African Social Science and Humanities Journal (ASSHJ)
https://journals.jozacpublishers.com/asshj

**Research Article**

This article is published by **Jozac Publishers** in the ***African Social Science and Humanities Journal (ASSHJ)***. Volume 5, Issue 1, 2024.

**ISSN:** 2709-1309 (Print)
2709-1317 (Online)



**Article detail**
**Received:** 07 February 2024
**Accepted:** 08 March 2024
**Published:** 12 April 2024

**Conflict of Interest:** The author/s declared no conflict of interest.

# Knowledge, attitudes and practices of COVID-19 safety protocols in Taraba State, Nigeria

John Maikomo Moses[1], Fatima Dominic Vakkai[2], Tordue Simon Targema[3*], Samuel Asicus[4]

*[1]Department of Political Science and International Relations, Taraba State University, Jalingo, Nigeria, jonmoziz@yahoo.com*

*[2,3&4]Department of Mass Communication, Taraba State University, Jalingo, Nigeria, torduesimon@gmail.com[3]*

https://dx.doi.org/10.4314/asshj.v5i1.5

*Corresponding author: torduesimon@gmail.com

**Abstract:** COVID-19 infodemic took centre-stage in global efforts towards containing the pandemic. Due to novelty of the virus, it became obligatory for experts and relevant agencies to enlighten the public on the nature of the virus as well as the safety protocols that must be adopted to contend its spread and enhance positive behavioural traits. It is against this backdrop, that this study examines the knowledge, attitude, and practices of COVID-19 safety protocol among residents of Taraba State, Nigeria. Data were generated using a cross-sectional survey where 332 respondents were administered questionnaire via cluster sampling technique across the three senatorial districts of the state. Findings reveal high level of knowledge and awareness of COVID-19 safety protocols courtesy of sustained sensitization from conventional and informal channels of communication. However, attitudes of the people towards the safety protocols were not commensurate to the level of awareness, a factor that is attributable to the predominance of fake news and conspiracy theories about the pandemic that were popularized mostly through informal sources which consequently undermined government's efforts in fighting the virus. The study concludes that although COVID-19 awareness was widespread, most people got their information from informal channels that contained a high dose of fake news and misinformation. To this end, the study recommends that government and its agents should diversify communication channels and evolve a people-oriented strategy that will recognise the popular channels of information among the people, and not just rely on conventional media channels.

**Keywords –** Attitude, COVID-19 safety protocols, Infodemic, Knowledge, Practices, Nigeria

## 1. INTRODUCTION

The world was struck with the deadly Corona Virus Disease (COVID-19) in 2019. By 2020, the pandemic that originated from Wuhan in China spread to other countries of the world (Olapegba et al., 2020), holding almost all activities of human endeavour to a standstill. The virus was first reported to World Health Organisation (WHO) on the 31st of December 2019 (Nigeria Centre for Disease Control, 2020) with typical symptoms such as coughing and sneezing, headache, fever, dry and or sore throat, catarrh, fatigue, diarrhoea, loss of taste/smell, body pain, difficulty in breathing, shivering among others (NCDC, 2020). The pace at which the virus spread across the globe and the high mortality rate recorded within a short period of time instilled fear and tension in many countries (Apuke & Tunca,

2022). Although it is not the worst pandemic in the history of mankind, COVID-19 is certainly the most disruptive and destructive pandemic in the 21st Century. In a bid to curtail the spread of the virus that had neither pre-existing vaccine nor cure, social measures for prevention became necessary (Ukonu & Mbamalu, 2021). Accordingly, several preventive measures were recommended by WHO and other international and national health agencies. These measures, otherwise known as COVID-19 safety protocols include among others frequent washing of hands, use of alcoholic-based sanitisers, wearing of face masks, observing physical distance, covering the mouth when coughing or sneezing and avoidance of large gathering (WHO, 2020a; NCDC, 2020) and much recently, taking the vaccine that has been discovered to provide immunity to the virus. As the virus raged on with severe casualty figures, several countries placed restrictions on their borders and as well imposed lockdowns on social and economic activities to reduce its spread, prevent communal transmission and reduce the casualty rate.

In Nigeria, after the index case of the virus was recorded in Lagos- the most populous city in the country which also became the epicentre of the pandemic in Nigeria (Lucas et al 2020), the Federal government through the National Centre for Disease Control (NCDC) and Presidential Task Force (PTF) recommended certain guidelines to nip the virus in the bud. However, this was not to be as the virus rather spread in a short while to other parts of the country with fatality cases across different states and the Federal Capital Territory (Maikomo, Targema & Obun-Andy, 2021). This necessitated the lockdown of economic and social activities in the country, and interstate travel restrictions were also imposed nationwide to effectively combat the virus. With the untold hardship and consequent economic meltdown brought about by the pandemic, resulting in the loss of about$76.69 billion globally (Nigeria Health Watch, 2021), the lockdown was relaxed in phases with strict guidelines and safety protocols reeled out for religious and social gatherings to cushion the effect of the pandemic and at the same time avoid an upsurge in the spread of the virus.

From that point moving forward, emphasis has been placed on the safety protocols as the most convenient alternatives of putting up with the pandemic and at the same time, carrying on with the daily routines of individuals. However, a careful observation of the situation in Nigeria indicates that these protocols have being largely misunderstood, misinterpreted, abused, and grossly undermined. Several conspiracy theories about the virus have been conjured and pushed into the mainstream of public discourse (Lucas et al 2020) as the protocols are on several occasions misconstrued as infringement on the right of association and freedom of worship (Apuke & Tunca, 2022; Ogbodo et al., 2020; Nwakpu, Ezema & Ogbodo, 2020). These conspiracy theories defy conventional understanding of the outbreak of the virus and allude to a secret plot perpetrated by influential individuals like Bill Gates and world power blocks to achieve selfish interests (Nigeria Health Watch, 2021).

This made the situation with COVID-19 to be unique as the global community battles not just the pandemic, but the wide scale infodemic that rocks the pandemic as well (Pennycook, 2020; WHO, 2020b; Lucas et al 2020). The presence of this infodemic and conspiracy theories have given rise to complexities that underlie the pandemic, and heightened the need to device appropriate communication strategies that would deliver specific messages to target individuals, debunk some of the widely peddled fake information and conspiracy theories and help in adjusting individuals' behavioural patterns positively towards the pandemic. Inobemhe et al. (2022) stated that conspiracies are tools used by powerful actors in the bid to provide explanations to causes of social or political events of significant importance. One of the popular conspiracies circulated during the COVID-19 pandemic was that high consumption of alcohol could neutralise corona virus thereby misleading many into high consumption of alcohol during the pandemic. A study carried out by Saiful et al. (2020) found out that the conspiracy on high consumption of alcohol has led to the death of 800 persons with about 5,800 patients hospitalised across the globe. Consequently, health communication experts across the globe suggest that a strategic communication approach is crucial towards refining the knowledge base of individuals, their attitudinal patterns and practices relating to safety protocols on the pandemic (Gonçalves, Piñeiro-Naval & Toniolo, 2021; Hyland-Wood, Gardner, Leask & Ecker, 2021). Notably, however, empirical evidence in this regard is relatively scanty within the Nigerian context, hence, the motivation for the current study.

The objectives of this study are to:

1. Assess the awareness of COVID-19 safety protocols among residents of Taraba State.
2. Determine the attitude of individuals in Taraba State towards COVID-19 safety protocols.
3. Determine the commonest channels through which residents of Taraba State access information about COVID-19 safety protocols.

