SOCIAL MEDIA, COVID-19 'INFODEMIC' AND PUBLIC PERCEPTION OF THE PANDEMIC IN SOUTH-EAST NIGERIA

Nweze Samuel, Ph.D

Lecturer, Department of Mass Communication, Ebonyi State University, Abakaliki, Nigeria

Kenneth Adibe Nwafor, Ph.D

Senior Lecturer, Department of Mass Communication, Ebonyi State University, Abakaliki, Nigeria

Oboke David Ogbonnaya

Lecturer, Department of Mass Communication, University of Maiduguri, Nigeria

Aneke Maurine Chika

Department of Mass Communication, Institute of Management Technology, Enugu, Nigeria

Nwamba Jane Irene

Department of Mass Communication, Institute of Management Technology, Enugu, Nigeria

Nwafor, Ezinne Comfort

Department of Theatre Arts, Federal College of Education, Obudu, Cross River State, Nigeria

Asogwa Joel

Department of Mass Communication, Enugu State University of Science and Technology, Enugu, Nigeria

ABSTRACT: *This study investigated how social media infodemic has influenced public perception of COVID-19 in South-east Nigeria. A cross-sectional survey design was used. Questionnaire served as instrument for data collection. The study was anchored on the Protection Motivation Theory (PMT), and the data collected were presented and analysed using chi-square. Results show that majority of the respondents were misinformed about COVID-19 as the result of information overload from social media as the results show significant relationship between COVID-19 infodemic and individual's attitude to preventive measures of the disease. Traditional media (radio/television) provided a more reliable information on the virus. The study recommends social media education to enhance media literacy and ability to practice individual gatekeeping on social media information among online media consumers.*

KEYWORDS: social media, COVID-19, infodemic' and public perception, pandemic, South-East, Nigeria

INTRODUCTION

On December 31, 2019, coronavirus (2019-nCoV) disease was first reported from Wuhan City in China (Hu,Yang, Li and Zhang, 2020). WHO declared it as a pandemic. Among the different types of confusion and information challenges, we need to recognise that COVID-19 is first and foremost a humanitarian challenge (McKinsey & Company,2020. The virus has caused the death of over 4, 000, 000 people with more than I, 000,000 people worldwide confirmed as infected by it. As of July, 2021 WHO reported that globally, there have been 186,638,285 confirmed cases of COVID-19, including 4,035,037 deaths; as of 12 July 2021, a total of 3,114,766,865 vaccine doses have been administered. However, there are some few countries without coronavirus. The United Nations (UN) officially recognises 193 countries infected by the virus. As of July 11th 2021, only 5 countries have not confirmed any cases of COVID-19 (Zoe, 2021). Many of these countries without COVID-19 are Pacific Island countries in Oceania. They are North Korea кр, Turkmenistan тм, Tonga то, Tuvalu тv and Nauru (Zoe, 2021).

Since the outbreak of the virus and the global upsurge of the COVID-19 pandemic, it has been accompanied on social media by an explosion of information disorders ranging from inaccurate, misleading and irrelevant information to public misgivings and doubts about the reality of the existence of the pandemic (Marin,2020). In the wake of a tsunami of misinterpreted, manipulated and malicious information surging online, misinformation around COVID-19 has taken centre stage. In the context of the current COVID-19 pandemic, the publics are particularly vulnerable to rumours and misinformation given the acute uncertainty around the virus itself (Larson, 2020). At the same time, the uncertainty and the novel nature of COVID-19 means that what may appear as 'rumour' — a yet unverified piece of information — may be an important clue to the behaviour and impact of this new virus (Larson, 2020).

Keeping this infodemic challenge in mind, this paper tries to evaluate the perception of people of South-East Nigeria regarding the credibility of social media information with a view to determining the influence of this overdose of confusing information and challenges on the behaviour and attitude of the people toward protecting themselves against being infected by the virus.

Statement of the Problem

With the spread of COVID-19, a massive information epidemic has undermined and disrupted global efforts to fight against COVID-19 (Hu, Yang, Li and Zhang 2020). However, the infodemic challenge does not receive enough attention in publications to fully understand it, and its unique risks have only begun to be explored (Ratzan, Sommariva and Rauh, 2020). The infodemic is partly characterised by a high information supply of variable quality, and a demand for timely and trustworthy information about 2019-nCoV (Eysenbach, 2020; Ball, Maxmen, 2020).

