# COVID 19, Misinformation and Disinformation: An Analysis of Nigerians' Perception of Social Media Health Awareness Campaigns

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## Abstract

*This study investigates how Nigerians perceive COVID-19 awareness messages received through social media networks in the period from 3rd June to 3rd October 2020. Using the quantitative research method, the study uses a sample size of 267 respondents drawn from 29 of the 36 Nigerian states and the Federal Capital Territory (FCT). The study is anchored in the Limited Effects Theory. The findings show that Nigerians regularly read COVID-19 related health messages on social media and that Whatsapp and Facebook are the primary social media platforms through which Nigerians received most of the COVID-19 related health messages. The study recommends that Nigerians should continue regular reading of updates about COVID-19 and other health messages on social media especially Whatsapp and Facebook since most health messages come from these platforms.*

***Keywords:*** *COVID-19, disinformation, misinformation, Nigeria.*

## Introduction

Proper communication of health information is essential for the health of people in any society. While the concept of communication generally refers to the transmission and exchange of information and meaning among the communicating parties, having access to the right information can sometimes be difficult. In particular, getting the right information that can influence individual and community decisions to enhance health can be complex (Thomas, 2006).

Thomas (2006) posits that necessary information that promotes regular physical activity, healthy weight, and good nutrition as well as actions, which aim at the reduction of tobacco use, substance abuse, injuries, and violence requires a range of information, education, and advocacy efforts, effective counselling and patient education to change health behaviours.

Lederman (2008) has specifically found two areas in which information on health issues is crucial, namely doctor-patient communication and health campaigns. The doctor-patient communication entails communication in which patients try to understand their doctors' prescription in order to restore them to health. In recent

times, however, communication of health-related issues has expanded to family, friends, doctors, nurses, social workers, hospital administrators, insurance companies, amongst others.

Health campaigns have recently become an essential part of health communication. Health campaigns, understood as "public campaigns in which the subject matter is health and the purpose of the health messages is to influence health-related attitudes and behaviours" (Lederman, 2008, p.10), are aimed at solving a health problem or preventing it.

Health campaigns were dependent on mass media particularly, broadcast media (Wakefield, Loken & Hornik, 2010). In recent times, social media have continued to be a source of health information (Song, et al., 2016). While many of such information are from trusted and known media sources, others are user-generated content (UGC) that may be difficult to verify.

Carey (cited in Rimal & Lapinski, 2009) has identified two important functions of communication in general: the transmission and ritualistic functions of communication. The transmission function deals with the processes through which communication becomes an instrument of acquiring knowledge. The ritualistic function relates to the fact that human nature is naturally communicative in the sense that communication is an intrinsic part of the human nature and human person.

Since health communication is principally an intervention effort to change behaviours, three intervention considerations are important for transmission communication to become effective in the realm of health communication. These are: (1) communication interventions depend not only on the channels and processing of information but also on the individual (prior experience, efficacy beliefs, knowledge, etc.) and societal factors (interpersonal relationships, cultural patterns, social norms, etc.). (2) There are always discrepancies between messages disseminated and received, which may arise in the process of interpretation or decoding such information. In such circumstances, unintended consequences that may make the situation worse or counter-productive may result (Cho & Salmon, 2007; Rimal & Lapinski, 2009). (3) Health communication process is so dynamic that sources and receivers of information continuously interchange their roles. This requires constant formative evaluation, audience assessment and message pretesting for the best results.

Effective communication is an essential component of quality health care and guarantees people's health while poor communication can have a significant negative effect on people. In other words, there is a correlation between effective communication and better health outcome of people (Swire-Thompson & Lazer, 2019). In 2018, Cancer Research UK (2018) published a report which found out that people were taking laetrile seeds as a cure for cancer which was not, however, supported by any scientific claim and that it can even lead to cyanide poisoning after laetrile or amygdalin. It also found a risk of serious side effects from cyanide poisoning after laetrile or amygdalin, especially after taking it by mouth. Effective communication occurs essentially when the communication takes place when it should, preventing incorrect or incomplete information from being communicated, preventing messages that lack critical facts or are unclear (Tigerconnect.com, 2020).

In the absence of effective communication, miscommunication and fake news can occur. Fake news on diseases like the novel coronavirus (COVID 19) on social media can endanger lives (Union for International Cancer Control, UICC, 2020). This is because more and more people rely on social media for vital information, including health information (Song et al., 2016; Swire-Thompson & Lazer, 2019). Indeed, in 2013, 72% of US adults looked online for health information and another 35% used online sources to figure out a medical condition they or an acquaintance have (Fox & Duggan, 2013). Unlike the traditional media, there are no editors or fact-checkers to cross-check the accuracy of messages shared on social media. In some cases, such messages reach as many or even larger users than many traditional media (Sommariva et al., 2018).

