

MISINFORMATION SHARING AND BEHAVIOURAL PATTERN OF NIGERIANS ON A VIRAL COVID-19 DISINFORMATION VIDEO*

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This study complies with research and publication ethics.

Abstract

This study focuses on a COVID-19 disinformation video promoting hydroxychloroquine as a cure, while dismissing other promoted COVID-19 preventive behaviours. It examines the virality of the video among Nigerians, their convictions on claims made, and likely behaviour in the possibility of suspected COVID-19 infection. The study was premised on the "availability cascade effect" which predicts a higher tendency for people to believe viral information, especially when supported by individuals considered experts on the issue being promoted. It adopted the survey research method, using snowball sampling. Data for the study was gathered electronically online from 222 participants who responded to survey. The snowball sampling method was adopted due to movement restrictions in Nigeria occasioned by the ravaging COVID-19 pandemic at the time of data collection. Findings from the study show that over 90 percent of respondents were aware of the video, with many denying further sharing online. Despite multiple fact-checks on different claims in the video, respondents who still believed the claims were found more likely to try-out hydroxychloroquine efficacy as a COVID-19 cure than those who do not. Respondents were however mostly positive on adhering to promoted COVID-19 preventive measures despite the contrary claims in the video. The virality of the video compared to its fact-checks, and sustained belief in its promoted disinformation claims, support the need to stop false information from spreading very early. Hence, there must be sustained efforts to continuously track false and malicious claims in the public space and strive to stop its spread immediately.

Keywords: COVID-19, disinformation/misinformation, COVID-19 behaviour, COVID-19 video, hydroxychloroquine, Nigeria.

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VİRAL BİR COVID-19 DEZENFORMASYON VİDEOSU BAĞLAMINDA NİJERYALILARIN DAVRANIŐ MODELLERİ VE YANLIŐ BİLGİ PAYLAŐIMI*

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Bu çalışma araştırma ve yayın etiğine uygun olarak gerçekleştirilmiştir.

Öz

Bu çalışma, COVID-19'un bir tedavisi olarak hidroksiklorokin'i öne çıkaran ve diğer COVID-19 önleyici davranış ve tutumları reddeden bir dezenformasyon videosuna odaklanmaktadır. Çalışma bu bağlamda videonun Nijeryalılar arasında viral olma derecesini, iddiaların inanılabilirliğine dair kanaatlerini ve şüpheli COVID-19 enfeksiyonu durumunda olası davranışlarını incelemektedir. Çalışma, viral bilginin özellikle alanında uzman kabul bireyler tarafından desteklenmesi durumunda, insanların viral bilgiye inanma eğiliminin daha yüksek olduğunu öngören "kaskad etkisi"ne dayandırılmaktadır. Bu çerçevede çalışmada kartopu örneklem tekniği kullanılmış ve anket yöntemi tercih edilmiştir. Araştırmanın verileri, anketi yanıtlayan 222 katılımcıdan elektronik ortamda çevrimiçi olarak toplanmıştır. Araştırmanın verilerinin toplandığı süreçte COVID-19 salgınının Nijerya'da neden olduğu hareket kısıtlamaları nedeniyle kartopu örneklem tekniği benimsenmiştir. Çalışmadan elde edilen bulgular, katılımcıların yüzde 90'ından fazlasının videodan haberdar olduğunu fakat paylaşımında bulduklarını inkâr ettiklerini göstermektedir. Videodaki iddialarla ilgili birden fazla doğrulama yapılmasına rağmen, iddialara inanmayı sürdüren katılımcıların hidroksiklorokinin etkisini bir COVID-19 tedavisi olarak denemeye, iddialara inanmayan katılımcılara kıyasla daha eğilimli oldukları saptanmıştır. Ayrıca katılımcılar, videodaki aksi yöndeki iddialara rağmen, kendilerine sunulan COVID-19 önleyici tedbirlere uyma konusunda çoğunlukla olumlu bir tutum göstermişlerdir. Yapılan doğrulamalara kıyasla, videonun viral olma seviyesi ve desteklenen dezenformasyon iddialarına olan inanç, yanlış bilgilerin yayılmasının erken bir safhada durdurulması ihtiyacını desteklemektedir. Bu nedenle, kamusal alandaki yanlış ve kötü niyetli iddiaları devamlı takip etmek ve yayılmalarını ivedilikle durdurmak için aralıksız bir çaba gösterilmelidir.

Anahtar Kelimeler: COVID-19, dezenformasyon/mizenformasyon, COVID-19 davranış ve tutumları, COVID-19 videosu, hidroksiklorokin, Nijerya.

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Introduction

Among frequently shared misinformation about the coronavirus pandemic is the controversial use of hydroxychloroquine either as a cure or preventive measure to the ravaging virus. This was heightened with the emergence of a viral video of a group of individuals that called themselves 'America's Frontline Doctors' on July 27, 2020. In the video, members of the group, clad in white coats appeared in front of the United States Supreme Court building making series of claims dismissing official response and measures to curtail the pandemic. The choice of the US Supreme Court frontage was probably to lend credence to the group. The video went viral globally generating tens of million in views across social media platforms. Several versions of the video flooded the Nigerian social media space on July 28, 2020.

Among vehement speakers at the event is a controversial Nigerian-trained US-based doctor, Stella Immanuel, who promoted hydroxychloroquine as a cure to the novel coronavirus, COVID-19 and dismissed wearing of face masks (Andrews & Paquette, 2020). Days later, Immanuel claimed she was on a spiritual mission to save the world (Ugbodaga, 2020). Others in the video were also reported to be of questionable personality with media report indicating little evidence most worked as COVID-19 frontline workers as suggested by the group's name (Basen et al., 2020). They have since been noted as soldiers of COVID-19 disinformation and labelled 'conspiracy-minded physicians' (Schwarcz, 2021).

