

SOCIAL MEDIA AND MISINFORMATION DURING THE COVID-19 PANDEMIC: AN ASSESSMENT OF WHATSAPP AND FACEBOOK FORWARDED MESSAGES

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Abstract

COVID-19 pandemic has affected not just the health and economic sector but it has given rise to numerous fake news, rumors, misinformation, hoaxes and conspiracy theories all over the globe. Such rumors and misinformation contributed to the rapid spread of the virus, self-medication, mysterious deaths and this menace has been reported globally. This paper is aimed at revealing some of the misinformation and fake news circulating social media in Nigeria during the Coronavirus pandemic using “Whatsapp” and “Facebook” forwarded messages and proffer recommendations. Content analysis research method was used to collect data from social media for the period of 5 weeks beginning from 11th July to 8th August 2020. The data collected have shown that the fake news came in form of the origin of the virus, spread of the virus, preventive measures, cure etc. As part of the recommendations, the mass media and relevant stakeholders should build strategic platforms for disseminating authentic public health messages. Also, advanced technology should be used to detect and remove fake online contents without genuine sources.

Keywords: COVID-19, Misinformation, Fake news, Social Media, Facebook, Whatsapp

Introduction

COVID-19 is a global pandemic caused by severe acute respiratory syndrome Coronavirus 2 (SARS-COV-2). It has posed a global health challenge to many countries. As of July 2020, more than 12.1 million cases of COVID-19 have been reported in more than 188 countries and territories, resulting to more than 552,000 deaths; more than 6.69million people had recovered from the disease. In the same vein, numerous rumors, hoaxes, fake news and misinformation have appeared on various social media platforms regarding the origin, spread, prevention and cure of the virus. It is no longer news that fake news spreads more rapidly on social media than news from reliable sources, damaging the authenticity balance of the news

ecosystem (Tasnim et al, 2020). Some of the information available to the public may not be accurate and it becomes hard for people to find reliable sources and trustworthy guidance during the pandemic as a result of an “infodemic” – i.e. an excessive amount of information about a problem that is typically unreliable (Hamzah et al. 2020). Even before the emergence of the COVID-19 pandemic the fake news had become rampant among the adult in both developed and developing countries. For instance the survey conducted by Pew Research Center on December 15, 2016 as cited in Ordway (2017) shows that 23 percent of the U.S. adults have shared fake news, knowingly or unknowingly, with friends and other individuals.

Over the past three decades, the Fake news becomes a common phenomenon in Nigeria. In November 1989, the Nigerian Television Authority (NTA) announced the death of the first Governor-General of Nigeria, Dr Nnamdi Azikiwe, the next morning; the news was on the front pages of almost all the country’s newspapers. It took two days for Azikiwe to clear the air about his rumored death (Madu & Ajayi 2019:4). Another example is the well documented video report claiming that President Muhammadu Buhari who has suffered a long term illness and absence from work during his first tenure had been long dead and replaced by a cloned person from Sudan named Jubril. The news circulated all over Facebook, Twitter and Whatsapp and got half a million viewers on YouTube. This prompted the president to stand and make a public denial while on visit to Poland saying “this is the real me”. Such fake news threatens the general coexistence of a nation. However, the same fake news is circulating in the midst of the COVID-19 outbreak. According to Lagos State health officials, three people have been hospitalized after taking overdose of chloroquine. This is because of the endorsement by President Trump, that the drug could kill the virus (Busari & Adebayo 2020). News of national lockdown also caused individuals panic, buying food stuffs and there was hike in prices of commodities in the market which led to the violation of social distancing in most cases.

Health misinformation is nothing new to Nigeria, at the height of Ebola outbreak in 2014, fake news circulated round the country that all Nigerians should take salt and bath with it to prevent contacting the disease. A reasonable percentage of the country took it and had drastic implications to some people who originally had sicknesses such as high blood pressures. And it resulted to two deaths and the Ebola itself killed eight people in Nigeria (Ogoina 2015:2). This issue of fake news and misinformation has increasingly become an issue of public health concern, it has contributed to the rapid spread of the virus, stigmatization, xenophobia and hindering the practices of healthy behavior among individuals (such as wearing of facemask and washing of hands) and promote practices that help spreads the virus.

