)	7 (3.7)	24 (12.6)	12 (6.3)	37 (19.5)	26 (13.7)	72 (37.9)
	Umunneochi	9 (4.7)	5 (2.6)	13 (6.8)	11 (5.8)	49 (25.8)	36 (18.9)	67 (35.3)
	Total	21 (5.5)	12 (3.2)	37 (9.7)	23 (6.1)	86 (22.6)	62 (16.3)	139 (36.6)
Follow recommendations about when to stay at home from work/school, and when not to?	Ikwuano	15 (7.9)	3 (1.6)	14 (7.4)	26 (13.7)	22 (11.6)	41 (21.6)	69 (36.3)
	Umunneochi	10 (5.3)	6 (3.2)	16 (8.4)	13 (6.8)	40 (21.1)	38 (20.0)	67 (35.3)
	Total	25 (6.6)	9 (2.4)	30 (7.9)	39 (10.3)	62 (16.3)	79 (20.8)	136 (35.8)

Understand recommendations about when to engage in social activities, and when not to?	Ikwuano	12 (6.3)	8 (4.2)	24 (12.6)	10 (5.3)	27 (14.2)	29 (15.3)	80 (42.1)
	Umunneochi	9 (4.7)	5 (2.6)	11 (5.8)	6 (3.2)	38 (20.0)	45 (23.7)	76 (40.0)
	Total	21(5.5)	13 (3.4)	35 (9.2)	16 (4.2)	65 (17.1)	74 (19.5)	156 (41.1)
Follow recommendations about when to engage in social activities, and when not to?	Ikwuano	1 (0.5)	4 (2.1)	8 (4.2)	22 (11.6)	18 (9.5)	30 (15.8)	107 (56.3)
	Umunneochi	0 (0.0)	9 (4.7)	15 (7.9)	17 (8.9)	29 (15.3)	37 (19.5)	83 (43.7)
	Total	1 (0.3)	13 (3.4)	23 (6.1)	39 (10.3)	47 (12.4)	67 (17.6)	190 (50.0)

Most of them could readily access COVID-19 related information, easily understood what to do if one thinks he has COVID-19, as well as understand restrictions and recommendations of authorities as regards COVID 19. However, about 28% of them found it difficult to judge if information about COVID-19 from the media is reliable and most of whom were from Ikwuano LGA. The recommendations most likely to be followed is how to protect oneself from COVID 19 while the one least likely to be complied with is when to stay at home from work/school and when not to.

