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Assessment of the Public Knowledge and Attitude to the use of COVID-19 Preventive Protocols

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Abstract

The effectiveness of preventive measures to curtail the spread of COVID-19 pandemic both in developed and developing countries round the world can be highly dependent on the knowledge, attitude and compliance of members of the society. This study assessed the knowledge and attitude of the general public towards the use of COVID-19 preventive protocols. A descriptive survey research design type was adopted for the study; while the snowball technique was used to select the sample for the study. A tool called "Knowledge and Attitude to COVID-19 Preventive Protocol (KAPPCOVID-19)" was developed to collect data from the respondents. The KAPPCOVID-19 included ten items on knowledge; 12 items on the attitude of using the COVID-19 preventive protocol and their views on the government's efforts to contain the spread of the virus. Descriptive statistics were used to describe the data. Findings revealed that most of the populace exhibited good knowledge of COVID-19, with a mean knowledge above 3.36 and this significantly enhanced their attitude towards the use of preventive protocols. Most of the respondents indicated positive attitudes toward adopting the preventive protocols, with a mean of 2.58. Recommendations were made in line with the study's findings; that more engaging public health education aimed at curtailing the further spread of COVID-19; physical and social distancing should be emphasised across all age groups in Nigeria.

Keywords: Attitude, COVID-19, Knowledge, Preventive protocols.

Introduction

Corona-viruses are a family of viruses that cause illnesses ranging from the common cold to more severe diseases such as Severe Acute Respiratory Syndrome (SARS) and the Middle East Respiratory Syndrome (MERS). These viruses were originally transmitted from animals to people. It was first discovered in Wuhan, China, in December, 2019. The main clinical sign of this highly infectious disease includes fever, dry cough, fatigue, myalgia, and breathing difficulty. Later, loss of sense of taste and smell has been added to the symptoms. The advanced phase of COVID-19 is characterised by respiratory distress syndrome, septic shock, bleeding and coagulation dysfunction. To fight the outbreak of COVID-19, many countries have imposed drastic lockdown and movement control orders on their residents. The first virus case was discovered on February 27th, 2020, with the index case clinically stable, with mild symptoms, and managed at the infectious disease hospital in Yaba, Lagos (Nigeria Centre for Disease Control, 2020). However, the number of cases increased daily after the index case. In less than three weeks, the virus had spread to some other parts of the country with Lagos maintaining the highest number of cases. Consequent upon the rate of spread of the *COVID-19*, precautionary measures were rolled out by governments ranging from travel restrictions to curfews, washing of hands regularly, avoiding touching face and close contact (1meter or 3 feet) with people who are unwell, work from home, practice social distancing and steer clear of crowded places. These precautionary measures were with a view to containing the spread of the virus. Schools were closed; businesses, offices, government establishments, ministries, universities, etc were shut down; as a result of the daily spread of the virus for months across the country (Orijinmo, 2020).

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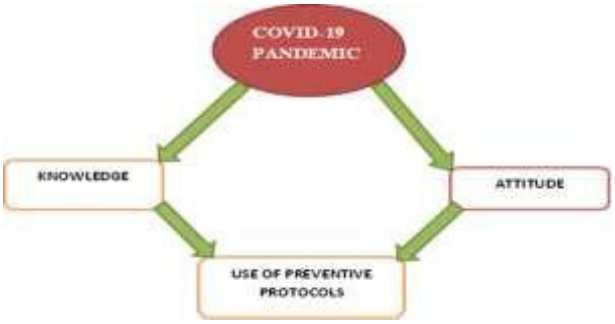
After several months, the government gradually eased the lockdown from state to state; with limited hours and alternate reopening of sectors and workers among others. Unfortunately, the second wave of the virus sprang up across the world. Nigeria's case was no exception, however, as the number of COVID-19 cases recorded in the country in December, 2019 suggests that a second wave of the epidemic has begun, said Boss Mustapha, the secretary to Federal Republic of Nigeria and chairman of the COVID-19 group. Consequently, Mustapha pointed out that the country stands to lose, not only the earnings from the hard work of the last nine months; but also the lives of its citizens, especially with or without hope of rapid access to the vaccine (aa.com.tr /it/Africa/ Nigeria hit by the second wave of Covid19/2080881). The peculiarities of the country's economic situation and other problems that arose during the first confinement did not facilitate the closure of the country in the second wave hence the recourse to the effective application of preventive protocols.