Soon after the group released the video, then United States President, Donald Trump retweeted it, and it went viral thereafter. Several versions of the video were shared across social media platforms attracting millions of views within hours. Tardáguila (2020) noted that the video was seen 14 million times on *Facebook* within six hours of its upload. *The New York Times* reported one version of the video on *Facebook* alone attracted 16 million views (Frenkel & Alba, 2020). It was also a leading performing post on *Twitter* with over 14 million views (Akinpelu, 2020). This was despite the fact that social media companies removed the video within hours of its upload (Frenkel & Alba, 2020). The video thus added to the streams of disinformation and misinformation on the pandemic, with potential to hinder efforts in combating the COVID-19 pandemic. Not surprisingly, it reignited widespread interest in potential use of hydroxychloroquine in combating the coronavirus pandemic.

A month earlier in June 2020, the WHO had stopped clinical trials of hydroxychloroquine as potential cure for COVID-19, after initially halting the trials in May 2020 due to safety concerns (Adebowale, 2020; Goodman & Giles, 2020). Initial trials of hydroxychloroquine had shown promising results in the management of COVID-19 cases in many societies (Goodman & Giles, 2020). As at the time of the video, several studies were ongoing globally, with no consensus yet among the scientific community (Goodman & Giles, 2020).

There was also call for local efforts in dealing with the global pandem-

ic based on the peculiarities of each society (*The Guardian Editorial Board*, 2020). When the WHO initially called for a halt in clinical trials on the use of hydroxychloroquine to treat the virus, Nigeria's National Agency for Food and Drugs Administration and Control (NAFDAC) maintained its approval locally (Adebowale, 2020). Months after the WHO halted the clinical trials of hydroxychloroquine, Director General of NAFDAC, Prof. Mojisola Adeyeye, continued to promote the drug, noting positive outcomes in clinical trials in selected African countries in its use at the early stage of COVID-19 infection to prevent progression of the disease (Muanya, 2020).

More conclusive studies have since emerged denouncing the efficacy of hydroxychloroquine in the treatment of COVID-19 (Gould & Norris, 2021), with the WHO (2021) summing up its position thus:

WHO does not recommend hydroxychloroquine as a treatment for COVID-19. This recommendation is based on 30 trials with more than 10 000 COVID-19 patients. Hydroxychloroquine did not reduce mortality, the need for, or duration of mechanical ventilation. Taking hydroxychloroquine to treat COVID-19 may increase the risk of heart rhythm problems, blood and lymph disorders, kidney injury, liver problems and failure.

The earlier controversies within the scientific community (Goodman & Giles, 2020) added to the confusion among the general public. While many experts denounced Immanuel's claims as 'personal opinion, which has no scientific backing and should simply be regarded as unsubstantiated claims' to 'be taken with a pinch of salt' (Olatunji, 2020); others saw her as the courageous doctor ready to go against all odds to halt the spread of the pandemic (Rafiu, 2020). Some experts continue to discredit scientific facts; promoting unsubstantiated claims and conspiracy theories around the pandemic (Schwarcz, 2021). These controversies were not unexpected considering that little was known in the early stage of the pandemic, with studies still ongoing to better understand the situation. Relevant authorities are however expected to appropriately manage such situations. Hyland-Wood, et al. (2021, p. 4) observed that,

Some inconsistent messaging will be unavoidable due to the rapidly changing nature of a pandemic, especially when jurisdictions vary in their responses (e.g., different regions might choose different strategies, or localised outbreaks might lead to localised restrictions). However, at any one point in time, communicators should aim for consistent messages and terminology. Communications across various channels (e.g., across national and local/ subnational governments, across communication channels, and especially within a government) need to be coordinated to achieve maximum consistency.

While inconsistencies are unavoidable in a novel pandemic, it was however weaponised in the video examined in this study. Amidst a ravaging pandemic, it facilitated the spread and perhaps influenced the promotion of unsubstantiated claims about the pandemic on social media platforms.

The misleading claims made in the viral video attracted the attention of fact-checkers around the world. Many of the fact-checks debunking the claims were published within days of the video's release. They all returned a false verdict, noting that hydroxychloroquine was not yet approved as a cure for COVID-19, since research was still ongoing to test the efficacy of the drug. Fact-checking has a tendency to suppress beliefs in misinformation (Portera & Wood, 2021), but rarely gain the same level of virality as the claims they debunk (Funke, 2019). It does not always guarantee that people will change their pre-existing beliefs regarding a phenomenon. It also seemed more people might have shared the video while being critical of it; further amplifying its virality (Tardáguila, 2020). Invariably, the video appeared to have been shared widely not only by those who might have believed in the claim, but also those 'who were actually speaking against the information it contained' (Tardáguila, 2020).

The production and strategic dissemination of the video under study is one of the well 'orchestrated disinformation campaigns' (Africa Check, et al., 2020, p. 7) around the pandemic. The proclamation of "Hydroxychloroquine" as a cure for a ravaging pandemic at a time of global uncertainties without necessary approval has the potential to build false hope in the minds of an already apprehensive public. The potential for public acceptance of the claims in the video among Nigerians was high considering how many were misled into bathing with salt solution after the information spreads among the populace during the 2014 Ebola outbreak in West Africa (Kawu, 2014). Some Nigerians had actually rushed to stock up on *Hydroxychloroquine* following its promotion by then United States President, Donald Trump, as a "very powerful" drug to treat COVID-19, with reported incidences of *hydroxychloroquine* poisonings in the country days afterwards (Spring, 2020).