Waszak, Kasprzycka-Waszak and Kubanek (2018) in a study found out that 40% of health information on cancer, neoplasm, heart attack, stroke, hypertension, diabetes, vaccinations, HIV, and AIDS shared on social media in the Polish language between 2012 and 2017 contained fake news. Similarly, based on the analysis of 120 Zika-related news, stories shortly after WHO declared Zika a public health emergency of international concern in February 2016, Sommariva et al. (2018) found out that misinformation was quickly spread on social media about Zika, particularly on Facebook and Twitter. Out of the top ten news stories about the Zika virus in 2016, half were rumours.

Also, a study by Sell, Hosangadi and Trotochaud (2020) between September 30th and October 30th 2014 immediately Ebola was diagnosed in the US and in which

3113 Tweets were analysed for fake news, authors found out that 5% of the tweets on Ebola contained falsehood and another 5% contained half-truths.

This study investigates how Nigerians perceive online information on social media during the COVID 19 global health crisis.

## Statement of the Problem

Since people are turning online for health information and with Fox and Duggan (2013) concluding that 72% of Americans source for health news online, online sources particularly social media have become a source of both authentic and fake news on health. Waszak, Kasprzycka-Waszak and Kubanek (2018) establish that 40% (that 2 in every 5 cases) of health information on social media was fake. Similarly, Sommariva et al. (2018) found out that 50% of information on the ZIKA disease in 2010 were rumours while Sell, Hosangadi and Trotochaud (2020) conclude in a study that 10% of Ebola-related tweets in the US in 2014 were not completely true.

The above studies show that although social media are being patronised for health-related information, they can contain a lot of misinformation, disinformation and fake news. Since there are no known studies carried out to determine the extent to which there were misinformation, disinformation and fake news related to COVID 19 in Nigeria, this research, therefore, aims to close this gap by interrogating the extent to which COVID 19 related health information shared on social media contained misinformation, disinformation and fake news.

## Research Objectives

The broad objectives of this study are to determine the:

1. Extent to which COVID-19 related information is shared on social media in Nigeria.
2. Extent to which Nigerians believe COVID-19 related information received on social media.
3. Extent to which Nigerians pay attention to the sources of COVID-19 related information.

## Research Questions

The following research questions have been formulated for this study:

1. To what extent is COVID-19-related information shared on social media in Nigeria?
2. To what extent do Nigerians believe COVID-19-related information received on social media?
3. To what extent do Nigerians pay attention to the credibility of the sources of COVID-19-related information?

## Conceptual Clarification

The main concepts in this study are explained for a better understanding.

## Misinformation and Disinformation

Defining misinformation and disinformation can be a complex task. However, Swire-Thompson and Lazer (2019) define misinformation as "the inadvertent sharing of false information", in other words, false or inaccurate information that is spread unintentionally (igi-global.com, 2020).

Disinformation is defined as "a coordinated or deliberate effort to knowingly circulate misinformation in order to gain money, power, or reputation." (p.345). In other words, disinformation is the deliberate creation and sharing of information known to be false (Wardle, 2017; Swire-Thompson & Lazer, 2019).

Thus, the major difference between disinformation and misinformation is the intentionality in the sense that while in disinformation, there is the deliberate intention to mislead others, in misinformation, there is no intention to pass across false information to others but one passes false information to others nonetheless but unintentionally. In both cases, false information is passed across to others but the intention is the distinguishing factor whether it is misinformation or disinformation. Wardle (2017) identifies seven types of misinformation and disinformation thus:

(1) Satire/parody: This kind of information has no intention to cause harm but can mislead all the same.
(2) Misleading content: This occurs when there is a misleading use of information to frame an individual or an issue.
(3) Imposter content: This occurs when genuine sources are impersonated.
(4) Fabricated content: This occurs when the information is false and designed to deceive and cause harm.

(5) False connection: This occurs when the headlines, visuals and captions do not support the content.
(6) False context: This occurs when genuine content is shared with false contextual information.
(7) Manipulated content: This occurs when genuine information or imagery is manipulated to deceive.

## COVID-19

COVID-19 is the acronym given to the novel strain of coronavirus disease that was discovered in China in 2019. The acronym "COVID-19" comes from the first two letters of "corona", "CO", the first two letters of "virus", "VI" and the first letter of "disease, "D" as well as the last two numbers of the year "2019", "19" which is the year the virus was discovered. Initially, the disease was known as "2019-nCoV" but was later referred to as COVID-19 (UNICEF, 2020). Coronaviruses belong to a large group of zoonotic viruses because they transmit from animals to humans. WHO (2020) believes COVID-19 may have originated from bats. COVID-19 can survive up to -20°C and can stay on surfaces for up to a few days depending on a combination of factors such as temperature, humidity and light. COVID-19 belongs to the group of thermolabile viruses, which means that they are easily destroyed by normal cooking temperatures (70°C). Thus, as a general rule, the risk of COVID-19 infection is higher in the consumption of raw or undercooked animal products such as raw meat, raw milk or raw animal organs (WHO, 2020). COVID-19 can be transmitted through direct contact with respiratory droplets of an infected person, which are generated from coughing and sneezing and touching contaminated surfaces.