## 2. LITERATURE SURVEY

Available literature indicates that the rate of compliance to COVID-19 safety protocols is poor in Nigeria (Ukonu & Mbamalu, 2021). Nwagbara et al (2021) note that "majority of people in sub-Saharan African are noncompliant with proposed health and safety measures recommended by the World Health Organization (WHO) and respective country health departments". This they attribute largely to *ignorance* and *misinformation* as key factors driving defiant behaviour. Studies reveal that citizens' compliance to health promoting measures is a prerequisite to contain infectious diseases (Galasso et al., 2020; Okten et al., 2020). Observance of disease prevention guidelines is associated with reduced risks of further spread (Matrajt & Leung, 2020; Soo et al., 2020), hence the need for adherence to the set infection and prevention control measures. Olapegba et al. (2020) observe that evidence-based campaign to widen the knowledge of citizens is necessary to remove preconceptions and promote public adherence to COVID-19 precautionary measures. This is further corroborated by Reuben et al. (2020), who aver that community-based health campaigns are necessary to improve the knowledge of citizens and to sustain positive attitudes as well as practice suitable intervention measures that can be easily understood by the community.

### 2.1. COVID-19 safety protocols and the Nigerian State

COVID-19 had neither vaccine nor cure for nearly a year after its outbreak. This made it difficult for medical experts to tackle it efficiently at the onset, a reality that was compounded by exponential fatality rates across the globe, prompting WHO to come up with safety protocols that could be adopted to contain its spread across. These protocols, according to WHO (2020a) emphasised physical distancing, wearing of face mask/shield while in public/crowded areas, regular hands sanitation with alcohol-based sanitizers, covering the mouth and nose while sneezing/coughing; getting tested once one develops symptoms, proceeding on self-isolation when tested positive
until one recover; and getting vaccinated – when the vaccine was eventually produced.

These protocols were widely circulated in all WHO advisories and communication channels but were met by a multiplicity of challenges at the level of individual acceptance and implementation. Nwakasi et al (2021, p.16) reveal that factors such as gender, education, place of residence, stigma, perceived threat, and confidence in government were among the major factors that influenced compliance or otherwise to the safety protocols. Their study establishes that masculinity prompted men to defy laid down protocols more than women, especially during the period of lockdown. Other contributory factors to non-compliance include a weak healthcare system that does not encourage citizens to seek proper medical attention but instead indulge in self-medication and alternative treatment (Agwu et al., 2022); endemic poverty and destitution (Nwakasi et al., 2021), religious and socio-cultural barriers, and the existence of a disturbing COVID-19infodemic that continued to misguide many in their approach to the pandemic (Apuke & Tunca, 2022; Lucas, Targema, Jibril, Sambo & Istifanus, 2020).

Studies have also established that trust in government strategies is a key determinant of positive behavioural traits to laid down health public health protocols (Gonçalves, Piñeiro-Naval & Toniolo, 2021; Shanka & Menebo, 2022), a situation that manifested in Nigeria where citizens do not trust government statistics on the pandemic. Many felt that government agents were inflating casualty rates to receive more financial support and squander without using the funds for combating the pandemic. Indeed, humongous cases of mouth-watering corruption scandals were reported regarding gross mismanagement of COVID-19 funds in Nigeria (Igwe, 2022; Agwu et al, 2022). This further increased citizens' disregard to the safety protocols reeled out by government to contend the pandemic.

## 2.2. COVID-19 infodemic in adherence to safety protocols in Nigeria

Widespread infodemic adversely impacted citizens' attitudinal pattern towards COVID-19. Few months after its outbreak, WHO (2020b: 2) raised alarm on the existence of COVID-19 infodemic that made it "hard for people to find trustworthy sources and reliable guidance when they needed it". COVID-19 infodemic ranged from origin of the virus to curative measures that have no basis in medical sciences (Pennycook et al., 2020). These are widespread and complicated effective containment of the pandemic. To combat the scourge, WHO set up mechanisms for debunking fake news, bursting myths and disclaiming conspiracy theories about the pandemic. These efforts aimed at sanitising the information space and ensuring that people across the globe have access to quality information about the pandemic that would guide their behavioural patterns. Such efforts were domesticated across countries of the globe through national agencies that provided information about the pandemic to citizens to counter the infodemic (Hyland-Wood et al., 2021). The Nigerian Centre for Disease Control (NCDC) discharged this mandate in Nigeria, and coordinated initiatives aimed at effectively containing the pandemic in the country. Notwithstanding these efforts, a predominance of fake news and conspiracy theories about the pandemic existed, with adverse implications on citizens' behaviour towards the pandemic. Lucas et al. (2020) document some of the popular fake stories peddled on the disease in Nigerian to include racial immunity, climate-induced immunity, fake preventive and curative measures, and religious colourations of the pandemic's origins and many more.

These were concocted and pushed into the public space. Thus, as people were locked down in their homes at the early stage of the pandemic and had to spend a substantial time with the media- especially the social media, the predominance of fake news in the media space was one of the major issues stakeholders had to contend. Aswani (2021: 181) notes that in Kenya, for instance, "government communication strategies are competing with many voices that either deny the form of existence of the virus and hence refute the place of vaccines, or speak of the inefficiency of the vaccine, or create conspiracies around the use of vaccines." This trend portends grave implications on petioles attitudinal patterns and adoption of the laid-down protocols. Against this background, this study assesses the level of knowledge, attitude, and practices of residents of Taraba State towards the prescribed COVID-19 safety protocols.

## 2.3. Theoretical guide: The Health Belief Model

The Health Belief Model emerged from the research of several social psychologists in the 1950s most particularly Hochbaum and Rosenstock (Janz & Becker, 1984). Since it was developed, the model has been a valuable framework for influencing the adoption of several public health interventions (Ju´arez-García et al., 2020). The model explains why individuals accept certain health behaviours to prevent or control diseases by considering six (6) major conditions which include susceptibility, seriousness, benefits and barriers to a behaviour, cues to action, and most recently, self-efficacy (Glanz, Rimer & Viswanath, 2008).

Micah, Lianyu and Ahoto (2023) note that these six conditions influence persons with chronic health conditions to adhere to COVID-19 preventive protocols like wearing of face mask, social distancing, regular hand washing, and the use of hand sanitizers. The model holds that when individuals feel vulnerable to a particular health risk and acknowledge the threat it poses to health, they are inclined to weigh the recommended behaviour(s) vi-a-vis the barrier. Where they perceive the severity of the health risk to be high, they become motivated to carry out the recommended action. Cues to action are also developed to enable the person to take the appropriate action in the process of adopting the right precautions. The six key components of this model are cognitive based, stipulating specific factors that a person who believes himself to be healthy must consider when deciding whether to adopt a recommended health behaviour. These six components are further explained thus:

i. **Perceived Susceptibility:** This presupposes an individual's vulnerability to contract a particular disease. People give attention to a recommended behaviour when they feel they are at risk of being affected by a disease.
ii. **Perceived Severity:** A consideration of the grave danger and consequences associated with contracting a specific illness or of leaving it untreated and the likelihood of being exposed to same.

iii. **Perceived Benefits:** This has to do with the belief that taking a particular health action will help one to avert an impending health risk. The perceived benefit entails the safety associated with taking recommended health behaviour.

iv. **Perceived Barriers:** Perceived barriers is concerned with the all-round costs to be incurred to in taking a recommended health action which include but not limited to financial, physical, and psychological costs. The costs are weighed side by side the benefits to be gleaned from carrying out a health promoting action. This cognitive process serves as major pre-determinant for making health decisions.

v. **Cues to Action:** These are relatable prompts, messages or experiences an individual had in the past which are likely to facilitate the adoption of health promoting actions. Relevant frames of reference are considered to decide on the next line of action. Cues to action in the context of this study include information, people and events that guide an individual to be vaccinated (Wong, Alias, Wong, Lee & Abubakar, 2020).

vi. **Self-efficacy:** The belief in having the self-ability to successfully carry out the recommended behaviour required to produce the desired health outcomes.

Against the backdrop of its perceived relevance, this study adopts the model to interrogate the knowledge, attitudes, and adoption of COVID-19 safety protocols among residents of Taraba State. As a cognitive theory, health belief model aligns with the current study because most persons analyse the six constructs of the model as major pre-determinants to adhering to COVID-19 preventive protocols like wearing of face mask, social distancing, regular hand washing, and the use of hand sanitizers. As the model presupposes, individuals are largely motivated to adopt COVID-19 safety protocols where they perceive they are vulnerable to contracting the virus side-by-side with the consideration of its severity in affecting one's breath and consequently leading to death. This explains why the level of compliance to the safety protocols was high in countries where high level of mortality was recorded.