One of the key issues surrounding COVID-19 outbreak is obtaining correct information. Millions of people have died as a result of the disease. Many more will die before we find better ways to manage or eradicate this disease, although eradication seems increasingly unlikely (Tworek, 2020). That tragedy has combined with another potentially life-threatening problem — an alarming quantity of poor-quality and often directly harmful information about the pandemic and quack cures (Tworek, 2020). The infodemic, too, appears to have had real health consequences (Tworek, 2020). A   study published in August 2020 estimated that alcohol poisoning killed almost 800 people from around the world who apparently believed an online rumour that drinking highly concentrated alcohol would prevent COVID-19 (Tworek, 2020). This confusion is mostly created by the social media users.

Although several studies have been done in this area (e.g. Ilesanmi & Afolabi, 2020; Olapegba, et al. 2020; Hu, Yang & Zhang, 2020; Dryhursta et al. 2020; Joarder, Khaled & Joarder, 2021), none of these studies focused on the South East Nigeria The problem of this study, therefore, is to fill this knowledge gap.

Objectives of the Study
The general objective of the study is to find out how people of South East Nigeria perceive COVID-19 in the mist of social media "infordemic". The specific objectives are to:
1)   determine the level of public exposure to misinformation about COVID-19 in South East Nigeria.
2)   find out the relationship between COVID-19 infodemic and public perception of the pandemic in South East Nigeria.
3)   identify the implications of social media COVID-19 infodemic to public adherence to preventive measures in South East Nigeria.

Research Questions
1)   What is the level of public exposure to misinformation about COVID-19 in South East Nigeria?
2)   What is the relationship between COVID-19 infodemic and public perception of the pandemic in South East Nigeria?
3)   What are the implications of social media COVID-19 infodemic to public adherence to preventive measures in South East Nigeria?

Hypotheses
1)   Ho: The level of public exposure to misinformation about COVID-19 in South East Nigeria is not high.

2)   Ho: There is no relationship between COVID-19 infodemic and public perception of the pandemic in South East Nigeria?

3)   Ho: Social media COVID-19 infodemic has no implications in the ways the people of South East perceive the pandemic.

REVIEW OF RELATED LITERATURE

Information and Infodemic
The word 'infodemic' is not new. It was coined as a blend of *information* and *epidemic* in 2003 by journalist and political scientist David Rothkopf in a *Washington Post* column (Merriam-Webster, 2020) during the outbreak of other health crisis. The word has seen renewed usage in the time of COVID-19. 'Infodemic' typically refers to a rapid and far-reaching spread of both accurate and inaccurate information about something, such as a disease. As facts, rumours, and fears mix and disperse, it becomes difficult to learn essential information about an issue. WHO (2021) explained that an infodemic is too much information including false or misleading information in digital and physical environments during a disease outbreak. The author stated that infodemic causes confusion and risk-taking behaviours that can harm health; leads to mistrust in health authorities and undermines the public health response. An infodemic can intensify or lengthen outbreaks when people are unsure about what they need to do to protect their health and the health of people around them (WHO, 2021). With growing digitization – an expansion of social media and internet use – information can spread more rapidly. This can help to more quickly fill information voids but can also amplify harmful messages.

Infodemic refers to a large increase in the volume of information associated with a specific topic and whose growth can occur exponentially in a short period of time due to a specific incident, such as the COVID-19 pandemic. In this situation, misinformation and rumorrs appear on the scene, along with manipulation of information with doubtful intent (Pan American Health Organization, PAHO, 2020).

