

Perceived Influence of Misinformation on Psychology of Uromi Residents During The First Wave of Covid-19 Pandemic

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Abstract

The Coronavirus disease 2019 (COVID-19) is a severe acute respiratory syndrome first discovered in an outbreak of respiratory illness cases in Wuhan City, Hubei Province, China. This work is a scrutiny of how misinformation influenced the psychology of Uromi residents during the first wave of the Covid-19 pandemic. Stimulus-response theory -also known as "hypodermic needle theory" was used as the theoretical framework for this study. In the course of the research, Survey was adopted as the research design and using questionnaire as an instrument. The findings revealed that greater percentage of the respondents posit that general misinformation belief about Covid-19 has negative effect on the psychology of Uromi residents, because 65% of the respondents answered Yes fewer percentages answered No and can't say respectively. It was therefore recommended that government and other stake holders should organize well-articulated evidence-based health campaigns, employing all necessary means of information dissemination, including traditional channels.

Keywords: *Misinformation, Psychology, Uromi, Covid-19, Pandemic*

Introduction

The Coronavirus disease 2019 (COVID-19) is a severe acute respiratory syndrome first discovered in an outbreak of respiratory illness cases in Wuhan City, Hubei Province, China. The outbreak of COVID-19 was reported to the World Health Organization (WHO) on the 31st, of December 2019, and WHO subsequently declared COVID-19 a global health emergency of international concern on the 30th of January, 2020 (Gallegos, 2020).

Furthermore, WHO declared it a pandemic on the 11th of March, 2020 due to its vast and swift spread across continents of the world (World Health Organization, 2020). According to Shaban (2020) as of the 13th day of May 2020 every country in Africa has recorded a case of COVID-19 with alarming spread rates. Currently, Nigeria has recorded the third-highest number of confirmed cases of COVID-19 in Africa after South Africa and Egypt.

It is worthy to note that all the 36 states of Nigeria including the Federal Capital Territory (FCT) have recorded confirmed cases of COVID-19. At present, Nigeria has recorded a total of 58,460 confirmed cases, 7,454 active cases, 49,895 discharged cases, and 1,111 deaths as of the 29th of September, 2020.

However, the pandemic nature of COVID-19 and its fast spread have caused great fear and apprehension by Nigerians as to what the disease is all about, how it spreads, how it can be prevented and treated to mention only but a few. This apprehension has caused the Nigerian populace to seek more information about COVID-19 via various strategies to stay safe and prevent contracting the disease. Information seeking strategies are the methods used for obtaining information from information objects or information retrieval systems (IGI Global, 2020). Information can be obtained from diverse sources (primary, secondary and tertiary sources) depending on the available source at the disposal of the seekers.

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The advent of Information Communication Technologies (ICT) has made access to a wide range of information in electronic formats easier. Consequently, Xie (2007) affirmed that the new digital environment does not only prompt people to apply more than a single type of information seeking strategy but also require people to change from one information seeking strategy to another in the information search process.

The agency saddled with the responsibility of combating pandemic like the Corona virus in Nigeria is the Nigeria Centre for Disease Control (NCDC). NCDC has played a great role in combating the spread of COVID-19 by making COVID-19 information available via various sources and media which include the NCDC Webpage, television jingles, newspaper columns, social media, radio, town criers, and other online sources. The availability of COVID-19 information may not automatically translate to accessibility and use in meeting information needs. For Nigerians to be able to access accurate COVID-19 information, efforts must be put into searching accredited and reliable sources to avoid misinformation as there is a lot of jargon and false information spreading rapidly on the Corona virus disease daily.

However, from the inception of the outbreak of the virus in the world; many unverified information and beliefs have been going round especially in African continent and Nigeria in particular probably due to insufficient information about the behavior and characteristics of the virus.

Misinformation are misleading and erroneous pieces of information. They could be regarded as mistaken thoughts or ideas that have been trending in society, mostly leading to malpractices in terms of health beliefs and health seeking behaviors. Qureshi (2006). Thus, there are many misinformation regarding COVID-19 pandemic and people tend to believe every little thing that is circulated in the society without confirming it Dutta (2020) Some studies have reported some of this misinformation about the virus among people.