The symptoms of COVID-19 include fever, cough and shortness of breath, pneumonia, breathing difficulties, kidney failure, and in extreme cases death. The incubation period for the virus is between 2 and 14 days (Mcleod, 2020). COVID 19 can be eliminated by using simple disinfectants such as soap and alcohol-based hand sanitizers (UNICEF, 2020).

## Literature Review

### Misinformation in Health Communication Online

Goel, Anderson, Hofman and Watts (2016) in a study found out the more popular a website is and the larger the subscribers, the higher the tendency to spread false information because of the trust subscribers have in such personality. Indeed, misinformation is believed quite easily. The Kingston University in London in a

study recently found out that more than 60 per cent of fake news online about healthcare issues is believed to be credible by readers (Young, 2020).

Misinformation is common in health communication and it is more online. Swire-Thompson and Lazer (2019) have found two ways in which misinformation and false health information are passed across online. These include: (1) User-Generated-Content (UGC): Due to the possibility that users can produce content and share same via social media platforms of Twitter, Facebook and WhatsApp to groups in their thousands and millions, there is a high tendency of misinformation being sent out as true because many of those pieces of health information are not verified. Also, (2) Mobile Apps are a source of dissemination of false health information. Lazer (2019) argues that due to the proliferation of mobile health apps coupled with the absence of oversight or regulation, the quality of many of the apps cannot be guaranteed as the example below demonstrates:

> One example of such an app was The Whole Pantry. The app was created by Belle Gibson, a popular Australian wellness blogger who publicly revealed that she had terminal cancer. Although she reportedly tried radiation and chemotherapy, she gave up on traditional treatment and was successfully managing her cancer with diet, exercise, and alternative therapies. The app was downloaded 200,000 times within the first month, voted Apple's Best Food and Drink App of 2013 and ranked #1 in the App store. However, in April 2015, Belle admitted that she in fact did not have cancer and never did (Swire-Thompson & Lazer, 2019).

Misinformation and disinformation are introduced online by many different sources including vested interests, politicians, news media, gossips, and works of fiction. Vosoughi et al. (cited in Swire-Thompson & Lazer, 2019) tracked 126,000 rumours spread by more than 3 million individuals on Twitter and found out that false information diffused significantly farther, faster, deeper, and more broadly than did the true information. This was the case because such information had content that were more novel and elicited more disgust, fear, and surprise (eliciting high-arousal emotions). In this regard, Zhang et al. (cited in Swire-Thompson & Lazer, 2019) reviewed 165 articles published between 2002 and 2013 and found out that 55% of the reviewed articles questioned the quality and credibility of online health information received which thus require consumers of such information to take extra care to evaluate such health information (Corcoran, 2007).

In the period of the COVID-19, misinformation can lead a person to change his behaviour and attitudes towards the virus, other people and how one should protect oneself and others (HSE, 2020). HSE (2020) posits that people misinform others in order to (1) get more visits to a website - known as "click-bait", (2) get private information from users - for example, "phishing scams", (3) counteract accurate information with false information, (4) cause panic and (5) show popularity by how many people the message reaches.

**Social Media and Fake Health Information**

Sell, Hosangadi and Trotochaud (2020) studied 3113 Tweets after the outbreak of the Ebola in the US in 2014 and found that 10% of Ebola-related tweets contained false (5%) or partially false/misinterpreted (5%) information. They concluded that many tweets had half-true tweets or misinterpretation of the truth but generally those half-truths included true information but also suggested some information that were not true. In the tweet "there is an Ebola patient in a Fairfax county hospital, I'm going to Canada", there is the suggestion that a patient was being tested for Ebola but at the same time reports with a tone of finality that there was an actual case of Ebola. Young (2020) argues that misinformation in health-related campaigns are generally in three categories: vaccines, natural cures, and fluoride.

Waszak, Kasprzycka-Waszak and Kubanek (2018)reported that a much higher percentage of shared links in Polish language shared via social media were shared 451, 272 times in the period from 2012 to 2017 resulting in 40% of cases containing misinformation about diseases such as cancer, neoplasm, heart attack, stroke, hypertension, diabetes, vaccinations, HIV, and AIDS. The misinformation in these campaigns was particularly related to vaccine invention and use in which more than 20% of dangerous links from our material was generated by one source. A Washington Post study found out that 54% of all anti-vaccine advertisements on Facebook were sponsored by two organisations, The "World Mercury Project", headed by Kennedy, and a California-based organization called "Stop Mandatory Vaccination" and both sponsored and spread misinformation about vaccines about the danger of vaccines on people (Sun, 2019).