## 3. PROBLEM STATEMENT

Although the concomitant tension that accompanied COVID pandemic has doused globally, the ripple effects of the deadly virus are still manifest in the society with systemic and intellectual loopholes for researchers to probe further to avoid future recurrence of the same tragedy. During the pandemic, Nigerians were forced to embrace the "new normal" as a way of living to contain the further spread of the virus (Maikomo, Targema & Obun-Andy, 2021). This new normal emphasised consciousness of the safety measures put forward by WHO to help individuals carry out their day-today activities in the face of the pandemic. In the post-lockdown era, humanity is forced to accept the new pattern of life that is anchored on the basic safety protocols such as frequent washing of hands, covering of coughs and sneezes, non-touching of the face, avoidance of crowded places, regular disinfection of frequently touched surfaces and objects, observation of physical distance, self-isolation where COVID-19 symptoms surface among others. These measures have affected social relationships, businesses, public gatherings, workplace interaction, tourism and virtually every aspect of human endeavour (WHO, 2020a). As a result of their inconveniences and other psycho-social factors, most persons find it difficult to abide by the safety protocols, thereby making every effort to evade them. Studies also indicate that in sub-Saharan Africa, noncompliance to COVID-19 safety protocol is largely attributable to ignorance, misinformation, and misconceptions (Nwagbara et al, 2021). Compounding these was a predominance of fake news and conspiracy theories on the pandemic that all bear the potentials of impacting negative knowledge and influencing defiant attitudinal traits to the laid-down safety guidelines towards combating the pandemic. Taraba State was one of the states in the northeastern part of Nigeria that had high cases of COVID-19 despite the efforts of the governments and other relevant stakeholders (NCDC, 2020). Hence, the need to investigate the knowledge of Taraba residents on COVID-19 safety protocols as well as examining the relationship between the residents' knowledge and their attitude and practices towards COVID-19 safety protocols. Against this background, this study assesses the knowledge, attitudes, and practices of COVID-19 safety protocols in Taraba State and how these affected people's compliance to the stipulated safety guidelines.

## 4. RESEARCH METHODOLOGY

This study adopted cross-sectional survey as the research design to generate data from the public on their level of awareness of the safety protocols, their attitudinal patterns towards them and the barriers to effective adoption of the safety protocols in Taraba State. The study area was selected as result of the fact that Taraba State was one of the states in the northeastern part of Nigeria that had high cases of COVID-19 despite the efforts of the governments and other relevant stakeholders (NCDC, 2020). Hence, the need to investigate this phenomenon to unravel residents' knowledge, attitude, and practices towards COVID-19 safety protocols to the fore. Data were collected from six (6) out of the sixteen Local Government Areas (LGAs) in Taraba State, two (2) each from the three senatorial zones. The selected LGAs include Jalingo (the State Capital), Zing, Bali, Gassol, Takum and Wukari LGAs. Cluster sampling technique was adopted to select survey respondents from each of the six LGAs while questionnaire was employed as instrument to generate the required data in the study. In all, 384 copies of questionnaire were administered as determined by Raosoft online calculator in line with the projected population of Taraba state as given by National Bureau of Statistics to be 3,609,800(NBS, 2022). The 384 copies of questionnaire were administered across the six LGAs, out of which 332 copies (representing 86.5%response rate) were successfully retrieved and analysed using SPSS version 21. Simple percentage and charts are used to present data for the sake of clarity and drawing of inference.

## 5. DATA ANALYSIS AND DISCUSSIONS

The first phase of data presentation focuses on demographic data of respondents, while the second phase focuses on thematic data and how it addresses the research objectives guiding the study as follows.

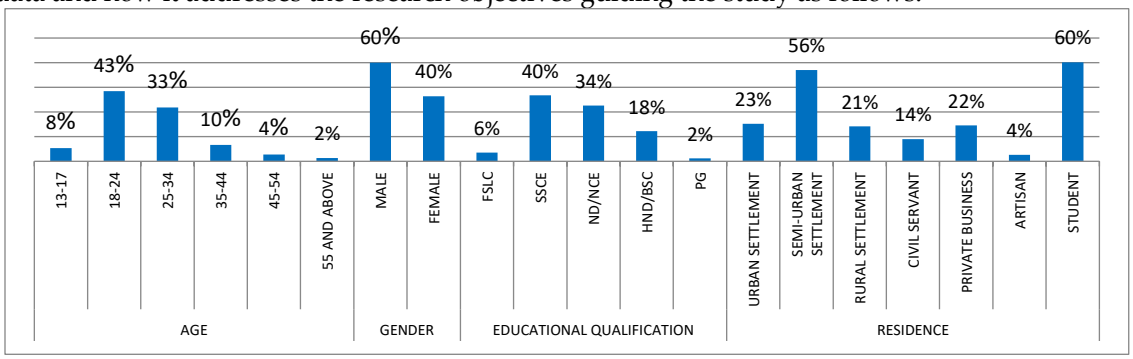


**Figure 1:** Demographic Data of Respondents

From the data collected and analysed, out of the 332 respondents, 43% fall within the age bracket of 18-24 as the highest followed by 33% respondents who are within the age range of 25-34 and the others fall within the remaining age brackets. Additionally, 60% of the respondents were male and 95% do possess a minimum educational qualification of SSCE, NCE/ND and above; with 56% predominantly residing in semi-urban settlements and 60% of the respondents are students. This shows that majority of the respondents are of age and enlightened enough to give intelligent and valid data for the study.

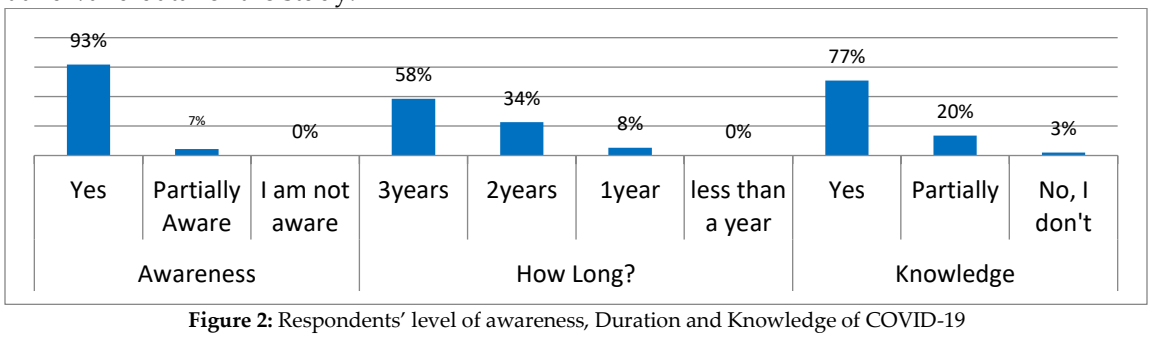


**Figure 2:** Respondents' level of awareness, Duration and Knowledge of COVID-19

From the above chart, an overwhelming percentage of 93% respondents said they are aware of the existence of COVID-19 and mostly for over 2 years at the point of carrying out the research. In addition to that, 77% respondents have knowledge of WHO/NCDC COVID-19 safety protocols. This reveals that an overwhelming percentage of the respondents are aware and well enlightened about the existence of COVID-19 for over two years and thereby in the right position to respond appropriately to the research instrument.