Moreover, it has been reported that many people believed that; "exposing yourself to the sun or to temperatures higher than 25 will prevent the virus", "the ability to hold your breath for 10 seconds or more without coughing or feeling discomfort means you are free from COVID-19 pandemic or any other lung disease", "drinking alcohol protects you against COVID-19 pandemic and is not dangerous", "COVID-19 virus cannot be transmitted in areas with hot and humid climates", "religious chants can kill the virus", "if I am young and healthy; I don't need to follow precautionary steps or physical distancing", etc. Dutta et al (2020).

Similarly, a study in Nigeria reported that some people believed that "COVID-19 pandemic is not real", others "believed that it is indeed real but cannot affect the poor or those who do not travel beyond the country", thinking that "some sorts of alcoholic substances and concoction could cure the virus or prevent them from getting infected", "believing that it is a "rich man's virus" and therefore it cannot affect the poor masses". Others believed that "COVID-19 pandemic cannot survive in a region around the equator as the temperature would kill it" (Ekundayo, 2020).

Also, another study in Nigeria reported that one of the most frequent responses on misinformation about COVID-19 pandemic is that "the virus was created in a laboratory" Abdulsalam et al (2020). Moreover, another study in Nigeria has reported that some people believed that COVID-19 pandemic was "a biological weapon designed by the Chinese government" and "consuming gins, garlic, ginger, herbal mixtures and African foods/soups as preventive measures against COVID-19 pandemic "Gandhi *et al* (2020).

Obviously, these negative effects have caused some psychological impacts the prevalence of insomnia, depression and post-traumatic stress symptoms among Uromi Residents during COVID-19 pandemic Oguntayo *et al* (2020). Including mental and physical stress among health practitioners thus leading to temporary separation from families, stigma and the pain of losing patient's and colleagues Mayhew *et al* (2020).

The survivals might experience social stigma from the society Tabish (2020) fear of being stigmatized could have prevented people with suspected cases of the virus from coming out voluntarily for testing Adegboyega (2020). In many cases, this is what is playing out in the country. It is believed that continuously holding on to some of these common misconceptions about the virus among many people might have been responsible for daily increases in the cases of the virus.

This is because, often times many people deliberately flout the formally prescribed preventive measures being put in place. Moreover, the daily increase in the cases and fatalities due to COVID-19 pandemic in Nigeria has continued to baffle the key stakeholders especially the government at all levels. Hence, this work is to study and investigate the impact of misinformation on the health psychology of Uromi residents during the first wave of COVID-19 Pandemic.

Statement of the problem

Health misinformation has the potential to harm public's health and it's considered a major threat to global public health. The framing and proliferation of health misinformation is motivated by many factors including the subject matter, the culture, and network dynamics. Studies suggest that the spread of misinformation varies by topic and that certain demographic groups and communities might be more susceptible to misinformation than others.

This is especially true during outbreaks of novel or emerging diseases, such as COVID-19 where much is unknown about the virus and vaccines or treatments do not yet exist. Misinformation about virus are usually linked to identity and beliefs, and can be considered chronic because they require continual attempts at correction. In contrast, most misinformation encountered during the COVID-19 pandemic can be classified as acute, meaning it can be corrected with scientific facts from trusted sources, such as the World Health Organization (WHO).

However, whether acute or chronic, misinformation can lead to actions or changes in attitude that can impede the control of COVID-19 around the world. In an effort to better understand misinformation about COVID-19 and its consequences, the researcher presents a simple framework that can help us identify different types of misinformation related to COVID.

Hence, this study is to investigate Impact of misinformation on the health psychology of Uromi residents during the first wave of COVID-19 pandemic.

Research Questions

1. What are the preferred information sources on covid-19 use by Uromi residents?
2. How credible are these information sources about the COVID-19 pandemic?
3. Does user's credibility evaluation of information about covid-19 have positive impact on the psychology of Uromi residents?

Literature Review

COVID-19 Pandemic

COVID-19 is an infectious disease that originated from an outbreak in Wuhan City, China in December 2019. However, due to the swift spread of the virus across nations and continents of the world, the World Health Organisation (WHO) declared COVID-19 a pandemic on the 11th of March, 2020 (WHO, 2020). According to Resnick (2020), the most common symptoms of COVID-19 are dry cough, flu, tiredness, aches, headaches, loss of taste and smell, discoloration of fingers and toes, and rashes on the skin to mention only but a few.