A 2019 study revealed that health misinformation and scepticism about the safety of the measles-mumps-rubella vaccine contributed to increasing the cases of a measles outbreak in the US to an all-time high of 1, 261 as of November 7, 2019,

the highest in 30 years (Sun, 2019). Similarly, Sommariva et al. (2018) carried out a study to find out the degree of ZIKA-related messages on social media (Facebook, LinkedIn, Twitter, Pinterest, GooglePlus) that were either verified news stories, rumours and satire or parody. The study found out that rumours on the disease, which falls into the category of misinformation, had three times more shares than verified stories. The study which was carried out between February 2016 and January 2017 analysed 120 stories on Zika disease as soon as WHO declared the disease a public health emergency of international concern used Buzzsumo to monitor the number of times social media content with Zika messages were shared.

## Theoretical Framework

The study is anchored in the limited effects theory of mass communication.

## Limited Effects Theory of Mass Communication

The Limited effects theory can be traced to the 1940s. It arose as a critic of the dominant effect of the media that held sway at the time such as those pioneered by Elizabeth Noel-Neumann who in her spiral of silence theory posits that people adjust their behaviours to align with the view of the majority propounded by the media (Simonson, 2013). During this period, the media is considered all influential and directly influenced people's thoughts, opinions and attitudes. Such influence was considered final and immediate generally explained under the title 'Magic Bullet Theory/The Hypodermic needle model' in which media consumers are subsumed in the might of the media and directly affecting their behaviour positively or negatively. It developed from the sociology programme of Columbia University pioneered by Paul Lazarsfeld. Lazarsfeld in which they argue that radio, newspaper, magazine and motion pictures have limited effects on people's behaviours.

The crux of the limited effects theory, according to Lazarsfeld, is that "even if there is an effect created by the media on the thoughts and opinions of individuals, this effect is minimal at best or limited" (Communication Theory, 2020).

Lazarsfeld and the Columbia University School opine that social and psychological factors limited the level of media influences on media consumers. Lazarsfeld identified four major players in media consumers' behaviour, namely:

(1) Media (2) Gate Keepers (3) Opinion Leaders and (4) Opinion Followers. The flow of information moves in this above order and gets massively filtered and reinterpreted by the time it reaches the opinion follower (Communication Theory, 2020).

Specifically, selectivity (moderated by media consumers' perceptions and opinions) and interpersonal relations are two key variables that influence people's behaviours after the consumption of media products.

The limited effects theory became a critique of 'Magic Bullet' theory because while the Magic bullet focused on how the media affected people, the Limited effect theory examines how people use the media. In other words, the media should not be considered as a single stimulus that induce effect on people who are passive receptors of media products but that there are many variables that determine how media affect people (Communication Theory, 2020).

The limited effects theory is apt for the understanding of fake news in COVID-19 related health messages on social media because the idea of fake news is built on the assumption that people get misled by false medical information peddled on social media about COVID-19 many times without cross-checking the facts.

## Methodology

The research design adopted for this study is descriptive. The descriptive research design is either quantitative or qualitative. The quantitative method is adopted for this study and the quantitative method is the holistic steps a researcher employs in embarking on research work. The quantitative research method deals with quantifying and analysing variables in order to get results. It normally involves the analysis of numerical data using specific statistical techniques to answer research questions. In other words, the quantitative research method attempts to explain a phenomenon through the gathering of data in numerical form and analysing them with the aid of mathematical methods (Apuke, 2017).

The quantitative research study is generally either descriptive or experimental. While the descriptive quantitative measures its subjects just once in order to establish some relationships between variables, the experimental quantitative design, on the other hand, measures subjects before and after a particular protocol in order to establish causality between variables (University of Southern

California Libraries, 2020). For this study, the descriptive quantitative method is best suited since the sample size selected is engaged only once.

## Population of Study

The population of the study is the entire population of Nigeria estimated at approximately 200 million (Worldometers.info, 2020). With 6 geopolitical zones and 36 states and the Federal Capital Territory (FCT), Nigerians belong to three main religions: Christianity, Islam and African Traditional Religion. This research adopts the online survey and therefore is targeted at any Nigerian residing in Nigeria as of the time of this research.

## Sample Size and Sampling Technique

Sample sizes are determined by formulas. Taro Yamane (GfK Polonia, 2013) developed the formula below to determine the sample size with a 95% confidence level and p-value of 0.5.

$$n = \frac{N}{1 + N * (e)^2}$$

where;
n - the sample size
N - the population size
e - the acceptable sampling error.