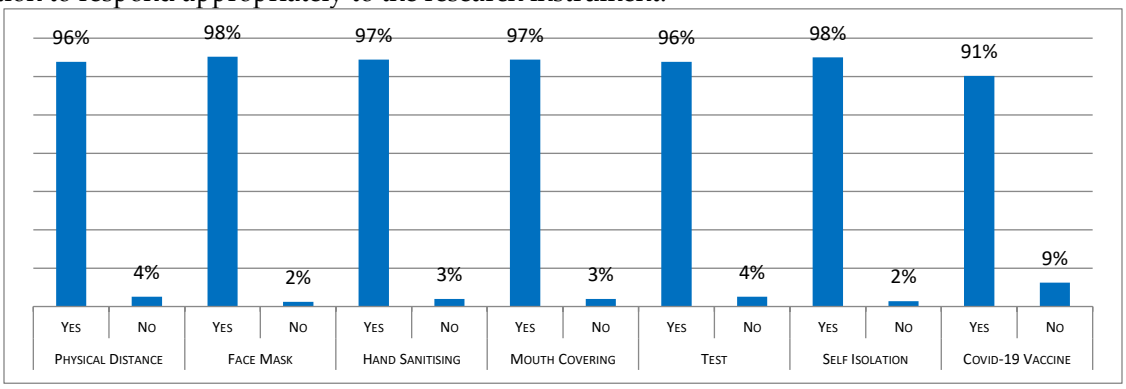


**Figure 3:** Awareness of COVID-19 WHO/NCDC Safety Protocols

In the chart above, 96% of the respondents are aware that maintaining physical distance from others can reduce the spread of COVID-19, 98% do know that wearing of face mask reduces the spread of COVID-19, 97% are aware that hand sanitising can reduce the spread of COVID-19, another 97% do know that mouth and nose covering reduce the spread of COVID-19, 96% are aware that going for test when you notice symptoms reduces the spread of COVID-19, 98% do agree that self-isolation when tested positive of COVID-19 reduces the spread of COVID-19 and 91% are aware that taking COVID-19 vaccine can reduce the spread of COVID-19. This implies that the majority of the respondents are aware of WHO/NCDC COVID-19 safety protocols.

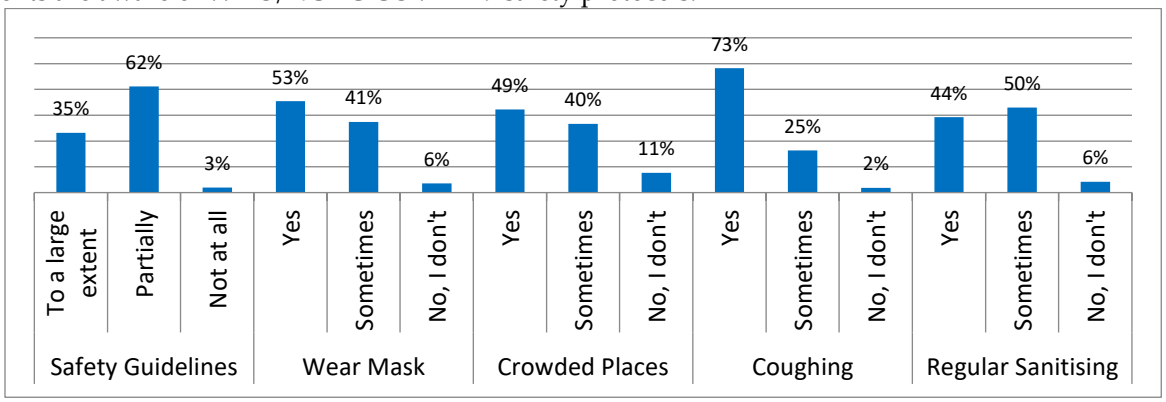


**Figure 4:** Adherence to COVID-19 Safety Guidelines

From the research data, only 35% of the respondents put into practice WHO/NCDC COVID-19 safety guidelines, 62% partially adhere to the safety guidelines while 3% do not; 53% of the respondents wear face mask while in public places whereas 41% do that sometimes and the remaining 11% do not at all; 49% of the respondents avoid crowded places for fear of COVID-19, 40% avoid same sometimes whereas the remaining percentage do not; 73% cover their nose/mouth while coughing/sneezing, or when someone is coughing/sneezing around them, 25% also do same sometimes while 2% do not; 44% sanitize their hands regularly as a safety guideline, 50% do sanitise their hands sometimes whereas 6% do not do that. It has been established here that majority of the respondents do not adhere to COVID-19 safety guidelines even though they are aware of the WHO/NCDC COVID-19 safety guidelines as evidenced in the research data.

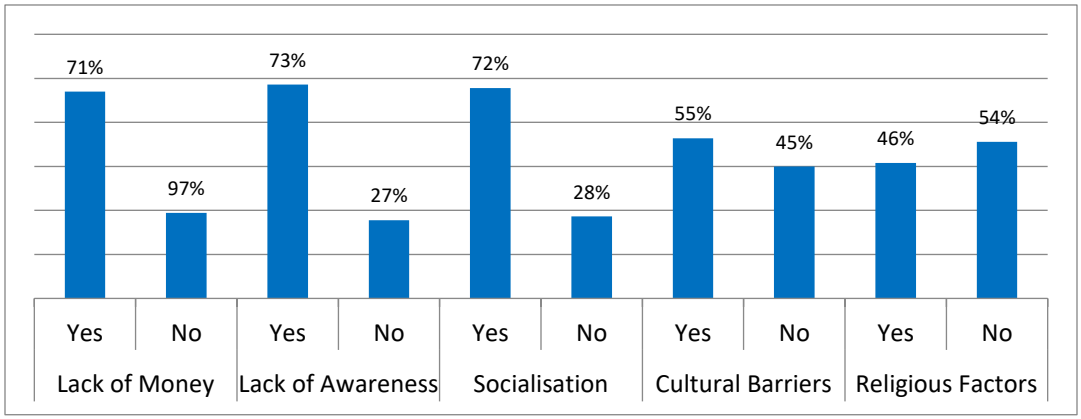


**Figure 5:** Obstacles to adoption of safety protocols

From the above chart, 71% said lack of money stands to be an obstacle to their adherence to safety protocol while 29% do not see lack of money as an obstacle to them; 73% of the respondents stated that lack of awareness was a hindrance to their observance of the safety protocols whereas the remaining 27% do not see that as an obstacle; 72% said socialisation is an obstacle to observing WHO/NCDC COVID-19 above safety protocols while 28% said it is not; 55% of the respondents affirmed that cultural barriers was an obstacle to them adhering to COVID-19 safety protocol whereas the remaining 45% said it is not an obstacle; to 46% of the respondents, religious factors served as hindrances to their adherence to COVID-19 safety protocol while 54% said it is not. It is apposite to therefore, say that lack of money, lack of awareness, socialisation and cultural barriers served as hindrances to public's compliance to WHO/NCDC COVID-19 safety protocols in Taraba State.