Having looked at how misinformation posed danger to public health, it is safe to say that if preventive measures are not taken to curb this menace; more dangers will unfold to the world as a result of

misinformation. This paper studied fake news (misinformation) in the social media, how misinformation circulates on social media and how to curb its spread.

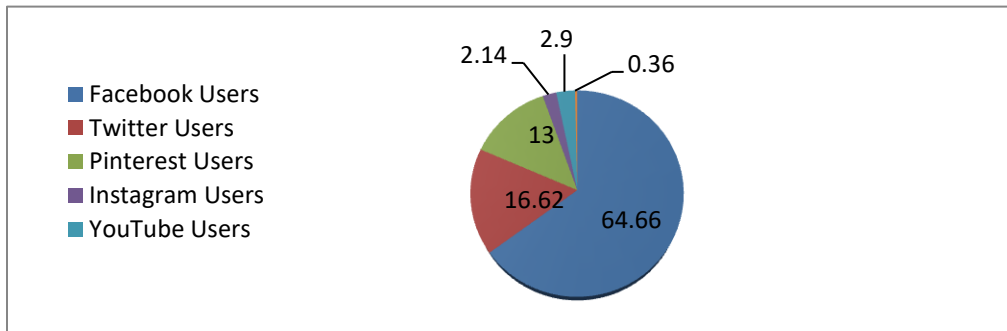
Conceptual Clarification

Social Media: Are websites and applications that enable users to create and share content or to participate in social networking. Chris (2015) sees social media as a social network of interactive communication that exist between people using a specialized electronic platform for interaction such as Facebook, Whatsapp, Twitter, MySpace, LinkedIn and Instagram. To Kaplan & Haenlein (2010:61) social media are group of internet-based applications that build on the ideological and technological foundations of web and that allow the creation and exchange of user generated content. Carr and Hayes (2015) argue that social media are internet-based channels that allow users the opportunity to interact with other members of the social media groups or platform and selectively self-present, either in real time or asynchronously, with both broad and narrow audiences who derive value from user-generated content and the perception of interaction with others.

According to Manning (2014) “social media” is the term often used to refer to new forms of media that involves interactive participation. The media is frequently divided into two different ages, the broadcast age and the interactive age. The broadcast age consists of radio, television while interactive age consists of the social media. With the rise of the social media, instant feedback was made possible. Manning (2014) also stressed that, all social media involve some sort of digital platform, whether mobile or stationary. Not everything that is digital is necessarily social media. Two common characteristics define social media. First, social media allows some sort of participation; social media are never completely passive, even though some social media networking sites like Facebook allow passive viewing of what others are posting. Secondly, social media are participatory in nature, social media involves interaction. This interaction can be with established friends, family, acquaintances or with new people who share common interest or a common acquaintance circle. All the above definitions focus on the interactive nature of social media and how it enables users to create, share and view content publicly.

According to the data released by the Startcounter Global Statistics on July,2020 Facebook has the highest users in Nigeria with 64.66% followed by Twitter coming far behind with 16.62%. The pie chart below shows that Pinterest occupies third position with 13.0% of active users followed by Instagram with only 2.14%. YouTube has 2.9% users followed by LinkedIn with 0.36 users.

Fig 1: Pie chart showing the percentage of social media users in Nigeria as at July, 2020



Source: Social Media Stats Nigeria July, 2020. <https://gs.statcounter.com>

Although, the Global statistic did not include Whatsapp among data generated on social media users in Nigeria but the data released in Pulse Nigeria's website indicates that Whatsapp social media is the most active platform in Nigeria with 85% of users.

Misinformation: Is relatively false or inaccurate information. Although, there are several related terms that usually used as misinformation. The terms like disinformation and rumors are the clear instances of terminologies frequently confused with misinformation. Wu et al, (2020:2) defined misinformation as relatively false or inaccurate information that is deliberately created and is intentionally or unintentionally propagated. Rumor refers to unverified information that can be either true or false (Wu et al. 2020:2). Calabrese (2020) sees misinformation as unintentionally misleading while disinformation is intentionally misleading and main effects raise fear and suspicion among the general population.