The proclaimed breakthrough drug, *Hydroxychloroquine*, is very significant for Nigerians who are mostly familiar with the drug previously used in the treatment of malaria, a major health burden in the country. *Hydroxychloroquine* was commonly used in the treatment of uncomplicated malaria up till 2005 when the country changed its treatment policy to more effective combination therapies, *artemether-lumefantrine* (AL) and *artesunate-amodiaquine* (ASAQ) based on WHO recommendation (National Malaria Elimination Programme, 2014).

With the rich history with *Hydroxychloroquine* in Nigeria, it became necessary to examine public perception of such disinformation promoting a widely familiar drug as a potential cure for a ravaging pandemic, as proclaimed in the video. This study thus examines the virality of the video among Nigerians, their perceptions of the claims, and the subsequent fact-checking. It also explores potential behaviour on the use of *Hydroxychloroquine* among respondents.

Online Information Sharing Behaviour and the COVID-19 Pandemic

The online space has undoubtedly demystified information dissemination; once the exclusive preserve of traditional mass media establishments. This however comes at a cost as the increasing information being shared online are hardly verified as expected of, and often practiced by traditional mass media practitioners. The spread of false information is a major challenge globally. The proliferation of internet access has enhanced the rising fortune of social media companies which mostly depends on users' engagement with messages on their platforms; triggering algorithms to further perpetuate contents with high engagements (Buchanan, 2020).

Social media platforms have since democratised information dissemination. However, it has also facilitated easy sharing and dissemination of false and unsubstantiated claims across various communities around the world. Perpetration of false information can have unwholesome consequences. For instance, during the Ebola outbreak in West Africa in 2014, many Nigerians were misled into bathing with salt solution after the information spreads among the populace (Kawu, 2014). In the wake of the COVID-19 pandemic, there were reports of 'people attacking telecommunications masts in response to fake stories about "5G causing coronavirus"' (Buchanan, 2020). With the roll-out of proven COVID-19 vaccines to possibly end the scourge of the pandemic, vaccine hesitancy remained a global cause for concern. Vaccine disinformation continued to be perpetuated by anti-vaccine activists, and readily spread online among the general populace (Center for Countering Digital Hate, 2021).

But why and how do people share false information? People tend to share information they come across online for various reasons. According to Buchanan (2020) people's tendency to share false information is not necessarily influenced by the authoritativeness of the information source, but by their perception of the truthfulness of information and alignment of the claims with their pre-existing attitudes and beliefs. Hence, individuals may likely share a false information if they are convinced of its accuracy, or where it agrees with their pre-existing belief on an issue. People also unintentionally contribute to the spread of false information; sharing such while being critical of its accuracy (Tardáguila, 2020). This tend to occur when people share information while calling attention to its inaccuracy. Hence, those who may not ordinarily be aware often become aware after receiving such messages. Regrettably, not everyone who received such messages would be convinced of its inaccuracy and they may likely further share such contents to others. A recent study however suggests that people's tendency to spread false information can be curbed by simply nudging them to think about the accuracy of the content before sharing (Pennycook et al., 2021).

The COVID-19 pandemic has further shown our vulnerability to spread misleading information at a time of global health predicament. The spread of

false and unsubstantiated claims relating to the novel coronavirus has been a cause for concern globally necessitating the WHO to call for concerted effort to control what it termed an infodemic (WHO, 2020). A BBC report noted grave consequences of COVID-19 related misinformation in different parts of the globe (Spring, 2020). This included citizens dismissing the severity of the virus resulting in delays in seeking care; rumour-induced racial tensions leading to mob attacks in India, alcohol poisonings in Iran; attacks on telecommunication facilities and personnel in the UK and other countries; hydroxychloroquine poisonings in Nigeria and Vietnam, cleaning disinfectant poisonings in the US, amongst others. The vaccines roll-out which was meant to salvage the situation has also been undermined by anti-vaccine activists propagating vaccine disinformation since the advent of the pandemic even before the vaccine breakthrough (Center for Countering Digital Hate, 2021).

Amidst the chaos, fact-checking activities around facts and fictions relating to the pandemic blossomed (Poynter, 2022). The International Fact-Checking Network (IFCN) of the Poynter Institute, formed a global alliance of over 100 fact-checkers around the world - the *#CoronaVirusFacts*, to track fact-checking activities about the virus. Since its formation in January 2020, the alliance has recorded over 16,000 fact-checks from over 86 countries and in more than 40 languages (Poynter, 2022). Social media giants also vowed to stem the spread of the pandemic by intensifying efforts to track, dispel, and promptly remove false information around the pandemic from their platforms (Chakravorti, 2020; Skopeliti & John, 2020).

Despite these efforts, false information relating to the pandemic continue to spread necessitating continuing vigilance of relevant stakeholders. A crisis situation such as the pandemic makes people more susceptible to false information; limiting their capability to evaluate potentially misleading information (Africa Check et al., 2020). Members of the public therefore need to be continuously enlightened on the potential dangers of spreading false information about the pandemic and be empowered on how to guard themselves from further perpetuating false information about the virus.

Studies have shown that shared false claims about the virus are often times not intended to cause harm. Apuke and Omar (2020) in their study examining motivation for sharing fake news during the pandemic among selected Nigerians found altruism as a leading predictor for sharing COVID-19 misinformation. Altruism relates to people's desire to share potentially useful information with others. Such desire to help others might however be counterproductive; further driving the spread of false information. This is because people may likely share unverified information they considered important in making sense of the pandemic. Other identified predictors in Apuke and Omar's study included instant news sharing, socialisation and self-promotion. A similar study on 200 respondents in Ikorodu, a Lagos suburb in Nigeria also found 94% of respondents noting they tend to share Covid-19 messages to

inform, caution and educate others (Salisu, 2021). This is despite the fact that less than one-third of respondents rated such shared messages 'mostly accurate', with only 38% reportedly attempting to confirm the accuracy of such messages.

