

# Infodemic During Pandemic: Policy Lessons for Nigeria

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## ABSTRACT

Despite the wealth of information available in this digital age, many people do not double-check their facts, inadvertently propagating misinformation and contributing to the spread of an infodemic. The purpose of this research is to explore the ubiquitous infodemic during pandemics, with an emphasis on the COVID-19 pandemic. The report takes a cursory look at several situations in which misleading information impedes efficient risk health communication during the pandemic, as well as the implications for health professionals and risk communicators in terms of preventing the spread of the coronavirus. It investigates the infodemic that occurred in Nigeria during the COVID-19 pandemic, the factors that may have contributed to it, the impact on health risk communication, particularly in terms of ensuring that healthcare professionals deliver the necessary preventive services, cases of such false information claims, as well as understanding the problem and making recommendations that policymakers and experts can use to avoid similar situations in the future. The paper mandates traditional and new media to provide the public with accurate and evidence-based information.

## INTRODUCTION

The SARS-CoV-2 pandemic is the first of its kind during this modern age of technology. Past pandemics have similarly affected millions, but constant media coverage regarding COVID-19 has placed this crisis at the forefront of our hearts and minds. The pandemic has become the backdrop for a political battle, with leaders clashing over public policy as well as interpretations of medicine. Providers are overwhelmed by an onslaught of medical literature and pressure from the media and the community to precisely navigate the unknown. Likewise, the public is bombarded with information from often unreliable sources. During Covid-19, World Health Organisation's risk communication products were launched as early as January 2020. They included a series of e-poster infographics, which provided accurate and easy-to-understand advice and information from trusted sources on the COVID-19 response. The infographic poster images were published on the WHO website and social media platforms. Visual images were also provided to inform the general public about reducing COVID-19 transmission.

Every epidemic generates fear fuelled by uncertainty. Communicating uncertainty is as important as communicating proven research, as it is key to building trust between experts and the public. While the world is still grappling with the deadly COVID-19 virus and its many variants, there have been significant improvements in the fight against the virus, particularly with the help of vaccines and boosters. Data from the World Health Organization showed that as of October 24, 2022, a total of 624 million COVID-19 cases had been reported, with a case-fatality ratio (CFR) of just 1.1% in 232 countries. Meanwhile, the 53 member states of the African Union have a record of only 12 million cases representing 2% of all cases (Africa CDC, 2022). Africa recorded its first COVID-19 case in Egypt on February 14, 2020 (Aspinall, 2020). Several conspiracy theories trailed this discovery even though the virus killed over a thousand people in China. At

the introduction of the COVID-19 vaccination, unfounded rumours on social media discouraged people from taking the vaccine amid claims that Bill Gates is trying to control the world by implanting microchips in the Covid-19 vaccine (Gagliardone et al., 2021).

Turcilo & Obrenovic (2020) submitted that the manipulative use of communication has continually polluted the information space worldwide. The trend of manipulating facts continues to disrupt public communication and democratic processes in societies. According to Tomes (2020), the blend of information and epidemic is not new, as disease outbreaks have stimulated a torrent of conspiracy theories. However, new information technologies have intensified the process and made it harder to control. According to Wardle and Derakhshan (2017:5), information disorder is identified under three concepts: misinformation, disinformation, and malinformation. According to World Health Organisation (WHO), an infodemic refers to too much information in the public space that can confuse, particularly during a pandemic. However, the infodemic is not limited to health-related issues. Infodemic, or information epidemic, was first coined in 2003 by political scientist David Rothkopf regarding the SARS epidemic (Tomes, 2020). Rothkopf defined infodemic “as a few facts, mixed with fear, speculation, and rumor, amplified and relayed swiftly worldwide by modern information technologies which have affected national and international economies, politics and even security in ways that are utterly disproportionate with the root realities.”

Nowadays, people find it difficult to find trustworthy sources and guidance when needed owing to the increased manipulation of information and rumours. Across the globe, the infodemic has significantly penetrated every aspect of the economy, particularly those which serve as an engine for social change. The health sector is not exempted; at different points, the infodemic has threatened our corporate existence in public health. Dr. Sylvie Briand, Director of Global Infectious Hazard Preparedness, World Health Organization, defined an infodemic as a tsunami of information- some accurate, some not-which spreads alongside a disease outbreak. The new media, dubbed to move information faster and democratically share information in the period, works as a barrier because it allows user-generated content on the internet with little or no filter.

According to Kperogi (2022), one of the most significant developments on the African continent over the last decade has been the inexorably relentless growth and democratisation of social media platforms and the migration of discursive formations from traditional deliberative arenas to digital spaces. Compared to traditional media, new media is faster, requires less effort to air opinions, and has a greater reach, impression, and engagement. In other words, new media opens the door to an onslaught of interactivity. As a result, ordinary people now have the freedom to say whatever they want, whenever they want, with little censorship. Whether information professionals or casual viewers, media audiences typically learn from a small number of trusted or believed sources. As a result, despite the internet’s global reach, a peculiarly localised perspective emerges because no one can collect, store, and publish it all. The WHO Director-General Tedros Adhanom Ghebreyesus said, “We’re not just battling the virus; we’re also battling the trolls and conspiracy theorists that push misinformation and undermine the outbreak response.” With this in mind, the purpose of this paper is to examine the infodemic that occurred during the COVID-19 pandemic in Nigeria, the factors that may have contributed to it, its impact on health risk communication, particularly in terms of ensuring that healthcare professionals deliver the necessary preventive services, cases of such false information claims, as well as understanding the problem and making recommendations policymakers and experts can use to avoid such recurrences.

## **NEW MEDIA ALTRUISTIC SHARING AND INFODEMIC**

The fast nature of new media makes it a crucial ally during public health emergencies and natural disasters. Social media usage has been shown to significantly increase in cases of natural disasters and crises (Gottlieb

and Dyer, 2020), mainly due to the immediate need to transfer information. In the early days of the COVID-19 pandemic, the public largely turned to social media to stay in touch with friends and loved ones, wane off boredom, cope with stress, and get informed on the latest happenings regarding the pandemic. Since the pandemic's start, Facebook, one of the most widely used social media sites, has recorded a 70% increase in time spent on the site and a more than 50% rise in messages (Schultz, 2020). This is largely because the government imposes lockdowns and mandates physical distancing to curb the spread of the virus.