COVID-19 spread mainly from person to person via small droplets from the mouth or nose of an infected person whenever they cough, speaks, or sneezes (Noi, 2020). Persons can contact COVID-19 when they breathe in these droplets or touch surfaces where the droplets settle on, after which they use the same hands to touch their eyes, nose, or mouth.

The Nigeria Centre for Disease Control (2020) outline some measure members of the public should adhere to strictly to halt the spread of COVID-19, the measures include regular wearing of facemask/ covering when in public, frequent hand washing with soap under running water for a minimum of 20 seconds, use of alcohol-based sanitizer in the absence of water, maintain a physical distance of at least two meters from others, avoid crowded spaces, covering of mouth/ nose properly with tissue paper when coughing/ sneezing or covering properly with the elbow in the absence of tissue paper, stay at home whenever you feel unwell, as well as avoid close contact with persons showing symptoms of respiratory illness.

COVID-19 affects older adults more than their younger counterparts because of their underlying conditions such as cardiovascular disease, respiratory illness, diabetes and this makes their fatality rate high when contacted with the disease (Sandoiu, 2020).

Currently, there is no internationally accepted treatment for COVID-19 as WHO and other renowned pharmaceutical companies are working hard to get a vaccine soonest for the treatment of the disease. There is paucity of studies on the COVID-19 information needs of rural dwellers. Rural dwellers in Nigeria are the most deprived set of people in our society with inadequate access to health care services and basic amenities.

However, Statista (2020) conducted a comparative study to determine the areas people need more information on COVID-19. The study covers Germany, United Kingdom, and the United States.

The majority of the respondents indicated they require more information on Testing for COVID-19/ Corona, policies for travel, risks to the health, COVID-19/ Corona in general, what to do if showing symptoms for COVID-19 / Corona, shopping availability, policies for working, Policies for schools/ kindergarten, among others. Clarke, Moore, Steege, Koopman, Belden, Canfield, Meadows, Elliott, and Kim (2016) studied health information needs, sources, and barriers of primary care patients.

The findings of the study revealed that the most common information needs were information on an illness/ medical condition, nutrition, alternative medicines, and new/ experimental treatment available.

Also, Adeyoyin and Oyewusi (2015) studied the needs and utilisation of health information among young adults in Abeokuta, Ogun State, Nigeria. The findings revealed that the majority of the respondents indicated nutrition as their major health information need, this followed by diagnosed medical condition, unsafe pregnancy, unwanted pregnancy avoidance, and HIV/ AIDS infection. UNICEF (2020) opined that the elderly has other underlining illnesses.

General Misinformation Beliefs

When misinformation like “Coronavirus is not heat-resistant and will be killed in a temperature of 26-27 degrees” or “the virus does not settle in the air but on the ground, so it is not transmitted through the air” was proliferated, many public from countries with high temperature thought that they are not going to be affected by a coronavirus WHO (2020).

As a result, WHO, with evidence, made it clear that COVID-19 can be transmitted in all places, including the places with hot and humid climate WHO (2020).

In Nigeria, when it was spread that “Drinking enough of alcohol (local gin) the virus will run away and it will prevent coronavirus infection, the price was raised five times higher than the regular price and surprisingly and ridiculously publics were hunting after it in the kitchen garden. Further, Fakhruddin et al. (2020) suggested that unreliable information or misinformation resulting in mistrust in public, which ultimately adversely affects individual decisions associated with health.

Impact of Misinformation on Health

The impact of misinformation can vary depending on its prevalence, content, and persuasive capacity (Sell *et al.*, 2020). Evidence from previous disease outbreaks concludes that misinformation is a serious threat to public health efforts to control a pandemic (Kalichman *et al.*, 2009).

Adults who endorsed conspiracy beliefs during the 2014 Ebola outbreak (e.g. a cure for Ebola exists but is being withheld) reported that they would be less likely to seek medical care if they thought they had Ebola. They also reported less support for quarantine policies than adults who did not endorse those beliefs (Earnshaw et al, 2019).

In early 2019, the US experienced multiple declarations of public health emergencies due to measles outbreaks. In Europe, the WHO revoked the measles eradication status of four countries: Albania, Czech, Greece, and the UK. Some reasons attributed to the revocation include global anti-vaxxer social movements, “too little, too late” responses from public health authorities, corrective information filled with high-quality scientific information but was filled with too much jargon, etc. (Poland *et al.*, 2010).