Our Sample size is thus: $\frac{\mathbf{200,000,000}}{\mathbf{1+200,000,000 \times (0.95)^2}}$ **=384**

From the above formula, an estimated sample size of 384 is required for the research population. However, only 267 responded to the online questionnaire and filled the survey via Google form that was distributed through two social media platforms: Facebook and WhatsApp from 3rd June to 3rd October 2020 in which any Nigerian could respond. The link with the questionnaire was shared via several Facebook and Whatsapp pages of students, lecturers, Government workers, business people and private individuals with the instruction for respondents to share the link to other Nigerian social media platforms. The response rate was, therefore, 70%, which is reliable enough for this study. Therefore, the sample size for this study is 267. The respondents filled the

questionnaire (see Appendix I) according to their states of residence (table 1), their gender (table 2) and their age (table 3).

## Data Presentation and Analysis

### Demographic Distribution of Respondents

| S/ No | States In Nigeria | Population* | Respondents Population Based Residence In The State | Percentage (%) Of Respondents | Major Regions Of Country | Percentages(%) Of | |
|---|---|---|---|---|---|---|---|
| | | | | | | North | South |
| 1. | ABIA | 3,727,300 | 2 | 0.8 | South | 12 | 88 |
| 2. | ADAMAWA | 4,248,400 | 4 | 1.5 | North | | |
| 3. | AKWA IBOM | 5,482,200 | 2 | 0.8 | South | | |
| 4. | ANAMBRA | 5,527,800 | 8 | 3.1 | South | | |
| 5. | BAUCHI | 6,537,300 | 2 | 0.8 | North | | |
| 6. | BAYELSA | 2,278,000 | 3 | 1.1 | South | | |
| 7. | BENUE | 5,741,800 | 2 | 0.8 | North | | |
| 8. | BORNO | 5,860,200 | 1 | 0.4 | North | | |
| 9. | CROSS RIVER | 3,866,300 | 4 | 1.5 | South | | |
| 10. | DELTA | 5,663,400 | 18 | 7 | South | | |
| 11. | EBONYI | 2,880,400 | 3 | 1.1 | South | | |
| 12. | EDO | 4,235,600 | 123 | 46 | South | | |
| 13. | EKITI | 3,270,800 | 5 | 1.1 | South | | |
| 14. | ENUGU | 4,411,100 | 3 | 1.1 | South | | |
| 15. | FCT (ABUJA) | 3,564,100 | 13 | 5 | FCT | | |
| 16. | GOMBE | 3,257,000 | 1 | 0.4 | North | | |
| 17. | IMO | 5,408,800 | 10 | 3.8 | South | | |
| 18. | JIGAWA | 5,828,200 | 0 | 0 | North | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 19. | KADUNA | 8,252,400 | 2 | 0.8 | North | | |
| 20. | KANO | 13,076,900 | 0 | 0 | North | | |
| 21. | KATSINA | 7,831,300 | 0 | 0 | North | | |
| 22. | KEBBI | 4,440,000 | 0 | 0 | North | | |
| 23. | KOGI | 4,473,500 | 1 | 0.4 | North | | |
| 24. | KWARA | 3,192,900 | 1 | 0.4 | North | | |
| 25. | LAGOS | 12,550,600 | 38 | 14 | South | | |
| 26. | NASARAWA | 2,523,400 | 0 | 0 | North | | |
| 27. | NIGER | 5,556,200 | 0 | 0 | North | | |
| 28. | OGUN | 5,217,700 | 1 | 0.4 | South | | |
| 29. | ONDO | 4,671,700 | 3 | 1.1 | South | | |
| 20. | OSUN | 4,705,600 | 7 | 2.7 | South | | |
| 31. | OYO | 7,840,900 | 1 | 0.4 | South | | |
| 32. | PLATEAU | 4,200,400 | 1 | 0.4 | North | | |
| 33. | RIVERS | 7,303,900 | 6 | 2.3 | South | | |
| 34. | SOKOTO | 4,998,100 | 1 | 0.4 | North | | |
| 35. | TARABA | 3,066,800 | 1 | 0.4 | North | | |
| 36. | YOBE | 3,294,100 | 0 | 0 | North | | |
| 37. | ZAMFARA | 4,515,400 | 0 | 0 | North | | |
| | **Total** | **193,392,500** | **267** | **100** | | **100** | |

Table 1: Demographic representation of Nigerian respondents based on states of residence.

| **Sex** | **Number** | **Percentage (%)** |
|---|---|---|
| **Male** | 109 | 40.8 |
| **Female** | 151 | 56.5 |
| **Invalid** | 7 | 2.7 |
| **Total** | **260** | **100** |

Table 2: Demographic representation of Nigerian respondents by sex.

| Age | Number | Percentage (%) |
|---|---|---|
| **18 years & below** | 40 | 15 |
| **19-30 years** | 99 | 37.1 |
| **31-45 years** | 95 | 35.5 |
| **46-60 years** | 18 | 6.7 |
| **61 years & above** | 8 | 3 |
| **Invalid** | 7 | 2.7 |
| **Total** | **260** | **100** |

Table 3: Demographic representation of Nigerian respondents by age.