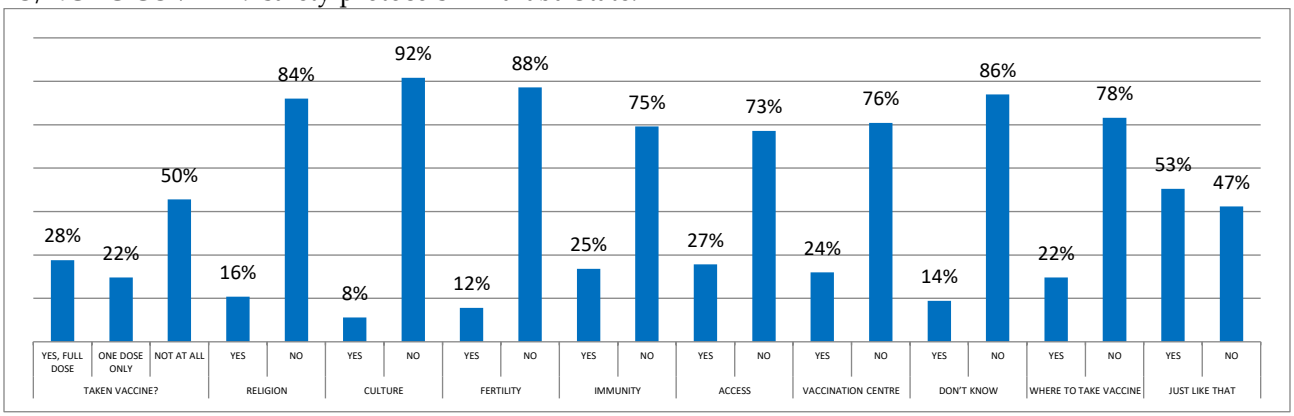


**Figure 6:** Reasons for not taking vaccine

From the research data, 28% of the respondents have taken full dose of the COVID-19 vaccine, 22% have taken one dose only whereas 50% have not taken the vaccine at all. Out of the respondents who have not taken the COVID-19 vaccine, 16% attributed the reason to being against their faith/religion while 84% said it is not; 8% said COVID-19 vaccine is against their culture and the remaining 92% said it is not; 12% stated that COVID-19 vaccine can affect their fertility/childbirth while 88% said it cannot; 25% of the respondents said they don't believe the vaccine can provide immunity against the virus while 75% do believe on the COVID-19 vaccine, 27% said they do not have access to COVID-19 vaccine whereas the other 73% do have access, 24% of the respondents said they are not vaccinated because they don't stay close to a vaccination centre while 76% did not experience that as a challenge; 14% said they don't know that there is a vaccine for COVID-19 whereas the other 86% do know about the vaccine; 22% said they don't know where to take the vaccine and the remaining 78% do know where to take the vaccine; 53% said they did not take the vaccine for no just reason while 47% did not subscribe to that. It is apparent to deduce from the data that majority of the respondents have not taken the full dose of COVID-19 vaccine albeit most of them do not have any justifiable reason for not being vaccinated as shown in the findings of this study.

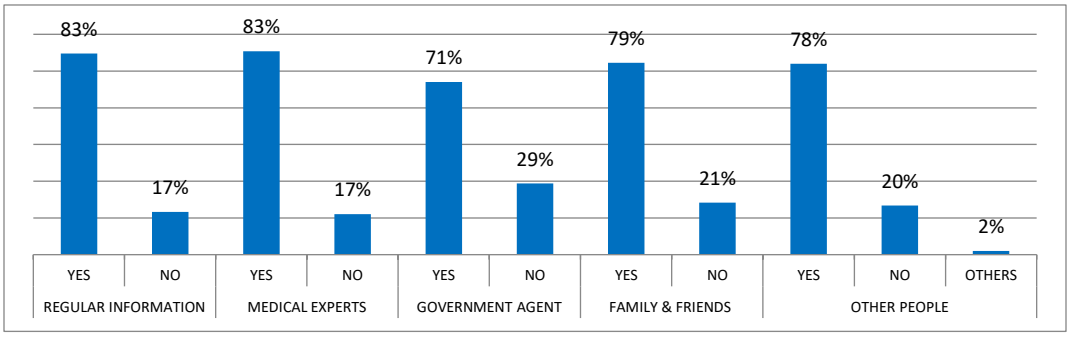


**Figure 7:** Information Sources

The chart above shows that 83% of the respondents receive regular information about COVID-19 and 17% do not. To further assess respondents source of information on COVID-19, 83% get their information on COVID-19 from medical experts 17% do not; 71% get information from government agents 29% do not; 79% get their information on COVID-19 from family and friends while the remaining 21% do not; 78% of the respondents also said that they get information on COVID-19 from people around them whereas 20% do not and the remaining 2% get their information from other sources. The findings show that most of the research audience receive regular information on COVID-19 from medical experts as foremost, followed by family and friends.

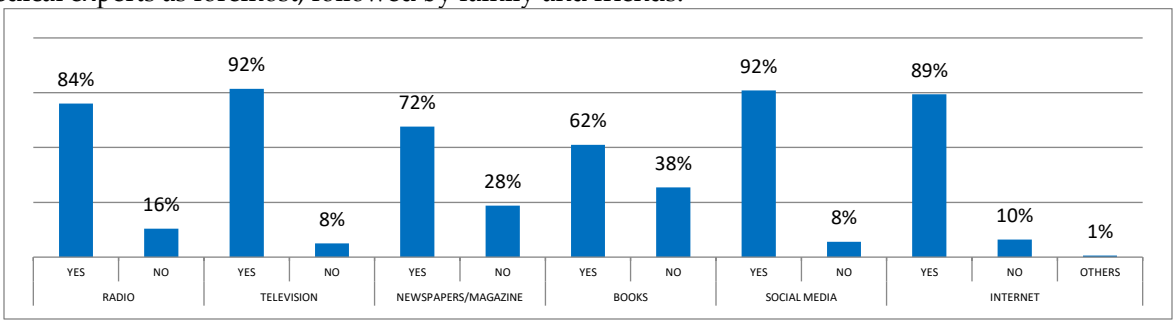


**Figure 8:** Channels of information about COVID-19

From the chart above, while trying to ascertain the media channel that provide the respondents with information about COVID-19, 84% of the respondents access information on COVID-19 from radio whereas 16% do not, 92% access information from television while 8% do not; 72% get information from newspapers/magazine and the remaining 28% do not; 62% access information from books while 38% do not; 92% get information on COVID-19 from social media while 8% do not; 89% access information from internet, 10% do not while the remaining 1% get information from other sources. It can be deduced that of all the media channels people access information on COVID-19, majority of the respondents access information from television, internet, and social media.

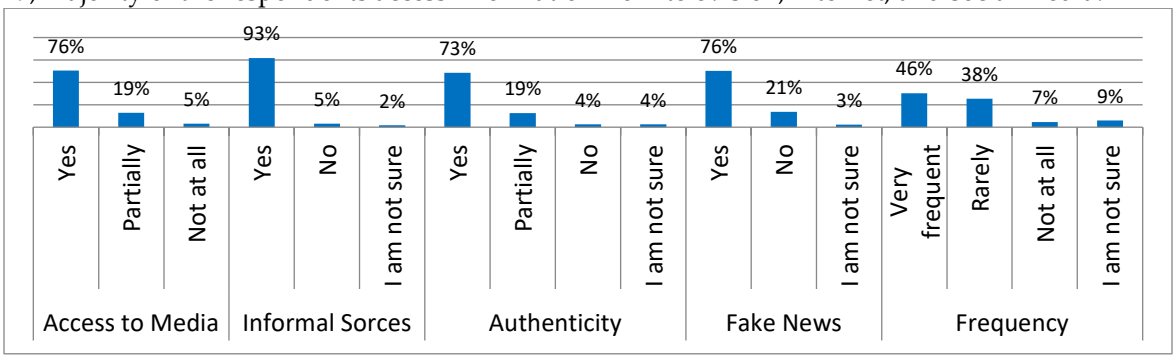


**Figure 9:** Access to media channels and fake news

From the research data, 76% of the respondents do have access to the various traditional and new media channels, 19% do have partial access to the various media channels and the remaining 5% do not have access at all; 93% have

access to other informal sources of information like market and places of worship, 5% do not have access to informal sources whereas 2% are not sure; 73% said the information they receive from these informal sources on COVID-19 are authentic, 19% said the information they receive from informal sources are partially authentic, 4% said it is not authentic and the remaining 4% are not sure about the authenticity of the informal sources; 76% of the respondents are aware of the existence of fake news on COVID-19, 21% are not aware of the existence of fake news on COVID-19 while 3% are not sure; 46% of the respondents come across fake news on COVID-19 very frequently, 38% rarely come across fake news on COVID-19, 7% do not come across fake news on COVID-19 at all, 9% are not sure if they have come across fake news on COVID-19. From the research data, it is apposite to note that the majority of the respondents access information on COVID-19 from informal sources more than they receive from traditional and new media sources which they say are authentic, consequently, an overwhelming majority were exposed to fake news on COVID-19 on very frequent basis.