On January 26, 2012, the President of the Federal Republic of Nigeria issued the Coronavirus Disease (COVID-19) Health Protection Regulations 2021 (covid19.ncdc.gov.ng), exercising the powers conferred under Section 4 of the Quarantine Act, Cap, Laws Q2 of the Federation of Nigeria 2020 and such other authority as may be admissible under that name. Additionally, recognising the urgent need to protect the health and well-being of Nigerians in the light of the increasing and widespread number of COVID-19 cases in Nigeria, Muhammed Buhari, President of the Federal Republic of Nigeria, issued that there should be a physical distance of at least two meters between people. Also, no gathering of more than 50 people was allowed in an enclosed space. All persons in public gatherings, whether indoors or outdoors, must comply with the provisions. It is a criminal offence to prevent an officer from enforcing this provision without good reason. Any violation of these regulations is punishable under Section 5 of the Quarantine Act in the event of summary conviction with a fine or imprisonment of up to six months or both.

Statement of problem

Despite all the measures taken by the Government of the Republic of Nigeria, the prevention protocols are hardly observed. In other words, the effectiveness of these mitigation measures depends heavily on how well the public cooperates and complies with the order or policy. The knowledge and attitudes people have towards the disease and preventive measures will significantly impact social willingness to accept behaviour change measures from health authorities. Therefore, this study assessed the knowledge and attitude levels of the Nigerian public to the use of COVID-19 prevention protocols.



Source: Theory of Planned Behaviour (TPB) developed by Ajzen (1991)

Corona Virus 2019 is a new virus that is currently wreaking havoc worldwide. In this study, researchers assessed the level of knowledge and public attitudes about using prevention protocols to prevent the deadly virus. This study was based on the Theory of Planned Behaviour (TPB) developed by Ajzen (1991), which proposes, among other things, that attitude shapes a person's behavioural intentions. TPB explains all of the behaviours over which people can exercise self-control. The theory is based on the assumption that it can predict and explain human behaviour by identifying people's intentions. Therefore, Ajzen explained this by three sets of factors viz; Attitudes to behaviour, subjective norms, and perceived behavioural control over behaviour.

Therefore, the concept has been implemented in diverse research along with beliefs, attitudes, behavioural intentions and behaviours in diverse fields along with advertising, public fitness and public relations. Specifically, it's been implemented in fitness-associated bahaviour; A

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guide for Health Service Researchers (Francis, Eccles, Johnston, Walker, Grimshaw, Foy, & Bonetti, 2004), advertising of Healthy Eating amongst adolescents (Chan, & Tsang, 2011), potential prediction of Health-Related Behaviours (McEachan, Conner, Taylor,& Lawton, (2011), Leisure participation behaviour and mental well-being of aged adults, (Li, Hsu, & Lin, 2019). Empirical evidence have shown that; TPB seems to be a viable framework for analysing goal-oriented human preventive behaviour; along with normal hand washing with soap, use of alcohol-based sanitiser, restriction in movement, normal domestic exercises, sporting of face mask and preserving of the social distance of meters, therefore its use because the studies body paintings for this look at that assessed the stage of knowledge, and mindset of the general public approximately using COVID-19 preventive protocols.

Objectives of the Study

i. assess the knowledge the of COVID-19 preventive protocols
ii. examine public attitude toward the use of COVID-19 preventive protocols

Materials and Methods

A descriptive survey research design was adopted for the study. The population consisted of public members, irrespective of age, gender, state, ethnic groups, religion, academic status and socio-economic status. A non-probability sampling technique was adopted to select the participants; these were reached through cold calling techniques using referral method through friends and colleagues. More than 500 telephone contacts and email addresses of public members known and referred to the researchers were collated; 142 respondents that duly filled and turned in the instrument represented the study sample. An instrument titled "knowledge and attitude to COVID-19 preventive protocols" (KAPPCOVID-19) was used to collect data from respondents. The KAPPCOVID-19 consisted of 12 items on knowledge and ten items on the attitude to use COVID-19 preventive protocols and their views on government efforts to contain the spread of the virus. The instrument was after that pilot tested to ascertain its psychometric properties. It was subjected to internal consistency reliability; which yielded an ordinal alpha reliability coefficient of 0.75. The instrument was administered via Google forms; a short link (https;//rebrand.ly/KAPPCOVID-19-Group1) was generated from the google form; this was shared via email addresses and WhatsApp accounts of participants. The link was sent repeatedly over 4 weeks; after that, the responses were extracted and processed using SPSS 20.0 version. A descriptive survey research design type was adopted for the study while the snowball technique was used to select the sample for the study.