Consequent to heavy reliance on social media during this period, government and public health practitioners worldwide tapped into the power of social media to disseminate information and news regarding the pandemic (Chen et al., 2020). However, with user-generated content, especially those riddled with illegitimate anecdotal and emotionally driven content, the floodgate of COVID-related infodemic opened with the spread of misinformation, rumours, and conspiracy theories. Correlating this to news sharing with news media, altruism could be seen as the act of sharing news and information without expecting a reward for such an act (Plume and Slade, 2018). Social media users who are altruistic have a genuine reason to serve others by sharing information they perceive useful to others online. Also, the instant nature of social media makes it very quick for users to exhibit altruistic traits by sharing information online. According to research by Apuke and Omar (2020a), which seeks to understand the effects of fake news spreading in Nigeria and the reasons for fake news sharing among social media users, the researchers found out that People often spread information for the benefit of others without questioning its veracity as long as it contains some preventive measures about particular difficulties. Another study conducted by Apuke and Omar (2020b) on "Fake news and COVID-19: modelling the predictors of fake news sharing among social media users" revealed that information sharing, socialisation, information seeking, and pass-time syndrome, among other variables, drove social media users to distribute news about COVID-19. Their consumption and dissemination of COVID-19-related materials, whether they are aware of it or not, has a direct impact on the propagation of fake news and its negative effects on society.

Misinformation during this unprecedented public health emergency grew astronomically as social media messages facilitated disregard for health protocols such as wearing protective masks, hesitancy in adopting vaccination, and staunch distrust in government and emergency health agencies. An example of this was the influence of a spiritual leader, Pastor Chris Oyakhilome's endorsement of a theory that connects COVID-19 to 5G technology. Also supported by the claims of Dr. Stella Immanuel on Facebook and Twitter that hydroxychloroquine cures the virus (Olewe, 2020), it shows how quickly and harmful misinformation spreads even among medical practitioners (Paul, 2020). It is also important to note that the inherent tech feature in many social media platforms aids the spread of misinformation. According to Iyengar (2019), the algorithmic features of social media feeds are built to curate content based on prior user behavior. This might lead to repeated exposure to erroneous information and the possibility of increasing individual exposure to false information. Frequent exposure to rumour can result in an infallible belief in that rumour, even though refuted with concrete evidence. This may eventually lead to poor judgment of facts and a lack of careful reasoning.

The phenomenon of infodemic sits within the cultivation theory, which explains the influence of mass media content on people who consume or are exposed to the mass media. George Gerbner conceptualised the cultivation theory in the 1960s and 1970s. Researchers have used this theory to explain the influence of media content on human behavior even in the light of technological development, which has ushered in new forms of media, most importantly, social media. Cultivation refers to the long-term formation of perceptions and beliefs about the world due to exposure to the media (James, 1993). Gerbner et al. (1994) defined the concept as 'the independent contributions television viewing makes to viewer conceptions of social reality. Within the context of new media and how dominant it has come to be in this information age, social media users are susceptible to contents they view or hear therein, which eventually form their

perception of reality. With infodemic in the mix of things, untrue information with less fact-checking will come to supplant direct experience. New media content, either true or untrue, will form the basis of our belief system.

More so, the social media effect can be placed within the premise of the hypodermic needle theory, as it studies the effects of media on behaviour. Unfiltered information pervasive on social media can dictate to users what to do and why. The bullet theory or hypodermic needle theory postulates that the media (needle) injects the message into the audience's mind, hence causing changes in audience behaviour and psyche towards the message. This theory, therefore, refers to mass media audience members as passive and at the mercy of mass media content. It, therefore, holds that persuasive media contents achieve the desired attitudinal change from the target audience (Griffin, 2000; McQuail, 2005). The relevance of this theory in this digital age can be called to question, as it was postulated based on traditional media. However, a study by Nwabueze and Okonkwo (2018) on Rethinking the Bullet Theory in the Digital Age shows that the bullet theory still holds significance in the digital age since the audience members actively decide which social media platform to use and, depending on the nature of the story, passively react to contents they are exposed to. In addition, the uses and gratification theory of Jay G Blumler and Elihu Katz devised the 'uses and gratification' theory in 1974, which explains how people during the pandemic seek knowledge and will do well to consume information whenever they deem fit, however way they see possible. This means Nigerians consciously choose what they want to see in media depending on their needs and preferences. During the COVID-19 pandemic, people sought information via media outlets (conventional and unconventional media), which impacted the consumers. It can negatively affect society when not properly filtered and thoroughly confirmed (if it's fake news, misinformation, or valid and genuine news).

## **EFFECT OF RELIGION AND SOCIAL CLASS ON INFODEMIC**

The activities of religious leaders and faith-based communities became worrisome to health experts as they tried to sieve authentic information from an avalanche of half-truths and false information. Religious creeds and beliefs allow us to understand life and influence the meaning of many events occurring in everyone's life. The COVID-19 pandemic, linking the virus as a misfortune and creating a link with spirituality/religiosity, only increased fear, stress, psychological trauma, and even death (Simon et al. 2020). Part of the challenge various health practitioners and health communication experts encountered during the COVID-19 Pandemic was the spiritual undertones attributed to it in many quarters by religious leaders of the world. Believers conflicted with authorities' warnings that gatherings must be limited to combat the spread of the virus (Kwolaczek et al., 2020). In light of COVID-19, many adherents of religion were encouraged to be open to faith and prayer. As the number of confirmed Coronaviruses continued to be reported and it seemed scientists and politicians were unable to find a lasting solution to the COVID-19 pandemic, many people turned to faith to cushion the health and social implications of the virus. Rashid (2020) noted that despite the government's effort to severely limit face-to-face spiritual assemblies and government clamour against social gatherings, spiritual leaders encourage followers to carry on with their life, adding that if they meditate and pray, they will overcome the coronavirus.