COVID-19 Pandemic Situation in Nigeria
The Coronavirus (Covid-19) is an infectious disease that causes respiratory infections ranging from the common cold to more severe respiratory difficulties. It originated from the Hunan seafood market at Wuhan, China where live bats, snakes, raccoon dogs, wild animals among others were sold in December 2019 (Shereen et al., 2020, pp. 91–98) and was declared a pandemic by the World Health Organization on 11 March 2020 (WHO, 2020). Since its identification, the virus is said to have accounted for about 512,311 deaths globally out of a swooping statistic of 10,514,028 positive cases which sadly increases exponentially daily (WHO, 2020). The first victim of the virus in Nigeria was an Italian man who arrived in the country on the 25 February 2020. He was admitted to an Isolation Centre in Yaba Lagos after showing symptoms of the virus (NCDC 2020). Subsequently, the cases increased and, as at the time of this paper, almost 28,711 positive cases and 11,665 recuperated persons have been identified (NCDC, 2020).

Noticeably, Nigeria tried to curb the rapid spread of Covid-19 through immediate lockdown of the major epicenters of Lagos, Ogun, and Abuja: commercial and administrative hubs of the country; where there have been spike of coronavirus cases (Obi-Ani, Anikwenze, Isiani, & Freemaa,, 2020). Some state governors also took proactive actions by closing their "borders" in a bid to curtail the spread of the virus. Other measures include prohibition of mass gathering of people at churches, sports arenas and burials while schools were closed nationwide (Obi-Ani, Anikwenze, Isiani, & Freemaa,, 2020). The achievement of these feats can be attributed not just to proper healthcare facilities but also to the impacts of social media in the country (Obi-Ani, Anikwenze, Isiani, & Freemaa,, 2020). Its platforms: WhatsApp, Twitter, Facebook, and YouTube have become varying means of communication and engagement by not just the government but by the general populace. Contrarily, social media is also utilised as a means of propaganda in disclosing news and information, which at most are based on assumptions and speculations (Obi-Ani, Anikwenze, Isiani, & Freemaa,, 2020).

The Covid-19 and the lockdown policies introduced by the government made people to be solely dependent on the media, thus the influence the media had during this period have not been attained in any other pandemic (Obi-Ani, Anikwenze, Isiani, & Freemaa,, 2020). The pandemic "panic button" is continuously being promoted by social media. Facebook, for instance, is the main social media platform in Nigeria, and users of this platform are increasing on daily basis. Although these platforms provide an easy and accessible ways of getting information, they can also be a source of misinformation (Abdelhafiz, et al. 2020).

On the other hand, rumors about the dangers of being vaccinated have also begun to flood social media platforms, especially Facebook. Some postings on Facebook such as those who have been vaccinated with COVID-19 immunity drugs are sure to die in two years have promoted fears in some people who have been vaccinated and discouraged those not yet vaccinated from going for the drugs. This claims are usually attributed to medical experts whose views can be hardly challenged (see: Obi-Ani, Anikwenze, Isiani, & Freemaa,, 2020).

Social Media in the Era of COVID-19 Pandemic in Nigeria

Social Media is "the collection of websites and web-based systems that allow for mass interaction, conversation and sharing among members of a network" (Murphy, 2013, p.3). Social Media is an offshoot of the Internet and according to DiMaggio et al. (2001, p. 307), the Internet refers to the electronic network or networks that link(s) people and information through computers and other digital devicess thereby allowing for person-to-person communication and information retrieval. The Internet is a major tool that emerged for the purpose of information dissemination; thus, the media acts as an information hegemon in terms of determining what information is made available to people as well as the impression people have on issues (Savrum & Leon, 2015). More so, DiMaggio (2011) admits that the Internet changes society and this is supported by Bowd (2016) who posits that the advent of social media came with opportunities for news outlets to engage more

people thereby leading to an increased spread of information to a wider audience (source: Obi-Ani, Anikwenze, Isiani, & Freeman, 2020).

Novel channels including, social media platforms, and the internet represented the most important sources of information, at the expense of more traditional media platforms; namely: newspapers (Abdelhafiz, Mohammed, Ibrahim, Ziady, Alorabi, Ayyad, Sultan, 2020). Over the years, social media has become an active technological tool in Nigeria as well as a news and communication channel for the citizenry of Nigeria (Obi-Ani, Anikwenze, Isiani, & Freemaak 2020). Access to mobile telephony especially among the technologically savvy youths has made dissemination of information easy with a snap of the finger. In recent times, as the pandemic encroaches on and emasculates world activities, social media platforms have been utilised as an information outlet to citizens (Obi-Ani, Anikwenze, Isiani, & Freemaak 2020). Government also uses social media platforms to inform the public and implement a lockdown policy to curb the spread of the Covid-19 virus. Thus, it has become an active tool for engagement and communication for the dissemination of plausible information as well as incredulous (mis)information.