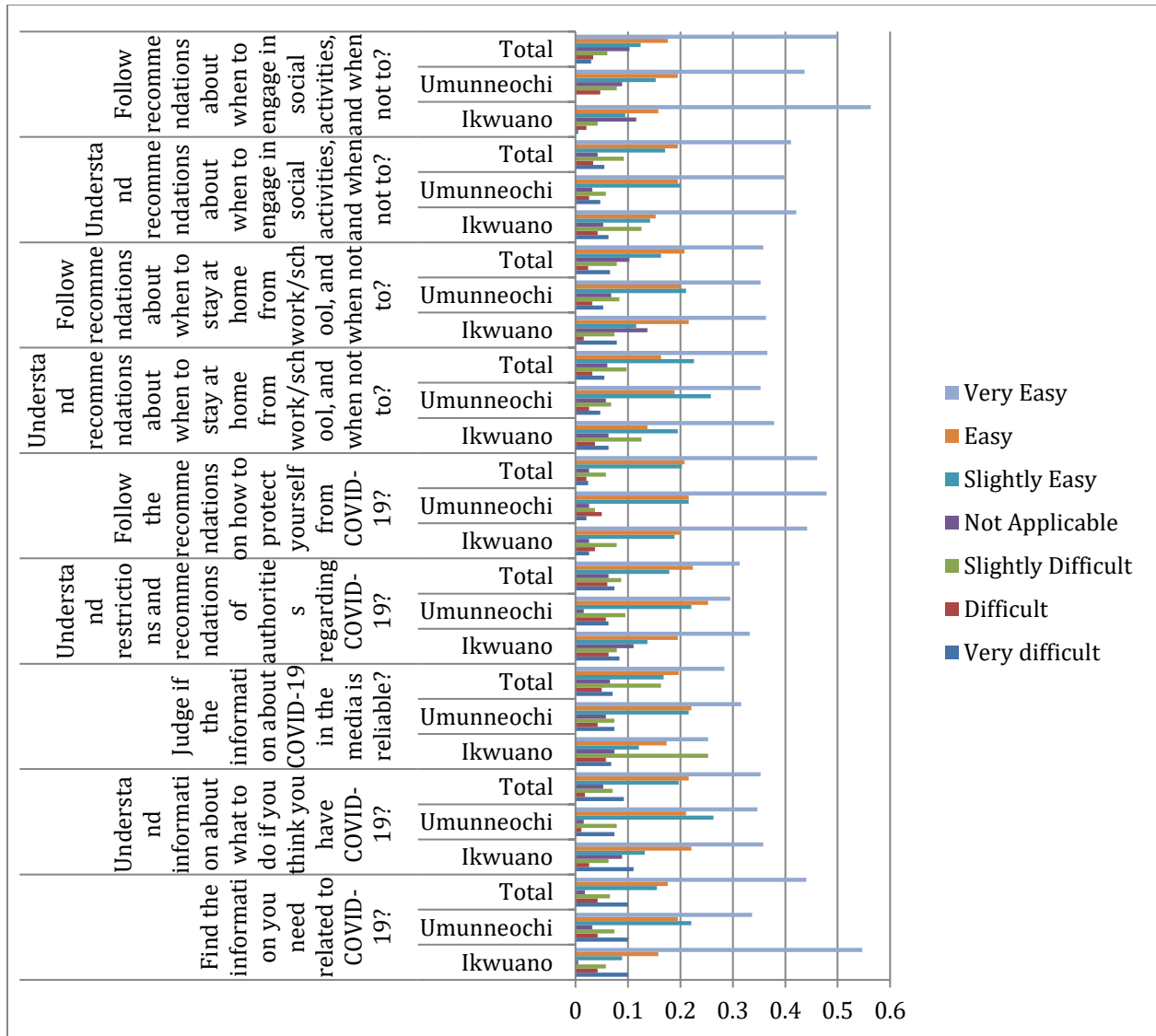


Figure 1: Health Literacy of the Respondents

Table 6: Risk Perception of the Respondents

Risk Perception		Extremely unlikely	Unlikely	Slightly Unlikely	Not Applicable	Slightly Likely	Likely	Extremely likely
What do you consider to be your own probability (chance) of getting infected with COVID-19?	Ikwuano	49 (25.8)	46 (24.2)	28 (14.7)	17 (8.9)	18 (9.5)	22 (11.6)	10 (5.3)
	Umunneochi	48 (25.3)	20 (10.5)	31 (16.3)	39 (20.5)	19 (10.0)	14 (7.4)	19 (10.0)
	Total	97 (25.5)	66 (17.4)	59 (15.5)	56 (14.7)	37 (9.7)	36 (9.5)	29 (7.6)
		Not all susceptible	Unsusceptible	Slightly unsusceptible	Not Applicable	Slightly Susceptible	Susceptible	Very Susceptible
How susceptible (at	Ikwuano	57 (30.0)	29	21 (11.1)	32 (16.8)	16 (8.4)	8 (4.2)	27 (14.2)

risk) do you consider yourself to an infection with COVID-19?			(15.3)					
	Umunneochi	55 (28.9)	20 (20.5)	29 (15.3)	30 (15.8)	21 (11.1)	14 (7.4)	20 (10.5)
	Total	112 (29.5)	49 (12.9)	50 (13.2)	62 (16.3)	37 (9.7)	22 (5.8)	47 (12.4)
		Not very severe	Not severe	Slightly not severe	Not applicable	Slightly severe	Severe	Very Severe
How severe would contracting COVID-19 be for you (how seriously ill do you think you will be)?	Ikwuano	38 (20.0)	18 (9.5)	4 (2.1)	59 (31.1)	9 (4.7)	11 (5.8)	51 (26.8)
	Umunneochi	17 (8.9)	9 (4.7)	22 (11.6)	26 (13.7)	27 (14.2)	36 (18.9)	53 (27.9)
	Total	55 (14.5)	27 (7.1)	26 (6.8)	85 (22.4)	36 (9.5)	47 (12.4)	104 (27.4)

The respondents' risk perception was low, as only about 27% of them rated their chance of getting infected with COVID 19 or their susceptibility as likely. Furthermore, 50% of them regarded contracting COVID-19 as a severe illness. Between the two localities, there is not much difference in their risk perception except that (10.0%) of residents in Umunneochi LGA rated their probability of getting infected as extremely likely compared to those in Ikwuano LGA (5.3%), while 14.2% of those in Ikwuano compared to 10.5% of those in Umunneochi rated their susceptibility as very susceptible. Furthermore, residents in Umunneochi viewed COVID-19 as a more severe illness than residents in Ikwuano.