Review of Related Literature

Researches in recent months have showed that the most deleterious misinformation circulation on social media has been on the COVID-19 pandemic. The nature of social media according to Albright (2017) makes it easy to spread misinformation as users potentially bombarded their friends and relatives with false and unverified information who then forwarded it again to their friends and so on. Comments on fake news sometimes fuel its "credibility" which can lead to rapid sharing and resulting in further fake news. Wu (2020) studied misinformation in social media using survey method. He outlined the following types of misinformation: **Unintentionally-Spread Misinformation:** This type of misinformation is not primarily deliberate to deceive its recipients. In many occasion the social media users may contribute to its propagation merely due to their trust of information sources, such as their friends, family, colleagues. **Intentionally-Spread Misinformation:** It is intentionally spread to deceive its recipients, which has triggered the intensive discussion about the subject matter. **Urban Legend:** This is intentionally-spread misinformation that is related to fictional stories about local events. The purpose can often be entertainment. **Fake News:** It is intentionally-spread misinformation that frequently appears in an

unverified news stories. **Unverified information:** This type of misinformation sometimes is true and accurate, but it is tagged as misinformation when it is not verified. **Rumor:** This is unverified information that can either be true or untrue. Allcott et al. (2018) investigated the trends in the diffusion of misinformation on social media. The outcome of the research uncovered about 10,240 fake news stories across 570 fake news websites between January 2015 and July 2018. Currently, the internet has become a vital part of our lives. Traditional methods of acquiring information have nearly vanished to pave a way for social media platforms (Bondiella & Marcelloni 2019). Lor (2018) asserted that in 2017 Facebook was the largest social media platform hosting more than 1.9 million users worldwide. The role of Facebook in spreading fake news possibly has the biggest impact from all the social media platforms (Anderson 2018). Fake news constitutes a potential threat to the public health system. The rise of fake news could be making disease outbreaks worse. According to the research findings from the University of East Anglia (UEA), as documented in their website, the fake news could harm human health, especially during the outbreak of an infectious disease such as COVID-19. When it comes to COVID-19, there has been a lot of speculation, misinformation and fake news circulating on the social networks on how the virus originated, what causes it and how it spread. Such fake news has negative effect to a nation's health and security.

The research conducted by Okoro et al. (2018) shows that the Nigerian army in 2017 began a medical exercise of free polio vaccination in south-eastern Nigeria as part of its military operations. Rumors started circulating that the military were going to schools to inject pupils with monkey pox virus. The rumors caused a massive panic which led to the closure of some schools. Thus, the free medical service was interrupted by rumors and fake news hence sabotaging government effort to help curb the spread of polio. Research findings by Carter (2014) showed that during the 2014 Ebola outbreak, a fake text message claiming people could avoid catching the disease by bathing and drinking with large quantity of salt water went viral on social media even though there was no medical and scientific basis for it. The message reads:

“Ensure that you and your family and all your neighbors bath with hot water and salt before daybreak today because of the Ebola virus which is spreading through the air”

People often share fake messages on Facebook, WhatsApp and other different social media platforms and most Nigerians abide with such rumors and misinformation. Though the motives behind sharing this unverified news could be attributed to altruism which most Nigerians tend to possess. Yet, the consequences were deleterious and left several hospitalized (Carter 2014).

With regard to measures taken to curtail the circulation of misinformation Tasnim (2020:2) suggested that advanced technologies like natural language processing or text-mining approaches might be used to detect online content that has no scientific basis, cited example with data-mining algorithms that are successfully detecting all kinds of fake news and removing them from their respective platforms. Twitter, Reddit, and Amazon have already implemented these methods to remove fake accounts or product reviews. Although, in some countries the authority have taken serious measures to respond to the current trend in rumors and fake news spread on COVID-19 pandemic. In China, for example, the authorities have withheld information from the public, systematically under-reported the number of infections, managed state media reporting, censored online message boards, detained whistleblowers and harassed journalists as well as health workers sharing information about the pandemic (Yuan 2020). This paper aims at revealing some of the misinformation and fake news circulating the social media in Nigeria during the COVID-19 pandemic.

Study Objectives

Some of the study's objectives include;

- i. To study the social media contents with a view to identifying fake and misinformation on WhatsApp and Facebook.
- ii. To examine the social media contents so as to find out the frequencies and percentages of fake and genuine news on COVID-19 appeared in the four WhatsApp groups under study.
- iii. To offer recommendations that would assist in reducing the spread of fake news and misinformation among the social media users.