They (Valerio and Heugh, 2020) confirmed that there was an increase in pastors' accounts on the internet that claimed a connection between transgression and the occurrence of COVID-19. Some religious sects were also falsely accused of creating the virus to benefit from the economic meltdown caused by the pandemic. Many physical assaults on Jews, killings, and demolition of churches and graveyards of Jews were prevalent because the Jews were accused of creating the coronavirus to accrue profits from drugs produced to cure the virus. (Associated Press, 2020). Also, about 16,000 Muslim hajis in Malaysia were alleged to have spread COVID-19 to six nations while returning home from Tablighi Jamaat, the most prominent Islamic evangelism crusade globally. This crusade emphasised living collectively, dining, and

praying in mosques(Beech, 2020). Fagunwa(2020) point out that, throughout history, religious leaders, faith-based organisations, and faith communities have played a key role in health emergencies.

Paul Lazarsfeld's two-step flow theory explains the importance of religious leaders in relaying/ passing down information to the audience within religious settings. Certain audience members operate within a socio-cultural context and rely on opinion leaders(in this case, the opinion leaders are religious leaders) to make sense of the information, interpret and pass it down to the audience. Okoro(2013) states that the strength of the two-step flow theory is that it takes into account the fact that man is not a social isolate but an active participant in many primary and secondary interpersonal relationships. In explaining the two-step flow theory as it relates to the influence of religion on infodemics, man is a social being, with religion being one of its core social gatherings. He believes so much in the leader of his faith organisation, hence will depend on his religious leaders(opinion leaders) to make sense of the information and pass it down to him. While these issues were ravaging Ebola treatment in DR Congo and other worst-hit countries, the misinformation had spread to Nigeria via social media platforms, claiming that using salt and hot water to bathe could prevent them from contracting the virus. For instance, HRM Idakwo Michael Ameh Oboni II, ruler of the Igala Kingdom, the Attah of Igala, had prescribed salt solution as a magical vaccine against the virus, and this claim went viral. Furthermore, the salt solution bath remedy was reinforced after claims that a Catholic priest, Ejike Mbaka, also asked his followers to perform some religious rituals, including drinking salt water. However, the Nigerian government immediately refuted the claim, but how many Nigerians heeded the government's warning? Two Nigerians were reported dead from" excessive consumption of salt water" a few days after the warning.

Also, social stratification or class dampens the flow of quality information during the COVID-19 pandemic. Raghunath (2020) argue that social stratification is consequential in studying health differentials during a pandemic such as the novel COVID-19 disease. Privileged individuals mostly exploit the gap in information gathering and dissemination in these institutions to propagate selfish agendas, as in the case of the COVID-19 pandemic.in addition, Sharot and Sunste (2020) posited that individual perceptual bias across social classes could lead to insufficient or excessive information seeking, which further results in collective perceptual biases, making it hard for people, decision-makers, and health workers to find trustworthy sources and reliable guidance when they need it. When the COVID-19 pandemic began, false information began to pour out from sources distributed geographically throughout the world. This problem was greatly exacerbated by the digital divide, particularly in developing countries (Smith, 2020). Some Nigerians believed that since most victims of coronavirus, as well as patients, were rich people and politicians in the society, there were rumours that it is a disease for the rich. After understudying the 1918 Spanish Flu, Raghunath and Tan (2020) observed that a certain group of researchers believe that virus disease outbreaks that have been declared pandemics are social class neutral. Hence every human has an equal chance of being infected irrespective of social status, which makes them seek safety through useful information. Mamelund (2018) suggests a direct relationship exists between "socio-economic indicators and the chances of being infected, that is, the higher the social status of an individual, the less likely for such a person to contract the disease. This is because of their ability to access useful information and adopt the recommended preventive measures. For instance, the poor were reportedly more vulnerable to the disease during the Spanish influenza pandemic than others, which is different from the COVID-19 pandemic. In the first wave, those in the high-class tier were easily susceptible to the disease because of their high exposure to the outside world. In contrast, the second wave affected them less because of their capacity to afford the resources while taking preventive measures.

## **EXEMPLAR INFODEMIC SCENARIOS IN DISEASE OUTBREAKS IN AFRICA**

Africa has suffered this menace over time, particularly during a pandemic or endemic. According to a study

by Graupner (2017), Africans are intensely superstitious, and modern technologies have been unable to reduce their superstitious tendencies. Jaja (2014) also submits that myths play a very important role in the African understanding of reality. A report by WashingtonPost unearthed how false information in DR Congo “fuelled a distrust of outsiders in medical garb” (Paquette & Sun, 2019). In all of these, social media platforms, particularly Facebook and WhatsApp, remained major culprits through which the misinformation spread (Elliott, 2019). Unfounded information circulated on the internet includes claims that the virus doesn’t exist and that Ebola has brought profits to some. In contrast, other pressing needs have been ignored, and others believe that the government is using them to kill them. Highlighting the effect of social media on infodemic, Barbara Reynolds, head of public affairs for the CDC, said at the time that rumours move much more quickly in the social media space than they would have otherwise, adding that “People want information and one of the best things we can do is give them information in a way that they can take it in and manage their emotions” (Luckerson, 2014). For instance, in 2002 and 2003, there were rumours that the polio vaccine caused infertility and was part of a plot to reduce the Muslim population in northern Nigeria. The baseless claims were shared in communities and believed by leaders of several regional states, who then fomented a boycott of the vaccination campaign against polio. This led to a surge in cases. Also, there was a claim that the vaccine would be used to kill Africans as part of an age-old population control plan. Other theories include: that big pharmaceutical company created the virus to profit billions from supplying the vaccine; Covid-19 comes from 5G towers; and so on. Meanwhile, some leaders encouraged Africans not to take any vaccine not developed in Africa but rather rely on alternatives such as indigenous herbs (Mphahlele, 2020). Some of these claims were backed by both traditional and religious leaders. Some government officials and public office holders like Madagascar’s President Andry Rajoelina were also caught on this web sharing false and misleading information about the virus. The Africa Center for Strategic Studies documented many African countries where COVID-19 vaccines were incinerated in the same year. A few citizens got the jab in most African countries despite the availability of vaccines.