**Research Question 1**

To what extent are COVID-19-related information shared on social media in Nigeria?

| Social Media Networks patronised by Nigerians | Number | Percentage (%) |
|---|---|---|
| Whatsapp | 236 | 36 |
| Facebook | 161 | 25 |
| Instagram | 104 | 16 |
| YouTube | 76 | 12 |
| Twitter | 74 | 11 |
| **Total** | **651** | **100** |

Table 4: frequency of social media networks patronised by Nigerians.

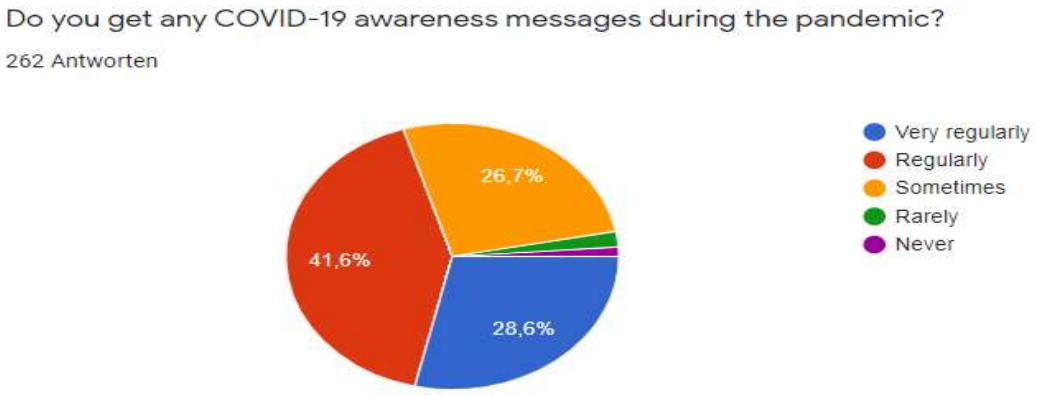



Figure 1: Respondents awareness of COVID-19 messages on Social media.

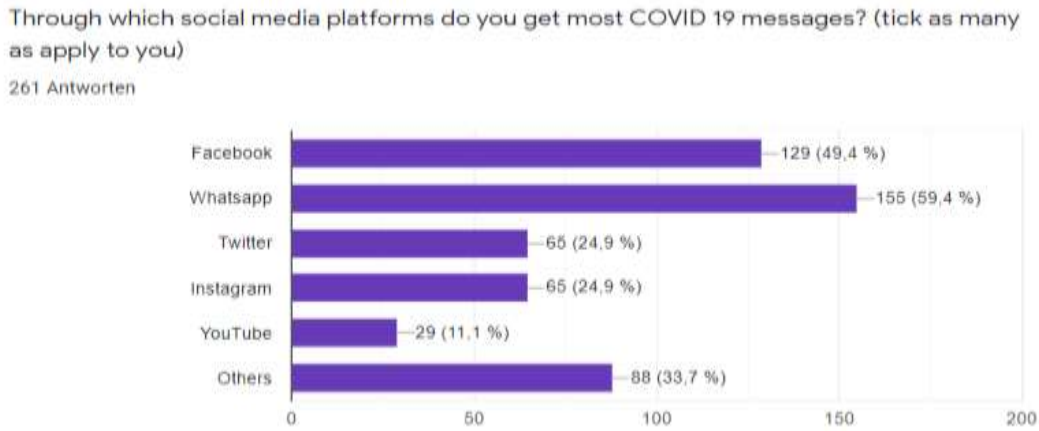



Figure 2: Social media platforms used for the dissemination of COVID-19 messages.

In Table 4, 61% of all Nigerians patronise mainly WhatsApp and Facebook social media networks. This means that 3 out of every 5 Nigerians use at least one of the two social media networks. Figure 1 above indicates that an overwhelming 70.2% of Nigerians said they are aware of COVID-19 related messages on Social media, which demonstrates that Nigerians regularly read or view messages that were disseminated on social media to create awareness about the diseases and the preventive measures. Figure 2 shows that 64% of all COVID-19 related awareness messages were received from primarily two social media platforms;

Whatsapp (35%) and Facebook (29%). Respondents received the least COVID-19 related messages from YouTube (7%).