Table 7: Perceived level of preparedness and self-efficacy of the respondents

Level of Preparedness and self-efficacy		Not at all	At all	Little	Unsure	Much	Very much	Very much so
I know how to protect myself from coronavirus	Ikwuano	4 (2.1)	2 (1.1)	9 (4.7)	4 (2.1)	20 (10.5)	49 (25.8)	102 (53.7)
	Umunneochi	5 (2.6)	2 (1.1)	18 (9.5)	11 (5.8)	31 (16.3)	50 (26.3)	73 (38.4)
	Total	9 (2.4)	4 (1.1)	27 (7.1)	15 (3.9)	51 (13.4)	99 (26.1)	175 (46.1)
		Very Difficult	Difficult	Slightly Difficult	Not Applicable	Slightly Easy	Easy	Very Easy
For me avoiding an infection with COVID-19 in the current situation is	Ikwuano	29 (15.3)	10 (5.3)	13 (6.8)	16 (8.4)	59 (31.1)	31 (16.3)	32 (16.8)
	Umunneochi	17 (8.9)	17 (8.9)	13 (6.8)	21 (11.1)	43 (22.6)	33 (17.4)	46 (24.2)
	Total	46 (12.1)	27 (7.1)	26 (6.8)	37 (9.7)	102 (26.8)	64 (16.8)	78 (20.5)

Perceived level of preparedness (75.6%) and self-efficacy (64.4%) were relatively high. However, the perceived level of preparedness was higher among Ikwuano residents (90.0%) than Umunneochi residents.

The practice of COVID 19 related preventive behaviors among all the respondents was high. The most commonly practiced preventive behavior is frequent washing of hands with soap and water for at least 20 seconds (83.2%). However, they are most very much likely to wear a face mask in public (60.3%) or wash their hands (52.9%). Simultaneously, the least preventive measures practiced by the respondents were the use of antibiotics to prevent or treat COVID 19 (17.9%) and stay at home from work/school (27.4%). In general, the practice of preventive behaviors was higher among Ikwuano LGA respondents except for use of antibiotics to prevent or treat COVID 19 and stay at home from work/school.

Table 8: Practice of COVID-19 related preventive behaviors by the Respondents

Preventive behavior		Not all	Someti mes	Rarely/ A little bit	Not applicabl e	Much	Very much/O ften	Very much so/Always
Frequently washed my hands with soap and water for at least 20 seconds	Ikwuano	6 (3.2)	21 (11.1)	10 (5.3)	3 (1.6)	16 (8.4)	25 (13.2)	109 (57.4)
	Umunneochi	1 (0.5)	20 (10.5)	1 (0.5)	2 (1.1)	30 (15.8)	44 (23.2)	92 (48.4)
	Total	7 (1.8)	41 (10.8)	11 (2.9)	5 (1.3)	46 (12.1)	69 (18.2)	201 (52.9)
Avoided touching my eyes, nose and mouth with unwashed hands	Ikwuano	8 (4.2)	25 (13.2)	25 (13.2)	5 (2.6)	11 (5.8)	25 (13.2)	91 (47.9)
	Umunneochi	3 (1.6)	18 (9.5)	3 (1.6)	8 (4.2)	42 (22.1)	40 (21.1)	76 (40.0)
	Total	11 (2.9)	43 (11.3)	28 (7.4)	13 (3.4)	53 (13.9)	65 (17.1)	167 (43.9)
Used disinfectants to clean hands when soap and water were not available	Ikwuano	27 (14.2)	23 (12.1)	12 (6.3)	21 (11.1)	18 (9.5)	21 (11.1)	68 (35.8)
	Umunneochi	12 (6.3)	27 (14.2)	5 (2.6)	8 (4.2)	44 (23.2)	32 (16.8)	62 (32.6)
	Total	39 (10.3)	50 (13.2)	17 (4.5)	29 (7.6)	62 (16.3)	53 (13.9)	130 (34.2)
Avoided a social event I wanted to attend	Ikwuano	20 (10.5)	14 (7.4)	34 (17.9)	9 (4.7)	21 (11.1)	24 (12.6)	68 (35.8)
	Umunneochi	9 (4.7)	23 (12.1)	1 (0.5)	12 (6.3)	43 (22.6)	32 (16.8)	70 (36.8)
	Total	29 (7.6)	37 (9.7)	35 (9.2)	21 (5.5)	64 (16.8)	56 (14.7)	138 (36.3)
Stayed at home from work/school	Ikwuano	15 (7.9)	23 (12.1)	19 (10.0)	23 (12.1)	21 (11.1)	45 (23.7)	44 (23.2)
	Umunneochi	7 (3.7)	22 (11.6)	1 (0.5)	8 (4.2)	42 (22.1)	50 (26.3)	60 (31.6)
	Total	22 (5.8)	45 (11.6)	20 (5.3)	31 (8.2)	63 (16.6)	95 (25.0)	104 (27.4)