Empirical Review

Ilesanmi & Afolabi (2020) examined "Perception and practices during the COVID-19 pandemic in an urban community in Nigeria: a cross-sectional study". The authors stated that various perceptions and practices have been associated with the COVID-19 pandemic. It assessed the perception and practices regarding COVID-19 among residents in selected urban communities of Ibadan, Oyo State, Nigeria. The researchers employed descriptive cross-sectional study design using a multi-stage sampling technique to recruit 360 respondents from households in Ibadan. Data were collected using an interviewer-administered questionnaire. Those who demonstrated washing of the palm, back of the hand, spaces between the fingers, fingernails, wrist, and thumbs had six points and were categorized to have had a good practice of handwashing. Bivariate analyses of sociodemographic characteristics and good handwashing practices were conducted using Chi-square test. Logistic regression was conducted to identify the determinants of good handwashing practices. Results showed that the perception of the likelihood to contract COVID-19 and practices to prevent COVID-19 had a weak correlation of 0.239 (p < 0.001). The study concluded that gaps exist in the practices that prevent COVID-19. It thus recommended that there is a need to improve handwashing, use of face masks and other practices that prevent COVID-19.

Olapegba, Ayandele, Kolawole, Oguntayo, Gandi, Dangiwa, Ottu & Lorfa, (2020) investigated "Knowledge and Perceptions in Nigeria a Preliminary Assessment of Novel Coronavirus (COVID-19)". The study assessed knowledge and perceptions about COVID-19 among the general public in Nigeria during the initial week of the pandemic lockdown in the country. A cross-sectional survey method was used. An anonymous online questionnaire was served to collect data from respondents within Nigeria. Purposive and snowball sampling techniques were used to recruit 1357 respondents, aged 15-70 years, from 180 cities and towns within Nigeria. Study data were analysed using descriptive statistics. Findings revealed that Nigerians have relatively high knowledge, mostly derived from traditional media, about COVID-19. Their perceptions of COVID-19 bear

implications across public health initiatives, compliance with precautionary behaviour as well as bilateral relations with foreign nations. The study recommended the intensification of evidence-based campaign to remove misconceptions and promote precautionary measures.

Hu, Yang & Zhang (2020) studied "The COVID-19 Infodemic: Infodemiology Study Analysing Stigmatizing Search Terms". The authors noted that in the context of the COVID-19 infodemic, the global profusion of monikers and hashtags for COVID-19 have found their way into daily communication and contributed to a backlash against China and the Chinese people. The study examined public engagement in crisis communication about COVID-19 during the early epidemic stage and the practical strategy of social mobiliation to mitigate the infodemic. Method employed was retrieval of unbiased values of the top-ranked search phrases which normalized the anonymised, categorised, and aggregated samples from Google Search data. The study concluded that Infodemiological analysis can articulate the collective propensities to stigmatized monikers across search behaviours, which may reflect the collective sentiment of backlash against China and Chinese people in the real world. The study recommended an integral component of preparedness, use of appropriate nomenclatures for the newly identified coronavirus, and social mobilization in a uniform voice should be made a priority for combating the next infodemic.

Theoretical Framework
One of the most used theories to explain how individuals adopt the promoted health measures, such as self-isolation, hand washing, social distancing and mask protection is the Protection Motivation Theory (PMT) (MacDonell, et al (2013). The theory was developed by Ronald W. Rogers in 1975, to describe how individuals are motivated to react in a self-protective way towards a perceived health threat. (MacDonell, Yan, Chen & Gong et al, 2013). The PMT explains individual-level behavioural responses in health-threatening situations (Rogers & Prentice-Dunn, 1997). At its core, the theory looks at motivational reasons for adopting protective measures and divides the causes into threat appraisal and coping appraisal (Farooq, Laato & Islam, 2020). In the context of worldwide pandemics, threat appraisal refers to the individual's perception of the seriousness of the situation, as well as how vulnerable they see themselves and their friends to be in the situation (Teasdale, Yardley, Schlotz & Michie, 2012; Bish & Michie, 2010). On the other hand, coping appraisal refers to the individual's evaluation of how well they can manage in the given situation. Thus, coping appraisal can be further divided into response costs, self-efficacy, and response efficacy (Teasdale et al, 2012).