Methodology

For the purpose of this research work content analysis research method was used to investigate fake news related to COVID-19 spread on the internet via social media networks in Nigeria. Content analysis is based on the manifest content of the mass media messages. Krippendorp (2004: 18) sees content analysis as a research technique for making replicable and valid inferences from data to their texts (or other meaningful matter) to the contexts of their uses. Cohen et al (2007 p475) observes that, the content analysis originally deriving from analysis of mass media and public speeches, it has spread to examination of any form of communicative material, both structured and unstructured. The study's population comprises of all forwarded messages related to COVID-19 found in the researchers' Facebook accounts and also those found in the four selected WhatsApp groups (Kwakwachi 2003 Class, Jido Community

Development, Mai Kura family group and food basket group) during the study period of 5 weeks (11th July-8th August).

In line with the assertion of Wimmer and Dominick (2011:161), topic area and study period play a significant role towards any decisions taken by a researcher to obtain a manageable and control population size in analyzing a media content. To this end, a purposive sampling was used in both the selection of four WhatsApp groups (Kwakwachi 2003 Class, Jido Community Development, Mai Kura family group and food basket group) and also in the selection of forwarded messages from the four groups mentioned and the Facebook. The units of analysis in this study were the forwarded messages found in the selected social media during the period of study. A manual coding sheet with two columns was developed taking into account the content category to record the number of misinformation and genuine information on COVID-19. The frequency and percentage were equally used in presenting parts of the research findings.

Criteria for Identifying Fake News in the Study

In recent years there has been a prevalent concern among the communication scholars and practitioners on how misinformation spreading through social media is damaging societies and social institutions (Allcott et al. 2018). In response to this trend, scholars focus more attention on the mechanism that would assist to contain the spread of misinformation in social media. For instance, De Beer & Matthee (2020) identified five approaches to detecting the fake news which include; (1) language approach, (2) topic-agnostic approach, (3) machine learning approach, (4) knowledge-based approach, (5) hybrid approach. According to Calabrese (2020) the following questions can help to prevent disinformation fires on social media; Is this original account, article, or piece of content? Who shared this or created it? When was this created? What account is sharing this? When was the account created? According to Mintz (2013) the best ways to determine misinformation on the Internet is to use common sense. The readers should check whether the information makes sense and whether the founders or reporters of the websites that are spreading the information are biased or have an agenda.

Based on Mintz (2013) proposition the researchers considered the forwarded messages on COVID-19 from the reliable sources such as NCDC and other government agencies as genuine information. While the social media contents on COVID-19 that has no genuine source or link were sorted and categorized as fake news and misinformation. Therefore the researchers spent two weeks (from 11th July to 8th August, 2020) collecting and sorting the social media shared and reposted messages related to Covid-19 pandemic mainly from the four WhatsApp groups and Facebook as the study's primary data.

Data Presentation and Analysis

The study data divided into two groups namely; the statistical data and the raw-texts data showing different social media messages related to COVID-19 pandemic. A total of 43 information were generated in all the Social media out of which 39 are misinformation and only 4 genuine in formation.

Table 1: Summary of misinformation/Fake news and genuine information collected during the study

Social Media	Whatsapp	Facebook	Twitter	Percentage
Misinformation				90.7%
Genuine Information				9.3%
Total				100%

Table 1. Above shows that the misinformation on COVID-19 dominated the social media studied with 39 reposted messages representing 90.7%. while only 4 genuine information were identified representing 9.3%.

Table 2: Distribution of fake news among four whatsApp groups

Whatsapp Groups	Frequency of Fake News	Percentage of Fake News
Food Basket Group	6	27%
Community Development	5	23%
Kwachi 2003 Class	8	36%
Kura Family Group	3	14%
TOTAL		100%

Table 2. Above indicates that food Basket group has 6 fake news/ misinformation representing 27%, Jido Community Development has 5 misinformation representing 23%. Kwakwachi 2003 Class has the highest 8 misinformation on COVID-19 representing 36% while Maikura Family group only 3 misinformation representing 14% of the total percentage.