			(11.8)			(16.6)	(25.0)	
Used antibiotics to prevent or treat COVID-19	Ikwuano	123 (64.7)	10 (5.3)	3 (1.6)	8 (4.2)	10 (5.3)	12 (6.3)	24 (12.6)
	Umunneochi	38 (20.0)	24 (12.6)	12 (6.3)	13 (6.8)	30 (15.8)	29 (15.3)	44 (23.2)
	Total	161 (42.4)	34 (8.9)	15 (3.9)	21 (5.5)	40 (10.5)	41 (10.8)	68 (17.9)
Wore a mask in public	Ikwuano	5 (2.6)	19 (10.0)	2 (1.1)	3 (1.6)	13 (6.8)	26 (13.7)	122 (64.2)
	Umunneochi	5 (2.6)	20 (10.5)	4 (2.1)	2 (1.1)	21 (11.1)	31 (16.3)	107 (56.3)
	Total	10 (2.6)	39 (10.3)	6 (1.6)	5 (1.3)	34 (8.9)	57 (15.0)	229 (60.3)
Ensured physical distancing in public	Ikwuano	9 (4.7)	14 (7.4)	8 (4.2)	4 (2.1)	26 (13.7)	31 (16.3)	98 (51.6)
	Umunneochi	7 (3.7)	16 (8.4)	4 (2.1)	7 (3.7)	39 (20.5)	37 (19.5)	80 (42.1)
	Total	16 (4.2)	30 (7.9)	12 (3.2)	11 (2.9)	65 (17.1)	68 (17.9)	178 (46.8)
Disinfected surfaces	Ikwuano	19 (10.0)	16 (8.4)	13 (6.8)	18 (9.5)	19 (10.0)	25 (13.2)	80 (42.1)
	Umunneochi	17 (8.9)	20 (10.5)	6 (3.2)	5 (2.6)	31 (16.3)	36 (18.9)	75 (39.5)
	Total	36 (9.5)	36 (9.5)	19 (5.0)	23 (6.1)	50 (13.2)	61 (16.1)	155 (40.8)

Table 9: Trust in sources of information

Source of Information		Very little trust	Little trust	A bit of trust	Not applicable	Much trust	A lot of trust	A great deal of trust
Television	Ikwuano	24 (12.6)	8 (4.2)	11 (5.8)	5 (2.6)	29 (15.3)	24 (12.6)	88 (46.3)
	Umunneochi	10 (5.3)	25 (13.2)	29 (15.3)	0 (0.0)	16 (8.4)	8 (4.2)	102 (53.7)
	Total	34 (8.9)	33 (8.7)	40 (10.5)	5 (1.3)	45 (11.8)	32 (8.4)	191 (50.3)
Newspapers	Ikwuano	19 (10.0)	16 (8.4)	25 (13.2)	15 (7.9)	17 (8.9)	28 (14.7)	70 (36.8)
	Umunneochi	15 (7.9)	29 (15.3)	19 (10.0)	1 (0.5)	26 (13.7)	14 (7.4)	86 (45.3)
	Total	34 (8.9)	45 (11.8)	44 (11.6)	16 (4.2)	43 (11.3)	42 (11.1)	156 (41.1)
Health workers	Ikwuano	12 (6.3)	9 (4.7)	7 (3.7)	5 (2.6)	34 (17.9)	32 (16.2)	91 (47.9)
	Umunneochi	6 (3.2)	8 (4.2)	13 (6.8)	1 (0.5)	28 (14.7)	17 (8.9)	117 (61.6)
	Total	18 (4.7)	17 (4.5)	20 (5.3)	6 (1.6)	62 (16.3)	49 (12.9)	208 (54.7)
Social media	Ikwuano	24 (12.6)	25 (13.2)	40 (21.1)	28 (14.7)	24 (12.6)	13 (6.8)	36 (18.9)
	Umunneochi	15 (7.9)	26 (13.7)	36 (18.9)	16 (8.4)	30 (15.8)	21 (11.1)	46 (24.2)
	Total	39 (10.3)	51 (31.4)	76 (20.0)	44 (11.5)	54 (14.2)	34 (8.9)	82 (21.6)
Radio	Ikwuano	23 (12.1)	14 (7.4)	12 (6.3)	1 (0.5)	14 (7.4)	33 (17.4)	93 (48.9)
	Umunneochi	8 (4.2)	16 (8.4)	30 (15.8)	7 (3.7)	30 (15.8)	29 (15.3)	70 (36.8)
	Total	31 (8.2)	30 (7.9)	42 (11.1)	8 (2.1)	44 (11.6)	62 (16.3)	163 (42.9)
Ministry of Health	Ikwuano	19 (10.0)	7 (3.7)	10 (5.3)	2 (1.1)	28 (14.7)	28 (14.7)	96 (50.5)
	Umunneochi	9 (4.7)	3 (1.6)	13 (6.8)	7 (3.7)	19 (10.0)	44 (23.2)	95 (50.0)
	Total	28 (7.4)	10 (2.6)	23 (6.1)	9 (2.4)	46 (12.1)	72 (18.9)	192 (50.6)
Institute of Public Health/Center for Disease Control	Ikwuano	17 (8.9)	19 (5.3)	11 (5.8)	5 (2.6)	20 (10.5)	23 (12.1)	104 (54.7)
	Umunneochi	5 (2.6)	2 (1.1)	14 (7.4)	6 (3.2)	29 (15.3)	47 (24.7)	87 (45.8)
	Total	22 (5.8)	12 (3.2)	25 (6.6)	11 (2.9)	49 (12.9)	70 (18.4)	191 (50.3)