RESULT AND DISCUSSION

The results are presented and discussed with respect to the research questions highlighted

Demographic Information of the Respondents

Variables	Categories	Freq	%
Gender	Male	72	50.7
	Female	70	49.3
Educational	No Formal Education	4	2.8
Qualification	SSCE	36	25.4
	Tertiary	102	71.8
Financial	Do not meet basic needs	18	12.8
Status	Just Meet basic needs	43	30.5
	Meet needs with a little left	51	36.2
	Live comfortably	29	20.6
Marital Status	Single	66	46.8
	Married	76	53.2
Age	18-25 years	13	9.2
	26-30years	50	35.2
	31-35year	25	17.6
	36 years & Above	54	38.0

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Table 1 revealed the demographic variables of the respondents. It was observed that 72 of the respondents, representing 50.7%, were males, while 70, representing 49.3%, were females. Also, on the age bracket of the respondents, it was observed that 38% are 36 years and above, 35.3% fall between 26-30 years, and 17.6% are between the ages of 31-35 years. However, 9.2% fall between the ages of 18-25 years. Furthermore, the table revealed the academic attainment of respondents and it was observed that 71.8% of them; had tertiary education, and 25.4% were SSCE holders. However, 4 respondents representing 2.8%, had no formal education. On the financial status, it was also observed that 20.6% live comfortably, 36.2% meet their needs with a little left, and 30.6% meet basic needs while 12.8% meet basic needs.

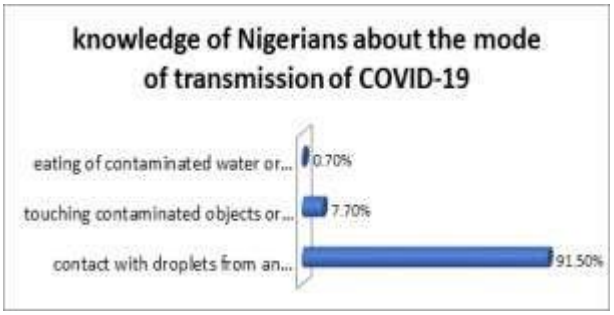

Figure 1 revealed respondents' level knowledge about the mode of transmission of COVID-19. It was observed from the figure that 91.5% of the respondents indicated that a person could be infected through contact with droplets from an infected person/organism through breathing, sneezing, or coughing and 7.70% indicated touching contaminated objects or surfaces. In comparison, 0.7% shows that through consuming contaminated water or food. This shows that the general public has good knowledge about the mode of transmission of COVID-19.

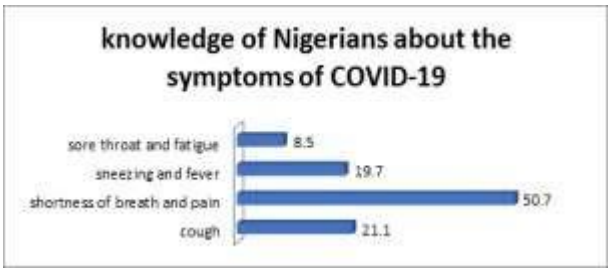

Figure 2: knowledge of Nigerians about the symptoms of COVID-19

Figure 2 further reveals the knowledge of the public about the signs of COVID-19. It was gathered that 50.7% of the respondents ranked the symptoms of COVID-19 and 19.7% ranked sneezing and fever while 8.5% indicated sore throat and fatigue.

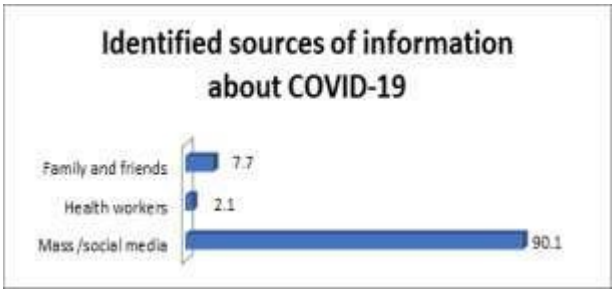

Figure 3: Identified sources of information about COVID-19

Figure 3 revealed the result on major sources of information about COVID-19. The results indicated that the majority of the general public gets information about COVID-19 from mass/social media (90.1%); while few stated that they got information from their family and friends (7.7%) and very few indicated health care workers (2.1%). it can be deduced from the result that mass/social media is a major source of information transmission about COVID-19.