Table 3 : Distribution of genuine news among four whatsApp groups

Whatsapp Groups	Frequency of Fake News	Percentage of Fake News
Food Basket Group		
Community Development		
Kwachi 2003 Class		

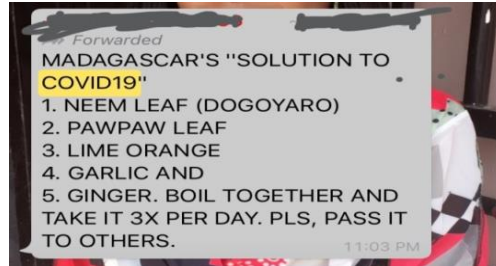
Kura Family Group		
AL		1/0

Table 3. Above shows that only 3 genuine information found in all 4 WhatsApp groups. Two (2) genuine information representing 67% were found on Mai Kura family group while One (1) genuine information representing 33% found on Jido Community Development. The table also shows that, food Basket group and Kwakwachi 2003 Class have no any genuine information during the period of study. This is a clear testimony that misinformation or fake news on COVID-19 dominated the social media platforms during the period of study. Therefore scholars and practitioners should make more effort towards reducing the circulation of the misinformation.

Some Misinformation related to COVID-19 found on WhatsApp groups during the study period

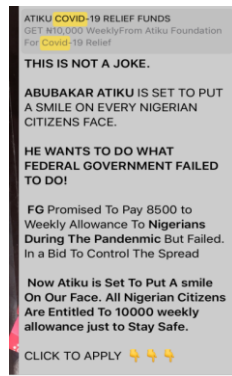
The following are some misinformation, fake news and rumors related to COVID-19 circulating on four WhatsApp groups during the period of study.

a. "Madagascar's solution to COVID-19"



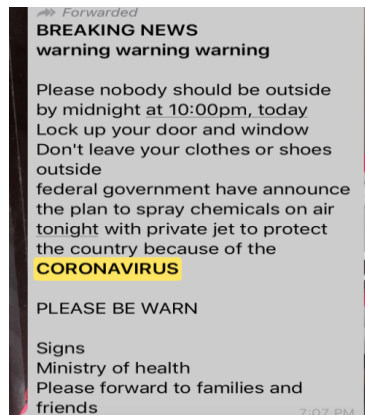
This above rumored message circulating Whatsapp claimed to have the mixture of herbal drink Madagascar is using to cure the Coronavirus.

a. AtikuAbubakarCovid-19 palliative to Nigerians



The above forwarded message was spreading like a wild fire on WhatsApp after the former president AtikuAbubakar's son tested positive to the coronavirus and his donation of 100million to the Nigerian government to help fight the virus. Scammers used this as an avenue to scam most Nigerians. By clicking the link, www.atikufoundation.com, you generate traffic to their websites and they can also steal your personal information. By filling in your bank details, they can also use it to hack your bank account and steal your money.

b. Federal government spraying chemical on air to fumigate



The federal government did not in any way announce such to Nigerians. Misinformation and rumors spreads faster than authentic news stories.

c. Cure for Coronavirus



According to the message above circulating on Whatsapp, the Chinese are not taking any Medication or vaccine to cure the virus, it claims that they have stopped going to the hospital instead they killed the virus with heat; hot steam inhalation, got gaggles and hot tea four times a day. According to www.factchecker.com, a website used in checking facts, the above information is totally false. Medically, steam inhalation and taking hot tea or water helps in easing out flu, since the virus is flu-like, misinformation claims in helps cure the virus.

- d. On the 23rd of March 2020, an audio clip emerged on Whatsapp of an alleged World Health Organization (WHO) official predicting that at least 45million Nigerians would die in the pandemic. The audio provoked so much attention that the NCDC issued a rebuttal.
- e. There were some reposted messages in which so-called experts have proffered cures of COVID-19 such as:
 - i. Constant sex
 - ii. Drinking alcohol
 - iii. Sitting in the sun,
 - iv. Or have claimed that African blood is immune to the coronavirus

None of these have any scientific basis. Social media activists, influencers, bloggers are using their social media handles to proliferate misinformation and fake news, propagate conspiracy theories and promote the denial of the virus.

Some Misinformation related to COVID-19 found on Facebook accounts during the period of study.

The following are some misinformation, fake news and rumors related to COVID-19 circulating on Facebook accounts during the period of study.

- a. Prolonged mask wearing causes intoxication or oxygen deficiency: the World Health Organization and health experts dismissed this claim. The breathable materials recommended for face masks worn properly

will not inhibit breathing. A misleading article being shared on Facebook claims the prolong wearing of mask is dangerous.