**Research Question 2**

To what extent do Nigerians believe COVID-19-related information received on social media?

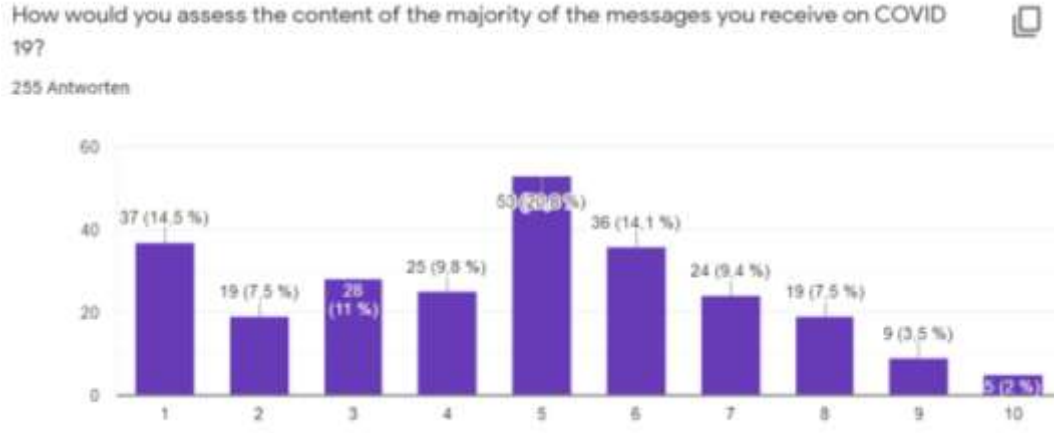



Figure 3: Nigerians' assessment of the contents of COVID-19-related messages distributed via social media (where 1=not fake and 10=very fake).

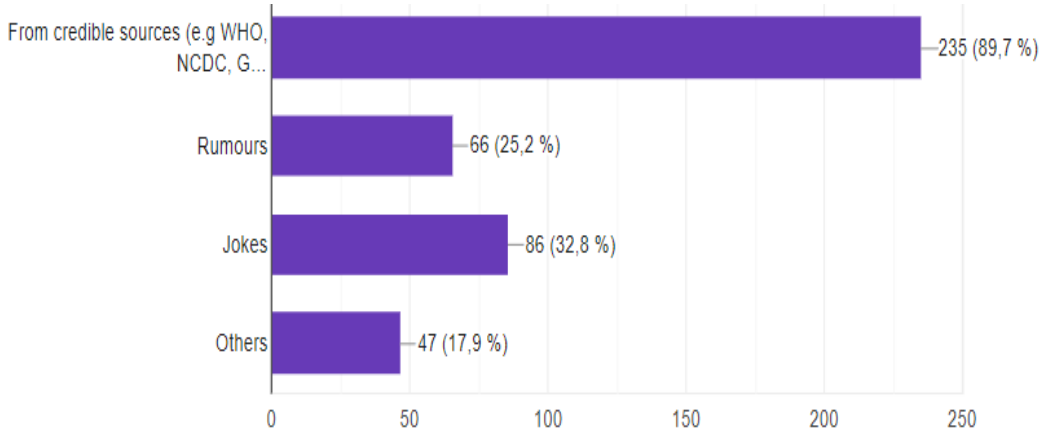



Figure 4: Major sources of COVID-19-related messages distributed via social media platforms.

In Figure 3, 64% of respondents believe that most of the COVID-19 awareness messages they received on social media platforms were predominantly not fake (scale 1 to 5) compared to 36% that believe the messages were predominantly fake (scale 6 to 10). Respondents believe that most of the messages received are not fake which are further confirmed on Figure 4 in which 61% of respondents say that they got most of their COVID-19 related messages from credible sources such as the World Health Organisation (WHO) and the Nigeria Centre for Disease Control (NCDC). In other words, since Nigerians rely on credible sources for their COVID-19 awareness messages, the messages were predominantly not fake.

**Research Question 3**

To what extent do Nigerians pay attention to the credibility of the sources of COVID-19-related information?




Figure 5: Nigerians' assessment of the credibility of COVID-19-related messages distributed via social media (where 1=not credible and 10=very credible).