Irrespective of the 'noble' intentions in misinformation sharing, the potential harms remain evident (Tijani-Adenle, 2021). It is therefore vital to understand people's perception of misinformation they encounter in the online space, and its potential influence on their behaviour. In this study, we examined a viral disinformation video propagated by an interest group which portrayed itself as a group of medical experts, but promoting unsubstantiated COVID-19 cure claims. The claims presented in the video appeared convincing with very high potential to mislead, since the proponents were supposed medical doctors. We therefore examined how selected Nigerians perceived this viral video, their subsequent reactions following the 'FALSE' verdict by fact-checkers, and their potential behaviour in the advent of suspected COVID-19 infection. Specifically, we examine the virality of the video among respondents, their perception of the claims therein, and subsequent behaviour. The "Availability Cascade Effect", discussed next, provided the framework for the study.

Theoretical Framework

This study is premised on the Availability Cascade Effect, an increasing tendency for people to believe shared information the more it continues to dominate the public space. According to Kuran and Sunstein (1999, p. 683), 'availability cascade is a self-reinforcing process of collective belief formation by which an expressed perception triggers a chain reaction that gives the perception increasing plausibility through its rising availability in public discourse'. The two scholars noted that availability cascades emerged as a fusion of two related cascading effects, the "informational cascade" and "reputational cascade". In informational cascades, individuals who consider themselves as having limited knowledge on a particular issue tend to rely on others whom they perceive to be more knowledgeable in forming an opinion about the issue. Hence, they tend to believe whatever the supposed experts are saying to be true, thus taking a stance from what they have been told. For reputational cascades, individuals tend to align themselves with the popular viewpoint in order not to appear to be a deviant, irrespective of their personal view on the matter. The fusion of both scenarios results in an increasing believability of the dominating viewpoint in the public space termed availability cascades.

In today's era of information super highway, it suggests a higher tendency for people to believe claims in viral messages regardless of any doubt they might have. As noted by Britt, et al. (2019, p. 96), 'an information environment such as the internet, social media algorithms that identify and highlight "trending" stories and source filters that restrict alternative information would inevitably produce an availability cascade'. This cascading effect could

occur regardless of the accuracy or otherwise of the information being circulated. Expectedly, the proliferation of false information termed 'information disorder' (Wardle & Derakhshan, 2017) is a growing concern globally. Depending on the intent of false claims being shared, Wardle and Derakhshan identified three types; misinformation, disinformation, and malinformation. Misinformation occurs when false information is shared without intention to cause harm often because people are not aware of its inaccuracy. Disinformation is however a deliberate dissemination of false information to cause harm while malinformation occur when people share genuine information intended to cause harm in the society (Wardle & Derakhshan, 2017).

Hence, the viral video examined in this study is justifiably a disinformation as it was deliberately shared by the group to spread false and unsubstantiated claims about the COVID-19 pandemic. Relating this to the "availability cascade effect" would suggest that majority of the populace who are likely to have inadequate knowledge of the COVID-19 might be convinced of the accuracy of the claims promoted in the video. The fact that the claims -particularly on the efficacy of hydroxychloroquine and dismissal of recommended non-pharmaceutical protocols, already circulating online, were being reinforced by supposed medical doctors purportedly on the frontline of fighting the pandemic would likely increase the plausibility of the claims among the populace. This is despite media report later questioning the medical integrity of personnel featured in the video, with little evidence most of them worked as COVID-19 frontline workers as suggested by the group's name (Basen et al., 2020). But again, it has been noted that such countering information may not likely go viral as the original information (Funke, 2019).

Hence, many may remain convinced of the efficacy of the hydroxychloroquine to cure the virus with the conviction that if such claim, already prevalent in the public space, were being reinforced by medical doctors, then there must be some element of truth in it, with a likelihood of conspiracy against it by health authorities as promoted in the video. The viral transmission of the video might have thus created a snowballing effect; influencing many members of the public to belief the disinformation being promoted, perhaps with few exceptions. This study thus examined the extent to which Nigerians believe in the promoted claims, and possible influence on their subsequent COVID-19 related behaviours. The following research question thus guided the study:

1. To examine respondents' attitudes towards the viral Stella Immanuel video
2. To examine respondents' sharing behaviour on viral Stella Immanuel Video
3. To examine respondents' reactions to the debunking of claims in the viral Stella Immanuel video.

Method

This study adopted the survey research method using electronic (online) means of data collection. The study population comprised active users of *WhatsApp* messaging app and other social media platforms in Nigeria. A questionnaire was drafted based on the study objectives to gather relevant data for the study. The questionnaire was first drafted on paper for manual piloting, and pre-tested with 30 potential respondents to get more insights and resolve possible ambiguities in the draft, in line with best electronic survey research practices (Björkefur et al., 2021). The final version, a 21-item questionnaire, was entered onto a *Google form* and appropriately programmed for online filling. The questionnaire's link was shared primarily through *WhatsApp* messaging app for people to respond to. *WhatsApp* was used in sharing the questionnaire link based on its popularity across varied age-groups in Nigeria. As at January 2022, *WhatsApp* was rated most popular social media platform in the country, with over 90 million users, followed by *Facebook*, *YouTube*, and *Instagram* (Statista, 2022). *WhatsApp* was thus considered an appropriate platform to share the questionnaire with potential respondents. The message used in sharing the link also included an appeal for recipients to help share among their contacts. The sampling method, identified as snowballing, was thus adopted to reduce risk of physical contact to protect the researchers and research participants as the study was conducted around the peak period of the first wave of the pandemic in Nigeria. Respondents were assured that participation in the study was voluntary; with their rights to withdraw their participation before, during and after filling the questionnaire guaranteed. Decision to fill the questionnaire was thus considered as agreeing to the terms of the research. Responses were gathered over a two-week period from, August 8 to August 22, 2020.