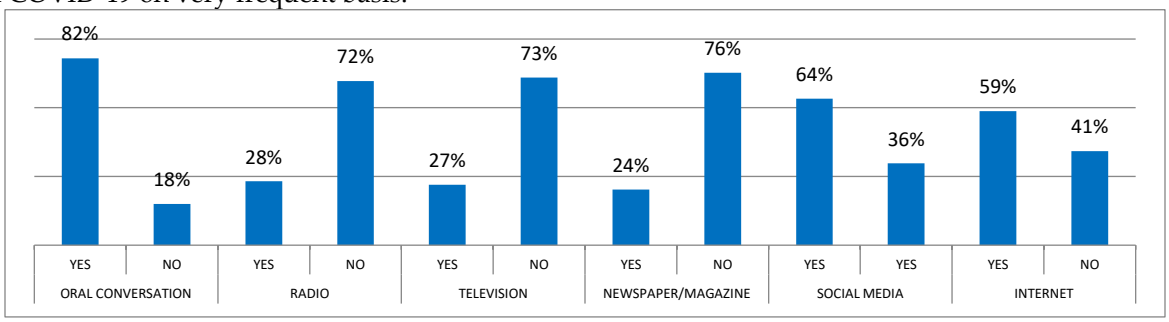


**Figure 10:** COVID-19 fake news channels

In the above given chart, 82% of the respondents see or hear fake news on COVID-19 through oral conversation with people and 18% do not, 28% see or hear fake news on COVID-19 through radio while an overwhelming 72% do not; 27% see or hear fake news on COVID-19 through television whereas the remaining 73% do not; 24% see or hear fake news on COVID-19 through newspaper/magazine while 76% do not; 64% of the respondents see or hear fake news on COVID-19 on social media while 36% do not; 59% see or hear fake news on COVID-19 on the internet whereas the remaining 41% do not access fake news on the internet. It is glaring to note that among the various channels people see or hear fake news on COVID-19, most of them access fake news from oral conversation, social media, and the internet.

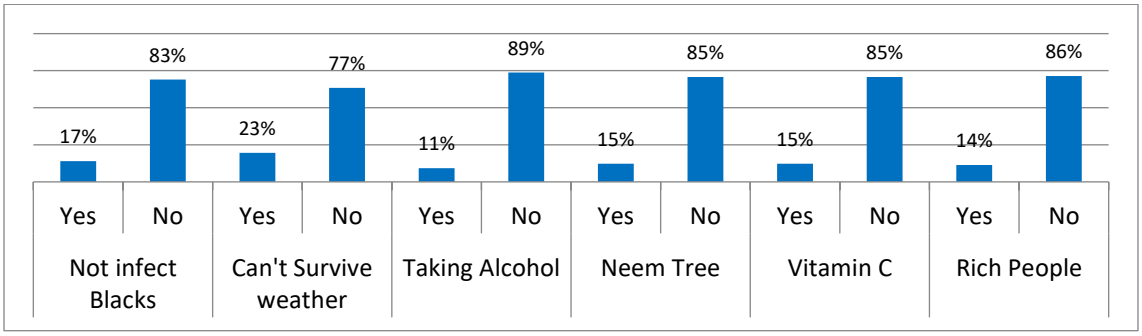


**Figure 11:** COVID-19 conspiracy theories

From the field survey data, 17% believed that COVID-19 will not infect black people while an overwhelming 83% do not; 23% believed that COVID-19 cannot survive Africa's hot weather whereas 77% do not; 11% believed that taking of alcohol prevents people from contacting COVID-19 while 89% do not; 15% believed that taking steam from neemtree prevents COVID-19 whereas 85% do not; 15% believed that taking of Vitamin C tablets prevent COVID-19 while 85% do not; 14% believed that COVID-19 is a disease for rich people and urban dwellers only while the remaining 86% do not believe that. This clearly shows that the majority of the audience do not believe in COVID-19 conspiracy theories although they have been exposed to fake news on social media, the internet, and oral conversation.

### 5.1. Discussion of findings

The findings of this study were discussed thematically to answer the research question as raised earlier in the study.

#### 5.1.1. Knowledge of COVID-19 safety protocols among residents of Taraba State

This theme seeks to ascertain the knowledge of COVID-19 safety protocols among residents of Taraba State. Findings from the study revealed that an overwhelming percentage of the respondents have been aware and well enlightened about the existence of COVID-19 for over two years at the point of carrying out the research and thereby in the right position to respond appropriately to the research questions. This finding corroborates the study of Asemah, David and Akpabio (2022) who discovered that the majority of the respondents have knowledge of coronavirus outbreak in Nigeria. Olapegbaet al. (2020) also confirmed that Nigerians have relatively high knowledge about COVID-19, which is mostly derived from traditional media. This indicates that the mass media have done well in the creation of awareness on COVID-19 across the state and the nation.

In addition to this, the study also established that a vast majority of the respondents are aware of the fact that adhering to W.H.O./NCDC COVID-19 safety protocols which include but not limited to observing of physical distance, wearing of face mask, hand sanitizing, self-isolation covering of mouth/nose when coughing, taking of COVID-19 vaccine among others can reduce the spread of COVID-19 in Taraba State and Nigeria by extension. This is courtesy of the sensitisation and awareness done on traditional and new media platforms to conscientize the audience about COVID-19 safety protocols to contain its spread in the country. NCDC (2020a, 2020b) and Gbadamosi (2020) also stated that the mass media educated Nigerians on safety protocols such as wearing of face masks, regular handwashing with soap and water or with alcohol-based hand sanitizers, thereby increasing audience awareness all over the country.

Reuben, Danladi, Saleh and Ejembi (2020) stated that the knowledge, attitudes, and practices (KAP) of the people toward COVID-19 is critical to understanding the epidemiological dynamics of the disease and the effectiveness, compliance and success of infection prevention and control measures adopted in a country. Therefore, the first step to achieving this is to ascertain the level of awareness of the people on COVID-19 which is in most cases a major precursor to the people's attitude and practice. Where the people's awareness level is low, it is most likely that their attitude and practice compliance rate to COVID-19 safety protocols will be low and where the awareness level is high is it also most likely that the compliance rate to COVID-19 safety protocols will be high too. Hence, the need for proper awareness by the mass media to increase the chances of the people's compliance rate to COVID-19 safety protocols.

#### 5.1.2. Attitude of individuals in Taraba State towards COVID-19 safety protocols

This objective aims to determine the attitude of individuals in Taraba state towards COVID-19 safety protocols. Albeit majority of the audience are aware of the WHO/NCDC COVID-19 safety protocols, most of them do not adhere to COVID-19 safety guidelines of observing physical distance, wearing of face mask, hand sanitizing, self-isolation, covering of mouth/nose when coughing among others as evidenced in the research data. The few who tend to practice the above COVID-19 safety guidelines do that only partially. Olapegba et al., (2020); Aluh and Onu (2020) averred that many persons shunned COVID-19 safety protocols of physical distancing, social isolations, restriction of religious and social gatherings etc. because they are alien solutions in overcoming the COVID-19 pandemic in Nigeria and Africa at large. The safety protocols were seen as diametrically opposed and foreign to the communal living prevalent in Nigeria. Sequel to the fact that Nigerians were not used to those kinds of restrictions and lifestyle, it became difficult for many to adapt and comply to the safety guidelines.

In addition, the study also established that lack of money, lack of awareness, socialisation and cultural barriers portend hindrances to public's compliance to WHO/NCDC COVID-19 safety protocols in Taraba State. Be that as it may, some of the respondents defy these hindrances; they did not only adhere to COVID-19 safety guidelines, but

they even took COVID-19 vaccine because of the perceived risk of contracting the deadly virus. This aligns with the basic postulation Health Belief Model. Glanz, Rimer and Viswanath, (2008) stated that Health Belief model attempts to explain why some people accept certain health behaviours to prevent, to screen for, or to control illness by considering six (6) conditions which include susceptibility, seriousness, benefits and barriers to a behaviour, cues to action, and most recently, self-efficacy. Micah, Lianyu and Ahoto (2023) added that these six conditions of the health belief model influence persons with chronic health conditions to adhere to COVID-19 preventive protocols like face mask-wearing, social distancing, regular hand washing, and the use of hand sanitizers. As the health belief model presupposes, individuals are largely motivated to adopt COVID-19 safety protocols where they perceive they are vulnerable to contracting the virus side-by-side with the consideration of its severity in affecting one's breath and consequently leading to death. This explains why the level of compliance to the safety protocols was high in countries where high level of mortality was recorded and vice versa. The compliance rate to COVID-19 safety protocols was largely low because during the early days of the COVID-19 outbreak in Nigeria, infected persons belonged to either the political class or high socioeconomic social status (Chukwuorji & Iorfa, 2020). The characteristic prevalence of COVID-19 infection among this group of persons accorded COVID-19 the name, 'a disease of the rich and mighty' (Nwaubani, 2020; Ilesanmi & Afolabi, 2020). Those who subscribed to this very belief were from low socio-economic status who felt they cannot contract the virus thereby having no need to adhere to the safety protocols or even take the vaccine. However, those who perceived they were vulnerable to contracting the disease either because of their old age or level of socialisation did not hesitate to take the vaccine.