The anti-vaxxer movement is grounded in misinformation and conspiracy theories that are focused on rhetorical and personal arguments that induce negative emotions like fear, anger, and sadness.

More research is needed to quantify the impact on health and link the recent measles outbreaks to these movements. Misinformation from seemingly credible sources, like governments, can have an impact on health. An example of this is when US President Trump touted chloroquine or hydroxyl chloroquine as a treatment for COVID-19 via tweet on March 19, 2020.

In the two weeks after this mention, searches for how to purchase this unverified treatment for COVID-19 surged by more than 200,000 searchers over the average level prior to the COVID-19 crisis (Liu *et al.*, 2020). Even after the news media reported on the fatal poisoning of a Phoenix man, searches for purchasing the drugs remained elevated at 200% and 1,167% higher than average for both drugs respectively (Liu *et al.*, 2020).

False remedies for illness, incorrect information on disease transmission, or allegations that disease is associated with a government conspiracy are all common examples of health misinformation during public health events or emergencies (Kouzy et al, 2020).

In a working paper yet to be published by the University of Chicago, Bursztyn, *et. al* study the differential exposure to news media and how misinformation on two shows on the Fox News network affect behavior and downstream health outcomes (Bursztyn *et al.*, 2020).

Their preliminary findings suggest that the documented effects on health outcomes are driven by the differences in messaging in how the two shows on the same network covered the pandemic in February and early March. The researchers suggest that when the virality of

posts on social media are reported on in the news media this potentially has an amplification effect and impact on health behavior and outcomes.

However, while misinformation has been prevalent in other pandemics, more research is needed to understand the prevalence of COVID-19 misinformation and its potential impacts on behavior and health.

Theoretical Review

Stimulus-response theory

Stimulus-response theory -also known as “hypodermic needle theory,” a dominant theory in communication research Bineham (1988, pp.230-246), is cogitated as one of the first general thoughts explaining media effects Lesser (2008).

The stimulus-response theory was developed at the very beginning of the twentieth century by combining the then available psychological and sociological theories De Fleur (1982). The theory, however, expounds that reception of a specific stimulus can be physiologically coupled with the creation of a particular reaction or response Treisman (1960, pp.49-60).

De Fleur (1956, pp.12-25) empirically explored that the increase of stimulus intensity generates a greater level of response regarding dropping leaflets on a community to convey information. Treisman (1960, pp. 49- 60) also documented that any stimulus can be interconnected to any response by any concurrent state of affairs. For this study purpose, therefore, the authors considered ‘misinformation’ as stimuli that can generate favorable or unfavorable responses regarding COVID-19. On the other hand, according to Lowery & DeFleur (1995), stimulus-response theory indicates that people lead distinct and isolated lives with limited social control each other because they are from distinct origins and their norms, values, and beliefs are not shared as a unifying set.

Further, BBC (2020) reported that conspiracies and bad information undermine public health messaging and cause potential harm. Consequently, this study proposed misinformation in three different forms as general misinformation belief, conspiracy belief, and religious misinformation belief because different people have different and distinct beliefs and ways of responding.

Methodology

The study adopted a descriptive survey design. The study sampled Rural residents in Uromi L.G.A in Edo State. Four hundred and twelve (412) Uromi residents were randomly selected.

The instrument used to elicit data from the respondents was a questionnaire; the questionnaire was carefully drafted to elicit information to achieve the objective of the study. More so, it comprises two segments (section A & B). Section A was meant to elicit demographic data of the respondents, while Section B comprised of questions geared towards gathering data for the study.

Out of 412 questionnaires distributed to the respondents, the researchers were able to retrieve 375 copies of the questionnaires from the residents of Uromi. Thus, there was a 90 % response rate.

The method of data analysis adopted were presented in tables and analyzed using descriptive statistics employing simple percentage. The formula is given thus

$$F = \frac{\text{Total no Respondents} \times 100}{Y}$$

Where F = frequency

Total no of respondents = response to a given question

Y = total population of the study

100 = Unit percentage.

Data Presentation

Table 1: Respondents Preferred Information Source

Option	Frequency	Percentage
Radio	99	26%
Television	41	11%
Social media	207	55%
Social gathering	28	8%
Total	375	100

The table shows that Ninety -Nine respondents, representing 26% answered Radio as their preferred source of getting information about COVID-19 by Uromi residents. Forty-one respondents, representing 11% answered television as their preferred sources of information. Two hundred and seven respondents, representing 55% answered social media as their preferred source of information. While twenty-eight respondents, representing 8% answered social gathering as their preferred source of information about Covid-19 by Uromi residents.