Despite sharing the questionnaire link with tens of thousands of *WhatsApp* subscribers via existing groups and personal contacts on the platform, only 222 respondents filled the questionnaire from across Nigeria and beyond; with the South-west region of the country recording dominance. The low response rate reflects observed trends often recorded in online surveys in Nigeria and other developing countries (Mailu et al., 2021; Nwakaego, 2021). Basic demographic details of respondents are presented in *Table 1*.

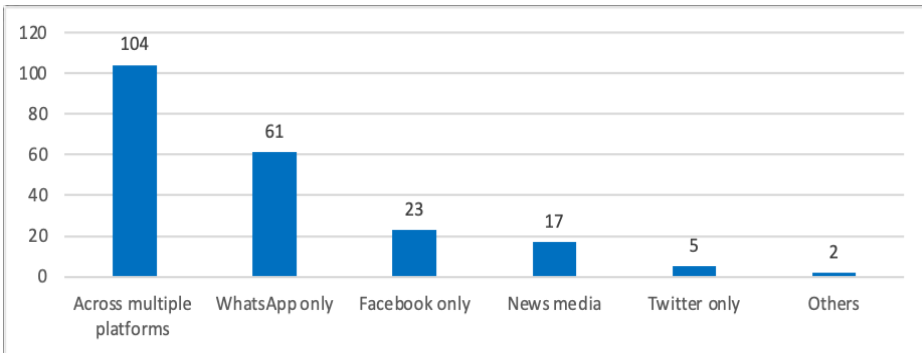
Table 1. Age distribution of respondents by gender

Age range	Gender of respondents (%)		Total
	Female	Male	
Below 18 years	1.0	1.7	1.4
18-29 years	20.4	10.9	15.3
30-44 years	40.8	50.4	45.9
45-60 years	31.1	31.1	31.1
Above 60 years	6.8	5.9	6.3
Total	100%	100%	100%
(n)	(103)	(119)	(222)

Findings

This section discusses findings from the survey of 222 respondents who participated in the study. Our findings support the virality of the video as 90 percent of respondents confirmed familiarity with the video. Seven percent said they were not aware of the video while about three percent were unsure if they had seen the video or not. The video also appeared to have trended on multiple social media platforms in the country. About half of respondents (46%) confirmed seeing the video on more than one social media platform. *WhatsApp* and *Facebook* led single platforms through which people saw the video, with *WhatsApp* leading the trail (see *Figure 1*).

Figure 1. Respondents' reported platforms through which they saw the video

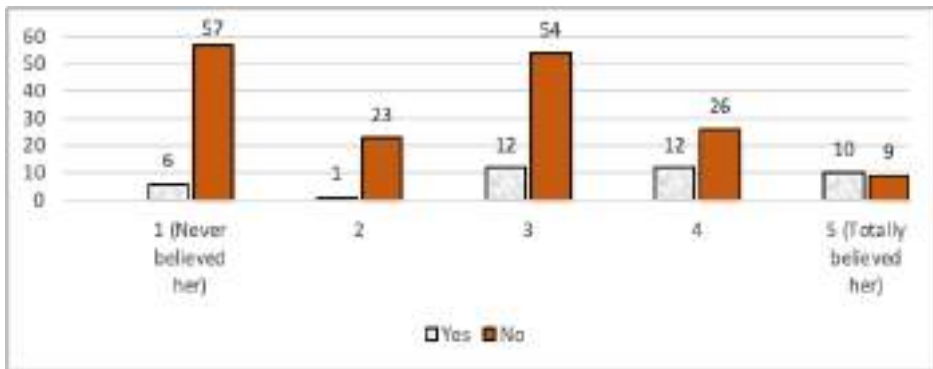


Despite the virality of the video, respondents in the study seemed not to have greatly contributed to the spread of the disinformation. Less than 20

percent of respondents (comprising 23% of males and 14% of females) confirmed sharing the video. However, the elderly population (above 60 years) more readily shared the video. Half of respondents over 60 years old confirmed sharing the video.

Respondents were asked to rate the extent of their belief in the claims made in the video on a scale of 1-5 with 1 being 'never believed her claims' to 5 for 'totally believed her claims'. Overall respondents reported a below average score of 2.66/5 suggesting that less people believed the claims than otherwise. Averagely, more males (mean = 2.78) expressed greater conviction in the claims than women (mean = 2.51). Respondents were mostly neutral, but with more denouncing the claims than believing them (see *Figure 2*).

Figure 2. Extent to which respondents believe claims made and their sharing of the video



Those undecided about the accuracy of the claims and those with higher belief in the claims shared the video more than those with less conviction about the claims. Some of those who believed the claims noted they were persuaded by the speakers' convincing oratory which according to them was 'detailed with proof'. Other reasons expressed for believing the claims included: confirmation of their previous suspicion of a cure; lingering controversies within the scientific community; supported based on success in clinical trials locally, and shared experiences of recovered COVID-19 patient. Some respondents who believed the claims said they were convinced "because she is a medical doctor", and "cited figures and gave facts on treated cases". They noted that, "she won't come out publicly if she has not treated (patients) with the drug and seen people get cured". Others were more elaborate:

With respect to the pandemic in Nigeria, there is an aura of distrust towards the claims of the government and NCDC that the effects of COVID-19 are severe. The political undertone where some state Governors are particular about the funds allocation for the pandemic takes away the credibility of the COVID-19's existence in Nigeria. Even from relevant medical reports, it was confirmed that patients can recover from COVID-19, and if this is true, then it is possible that there is a potential cure. So, the claim that hydroxychloroquine can cure the virus was believable

and to corroborate this, was the reactions of both Twitter and Facebook, deleting the video without justification.