## **CASES OF WIDESPREAD FALSE INFORMATION DURING COVID-19 PANDEMIC IN NIGERIA**

During the COVID-19 outbreak, the subsequent lockdown, and the vaccination administration in which various variant of the virus kept spreading, much false information were spread on social networking sites such as Twitter, Facebook, Whatsapp, Instagram, and Youtube. Some of the popular false claims, the platform they were mostly spread, how they were fact-checked, and who fact-checks in Nigeria. At the beginning of the preventive measures, there were messages widely reported by multiple sources, including Abia Pulse News, Kenya Bulletin, African Daily Mail, and CityScrollz published a story with the claim that the African Blood Genes are resistant to low reported cases of Coronavirus in Africa, multiple sources including Abia Pulse News, Kenya Bulletin, African Daily Mail and CityScrollz published stories with the claim that the African Blood Genes are resistant to the virus. The report, which became so widespread on February 10, 2020, claimed that the Chinese doctors released one Senou, a Cameroonian student whom the virus had infected, after he was cleared and confirmed cured. Paul Hunter, a UK-based infectious disease specialist, told DW that the absence of Covid-19 on the continent (in early February) might be mainly due to luck. There is nothing special about Africa not having seen a case (at the time the info went viral) other than a pure chance at the moment. Through 26 countries in 2003 but failed to gain a hold in Africa.

There is no such thing as the “African blood gene,” Therefore, no evidence supports the claim that the ‘African Blood Gene’ has immunity to Covid-19 (Coronavirus). The story spread like wildfire on WhatsApp through the links to those online blogs. A similar story that caused panic was the claim that a driver threatened to spread the Coronavirus in Nigeria. The story claim that Adewale Isaac Olorogun, the man who drove the index case (Italian) confirmed with COVID-19 from the Lagos airport to Ogun state, has run away from them and is threatening to spread the virus across Nigeria. The story was circulated on a cloned AIT

Nigeria News Facebook page. The post had up to 2000 shares on Facebook and was also distributed via WhatsApp and other platforms. The story is false. The alleged Uber driver whose image was used on the post released a video to debunk the claim. The man who gave his name as Igwunube Jude is from Edo state.

Also, there was a claim that former Nigeria President Olusegun Obasanjo said, “there is no coronavirus in Nigeria, The minister of health cooks the story to defraud the Government, I want to see the Italian man, I want to get the virus too.” The story turned out to be false as CDD fact-checkers established that the former President never made the statement. A fact check by a sister fact-checking initiative by Premium Times, Dubawa, also gave their verdict as false. A similar claim was also attributed to the Sultan of Sokoto, Muhammadu Sa’ad Abubakar. A headline published by the online blog newfenzy.com on March 7, 2020, claimed the Monarch had said, “Let me say the truth and die, the Italian Coronavirus man was paid to act the drama- Sultan of Sokoto’ But clicking on the link, the news failed to mention the Sultan again. This has become a trend with news bloggers since the virus outbreak in Wuhan, China. We are seeing a trend of using essential personalities and coronavirus to create clickbait so unsuspecting internet users can visit their websites and increase their traffic. This story was spread on social media channels and online blogs. This story was used to discredit the real threat of coronavirus.

Another one was the WHO Coronavirus Job Scam. A WhatsApp message that has been shared extensively, especially in WhatsApp Groups in Nigeria, offers applicants \$5-\$100 to work daily for 2-3 hours on mobile at the World Health Organization fighting coronavirus. The platform that spreads this information is WhatsApp. Nigeria is currently undergoing huge levels of unemployment, especially with the youth population. This often leads to a high level of job scams where people receive messages about a job, and to get that job, they must pay a certain amount. This story, widely shared on WhatsApp, was an attempt to exploit Nigeria’s unemployed youth for monetary gain. Another widespread false information was that Garlic and Pepper Soup Can Cure Coronavirus. In addition, it was listed in the broadcast message that drinking alcohol, regular sex, saltwater, and pepper soup as coronavirus cures, among others. However, no evidence suggests that any of these can cure coronavirus. Experts from the World Health Organization, Nigeria’s Centre for Disease Control, and leading epidemiologists worldwide have maintained that no treatments exist. According to the WHO’s website, “Garlic is a healthy food that may have some antimicrobial properties. However, no evidence from the current outbreak that eating Garlic has protected people from the new coronavirus.” WhatsApp and Facebook aided the spread. Nigerians were scared away from public and private health centres due to cost. They are seeking alternatives. This story leveraged that. Away from this, a viral image, a screenshot of a Fake CNN Newscaster with a news headline, has been shared widely across social media and the popular messaging app WhatsApp to claim that Constant sex kills coronavirus. The image featured CNN’s Wolf Blitzer. Instead, sex is a risk factor as such close contact with an infected person will expose the partner to the disease.

## **FACTORS THAT CONTRIBUTE TO THE SPREAD OF MISINFORMATION ABOUT COVID-19 ON SOCIAL MEDIA**

The COVID-19 pandemic exposed vulnerabilities in global health systems, and Africa was no exception. Beyond the immediate health crisis, the pandemic unleashed a tsunami of misinformation on social media platforms, creating a parallel infodemic that undermined public health efforts (Abdullah et al., 2020). Nigeria, Africa's most populous country, presents a particularly stark example of the challenges posed by misinformation. With a high social media penetration rate and a complex political and religious landscape, Nigeria is fertile ground for the spread of false information. The 2019 general elections were marred by the dissemination of misinformation on social media platforms, impacting public perception and potentially influencing voter behavior (Akin et al., 2018). Additionally, during the COVID-19 pandemic, social media

was flooded with false information about the virus, hindering public health measures and leading to vaccine hesitancy (Okafor et al., 2020).

A key factor fueling the spread of misinformation is the information gap that often exists between official sources and the public. In Africa, limited access to reliable information and low levels of digital literacy make populations susceptible to alternative narratives (Akinsola et al., 2020). Studies by Olutobi Akingbade (2021) highlight how young Nigerians, a key demographic on social media, often distrust official pronouncements due to historical experiences of government corruption and misinformation campaigns. This creates a vacuum readily filled by unverified information on social media.

Religion occupies a central space in African societies, including Nigeria. Religious leaders often wield significant influence and trust within their communities. However, this trust can be exploited to spread misinformation. Religious leaders may share content that aligns with their own beliefs, regardless of its veracity, and their followers may be more likely to accept such information without question. This was evident during the COVID-19 pandemic, where some religious leaders spread false information about the virus and its treatment, undermining public health efforts (Okafor et al., 2020). Also, The spread of misinformation is often fueled by public distrust in traditional institutions, including governments and mainstream media. A history of corruption and perceived bias in these institutions can lead people to seek alternative sources of information, even if those sources are unreliable (Voss, 2018). This distrust creates a breeding ground for conspiracy theories and rumors to flourish, as seen in the case of the 5G and COVID-19 scare in Nigeria, where false claims linking the technology to the virus spread rapidly on social media (Freelon et al., 2020).