Table 2: User's Credibility Evaluation

Option	Frequency	Percentage
Yes	207	55%
No	135	36%
Can't say	33	9%
Total	375	100

The table shows that two hundred and seven respondents, representing 55% answered yes that user's credibility evaluation of information about COVID-10 has a positive impact on the health psychology of Uromi. One hundred and thirty-five respondents, representing 36% answered No. while thirty-three respondents, representing 9% were indecisive.

Table 3: Misinformation about Covid-19 and the psychology of respondents

Option	Frequency	Percentage
Yes	241	65%
No	119	31%
Can't say	15	4%
Total	375	100

The table shows that two and forty-one respondents, representing 65% answered yes that misinformation about COVID-19 have negative effect on the psychology of Uromi residents. One hundred and Nineteen respondents, representing 31% answered No. while fifteen respondents, representing 4% answered can't say.

Discussion of Findings

In research question one: enquires were made to examine the general misinformation belief about Covid-19 on the health psychology of Uromi residents, one questionnaire drawn from the question were used as a base line answer of research question one. Greater percentage of the respondents posits that general misinformation belief about Covid-19 has negative effect on the health psychology of Uromi residents, because 65% of the respondents answered Yes. Fewer percentages answered No and can't say respectively.

These are replicable to what Fakhruddin et al (2020) said misinformation adversely affects individual decision associated with health.

Research question two, findings and analysis show that conspiracy theory misinformation has negative effect on the health psychology of Uromi residents, with a greater percentage 70% of the respondents agreed. While fewer percentage of the respondents disagree with the assertion.

Question three: research question three explored the effectiveness of user's credibility evaluation of information about Covid-19 has a positive impact on the health psychology of Uromi resident's greater percentage 55% of the respondents agreed on the assertion, 36% percentage disagree while 9% percent of the respondent were indecisive on the question. The findings were in line with Baj et al., said that the source of information is imperative in credibility evaluation of information. Research question four: in answering research question four on the questionnaire. The analysis shows that a greater percentage 55% of the respondents said that preferred information from social media, 26% said they preferred radio, 11% of the respondents answered television while 8% of the respondents preferred social gatherings.

Conclusion

Holding on continuously to some common misinformation about Corona virus disease (Covid-19) pandemic among the people has been suggested to be largely responsible for the daily increase of Covid-19 pandemic and its fatalities particularly in Uromi resident in Nigeria.

This rapid increase in cases and fatalities of the virus has been having serious negative psychological effect on the health, jobs/works, businesses, family life, social relations and the economy of the country at large. There is need for positive change in people's belief-systems and health-related behaviours about the virus. This will be through effective and active public enlightenment and awareness creation by the major stakeholders, government at all levels with strict compliance with the prescribed measures for the virus.

Therefore, concerted efforts of the stakeholders at all levels to change the narrative of misinformation among people become significant. This will go a long way in influencing positive health related behaviours among people, getting rid of some misinformation about the disease that may trigger larger community transmissions as the efforts to discover new vaccine or drugs for Covid-19 pandemic treatment continues.

Recommendation

In order to enhance the impact of wide range Covid-19 misinformation among the people, there is urgent need forth government and other stake holders to organize well-articulated evidence-based health campaigns, employing all necessary means of information dissemination, including traditional channels.

1. Both government at all levels and the citizens are expected to change their behavioral patterns towards the virus, whereby well-informed messages could be packaged about Covid-19 pandemic in order to minimize its widespread.
2. The Federal Government should intensify prevention and control measures by ensuring that all states comply with Federal Government preventive. Orders in order to ensure uniformity of purpose.
3. Federal should scale up provisions for health care facilities for Covid-19 treatment as number of cases continue to increase
4. Laws against stigmatization of Covid-19 patients or survivors should be enacted and enforced by the federal government.
5. The government should attempt of change the narrative of some misinformation about the virus in Nigeria and particularly in Edo State should remain a top priority in their agenda. Pending when scientifically, medically and clinically proven vaccines or drugs for us treatment has been finally discovered in the world.

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