If she can treat more than 300 patients with hydroxychloroquine without any death case and test was conducted on those patients after some days, and it was negative, then it is a proof beyond any reasonable doubt that hydroxychloroquine is a cure for COVID-19.

This issue has lingered since the pandemic started. Claims from patients who recovered showed that hydroxychloroquine was administered on them towards their recovery. This led to surge in price of the drug in the country. With claim from a medical doctor, I had to believe in it a bit.

Those who considered the claims a hoax noted their ingenuity of COVID-19 misinformation and said they considered the 'staged event' a 'political propaganda' with unsubstantiated claims which should be viewed with scepticism. Some of respondents who did not believe the claims observed that, "She looks like someone paid to talk", or "politically driven to portray such information," "someone who just needed fame"; and that "it was all about her emotions as the claims weren't scientific". They reasoned that "if it is true that hydroxychloroquine is efficient in curing COVID-19, then why are all the victims still not cured with it" noting perhaps she was only successful because "her cured patients were in the very early stages, but this cannot work for people already in the hospitals and on ventilators".

Others presented an informed perspective noting:

I have an idea of fact-checking, so I don't believe everything I see now on the internet.

Because she downgraded the use of face mask which has been the major prevention of COVID-19.

I wondered why she was the first person to speak up and I crosschecked with other Doctors (because I work in a teaching hospital) who felt her utterances were unethical.

There was still a lot of research and diagnosis going on, so I was sceptical about the efficiency of the drug curing Coronavirus.

Those sceptical about the claims expressed their views thus:

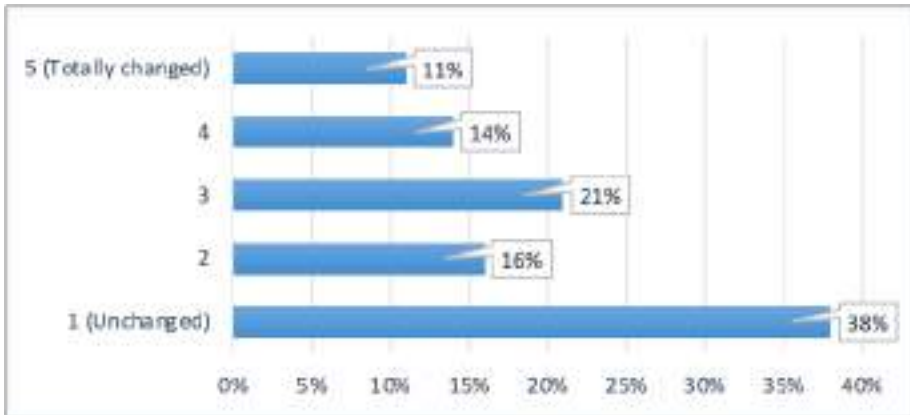
I believed she might have used the drug on her patients but I don't think science accept one's perception on scientific matter unless it is proven with empirical data

I was sceptical because of the circumstances of the broadcast, but her claim to have confidently cured over 300 confirmed severe cases got me. But I still wanted to confirm her claim from a more convincing source/body to ascertain her position.

While her claims are not scientifically backed and her religious background and ideology might be responsible for her thought ... however, the lack of transparency of nations ... and possible strategic moves towards advance slavery made me moderate in my response.

Soon after video went viral, other social media posts emerged countering the claims in the video even before fact-checks were published on the claims. Sixty-six percent of respondents (n=146) confirmed reading the countering social media posts even though majority still remained resolute in their beliefs on the claims made (See *Figure 3*).

Figure 3. Extent to which respondents' belief swayed after reading countering post



In the days following the release of the video, several fact-checks were published on claims made in the video (e.g. Spencer & Fichera, 2020), amid other elements such as profiling the America’s Frontline Doctors group, and individual members who featured in the video (e.g. Basen et al., 2020; Schwarcz, 2021). Almost forty-four percent (43.9%; n=94) of respondents confirmed awareness of the video fact-check while a slightly higher percentage (44.4%, n=95) claimed not to be aware. Another 12 percent were unsure of themselves. Of the 94 respondents who confirmed awareness of the fact-checks, only 68 percent confirmed reading it.

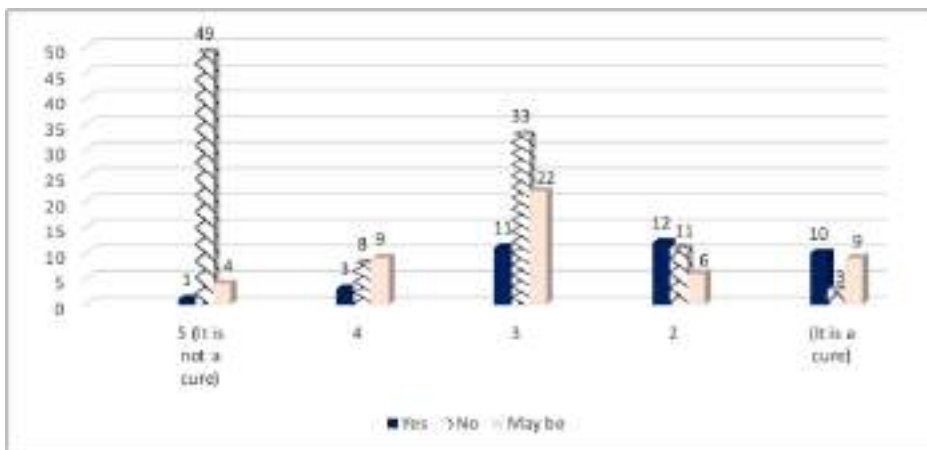
The 94 respondents reportedly became aware of fact-checks on the video after seeing online posts of fact-checks debunking claims made in the video. Many also found out about it through shared posts, or notifications by social media platforms. Few respondents reported learning about the fact-checks through news mention mostly on notable news media organisations such as Cable News Network (CNN) and Channels TV, a Nigerian news channel.