Celebrities and social media influencers	Ikwuano	37 (19.5)	29 (15.3)	27 (14.2)	47 (24.7)	18 (9.5)	13 (6.8)	19 (10.0)
	Umunneochi	14 (7.4)	13 (6.8)	34 (17.9)	34 (17.9)	47 (24.7)	19 (10.0)	29 (15.3)
	Total	51 (13.4)	42 (11.1)	61 (16.1)	81 (21.3)	65 (17.1)	32 (8.4)	48 (12.6)
World Health Organization (WHO)	Ikwuano	11 (5.8)	7 (3.7)	6 (3.2)	4 (2.1)	18 (9.5)	16 (8.4)	128 (67.4)
	Umunneochi	7 (3.7)	3 (1.6)	9 (4.7)	6 (3.2)	27 (14.2)	21 (11.1)	117 (61.6)
	Total	18 (4.7)	10 (2.6)	15 (3.9)	10 (2.6)	45 (11.8)	37 (9.7)	245 (64.5)
COVID-19 Hotlines	Ikwuano	18 (9.5)	11 (5.8)	13 (6.8)	4 (2.1)	18 (9.5)	11 (5.8)	115 (60.5)
	Umunneochi	14 (7.4)	5 (2.6)	9 (4.7)	3 (1.6)	37 (19.5)	29 (15.3)	93 (48.9)
	Total	32 (8.4)	16 (4.2)	22 (5.8)	7 (1.8)	55 (14.5)	40 (10.5)	208 (54.7)
National COVID-19 information website	Ikwuano	21 (11.1)	12 (6.3)	8 (4.2)	6 (3.2)	12 (12.1)	18 (9.5)	102 (53.7)
	Umunneochi	11 (5.8)	8 (4.2)	9 (4.7)	4 (2.1)	31 (16.3)	43 (22.6)	84 (44.2)
	Total	32 (8.4)	20 (5.3)	17 (4.5)	10 (2.6)	54 (14.2)	61 (16.1)	186 (48.9)
State COVID-19 Committee	Ikwuano	23 (12.1)	11 (5.8)	7 (3.7)	3 (1.6)	25 (13.2)	23 (12.1)	98 (51.6)
	Umunneochi	16 (8.4)	9 (4.7)	11 (5.8)	3 (1.6)	25 (13.2)	69 (36.3)	57 (30.0)
	Total	39 (10.3)	20 (5.3)	18 (4.7)	6 (1.6)	50 (13.2)	92 (24.2)	155 (40.8)

The most trusted sources of information reported by the respondents were World Health Organization (64.5%), followed by COVID 19 hotlines and health workers (54.7%), respectively. The least trusted sources of information on COVID 19 were Celebrities and social media influencers (12.6%) and social media (21.6%). By localities, Ikwuano followed a similar trend with the state, while for Umunneochi World Health Organisation (61.6%) and health workers (61.6%) were the most trusted source of information on COVID 19.

Table 10: Frequency of seeking COVID-19 related information

		Never	Very rarely	Rarely	Not applicable	Occasionally	Often times a day	Several times a day
How often do you seek information about COVID-19?	Ikwuano	18 (9.5)	24 (12.6)	21 (11.1)	14 (7.4)	37 (19.5)	29 (15.3)	47 (24.7)
	Umunneochi	7 (3.7)	11 (5.8)	26 (13.7)	2 (1.1)	72 (37.9)	42 (22.1)	30 (15.8)
	Total	25 (6.6)	35 (9.2)	47 (12.4)	16 (4.2)	109 (28.7)	71 (18.7)	77 (20.3)

Only 77 (20.3%) were seeking information on COVID 19 several times a day, particularly residents from Ikwuano (24.7%), while 22.1% of residents of Umunneochi did so often times a day.