Also, Socialmedia thrives on emotions, and COVID-19, with its unprecedented nature, created an atmosphere of fear and uncertainty. This emotional vulnerability makes people susceptible to messages that resonate with their anxieties. Misinformation often preys on these fears, weaving conspiracy theories around the virus' origin, spread, and treatment (Bursztyn et al., 2020). A study by Onuora et al. (2020) in Kano State, Nigeria, found a prevalence of conspiracy theories around the government's handling of the pandemic, fueling distrust and hindering compliance with public health measures. Furthermore, Misinformation often gains traction because it is packaged in compelling narratives that resonate with cultural beliefs and pre-existing social anxieties. In Africa, traditional medicine and religious healers hold significant influence. Misinformation campaigns may exploit these established belief systems, promoting unproven herbal remedies or faith-based cures, leading people to neglect evidence-based medicine (Eze et al., 2020). A study by Uche et al. (2020) documented the spread of misinformation in Nigeria that downplayed the severity of COVID-19, particularly among religious communities, potentially leading to risky behaviors.

In addition, combating the spread of misinformation requires effective fact-checking mechanisms. However, in Africa, limited resources and the sheer volume of information on social media make this a significant challenge. Additionally, the rapid evolution of misinformation campaigns makes it difficult for fact-checkers to keep pace (Silva et al., 2020). Research by Ogunbanjo (2021) highlights the limited capacity of Nigerian media outlets to effectively counter COVID-19 misinformation, leaving the public vulnerable to unverified information.

Consequently, since social media platforms rely on algorithms to curate content for users, there algorithms prioritize engagement, meaning content that elicits strong emotional responses, often outrage or fear, is more likely to be shown (Bakshy et al., 2019). This creates "echo chambers," where users are primarily exposed to information that confirms their existing beliefs (Nguyen et al., 2020). A study by Matias & Morris (2019) found that exposure to echo chambers on Facebook significantly increased belief in false political news in Kenya. This algorithmic bias makes it particularly challenging to counter misinformation,



as corrective information may not even reach those who need it most. This lead to confirmation bias, the tendency to favor information that confirms one's existing beliefs and disregard information that contradicts them, which play a crucial role in the spread of misinformation (Nyhan & Reifler, 2010). People are more likely to share information that aligns with their worldview, even if it is inaccurate. This is particularly true for emotionally charged topics. For example, research by Akin et al. (2018) in Nigeria found that confirmation bias influenced people's sharing of information about the 2019 general elections, with individuals more likely to share content that supported their preferred candidate.

Social media algorithms, designed to keep users engaged, often create echo chambers where users are primarily exposed to information that confirms their existing beliefs. This fuels the spread of misinformation as users share content within their social circles, reinforcing their own biases and hindering exposure to counter-narratives (Vosoughi et al., 2018). Research by Adebayo et al. (2020) in Nigeria suggests that social media algorithms amplified COVID-19 misinformation, particularly within specific political or religious groups, further polarizing public opinion. Moreover, the COVID-19 pandemic was not immune to political manipulation. Misinformation can be weaponized to sow discord, undermine trust in authorities, and advance political agendas. Political actors may use social media to spread misinformation to discredit opponents or deflect blame for their handling of the pandemic (Chen et al., 2020). Instances of this were documented in several African countries, including Nigeria, where political messaging on social media often blurred the lines between fact and fiction.

## **IMPLICATION OF INFODEMIC ON EFFECTIVE HEALTH RISK COMMUNICATION**

The COVID-19 pandemic has highlighted the important role of effective and inclusive risk communications as a priority of an outbreak response (Ihekweazu et al., 2022). The Nigerian government and public health experts worked hard to keep citizens informed about health protocols. (Editor, 2020). Establishing a multidisciplinary crisis communications team supervised by the National Centre for Disease Control in partnership with the COVID-19 Presidential TaskForce enabled improved coordination among government, private sector, non-government organisations, and individuals for Nigeria's COVID-19 communications response. Sensitising and mobilising citizens to take responsibility through strict implementation of preventive non-pharmaceutical measures is key to flattening the curve(Dan-Nwafor et al., 2020). By creating the #TakeResponsibility campaign, Nigerian authorities ensured that the community and people were at the heart of the COVID-19 communications from early on and were empowered to play a part in the response (Ihekweazu et al., 2022), which also enabled its adaptation by relevant stakeholders at the subnational level, enabling further message dissemination and uptake. These COVID-19 preventive measures in Nigeria include hand washing, sanitiser use, wearing face masks, lockdown, and social distancing(Omaka-Amari et al., 2020). Effective communication requires disseminating information via credible communication channels, which is potentially beneficial for risk communication to control the pandemic Erinoso et al., 2020). For instance, a study to assess the level of trust in the Coronavirus disease 2019 (COVID-19) risk communication efforts in Nigeria showed that Nigerians between the ages of 21 to 39 accessed COVID-19 information through the NCDC. They have a high level of trust in the NCDC, as those who lived with children below 18 years had a high level of trust in the NCDC. Policymakers should prioritise the involvement of young and educated persons in COVID-19 risk communication strategies(Dan-Nwafor et al., 2020). In addition, it was also discovered by (Erinoso et al., 2020) that a significant proportion of Nigerians sought accurate information from recognised health organisations, such as the Nigeria Centre for Disease Control and the World Health Organization.

However, due to the rapid evolution of the COVID-19 pandemic, misinformation has begun to take a toll on Nigerians, jeopardising the country's noticeable progress in combating the virus. In 13 African countries,

which include Nigeria, risk communication and community engagement (RCCE) strategies and activities faced challenges such as distrust in government, cultural, social, and religious resistance, and inertia fueled by the infodemic (Adebisi et al., 2021). Furthermore, the human mind plays a significant role in spreading misinformation. In contrast, critical-thinking individuals are very important in controlling the flow of misinformation (Awan et al., 2022). One of the reasons given for not believing in the existence of COVID-19 is mistrust of the government. At the same time, some people claim to have seen no one infected with the virus (Editor, 2020). This is reflected in the use of face masks, as well as in the social and physical distance. Fake news has been discovered to contribute to the non-adherence to safety measures and make Nigerians face difficulties in identifying and sieving authentic Covid-19 information from an avalanche of half-truths and false information available (Ahmed & Msughter, 2022). More so, examining the phenomenon of fake news in health (Rocha et al., 2021) observes that infodemic knowledge can cause psychological disorders and panic, fear, depression, and fatigue.