The results are presented and discussed with respect to the research questions.

Research Question One: What is the knowledge of general public on the use of COVID-19 preventive protocol?

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Table1: Knowledge of the General Public on the Use of COVID-19 Preventive Protocols

	Statement	SA	A	D	SD	Remarks
1	The use of face masks prevents the spread of covid-19	87 (61.3%)	44 (31.0%)	9 (6.3%)	2 (1.4%)	Agreed
2	Regular hand washing with soap and water	105 (73.9%)	26 (18.3%)	9 (6.3%)	2 (1.4%)	Agreed
3	Use of alcohol-based sanitizers	100 (70.4%)	29 (20.4%)	12 (8.5%)	1 (0.7%)	Agreed
4	Social distancing	110 (77.5%)	23 (16.2%)	7 (4.9%)	2 (1.4%)	Agreed
5	Shaking hands and hugging my affiliates	54 (38.0%)	17 (12.0%)	20 (14.1%)	51 (35.9%)	Agreed
6	Sharing clothes and personal effects	36 (25.4%)	25 (17.6%)	15 (10.6%)	66 (46.5%)	Disagreed
7	Contact NCDC or nearest hospital if symptom develops	98 (69.0%)	29 (20.4%)	7 (4.9%)	8 (5.6%)	Agreed
8	Report cases of people with symptoms	96 (67.6%)	27 (19.0%)	12 (8.5%)	7 (4.9%)	Agreed
9	When sneezing, bend towards your armpit	112 (78.9%)	20 (14.1%)	6 (4.2%)	4 (2.8%)	Agreed
10	Do self -isolation if you mingled with a suspected group	104 (73.2%)	27 (19.0%)	6 (4.2%)	5 (3.5%)	Agreed

Table 1 shows the knowledge of the general public on the use of COVID-19 preventive protocol. It was observed that 92.3% of the respondents' strongly agreed that the use of face masks prevents the spread of covid-19 while 7.7% disagreed, 92.2% strongly agreed that regular hand washing with soap and water can prevent spread of COVID-19. Also, 90.8% stated that the use of alcohol-based sanitizers, 93.7% indicated that social distancing can reduce the spread of COVID-19. In addition, 89.4% stated that individual should contact NCDC or nearest hospital if symptom develops. 86.6% further stated that report cases of people with symptoms while 92.2% strongly agreed that self -isolation if you mingled with a suspected group should be adopted. However, 57.1% of the respondents strongly disagreed that sharing clothes and personal effects can reduce the spread of COVID-19. This implies that all the items on general public knowledge on the use of COVID-19 preventive protocol of respondents' traits except item 6 which are negative traits in which the respondents disagreed with, the rest shows that the general public had good knowledge on the use of COVID-19 preventive protocol. Hence, the researchers concluded that the general public had good knowledge of the use of COVID-19 preventive protocol.

Research Question Two: What is the general public's attitude towards the use of COVID-19 preventive protocol?

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Table 2: Attitude of the general public towards the use of COVID 19 preventive protocol

	Statement	SA	A	D	SD	Remarks
1	I find it hard to beli eve that COVID-19 exists in Nigeria	14 (9.9%)	18 (12.7%)	18 (12.7%)	92 (64.8%)	Disagreed
2	I don't believe the preventive measures are capable of curbing the spread of COVID-19	12 (8.5%)	21 (14.8%)	20 (14.1%)	89 (62.7%)	Disagreed
3	I often don't wear a face mask because it is inconvenient	24 (16.9%)	23 (16.2%)	37 (26.1%)	58 (40.8%)	Disagreed
4	I make sure I observe the protocols because I believe prevention is better than cure	92 (64.8%)	36 (25.6%)	8 (5.6%)	6 (4.2%)	Agreed
5	I observe social distancing when in public	65 (45.8%)	36 (25.4%)	32 (22.5%)	9 (6.3%)	Agreed
6	I believe that many people with symptoms of malaria are said to be suffering from COVID-19	36 (25.4%)	27 (19.0%)	41 (28.9%)	38 (26.8%)	Disagreed
7	I don't feel like using the preventive protocols because many people do not use it around me	8 (5.6%)	30 (21.1%)	26 (18.3%)	91 (64.1%)	Disagreed
8	I'm not happy that months are being wasted because of an illness that doesn't exist	16 (11.3%)	17 (12.0%)	18 (12.7%)	91 (64.1%)	Disagreed
9	The symptoms of COVID-19 are scary so I try to observe the preventive protocols	73 (51.4%)	42 (29.6%)	18 (12.7%)	9 (6.3%)	Agreed
10	I believe that corona virus cannot survive in Nigerian climate	21 (14.8%)	22 (15.5%)	32 (22.5%)	67 (47.2%)	Disagreed
11	I believe that the increase in number of new cases everyday is being politicized	45 (31.7%)	38 (26.8%)	26 (18.3%)	33 (23.2%)	Agreed
12	Maintaining Etiquette while Sneezing (sneeze into elbows and discard the tissue/hanky used)	97 (68.3%)	32 (22.5%)	10 (7.0%)	3 (2.1%)	Agreed