Table 11: Trust in institutions involved in the control of COVID 19

Institution		Very low confidence	Lower confidence	Low confidence	Not applicable	Confidence	High Confidence	Very high confidence
Your family doctor	Ikwuano	21 (11.1)	26 (13.7)	37 (19.5)	23 (12.1)	26 (13.7)	25 (13.2)	32 (16.8)
	Umunneochi	16 (8.4)	14 (7.4)	22 (11.6)	20 (10.5)	49 (25.8)	37 (19.5)	32 (16.8)
	Total	37 (9.7)	40 (10.5)	59 (15.5)	43 (11.3)	75 (19.7)	62 (16.3)	64 (16.8)
Your employer	Ikwuano	37 (19.5)	34 (17.9)	38 (20.0)	26 (13.7)	19 (10.0)	23 (12.1)	13 (6.8)
	Umunneochi	24 (12.6)	14 (7.4)	33 (17.4)	51 (26.8)	34 (17.9)	24 (12.6)	10 (5.3)
	Total	61 (16.1)	48 (12.6)	71 (18.7)	77 (20.3)	53 (13.9)	47 (12.4)	23 (6.1)
Hospitals	Ikwuano	18 (9.5)	12 (6.3)	18 (9.5)	12 (6.3)	40 (21.1)	49 (25.8)	41 (21.6)
	Umunneochi	7 (3.7)	3 (1.6)	8 (4.2)	6 (3.2)	26 (13.7)	42 (22.1)	98 (51.6)
	Total	25 (6.6)	15 (3.9)	26 (6.8)	18 (4.7)	66 (17.4)	91 (23.9)	139 (36.6)
Ministry of Health	Ikwuano	13 (6.8)	10 (5.3)	10 (5.3)	15 (7.9)	40 (21.1)	34 (17.9)	68 (35.8)
	Umunneochi	8 (4.2)	1 (0.5)	5 (2.6)	22 (5.8)	31 (16.3)	49 (25.8)	85 (44.7)
	Total	21 (5.5)	11 (2.9)	15 (3.9)	26 (6.8)	71 (18.7)	83 (21.8)	153 (40.3)
Institute of Public Health/Center for disease Control	Ikwuano	13 (6.8)	10 (5.3)	12 (6.3)	18 (9.5)	32 (16.8)	32 (16.8)	73 (38.4)
	Umunneochi	13 (6.8)	2 (1.1)	6 (3.2)	14 (7.4)	32 (16.8)	49 (25.8)	74 (38.9)
	Total	26 (6.8)	12 (3.2)	18 (4.7)	32 (8.4)	64 (16.8)	81 (21.3)	147 (38.7)
Schools	Ikwuano	75 (39.5)	34 (17.9)	11 (5.8)	27 (14.2)	21 (11.1)	11 (5.8)	11 (5.8)
	Umunneochi	32 (16.8)	22 (11.6)	43 (22.6)	39 (20.5)	29 (15.3)	10 (5.3)	15 (7.9)
	Total	107 (28.2)	56 (14.7)	54 (14.2)	66 (17.4)	50 (13.2)	21 (5.5)	26 (6.8)

Public transportation companies	Ikwuano	119 (62.9)	22 (11.6)	6 (3.2)	16 (8.4)	13 (6.8)	6 (3.2)	8 (4.2)
	Umunneochi	61 (32.1)	50 (26.3)	34 (7.9)	16 (8.4)	22 (11.6)	4 (2.1)	3 (1.6)
	Total	180 (47.4)	72 (18.9)	40 (10.5)	32 (8.4)	35 (9.2)	10 (2.6)	11 (2.9)
Police	Ikwuano	136 (71.6)	6 (3.2)	8 (4.2)	12 (6.3)	11 (5.8)	10 (5.3)	7 (3.7)
	Umunneochi	43 (22.6)	44 (23.2)	40 (21.1)	32 (16.8)	21 (11.1)	6 (3.2)	4 (2.1)
	Total	179 (47.1)	50 (13.2)	48 (12.6)	44 (11.6)	32 (8.4)	16 (4.2)	11 (2.9)
Your church/place of worship	Ikwuano	54 (28.4)	27 (14.2)	34 (17.9)	16 (8.4)	21 (11.1)	17 (8.9)	21 (11.1)
	Umunneochi	34 (17.9)	7 (3.7)	36 (18.9)	12 (6.3)	49 (25.8)	31 (16.1)	21 (11.1)
	Total	88 (23.2)	34 (8.9)	70 (18.4)	28 (7.4)	70 (18.4)	48 (12.6)	42 (11.1)