Table 2. How respondents became aware of the video fact-checking

How respondents knew about the fact-checking?	Percentage of Respondents aware of fact-checking on the video
I saw the post of the fact-checked article	36%
Someone shared the fact-checked article with me	30%
I was notified on social media	27%
News media mention	7%
Total	100%
(n)	(94)

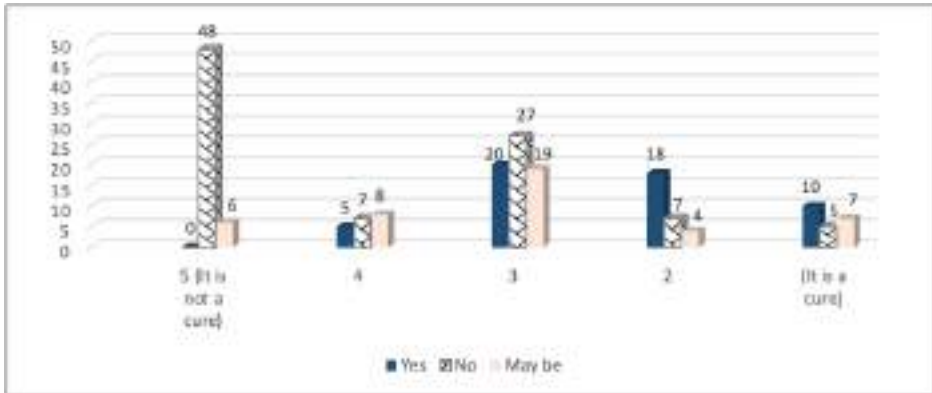
Respondents in the study appeared sceptical in believing fact-checkers' verdict on claims made in the video. The greatest percentage (35%) of respondents rated their support of the false verdict of Fact-checkers averagely with a 3-point rating on a scale of five (3/5). However, the percentage of those supporting the verdict (Rated 4 and 5 = 39%) were generally higher than those opposing it (Rated 1 and 2 = 27%). Those opposing fact-checkers' verdict appeared convinced about the claims and readily confirmed their likelihood to take hydroxychloroquine (or in combination with other drugs) to prevent COVID-19 in contrast to those supporting it (see Figure 4).

Figure 4. Likelihood of respondents taking hydroxychloroquine to prevent COVID-19 compared with extent of their support for fact-checks' verdict



Similarly, those indecisive (*rated 3*) and those not supporting fact-checkers' verdict (*rated 1 and 2*) were found more likely to self-medicate with hydroxychloroquine if they suspect they might be infected with COVID-19 (See *Figure 5*). Those who aligned with fact-checkers' false verdict thus expressed less likelihood of self-medicating with hydroxychloroquine compared to those less convinced.

Figure 5. Possibility of respondents self-medicating with hydroxychloroquine for suspected COVID-19 based on their support to the fact-checks' verdict



Respondents expressed diverse views on promoted behaviours in the video. Greatest majority of respondents simply expressed support for wearing facemask while a few more supported the idea 'cautiously'. Another dominant view focused on its preventive capability, emphasising its need to curb the spread of the virus. Some however considered the preventive ability of facemask to be relative based on specific circumstances. Less dominant views considered wearing facemask simply as a civil behaviour in obedience to official directive. Others de-emphasised its necessity in curbing the virus, noting it generally filters the air we breathe in and prevents common air-borne disease. Few respondents considered it unnecessary and/or ineffective in limiting the spread of the virus while few others focused on its limitations and considered it to be hazardous suggesting it might be risky for some with underlying breathing challenges. Others were indifferent, considering facemask use as an individual choice.

Table 3. Themes in respondents' views on wearing masks

Views on wearing masks	Frequency	Percentage
Support the idea	80	38.3
Preventive	77	36.8
Official directive	12	5.7
General prevention	11	5.3
Support the idea with caution	11	5.3
Relatively preventive	5	2.4
Ineffective / unnecessary	5	2.4
Hazardous	3	1.4
Indifferent	3	1.4
Others	2	1.0
Total	209	100.0

Overall, the level of information sharing on the video appear to be minimal among respondents. As seen in *Table 4* below, the extent to which respondents shared the original video and its subsequent fact-checks is minimal occurring in less than 20 percent in both cases.

Table 4. Respondents' sharing of the video and its fact-check?

Respondents sharing video?	Respondents' sharing fact-check?		Total
	Yes	No	
Yes	6%	12%	18%
No	13%	69%	82%
Total	19%	81%	100%
(n)	(37)	(159)	(196)

Discussion

Respondents' attitudes towards the video

Findings of the study suggest that respondents were less convinced of the factuality of the claims made in the video, and were divided in their expressed opinions. The uncertainties and conflicting reports on the efficacy of hydroxy-chloroquine either for prevention or treatment of COVID-19 might have contributed towards the disillusion expressed by some respondents. Hence, the

need for coherence in official declaration or appropriate public communication at a time of public health crisis such as the COVID-19 pandemic cannot be over-emphasised (Hyland-Wood et al., 2021). It is however commendable that many respondents were still able to critically evaluate the claims and video in general, noting a possible agenda behind the charade.