N.B: The remark is based on the higher percentage (strongly agree and agree versus disagree and strongly disagree)

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Table 2 shows the general public's attitude towards the use of COVID-19 preventive protocols. It was observed from the table that some of the respondents agreed with items 4, 5, 8, 11, 12 and 13 which is above the criterion mean value, this implies that the respondents have positive attitude towards the use of COVID-19 preventive protocols. On the other hand, respondents disagreed with the assertion on items 1-3, 6-8, and 10. In addition, the majority of the respondents disagreed that 'I don't believe the preventive measures are capable of curbing the spread of COVID-19, indicated that the respondents believe the preventive measures are capable of reducing the spread of COVID-19. Also, the respondents disagreed that they often don't wear a face masks because it is inconvenient. It can be concluded that the general public attitude towards the use of COVID-19 preventive measures was positive and high.

Discussion

This study assessed the general public's knowledge on mode of COVID-19 transmission. From the result, the general public has adequate knowledge about the mode of transmission of COVID-19. These findings correspond with Kebede, et al. (2020) which found that the knowledge about the major mode of transmission was as high as 95.1%. Also, the findings supported the findings of Mahmood, Hussain, Mahmood, Ahmad, Majeed, Beg, & Areej, (2020) who also found that their study participants had a good knowledge about the COVID-19 disease, thereby took positive measures for protection. This may likely be due to constant announcements about COVID-19 diseases and the accompanied negative outcome of contacting it. Aside from the knowledge about transmission, participants also indicated high knowledge about the clinical symptoms of COVID-19. The study participants indicated that they were aware of symptoms such as shortness of breath and pain, cough, sneezing, fever, sore throat, and fatigue. This was found to be in line with the findings of Olaimat, Aolymat, Shahbaz, & Holley, 2020; Kebede, Yitayih, Birhanu, Mekonen, & Ambelu, 2020).

The mass/social media was found to be significant means of information transmission about COVID-19. Past researches (Kebede, 2020; Olaimat, et al. 2020; Mahmood, 2020) also found mass/social media to be a significant source of information transmission. Most participants indicated that their knowledge about COVID-19 was through mass/social media. This is an improvement in our society as most people gradually adapt to getting information from the internet, television, radio, newspaper, etc. It is still necessary for people to spread necessary information among their family and friends to make up for people who may likely miss such information on social media. Also, health workers should increase their efforts in circulating health-related information. However, this result may be because the instrument was administered online and most respondents were acquainted with the internet.

Further findings from the study revealed that the general public had good knowledge about the use of COVID-19 preventive protocol. This implies a comprehensive knowledge among the populace. Their knowledge according to these findings revealed that the general public knew about the transmission of COVID-19, the symptoms of the disease, the protective measures to be taken to prevent contracting the disease, and all the knowledge is mostly derived from mass/social media. Findings on the general public attitude towards the use of COVID-19 preventive measures were significantly positive and also high. This is in line with Erfani et al.(2020) findings that found that almost all their participants had a positive attitude toward COVID-19 protective measures. This indicates that knowledge acquired by the people about COVID-19 has mostly and positively affected their attitude to preventive measures for protection against contracting the disease.

Conclusion/Recommendations

Based on the findings of this study, it can be concluded that the general public has good knowledge and a positive attitude to the COVID-19 preventive protocols. The social media served as the main source of information on COVID-19 preventive protocols to the general public. The study, therefore, recommends that:

i. Public enlightenment on the signs and symptoms of COVID-19 should be intensified

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ii. The health sector should organise public health campaigns to raise the awareness of the public about COVID-19 and its preventive protocols

iii. The general public should rely more on information about the virus given by health workers as circulated through the social media.

iv. The health sector should be encouraged to continue to organise health education programmes to improve the knowledge and attitude of the general public about COVID-19

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