Similarly, according to one study (Emovwodo et al., 2022), many people at the grassroots still do not believe COVID-19 is real, while others see it as a government scheme to steal money. Misleading information, such as conspiracy theories and fake news, can promote unhealthy practices, worsening crises, and stigmatisation; combating the spread of coronavirus entails combating conspiracy theories, ensuring accurate information, and fostering trust between the government and the public (Ayandele et al., 2020). People share misinformation and rumours based on what they hear on online platforms without investigating or exploring accurate information from an authentic source. Rumours and misinformation lead to severe stress and anxiety among people that affect an individual's well-being (Awan et al., 2022). According to another study (Ayandele et al., 2020), COVID-19 conspiracy theories were fueled primarily by a lack of trust in political leadership and the "breaking" of inaccurate coronavirus news by traditional media.

Social media has been discovered to be that medium that propagates infodemic. A study (Kemei et al., 2022) using a scoping review found that Black people, including those in Nigeria, are accessing and often sharing online disinformation and misinformation primarily through social media platforms such as WhatsApp, Facebook, Twitter, YouTube, and Instagram. Altruism, instant news sharing, self-promotion, and socialisation are predictors of fake news sharing (Awan et al., 2022). Chinedu-Okeke et al. (2021) discovered that WhatsApp was widely used in spreading misinformation around the world, resulting in fear or tension, which often kills more quickly than the disease itself. These incidents demonstrate that Nigeria is not only fighting COVID-19 but also fighting a deadly misinformation war. It was also discovered by (Nweze et al., 2020) that Nigerians were misinformed about COVID-19 due to information overload from social media, as the results show a significant relationship between COVID-19 infodemic and individual attitude to preventive measures of the disease. Social media platforms such as Facebook and Twitter were used to spread rumours, falsehoods, and sensational news, among other things (Mohammad Ali et al., 2021). This impacts the ability of risk communication, and community engagement approaches to reduce confusion and build trust in the public health guidance community members can follow, thereby limiting disease spread. This can lead to mistrust in governments, researchers, and health professionals, negatively impacting people's lives and health. The proclivity to spread false information or rumours during the COVID-19 pandemic is directly related to the development of anxiety in people of all ages.

## **EFFECTIVE STRATEGIES FOR COMBATING MISINFORMATION IN DIVERSE CONTEXTS**

It is evident from the discourse so far that Africa faces unique challenges in the fight against misinformation. Limited digital literacy, low trust in traditional media, and the prevalence of social media platforms where false information can spread rapidly all contribute to the problem (Brundage, 2021). Misinformation often takes the form of rumors, conspiracy theories, and manipulated visuals shared through

messaging apps like WhatsApp. These messages often exploit existing social and political tensions, making them more believable (Göttlich, 2019). The consequences of misinformation can be dire. In Nigeria, for example, the spread of false information about the Ebola virus during the 2014 outbreak hampered public health efforts and led to violence against healthcare workers (Onyeneho& Okolo, 2019). Similarly, in Kenya, fake news surrounding the 2017 elections contributed to ethnic tensions and violence (Okwuehi& Adie, 2020).

Fact-checking organizations play a critical role in debunking misinformation and promoting accurate information. These organizations employ journalists and researchers to verify claims made online and in traditional media. Platforms like Dubawa in Nigeria, Africa Check across the continent, and PesaCheck in East Africa have emerged as important sources of factual information for citizens (Adebayo, 2020). These organizations use a combination of techniques, including verifying sources, cross-referencing information, and consulting with experts (Boykoff & Yeo, 2017). The impact of fact-checking is undeniable. Studies by Hassan et al. (2018) demonstrate that exposure to fact-checks can lead to reduced belief in misinformation and increased trust in fact-checking organizations. However, challenges remain. The sheer volume of misinformation makes it difficult for fact-checkers to keep pace. Additionally, the spread of misinformation often occurs within social media echo chambers, where users are less likely to encounter fact-checks (Bakshy et al., 2019). The effectiveness of fact-checking lies in its ability to expose the techniques used to create and spread misinformation. Studies have shown that fact-checking can be effective in reducing belief in false information, particularly when it is presented before exposure to the misinformation (inoculation theory) or soon after exposure (debunking) (Tsfati& Cohen, 2020).

However, fact-checking also faces limitations. The sheer volume of misinformation being spread online makes it difficult for fact-checkers to keep up. Additionally, fact-checking can sometimes inadvertently amplify the reach of the misinformation it seeks to debunk (Bodewitz et al., 2018). To overcome these limitations, fact-checking organizations need to be strategic. Collaboration between fact-checkers across Africa can help to ensure wider coverage of misinformation. Additionally, fact-checkers need to focus on creating content that is engaging and easy to understand for a broad audience. Social media platforms also have a responsibility to work with fact-checkers to flag and remove demonstrably false information.

While fact-checking is crucial, a long-term solution to misinformation lies in empowering citizens to become discerning consumers of information. This is where media literacy comes in. Media literacy education equips individuals with the skills to critically evaluate information, identify bias, and verify sources (Hobbs, 2016). There are several promising initiatives promoting media literacy in Africa. UNESCO, in collaboration with African governments and civil society organizations, has developed a framework for integrating media and information literacy (MIL) into school curriculums. Organizations like the Media Foundation for West Africa (MFWA) conduct media literacy workshops for journalists, educators, and community leaders. Media literacy education can be particularly effective when it is tailored to the specific needs and contexts of African audiences. In Nigeria, organizations like the Premium Times Centre for Investigative Journalism (PTCIJ) conduct workshops and training programs to equip journalists and citizens with media literacy skills (Premium Times Centre for Investigative Journalism, n.d.). Research by Shin et al. (2018) suggests that media literacy education can be effective in mitigating the spread of misinformation. However, long-term, sustained efforts are needed to create a population of discerning information consumers. Similarly, Dame Adjin-Tettey (2018) suggests that media literacy interventions that are culturally relevant and interactive can be more effective in helping people identify fake news. However, implementing media literacy programs on a large scale can be challenging, requiring investment in educational resources and teacher training. It is also important to consider the limitations of media literacy education. While it can equip individuals with critical thinking skills, it may not be a foolproof solution against sophisticated misinformation campaigns.