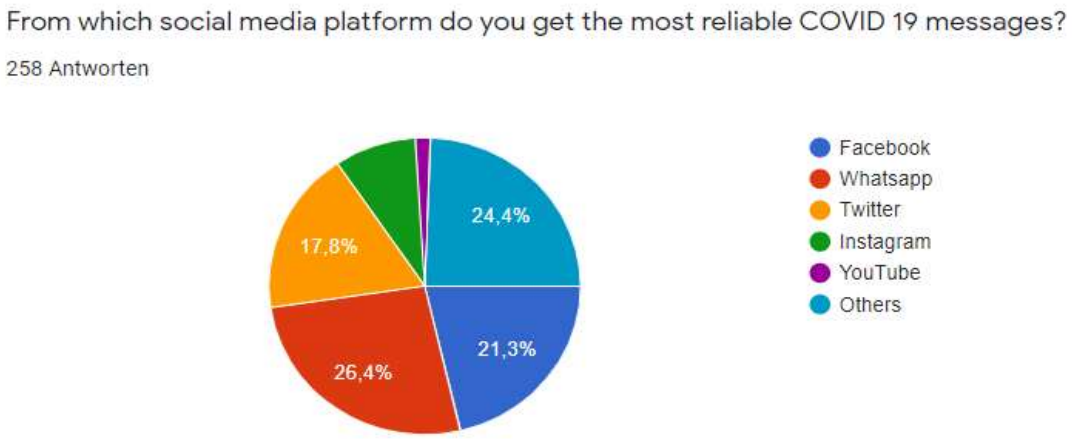



Figure 6: Social media platforms where the most reliable COVID-19-related messages are distributed.

In figure 5, 63% of respondents believe that most the messages they got were credible and reliable (Scale 6 to 10) and in figure 6, 48% of respondents say they receive the most credible awareness messages on COVID-19 from WhatsApp and Facebook.

## Discussion

From the results above, an approximately 3 out of every 4 Nigerians, said they regularly receive COVID-19 related awareness messages on Social media, which is an indication that Nigerians follow and regularly read health messages on social media. Similarly, 3 out of every 5 Nigerians receive most COVID-19 related awareness messages primarily from Whatsapp and Facebook. This confirms the data in Table 4 which shows that Whatsapp and Facebook are the most patronised and subscribed social media platforms by Nigerians. Nigerian respondents received the least COVID-19 related messages from YouTube and data in table 4 also shows that YouTube is one of the least patronised social media networks by Nigerians.

In addition, 3 out of every 5 Nigerians believe that most of the COVID-19 awareness messages they received on social media platforms were largely not fake. In other words, 40% of the messages received were fake. These results align with a study by Waszak, Kasprzycka-Waszak and Kubanek (2018) which found out that 40% of health information on cancer, neoplasm, heart attack, stroke, hypertension, diabetes, vaccinations, HIV, and AIDS shared on social media in

the Polish language between 2012 and 2017 contained fake news. Also, 3 out of every 5 Nigerians say that they got most of their COVID-19 related messages from credible sources particularly the World Health Organisation (WHO) and the Nigeria Centre for Disease Control (NCDC). In other words, Nigerians believe that most COVID-19 related messages were not fake because the messages were from trustworthy sources. However, in a study by Sommariva et al. (2018), half of the sources of the Zika virus received in February 2016 were rumours.

In figure 5, 3 out of every 5 Nigerians believe that most COVID-19 messages they got from social media were credible and reliable and that the most credible awareness messages on COVID-19 were received from WhatsApp and Facebook. In other words, 40% of messages received via Whatsapp and Facebook were not credible. This data again confirms data in Table 4 in which most Nigerians patronise mainly Whatsapp and Facebook and thus credible messages also emanate from the two networks. However, Sommariva et al. (2018) in a study found out that misinformation was quickly spread on social media about the Zika virus, particularly on Facebook and Twitter.

The limited effects theory is confirmed in the results of this study since many respondents believe that many of the COVID-19 related messages were not fake and credible even though they could be. In other words, they were able to determine, besides what the media presented, that a majority of the messages they received on COVID-19 were not fake based on other variables not captured in thus study. The media effect on them was thus limited.

## Conclusion

Based on the foregoing, it can be concluded that Nigerians regularly read health messages on social media and that Whatsapp and Facebook are the primary social media platforms through which Nigerians received most of the COVID-19 related health messages while YouTube was the least patronised social media network for the reception of COVID-19 related messages. Also, a majority of Nigerians believe that the COVID-19 awareness messages were not fake because they get such messages from credible sources. Nigerians also believe that most messages received were credible and Whatsapp and Facebook are the two social media network where the most credible messages on COVID-19 were disseminated from.

## Recommendations

From the conclusion of this study, the following are recommended:

1. Nigerians should follow and frequently read health messages on social media especially Whatsapp and Facebook since most health messages come from these two platforms.
2. Nigerians should ensure that while consuming health messages from social media, attention should be paid to the sources to ensure that they are reliable and credible.
3. Other social media platforms should encourage dissemination of health message in their platforms in order to increase the social media options of Nigerians to patronise rather than just almost absolute dependence primarily on Whatsapp and Facebook.

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