Most trusted institutions in the control of COVID 19 were the Ministry of Health (40.3%), Institute of Public health/Center for disease control (38.7%), and hospitals (36.6%), while the least trusted institutions were police (2.9%) and public transport companies (2.9%) followed by employers (6.1%) and schools (6.8%). Generally, the Nigerian Police have always had a negative perception and have never really enjoyed the public's trust (Ajayi & Longe, 2015; Mayowa, 2020). It is also noteworthy that most public transporters do not comply with COVID 19 protocols particularly with respect to limitation of the number of passengers.

Table 12: Conspiracies about COVID 19

Conspiracy		Certainly not true	Not very true/Slightly not true	Not true	Not applicable	True	A bit true/slightly true	Certainly true
I think that.... many very important things happen in the world, which the public is never informed about	Ikwuano	18 (9.5)	20 (10.5)	24 (12.6)	22 (11.6)	35 (18.4)	18 (9.5)	53 (27.9)
	Umunneochi	19 (10.0)	13 (6.8)	6 (3.2)	9 (4.7)	54 (28.4)	23 (12.1)	66 (34.7)
	Total	37 (9.7)	33 (8.7)	30 (7.9)	31 (8.2)	89 (23.4)	41 (10.8)	119 (31.3)
Politicians usually do not tell us the true motives for their decisions	Ikwuano	20 (10.5)	45 (23.7)	15 (7.9)	6 (3.2)	43 (22.6)	14 (7.4)	47 (24.7)
	Umunneochi	14 (7.4)	12 (6.3)	7 (3.7)	7 (3.7)	49 (25.8)	31 (16.3)	70 (36.8)
	Total	34 (8.9)	57 (15.0)	22 (5.8)	13 (3.4)	92 (24.2)	45 (11.8)	117 (30.8)
Government agencies closely monitor all citizens	Ikwuano	40 (21.1)	34 (17.9)	26 (13.7)	16 (8.4)	33 (17.4)	20 (10.5)	21 (11.1)
	Umunneochi	25 (13.2)	18 (9.5)	21 (11.1)	33 (17.4)	32 (16.8)	27 (14.2)	34 (17.9)

	Total	65 (17.1)	52 (13.7)	47 (12.4)	49 (12.9)	65 (17.1)	47 (12.4)	55 (14.5)
Events that superficially seem to lack a connection are often the result of secret activities	Ikwuano	47 (24.7)	22 (11.6)	21 (11.1)	24 (12.6)	36 (18.9)	11 (5.8)	29 (15.3)
	Umunneochi	17 (8.9)	16 (8.4)	16 (8.4)	17 (8.9)	44 (23.2)	20 (10.5)	60 (31.6)
	Total	64 (16.8)	38 (10.0)	37 (9.7)	41 (10.8)	80 (21.1)	31 (8.2)	89 (23.4)
There are secret organizations that greatly influence political decisions	Ikwuano	17 (8.9)	15 (7.9)	6 (3.2)	19 (10.0)	38 (20.0)	26 (13.7)	69 (36.3)
	Umunneochi	8 (4.2)	10 (5.3)	12 (6.3)	21 (11.1)	28 (14.7)	31 (16.3)	80 (42.1)
	Total	25 (6.6)	25 (6.6)	18 (4.7)	40 (10.5)	66 (17.4)	57 (15.0)	149 (39.2)

The most commonly accepted controversy was that there are secret organizations that greatly influence political decisions (39.2%), while the least accepted controversy was government agencies closely monitor all citizens (14.5%). Acceptance of the controversies was commoner in Umunneochi LGA than in Ikwuano LGA.

DISCUSSIONS

Participants in the study were predominantly male, with an average age is 39.9+12.8 years. Almost all participants had varying degrees of exposure to formal education, with a greater proportion with tertiary education. There was a low level of reported history of chronic illness. The test hardly confirmed the few who reported experiencing COVID 19 symptoms. This is probably because of the state's low testing capacity and the country at large, particularly for residents in rural areas.

Access and understanding of COVID 19 related information were reasonably good. However, a large proportion of the populace still lacked access to information despite various government agencies' sensitization efforts. Lack of access to information has also been attributed to lack of access to a regular power supply and internet prevalent in most rural communities in Sub-Saharan Africa (Akalu, Ayelign&Molla, 2020). A good number of the respondents had difficulty assessing the reliability of information disseminated via the media despite a good level of educational background. This could be due to the politicization of the COVID 19 pandemic both locally and internationally, resulting in a polarization of opinions among leaders, complicated by prevalent conspiracy theories (Bernard et al., 2020; Stein, 2021). The lack of public trust consequent of lack of transparency and accountability by the Nigerian government could also explain this scenario (Ezeibe, 2020).