Respondents' sharing behaviour on the video

Sharing activities on the video were minimal among respondents. Despite the evident virality of the video, only a small fraction of respondents reported sharing the video thus limiting potential spread of the false claims propagated in the video. The less than 20% claims should however still be of concern considering the multiplying effect it could have on the spread of the false claims. The limited sharing is not uncommon (Buchanan, 2020). As noted by Buchanan, the 20% should still be of concern to policy makers and information disorder activists. When contextualised with the total population of active social media users, such low percentage still amounts to millions of people who could potentially spread misleading information. In this study, we found a direct relationship between respondents' belief in the claims and their subsequent sharing of the video. This supports earlier studies noting a higher tendency for people to share information they consider useful (Apuke & Omar, 2020; Salisu, 2021; Talwar et al., 2020).

The high sharing rate recorded among respondents over 60 years old is also significant considering the potential influence of elderly population within the family, and potential risk to the larger society in a pandemic (Brashier & Schacter, 2020). The finding supports observed trend in previous studies even before the pandemic (e.g. Guess, Nagler, & Tucker, 2019). It is important to understand factors predisposing the aged to share misinformation to appropriately address the problem. Brashier and Schacter dismiss the tendency to attribute the habit to cognitive declines arguing instead for social changes and digital illiteracy as risk factors. According to the duo, "Late adulthood also involves social changes, including greater trust, difficulty detecting lies, and less emphasis on accuracy when communicating. In addition, older adults are relative newcomers to social media and may struggle to spot sponsored content or manipulated images" (2020, p. 316). Hence public efforts towards stemming the spread of misinformation need to strategically engage with the older population for meaningful result. Brashier and Schacter (2020) argue that such interventions should focus on addressing the "shifting social goals and gaps in their digital literacy" among the elderly.

Respondents' attitudes following the debunking of the claims in the video

Respondents still expressed varied attitudes on the claims in the video despite the multiple debunking and fact-checking of the claims. More respondents however expressed greater supports for fact-checkers' verdicts on the

claims, when compared with their expressed low ratings of their beliefs in the video claims. Respondents still favoured wearing of face masks as a necessary behaviour to stem the spread of the pandemic. There appeared to be an inverse relationship between respondents' agreement with the false verdicts and the possibility of them practising the promoted behaviour in the video. Those who were more convinced of fact-checkers' false verdicts were less likely to use hydroxychloroquine (alone, or in combination with other promoted drugs) either as treatment or preventive for COVID-19 infection. They were also more likely to favour the use of face masks and other recommended preventive practices.

Findings from this study suggest greater familiarity with the video than the fact-checks that later debunked them. This confirms Funke's (2019) observations that fact-checks do not often attain the virality of misinformation posts they countered. Funke (2019), however noted that this need not discourage fact-checkers as there has also been several promising results on potential of well-written fact-checks to change people's misconceptions. There are also evidences of fact-checks significantly reducing public belief in misinformation (Portera & Wood, 2021). Fact-checkers must however learn to debunk false claims without further promoting the misinformation by limiting detailed references to the debunked claims (Tardáguila, 2020).

The "availability cascade effect", which provided supporting framework for this study, predicts a higher tendency for people to support claims in the kind of video examined in this study. This postulation was however not supported in this study. Evidence here suggests that less people actually believed the claims in the video despite its global virality, and the manipulative tactics employed in using supposed experts and notable personalities (e.g. Former US President, Donald Trump) to spread the disinformation campaign of calumny on the pandemic.

Findings here thus suggest that people's personal conviction might be more relevant in influencing their beliefs in viral messages irrespective of the sophistication in the presentation of the message, or pedigree of its promoters. The findings support the need for public health campaigners to focus on empowering individuals with appropriate and accurate information regarding the pandemic and other public health issues. Findings here suggests that public health campaigns on public health crisis like the COVID-19 pandemic may therefore be more effective when focused on individual's reasoning capacity to reflect on the plausibility of information they encounter to make informed decision (Pennycook et al., 2021). This is in addition to mass dissemination of accurate and verified information on the public health issue. Hence, well-researched and well-written fact-checks providing evidences, and recognising people's biases may go a long way in changing people's perspective on an issue, and their subsequent behaviour.

Conclusion

The viral video examined in this study was one of the well 'orchestrated disinformation campaigns' (Africa Check et al., 2020: 7) around the pandemic. We found that people were more likely to engage with COVID-19 dis/misinformation than their subsequent fact-checks. There appeared to be a greater conviction in fact-checking verdicts which might have included clear evidences to support the verdicts. People may less likely act on false COVID-19 claims with increasing evidence of critical evaluation of promoted false claims.

Efforts of giant social media platforms in combating false claims around COVID-19 on their platforms (Chakravorti, 2020), though commendable, need to be intensified to limit the spread of misinformation as early as possible. For instance, the video examined in this study already garnered 14 million views on *Twitter* (Akinpelu, 2020) and 16 million views on *Facebook* (Frenkel & Alba, 2020) before its removal. Despite that, it is likely still available among millions of social media users who might have downloaded it to their devices before it was taken down. No doubt, the number of views would have been much higher had it been left online. Fact-checkers must thus intensify efforts to stem the spread of misinformation by promptly tracking false claims in the public domain; early publication of debunking fact-checks, and aggressive promotion of such fact-checks for maximum reach.

Social media platforms also need to be increasingly alert and responsive to stemming the spread of false claims on their platforms. They need to show greater commitments and take decisive actions in tackling COVID-19 false claims and other forms of information disorder easily being propagated on their platforms (Chakravorti, 2020). Perceived lapses of varied platforms in tackling COVID-19 dis/misinformation (Center for Countering Digital Hate, 2021; Chakravorti, 2020; Ugbede, 2022) must be urgently addressed to wholly address the infodemic that impeded global fight to combat the COVID-19 pandemic, while threatening effective management of future global health crisis.

Limitation of Study

This study is limited in scope, examining one COVID-19 disinformation video. The sampling procedure may also limit the generalization of our findings. Broader studies are requested to establish public engagements with, and influence of online COVID-19 disinformation contents on the public.

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