More so, majority of the respondents did not take a full dose of the COVID-19 vaccine and do not have any justifiable reason for not being vaccinated as shown in the findings of the study. This revelation slightly agrees with the findings of other scholars. Sokunbi, Oluyedun, Adegboye, Oluwatomisin and Ibrahim (2022) averred that as of September 21, 2022, more than 31 million people have been fully vaccinated in Nigeria which made up 15% of the entire population. The number of COVID-19 vaccination doses administered per 100 people in Nigeria rose to 53 as of March 25, 2023 (Trading Economics, 2023). According to World Health Organisation (WHO), as of 19th March2023, a total of 116,606,863 vaccine doses have been administered in Nigeria. This, however, does not represent the total number of persons vaccinated because some persons received multiple doses of the vaccine whereas others received just a single dose of the vaccine. Be that as it may, the rate of compliance to vaccination in Nigeria is poor when the number vaccinated is compared to the total population of the country (Sokunbi, Oluyedun, Adegboye, Oluwatomisin & Ibrahim, 2022).

### 5.1.3. Communication channels for accessing information onCOVID-19 safety protocols in Taraba State

The research data show that majority of the respondents receive regular information on COVID-19 from medical experts as foremost, followed by family and friends. In addition to these non-formal channels, most of the respondents do access information on COVID-19 from television as foremost, followed by internet and social media. This corroborates the study of Asemah, David and Akpabio (2022) who affirmed in their study that majority of the respondents accessed COVID-19 messages through television reportage. This also agrees with the study of Olapegba et al. (2020) who stated that television and radio are the most common source of health information about COVID-19. This is to say that Nigerian television stations were at the vanguard of COVID-19 campaign awareness thereby becoming the most popular source of information on COVID-19.

The study also established that majority of the respondents access information on COVID-19 from informal sources more than they receive from traditional and new media sources, consequently, an overwhelming majority of the respondents were exposed to fake news on COVID-19 on very frequent basis. Suffice to say that regular access to informal sources of information increases audience chances of exposure to fake news as shown the research data. The study further revealed that most respondents access fake news on COVID-19 majorly from oral conversation, social media, and the internet. Be that as it may, majority of the audience do not believe in the COVID-19 conspiracy theories although they have been exposed to the conspiracy theories and fake news on social media, internet, and

oral conversation. Aswani (2021: 181) observed this trend, especially with the people's continued hesitation to take up COVID-19 vaccine in Kenya: "government communication strategies are competing with many voices that either deny the form of existence of the virus and hence refute the place of vaccines, or speak of the inefficiency of the vaccine, or create conspiracies around the use of vaccines. The "other voices" competing with the traditional mass media in disseminating information to the audience on COVID-19 are grossly responsible for the conspiracy theories, misinformation and fake news circulated about COVID-19. These voices are undermining the efforts of the media in spreading authentic information towards controlling the spread of the virus.

Aswani (2021: 181) added that "good communication strategies seem to be the missing link in spurring the take up of COVID-19 vaccines and pushing the population to herd immunity." This, therefore, necessitates the developing of an effective communication strategy to counter the pre-existing conspiracies and fake news on COVID-19 and other health communication interventions in Nigeria. It is obvious from the findings of this study that there is an eminent need for a more robust and effective communication strategy in order positive behaviour towards COVID-19 safety protocols in Taraba State and Nigeria as a whole.

To overcome some of the barriers faced in communicating health programmes in Nigeria like the COVID-19 safety protocols and vaccination exercise, Shem and Asicus (2023) suggested that there is the need for collaboration between health professionals, communication experts, traditional leaders, religious leaders, and celebrities. This collaborative approach will help to increase the authenticity and believability of the message because of the respect the people accord to their religious and traditional leaders. This approach will also help to reduce the resistance health interventions are faced with in terms of cultural and religious beliefs when the religious and traditional leaders collaborate with the mass media to create awareness and sensitisation. In 2004 for instance, polio eradication programme was hamstrung in the Northern part of Nigeria due to widespread conspiracies that the vaccine was targeted at reducing birth rate in the northern region. This brought about serious resistance from the people in the core north which led to the attack and maltreatment of the health workers doing the vaccination exercise. This prompted federal government to use the media in collaboration with religious leaders and traditional rulers to assuage the people's fears through strategic health communication on polio virus which assures the people about the safety of the vaccine (Odorume, 2015 cited in Shem & Asicus, 2023). This led to the success of polio vaccination programme in those places that were previously inaccessible. This clearly demonstrates the important role strategic communication plays in health communication.

## 6. RESEARCH IMPLICATIONS

There is a high level of awareness to COVID-19 safety protocols among residents in Taraba state courtesy of traditional and new media sensitisation and how the safety protocols have the potency of reducing the spread of COVID-19. Be that as it may, although majority of the audience are aware of the WHO/NCDC COVID-19 safety protocols, most of them do not adhere to COVID-19 safety guidelines despite the high level of awareness they possess. This reveals that audience could have the adequate knowledge of a particular health risk and may still choose to damn the consequences most especially where they feel the severity rate of the health risk and/or their susceptibility to it is low as postulated in the health belief model. This situation was also accentuated by the proliferation of fake news through informal sources like social media, family and friends among others which undermined government's efforts to contain the virus. This implies that, regardless government's efforts in a public health campaign, the success can be mitigated where informal sources are allowed to overshadow formal sources of information to the target population.

## 7. CONTRIBUTIONS TO SCIENTIFIC COMMUNITY AND FUTURE RESEARCH

This study contributes to scientific community in that it has brought to the fore through empirical research how intervening factors can affect the success of any communication campaign. This is more particular in scenarios where there is porosity in information management and dissemination as in the case of COVID-19 where infodemic

undermined the public health campaigns carried out. Whereas this study utilised cross sectional survey to investigate the knowledge, attitude, and practices of COVID-19 safety protocols among Taraba state residents, future studies can be conducted using mixed methods on the same topic to build on the findings of this study.

## 8. CONCLUSION

This study establishes high awareness about COVID-19 and stipulated safety guidelines towards containing it. What is worrisome, however, is the reliance informal sources for knowledge abou8t the pandemic among the masses which breeds negative attitudinal traits to the pandemic and limits the overall impact of efforts at taming it. The predominance of unofficial and informal sources of information about the pandemic provided a healthy environment for the spread of fake news, misinformation, and conspiracy theories on the pandemic. This, coupled with distrust in government policies and sincerity of purpose, made compliance to the safety protocols difficult. Considering this, the study concludes that the need for government and its agents to diversify communication channels and engage with the masses using both formal and informal channels to burst myths in times of pandemics and health emergencies is paramount, if only the right attitudinal patterns and best practices towards containing such pandemics are to be attained. Healthy information is key to positive health behaviour- especially for controversial pandemics like COVID-19. It is also crucial to address socio-cultural constraints that pose as obstacles to acceptance and adoption of prescribed health guidelines if such guidelines must make maximum impact among the masses towards effectively containing health emergencies.

## 9. FUNDING

The authors received funding from the TETFund Institution Based Research grant for the execution and publication of this research work.

## ORCID

**Tordue Simon Targema** https://orcid.org/0000-0002-2403-2571
**Samel Asicus** https://orcid.org/0000-0001-9672-6751

## REFERENCES

Aluh, D. O., & Onu, J. U. (2020). The need for psychosocial support amid COVID-19 crises in Nigeria. *Psychological Trauma: Theory, Research, Practice, and Policy*, *2*(5): 557-558.doi: 10.1037/tra0000704.