The majority of the respondent understood and complied with the COVID 19 control and prevention protocols enunciated by the government. Interestingly, there was a slightly higher proportion of those who complied with the regulations compared to those who understood the regulations. These imply that some people observed the protocols even without understanding

the protocols, possibly because of the mass action and enforcement of compliance by various government agencies.

Risk perception refers to an individual's intuitive risk assessment, reflecting public attitudes or beliefs about potential harm. It is widely accepted that perceived risk is fundamental for triggering behavioral changes, and it is a key requirement in the adoption and practice of any health-related preventive behaviors (Ning et al., 2020; Jahangiry et al., 2020). Incidentally, it was observed among the respondents that COVID 19-related risk perception was sub-optimal. This will no doubt impact adversely on sustained behavior change in the long run. This can also be explained by the fact that most people followed COVID 19 regulations not because of the belief in the information received but because of the government's tough measures.

Perceived level of preparedness and rate of self-reported adherence to preventive health behaviors among rural residents in Abia State was desirable and comparable to what has been reported elsewhere (Shahnaziet al., 2020). Although the respondents had varied sources of information on COVID 19, their most trusted/reliable were health-related sources such as WHO, hotlines, and health workers. Most of them considered information from social media less reliable, particularly those facts disseminated by the social influencers. A study in the US revealed that traditional sources and government agencies remained reliable sources of COVID 19. This is important in determining the appropriate/choice of channels for disseminating COVID 19 information.

CONCLUSION AND RECOMMENDATIONS

The success in the control of COVID-19 can only be guaranteed by adherence to health and other control measures affected mainly by knowledge, attitudes, and practices (KAP). Findings suggest that a good number of the respondents still have difficulty assessing the reliability of information while the risk perception is sub-optimal. Any opportunity to facilitate knowledge, attitudes, and practices (KAP) of the Nigerian Citizens will improve protocol adherence.

- The first recommendation is to strengthen existing risk communication and community engagement processes with constant real-time communication between the experts and the people who face risks of survival to provide knowledge to make decisions that mitigate the pandemic's effects.
- The second recommendation is a well-coordinated, multi-sectoral response at all levels aimed at leveraging on available resources and stakeholder engagements to manage actions capable of controlling COVID 19 such as high-level advocacy to critical stakeholders in the transport, religious, traditional leaders, leaders of community-based organizations including, market men and women groups and others identified as key to the success of this campaign on managing timely and appropriate health advisories will encourage response to government guideline. Stakeholders should take up the challenge of continuous health education, health promotion, and sensitization in urban and rural areas in schools, markets, motor parks, worship centers, etc.
- Thirdly, in today's hyper-turbulent environment, social media platforms, community influencers, motorized sensitization campaigns and town announcers should readily be

used to debunk rumors, misinformation, misconceptions, risky behavior, and stigmatization. Globally, conspiracy theories remain a significant threat in efforts to control the COVID-19 pandemic. The respondents believe in some political conspiracies that impeded COVID 19. Consequently, there is a need for behavioral change communication interventions to debunk conspiracies using scientific facts consistently.

- Fourthly, the role of Leadership trust is foundational to effective communication. Leaders who model exemplary, visionary, selfless and competent, and trustworthy behavior gain needed followership expected for high-quality relationship and compliance. Therefore, good governance that maintains trust between the government and the citizenry with sincerity of purpose, diversity, social justice, provision of basic infrastructure, and recognition of employees' welfare and rights will promote people's reception attitudes and practice government policies. With the perceived level of public sector corruption worsening in Nigerian (TI, 2021) and the dilapidation of political, social, economic, and health sectors (Anthonia Obi-Ani et al., 2021), it is apt to re-ignite the passion for compliance and patriotism through good governance.
- Lastly, National Orientation Agency (NOA) advocates for peacebuilding and security consciousness in a complex heterogeneous nation like Nigeria. NOA recommends continuous persuasive enforcement rather than forceful enforcement through one and one engagement for sustainable behavioral change and compliance to COVID19 protocols. In effect, Religious clerics and other vital stakeholders must desist from hate speech and adopt messages of love to enhance religious tolerance, peaceful coexistence, and adherence to COVID 19 protocols. Such a sustainable sensitization campaign reminds Nigerians to "TAKE RESPONSIBILITY FOR THE PROTECTION OF ALL" and does the right thing by adhering to the safety protocols and guidelines (www.noa.gov.ng).

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