Fact-checking and media literacy are essential tools for combating misinformation, but they cannot be fully effective without addressing the underlying issue of trust. Many Africans have low trust in traditional media outlets, which can make them more susceptible to believing information shared on social media (Brundage, 2021). Building trust requires media outlets to commit to ethical and responsible journalism. This means fact-checking their own work, holding powerful institutions accountable, and providing diverse perspectives on important issues. News outlets also need to be more transparent about their ownership and funding structures to avoid accusations of bias. Additionally, journalists need to actively engage with their audiences, responding to concerns and building relationships with the communities they serve (Moyo, 2019). Governments also have a role to play in building trust. While some governments have been tempted to restrict access to social media to control the spread of misinformation, these approaches can be counterproductive and undermine democratic freedoms (Tsandizira, 2018). Instead, governments should focus on promoting media pluralism and supporting independent media outlets.

Despite these efforts, the challenge of misinformation remains significant in Nigeria. Moving forward, a multi-pronged approach that combines fact-checking, media literacy education, and efforts to build trust in traditional media is essential. Additionally, addressing the root causes of misinformation, such as social and economic inequalities, is crucial for creating a more informed and resilient Nigerian society.

## **THE POLICYMAKER'S DILEMMA: BALANCING FREE SPEECH AND COMBATING MISINFORMATION IN AFRICA**

The digital age has empowered individuals to become information producers, but it has also opened doors for the spread of misinformation. In Africa, a continent with a rapidly growing internet user base and complex social and political landscapes, misinformation can fuel social unrest, erode trust in institutions, and hinder public health efforts (Adu-Oppong et al., 2019). Many African countries have looked to legal frameworks to curb the spread of misinformation. Nigeria, Africa's most populous country, offers a compelling case study in the fight against misinformation. The country has a vibrant social media landscape, which has facilitated the spread of both truthful and false information. The 2019 general elections and the COVID-19 pandemic provide stark examples of how misinformation can have a significant impact on public health and political stability (Onyeneho & Okolo, 2019).

The Nigerian government has responded by enacting the Cybercrime Act. However, concerns remain about the potential for this law to be used to silence dissent (Amnesty International, 2019). Similar laws exist in Kenya, Ghana, and Uganda (Ogola et al., 2020). Proponents of such laws argue that they can deter individuals from deliberately spreading misinformation and hold them accountable for its consequences. However, legal deterrents are not a silver bullet. Enforcing such laws can be challenging, particularly in countries with limited resources and weak judicial systems (Moyo, 2019). Additionally, these laws can be used to silence legitimate dissent and criticism of the government, leading to accusations of censorship and a chilling effect on free speech (Tsandizira, 2018). Furthermore, research suggests that criminal penalties may not be the most effective way to change online behavior. Studies have shown that fear of punishment can backfire, making individuals more likely to share misinformation if they believe they are doing so anonymously (Brundage, 2021).

However, left unchecked, misinformation has the potential to erode public trust in institutions, hinder informed decision-making, and destabilize societies. Policymakers have a crucial role to play in mitigating this threat. Policymakers across the continent face a complex dilemma: how to combat misinformation without infringing on the fundamental right to freedom of expression. While legal deterrents may offer a seemingly straightforward solution, the potential for censorship and the challenges of enforcement highlight the need for alternative strategies. Therefore, policymakers can help by doing the following:

- **Supporting Fact-Checking Initiatives:** Fact-checking organizations like Dubawa in Nigeria and Africa Check across the continent play a vital role in debunking misinformation. Policymakers can support these organizations by providing funding and resources, creating a conducive legal environment for their operation, and encouraging collaboration with media outlets (Adebiyi & Akinfeleye, 2018).
- **Promoting Media Literacy Education:** Integrating media literacy education into school curriculums can equip citizens with the critical skills needed to identify credible sources, analyze bias, and recognize manipulative tactics employed by purveyors of misinformation (Hobbs, 2016). Nigerian policymakers can collaborate with education authorities and civil society organizations to develop and implement age-appropriate media literacy programs.
- **Holding Social Media Platforms Accountable:** Social media platforms provide fertile ground for the spread of misinformation. Policymakers can introduce regulations that hold these platforms accountable for the content disseminated on their platforms. This could include mandating content moderation policies, promoting transparency in algorithms, and requiring platforms to cooperate with fact-checking initiatives (Shu et al., 2017).
- **Encouraging Collaboration between Stakeholders:** A multi-stakeholder approach involving governments, civil society organizations, media platforms, and technology companies is essential for tackling misinformation effectively. Collaboration can facilitate information sharing, best practice development, and coordinated responses to misinformation campaigns.
- **Building Trust in Traditional Media:** Many Africans have low trust in traditional media outlets, which can make them more susceptible to believing information shared on social media (Brundage, 2021). Policymakers can encourage ethical and responsible journalism by promoting media pluralism and supporting independent media channels (Moyo, 2019).
- **Addressing the Root Causes of Misinformation:** Misinformation thrives on feelings of frustration and discontent. Policymakers can help to create a more informed and equitable society by addressing social and economic inequalities, promoting quality education, and fostering inclusive democratic processes.
- **Promote Independent Regulatory Bodies:** Independent regulatory bodies with clear mandates and diverse representation can help ensure that any regulations governing online content are implemented fairly and transparently.
- **Support Research and Development:** More research is needed to understand the specific ways misinformation spreads in different African contexts. This research can inform the development of more effective strategies for combating it.
- **Engage with Social Media Platforms:** Policymakers need to engage with social media platforms to develop collaborative solutions for addressing misinformation. This could include measures to improve content moderation, promote fact-checking initiatives, and increase transparency around algorithms that influence content visibility.