Apuke, O. D., & Tunca, E. A. (2022). Modelling the Factors That Predict the Intention to Take COVID-19 Vaccine in Nigeria. *Journal of Asian and African Studies*, *58*(5): 664–680. DOI: 10.1177/00219096211069642

Asemah, E. S., David, T. S., & Akpabio, J. (2022). Perception of Media coverage of Corona virus outbreak in select Local Government Areas in Edo State. *Mass Communicator: International Journal of Communication Studies, 16*(1), 4-11.DOI: 10.5958/0973-967X.2022.00001.1.

Aswani, D. R. (2021). Perceptions towards Government Communication Strategies on COVID-19 Vaccination in Kenya. *Asian Journal of Humanities and Social Studies*, *9*(5), 181-193, https://doi.org/10.24203/ajhss.v9i5.6755

Chukwuorji, J. C., & Iorfa, S.K. (2020). Commentary on the coronavirus pandemic: Nigeria. *Psychological Trauma: Theory, Research, Practice, and Policy 12*(S1): S188–S190 DOI 10.1037/tra0000786.

Galasso, V., Pons, V., Profeta, P., Becher, M., Brouard, S., & Foucault, M. (2020). Gender differences in COVID-19 attitudes and behaviour: Panel evidence from eight countries. *Proceedings of the National Academy of Sciences of the United States of America, 117* (44), 27285-27291. doi: 10.1073/pnas.2012520117.

Gbadamosi B. (2020). War on COVID-19: Oyo threatens to shut markets for flouting precautionary measures—Oyo state. *The Pace Setter State*. Retrieved from https://oyostate.gov.ng/war-on-covid-19-oyo-threatens-to-shut-markets-for-flouting-precautionary-measures/

Glanz, K. Rimer, B. K., & Viswanath, K. (2008). *Health Behaviour and Health Education: Theory, Research and Practice.* San Francisco: Jossey-Bass.

Ilesanmi, O., & Afolabi, A. (2020). Perception and practices during the COVID-19 pandemic in an urban community in Nigeria: a cross-sectional study. *PeerJ,* DOI 10.7717/peerj.10038

Inobemhe, K., Santas, T., & Udeh, N.-T. S. (2022). A Discourse on the effectiveness of health communication on COVID-19 infodemic and conspiracy theory in Nigeria. *Mediterranean Journal of Social & Behavioral Research, 6*(3), 93-100. https://doi.org/10.30935/mjosbr/12331

Janz, N. K., & Becker, M. H. (1984). *The Health Belief Model. A Decade Later*. Retrieved from https://pubmed.ncbi.nlm.nih.gov/?term=Janz+NK&cauthor_id=6392204

Ju´arez-García, D. M., de Jesús García-Solís, M., & T´ellez, A. (2020). Adaptation and validation of the health belief model scale for breast self-examination in Mexican women. *Value in Health Regional Issues, 23*, 30–36. https://doi.org/10.1016/j.vhri

Hyland-Wood, B., Gardner, J., Leask, J., & Ecker, U. K. H. (2021). Toward effective government communication strategies in the era of COVID-19. *Humanities & Social Sciences Communications, 8*(30). https://doi.org/10.1057/s41599-020-00701-w

Lucas, J. M., Targema, T. S., Jibril, A., Sambo, E. O., & Istifanus, B. A. (2020). Combating COVID-19 Infodemic in Nigerian Rural Communities: The Imperatives of Traditional Communication Systems. *ASEAN Journal of Community Engagement*, *4*(2), 360-385. https://doi.org/10.7454/ajce.v4i2.1102.

Maikomo, J. S., Targema, T. S., & Obun-Andy, M., (2021). Convid-19 and the New Normal in Developing Societies: An appraisal of Nigeria's adaptation to Digital Life in public and private Spheres. *Journal of Developing Societies 37*(3), 246-274. https://doi.org/10.1177/0169796X21996830

Matrajt, L., & Leung, T. (2020). Evaluating the effectiveness of social distancing interventions to delay or flatten the epidemic curve of corona virus disease. *Emerging Infectious Diseases,* 26(8), 1740–1748.

Micah, G. B., Lianyu. C., & Ahoto, A. T. (2023). Observation of COVID-19 safety protocols by persons with chronic health conditions in Ghana: The influence of health belief model. *Acta Psychologica, 236*, doi: 10.1016/j.actpsy.2023.103928

National Bureau of Statistics, NBS (2022). National Bureau of Statistics projection population. Retrieved from https://www.citypopulation.de/en/nigeria/admin/

National Centre for Disease Control (2020). *Frequently Asked Questions on COVID-19.* Retrieved from ncdc.gov.ng.

National Centre for Disease Control (2020). *Public Health Advisory on COVID-19.* Retrieved from ncdc.gov.ng.

Nigeria Health Watch (2021). *Conspiracy theories and COVID-19 vaccine introduction in Nigeria.* Accessed from nigeriahealthwatch.com

Nwagbara, U. I., Osual, E. C., Chireshe, R., Bolarinwa, O. A., Saeed, B. Q., Khuzwayo, N., & Hlongwana, K. W. (2021). Knowledge, attitude, perception, and preventative practices towards COVID-19 in sub-Saharan Africa: A scoping review. *PLoS ONE16*(4): https://doi.org/10.1371/journal.pone.0249853

Nwakasi, C., Esiaka, D., Uchendu, I., & Bosun-Arije, S. (2021). Factors Influencing Compliance with Public Health Directives and Support for Government's Actions against COVID-19: A Nigerian Case Study. *Scientific African.* doi: https://doi.org/10.1016/j.sciaf.2021.e01089

Nwaubani A. T. (2020). Coronavirus: why some Nigerians are gloating about Covid-19. *BBC news*. Retrieved from https://www.bbc.com/news/world-africa-52372737

Olapegba, P. O., Ayandele, O., Kolawole1, S. O., Oguntayo, R., Gandi, J. C., Dangiwa, A. L., Ottu, I. F. A., & Iorfa, S. K. (2020). Survey data of COVID-19-related Knowledge, Risk Perceptions and Precautionary Behavior among Nigerians. *Data Brief,8*(3), 1-8. doi: 10.1016/j.dib.2020.105685.

Reuben, R. C., Danladi, M. M. A., Saleh, D. A., & Ejembi, P. E. (2021). Knowledge, attitudes, and practices towards COVID- 19: An epidemiological survey in North-Central Nigeria. *Journal of Community Health, 46*(3), 457–470. https://doi. org/10.1007/s10900-020-00881-1

Shem, W., & Asicus, S. (2023). Pragmatic Health Communication Model in a Multicultural Society: A New Media Approach. *World Scientific News, 176,* 121-132.

Sokunbi, T. O., Oluyedun, A. T., Adegboye, E. A., Oluwatomisin, G. P., & Ibrahim, A. D. (2022). COVID-19 vaccination in Nigeria: Challenges and recommendations for future vaccination initiatives. *Public Health Challenges, 2*(57), 1-4. doi.org/10.1002/puh2.57.

Trading Economics (2023). *Nigeria Coronavirus COVID-19 Vaccination Rate. Retrieved from* https://tradingeconomics.com/nigeria/coronavirus-vaccination-rate

Ukonu, M. O., & Mbamalu, M. (2021). Predictors of compliance to COVID-19 containment communications in Nigeria's Federal Capital Territory, Enugu, and Lagos State. *Sage Open, 11*(3), 1-12. DOI: 10.1177/2158244021104724

Wong, L. P., Alias, H., Wong, P., Lee, H. Y., & Abubakar, S. (2020). The use of the health belief model to assess predictors of intent to receive the COVID-19 vaccine and willingness to pay. *Human Vaccines & Immunotherapeutics, 16*(9), 2204-2214, DOI: 10.1080/21645515.2020.1790279

World Health Organisation (2020). *COVID-19: "New Normal."* Retrieved from https://who.int/westernpcacific/emerencis/COVID-19/information/COVID-19-new-normal

World Health Organisation (2023). *COVID-9 Vaccination Tracker: Nigeria situation*. Retrieved from https://covid19.who.int/region/afro/country/ng