An article containing the claim on a Nigerian website was shared 55,000 times on Facebook. Dr Richard Mihigo of the World Health Organization told BBC in an interview that the claims are false. “Non-medical and medical masks are made from woven fabric that has high breathability. The masks should allow you breathe normally and prevent particles from passing through” he said. There are people whom wearing masks is not advisable, children under the age of 2 because their respiratory system are not yet fully developed and people with respiratory conditions, people should not wear mask when exercising according to WHO.(source,www.bbc.co.uk)

b. Children died in Senegal from Covid-19 vaccination: claims that seven children died after a mass covid-19 vaccination programme in Senegal are false. A Facebook post shared 7,000 times claims the children died at the spot after giving jabs as vaccination in Senegal. NgoneNgom, a spokesperson at Senegal’s Ministry of health confirmed to BBC news Africa that the story was “fake news”. (source, www.bbc.co.uk).

c. 5G Network is the cause of Coronavirus: The idea that 5G could have health implications is not new but conspiracy theories and misinformation linking 5G with covid-19 went viral during the lockdown. A surveyed carried out by BBC on May, 2020 showed that 20% of people believed the virus was a hoax. Major health organizations have said that 5G is safe and it has no link with corona virus. There were so many posts on Facebook claiming 5G was the cause of covid-19 and this led to attacks on telecom workers and almost 100 masts were set on fire during the lockdown in UK by anti-5G protesters. (source,www.bbc.com).

Scientists confirm that covid-19 is transmitted via respiratory droplets, and they are quick to point out that you cannot transmit droplets through 5G waves. Many of the hardest-hit countries currently have no 5G network. Iran has over 114,000 confirmed cases and no 5G masts even Nigeria has no 5G masts but the virus is spreading fast.

d. President Muhammadu Buhari is sick with persistent cough: A controversial blogger KemiOlunloyotweeted and subsequently posted on Facebook that President Muhammadu Buhari is sick with persistent cough and that makeshift ICU had been set up to treat him. Within hours, the tweet had been liked 3,300 times and retweeted more than 2,000 times. The tweet went viral on Facebook and the whole Nigerian social media users went agog due to this purported fake news.



- e. Crisis Grants for Covid-19 Support: There are several fake news on crisis grants and palliatives flowing on Facebook and other social media platforms in English and vernacular languages. An example of such shared fake news can be seen below:

Crisis grants of ₦652,100 are now available for individuals who need support during the COVID-19 pandemic. To check eligibility visit <https://relief.fundsllll.com>.

How to curb fake news and misinformation online

To effectively curb the rapid spread of misinformation on the social media, the Nigerian government needs to make conscious effort to establish and sustain two-way communication with its citizens. The government must consistently and timely provide information that respond to people's concerns. Government should partner with civil organizations and agencies such as ministry of information and National Orientation Agency to ensure that correct information is widely shared to people and always debunked rumors and fake news circulating. The Nigerian government and world leaders need to counter the scourge of fake news around the COVID-19 pandemic. Tackling the pandemic needs everyone to comply with government set down rules and accurate information is always the key. Government needs to also partner with social media owners like Mark Zukerberg the owner of Facebook, to help take down fake news circulating the platform.

Conclusion

The COVID-19 pandemic is happening at the time of globalization and the diffusion of social media networks, where everyone is self-acclaimed journalist who quickly share breaking news and information without necessarily verifying the source to know whether it is true or false. The misinformation about COVID-19 pandemic spreading on the social media overcome the genuine ones. As such, in Nigeria misinformation contributed enormously to the spread of the virus as many Nigerians refused to believe in the existence of the virus. Government, shareholders and media organizations need to play their part in

giving correct information to the masses to avoid the dangers that accompanies fake news and misinformation.

Recommendations

Health care workers should be well equipped with the most recent research finding which can be used for direct caregiving to patients this can improve patient-provider communication and result in better health outcome.

1. Social media users should be verifying sources of information they received especially forwarded messages to ensure it is not fake news and misinformation.
2. All misinformation and rumors should be removed online, only scientifically proven awareness should be allowed to get to people, this can be done in partnership with the owners of social media.
3. Advanced technologies should be used to detect online contents that are false especially one that concerns public health like COVID-19, Twitter, Amazon has already implemented this method to remove fake contents online.
4. Individual public should desist reposting and forwarding unconfirmed messages to friends and other social media.

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