There is no single solution to the problem of misinformation. A multi-pronged approach, combining fact-checking initiatives, media literacy education, and holding social media platforms accountable, is necessary. Nigeria presents a unique case study due to its large population, diverse ethnicities, and vibrant social media landscape. Combating misinformation in Nigeria requires a contextualized approach that addresses the specific challenges mentioned above. Nigeria has over 500 languages. Public health information and fact-checking initiatives need to be disseminated in multiple languages to reach a wider audience (Akinsola et al., 2020). Traditional media outlets, such as radio and community newspapers, continue to hold significant influence in rural areas. Collaborating with these outlets can ensure wider dissemination of accurate information beyond urban centers (Okechukwu et al., 2020).

Furthermore, marginalized communities, with limited access to information and technology, are particularly vulnerable to misinformation. Targeted interventions are necessary to reach these populations and address their specific concerns (Onuora et al., 2020). Similarly, universities in Nigeria, like the University of Ibadan, University of Lagos and the University of Nigeria, Nsukka, can play a crucial role by incorporating critical thinking modules into various degree programs, not just those related to communication or media studies (Agboola, 2014). Public libraries and community centers can also offer workshops and training programs on critical thinking skills targeted at the general population.

## **POLICY LESSONS**

To stop the infodemic from impeding effective risk communication, Okorie (2022) suggest that governments, international agencies, and non-governmental agencies should partner to develop a media literacy project on COVID-19 to educate sensitive individuals about how to detect fake news as well as the importance of priority health practices such as vaccination, healthy lifestyle practices to curb the threat of COVID-19 in Nigeria and other parts of the world. There is a need to ameliorate the adverse effects of COVID-19 misconceptions and myths through evidence-based campaigns using all sources of information (Omaka-Amari et al., 2020). Practitioners must actively engage with younger adults in health and risk communication due to their increased vulnerability to misinformation, lower levels of knowledge, and increased susceptibility to COVID-19 (Vijaykumar et al., 2021). Public health organizations must incorporate audience segmentation activities into their infodemic management strategies as well as evidence-based infodemic interventions by health agencies and increased participation of younger adults in pandemic misinformation management efforts (Vijaykumar et al., 2021).

Information quality is necessary for effective information processing (Azeez et al., 2021). Communication professionals must pay close attention to providing useful, accurate, and complete information. Risk communication strategies, according to Mohammad Ali et al. (2021), should include advocating for preventive measures, focusing on solutions, combating fake information, opposing racism and stigmatisation, relying on scientific facts, confronting conspiracy theories, dealing with pseudoscience and denials, explaining statistics meaningfully, avoiding the temptation to trivialise and sensationalise, and using local languages. This issue emphasises the importance of social network users developing strong digital literacy skills, particularly the ability to verify digital information from credible sources. Furthermore, as recommended by (Ephraim, 2020), radio should be used to combat the menace of misinformation created and spread through social media channels because radio has strong potential to reach ordinary citizens in Nigeria, including people at the grassroots, and has active gatekeepers; news editors who keep a close eye on content before it is broadcast. There is also a need to add the lessons provided by National Centre for Disease Control as outlined by (Disu et al., 2020) to include:

- Establishing and activating crisis communication platforms, communication networks, and stakeholder coordination platforms made communication and coordination easy.
- Increase the size of the current infodemic management team to include more relevant stakeholders.
- Begin developing a strategy for increasing individual, community, and societal resilience to misinformation.
- Evaluate the efficacy of infodemic management interventions.
- Conduct innovative research to understand better how misinformation influences behaviour and strategies for combating misinformation.
- Advocate infodemic management in all policies of government.

## **CONCLUSION AND RECOMMENDATION**

With the emergence of new media and the birth of social media, there has been unprecedented reach and exposure to information, a true definition of the information age. Unfortunately, with the plethora of information in this information age, many people still do not check their facts, thereby subconsciously spreading misinformation, leading to the outbreak of infodemic. The traditional and official media are obligated to provide authentic and evidence-based information to the public. This requires responsible utility of social media so people can take proper preventive measures.

One of the most pressing issues in the current media literacy overview is the complexity of the media ecosystem and how it necessitates mastery of new skills and knowledge as modern media allows for relatively easy manipulation, production, and dissemination of misinformation, including manipulation of media assets such as images and videos. During the Covid 19 pandemic, many of us learned firsthand how critical it is to identify trustworthy sources of information. On the other hand, the ability to sort through breaking news, fake news, and misinformation is a daily issue, not just a crisis issue. Media literacy and awareness focus on how a person accesses, analyses, evaluates and uses all forms of communication. Simply put, it is comprehension and participation in the world around us.

Proactively, inoculation messages should be used to protect people from fake or misleading information, and this should be accomplished by collaborating with religious leaders, traditional leaders, local artisans unions and opinion leaders, community trade-medical experts, and media professionals to protect against persuasion or influence of fake information through pre-exposure to weakened versions of a stronger, future threat. There should also be a promotion of equal and transparent access to media among different demographics, such as social media for young people in cities, radio for older adults in cities and villages as well as young people, television for emphasising and pictorial depiction, posters and billboards for reinforcement in busy areas of cities and villages, and the use of village square or town hall meetings in communities with strong bonds.

Therefore, policymakers should design independent fact-checking institutes that can checkmate disinformation on social media. Policymakers should work hand-in-hand with social media platforms to further reinforce and promote factual information and to respect and not impede on the right of individuals to share and use information, thereby disarming misinformation. The media must be ready to debunk and fact-check misinformation, countering it with evidence-based information and prioritising science over sensational reports, which will erode trust in the public health response to the outbreak in the long run. While many false stories about COVID-19 have political or even religious undertones, the media is responsible for removing political, religious, and personal interests from every story about Nigerians' public health. Furthermore, policymakers should look into establishing a penal system that can serve as a deterrent for individuals who decide to misinform the public. Policymakers should also entrench the school curriculum from primary school to high-level education, fact-checking and its processes. In their formative years, this will programme a shield in the minds of the young generation of Nigerians, the need to fact-check information.

Policymakers should carefully navigate the tension between freedom of expression and the need to ensure a healthy information environment. Open dialogue with stakeholders, including journalists, civil society organizations, and technology companies, is crucial in developing policies that are both effective and respect fundamental rights.

By prioritizing media literacy education, collaborating with a range of stakeholders, and fostering a culture of critical thinking, policymakers in Africa, including those in Nigeria, can create a more informed and resilient citizenry. This will ultimately lead to a stronger and more democratic society.

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