The literature on PMT suggests that there are significant individual differences in the likelihood of adopting health behaviours (Bish & Michie, 2010]. Some people feel the need to criticize or neglect suggested health behaviours (McNeill, Harris & Briggs, 2016), while others adopt them without complaint (Farooq, Laato & Islam, 2020). Both threat and coping appraisals have been shown to impact protection motivation (Miller, Yardley & Little, 2012) with perceived severity being identified as one of the key underlying causes for both appraisals (Teasdale, Yardley, Schlotz & Michie, 2012; Bish & Michie, 2010). Protection motivation then typically leads to actual

behaviour (Sharifirad, Yarmohammadi, Sharifabad & Rahaei, 2014), but there have been reports to the contrary (eg, Williams, Rasmussen, Kleczkowski, Maharaj & Cairns, 2015).

Despite several studies on pandemic behaviour through the lens of the PMT, the existing literature has not exhaustively addressed the impact of internet sources on protection motivation and ultimately behavioural intentions. The role of the internet in pandemic situations is arguably highly complex, as it contains a myriad of information sources and social media platforms through which people can not only acquire knowledge but communicate and share experiences as well (Farooq, Laato & Islam, 2020). The internet has become the primary source of information for many, but there is a large variance in the preferred online information source.

This study is related to PMT because social media platforms further complicate the information on COVID-19 with personalized content, which can contribute to some groups of people receiving better and more accurate information regarding the pandemic situation than others (Farooq, Laato & Islam, 2020).

RESEARCH METHODOLOGY

A cross-sectional survey was used for the present study. The study was conducted among the adults who are users of social media in three selected states of South-East Nigeria: Ebonyi, Enugu and Imo. Questionnaire was used as the instrument of data collection. Data was collected from 390 respondents and anlaysed using Statistical Package for the Social Sciences (SPSS), version 26.0. Survey Monkey was also used to support data collection online.

Descriptive statistical methods were used to summarize data on socio-demographic characteristics responses to questions concerning perceptions and attitude toward COVID-19 in the era of infodemic. Data analysis was based on the 390 participants that responded to the questionnaire. Data were summarized as frequencies (n) and percentages (%) for categorical variables. Perceptions concerning COVID-19 was assessed by answering 16 multiple-choice questions followed by the calculation of a total cumulative knowledge score for each participant. All data analyses were performed using chi-square and Statistical Package for the Social Sciences (SPSS) version 26.0. A value of $P < 0.05$ was considered statistically significant. The use of CHI square enabled comparison of the observed values.

RESULTS

Demographic Variables
The demographic information presented in this section shows the age of research participants, sex, marital status, occupation and educational qualification.

Table 1: Age of Respondents

Variables		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18Yrs-28Yrs	49	12.6	12.6	12.6
	29Yrs-38Yrs	201	51.5	51.5	40.0
	39Yrs-48Yrs	107	27.4	27.4	81.5
	49Yrs-58Yrs and above	33	8.5	8.5	100.0
	Total	390	100.0	100.0	

Table 1 suggested that most of the respondents were youths who use social media more often. The implication is that most of the respondents who were influenced by social the messages on COVID-19 were the youths of South East Nigeria.

Table 2: Sex of Respondents

Variables		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	111	28.5	28.5	28.5
	Male	279	71.5	71.5	100.0
	Total	390	100.0	100.0	

 By implication, more males sought for information on COVID-19 more than females. Hence, those who could be affected by misinformation or accurate information were men.

Table 3: Marital Status of Respondents

Variables		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Divorced	9	2.3	2.3	2.3
	Married	290	74.4	74.4	76.7
	Single	91	23.3	23.3	100.0
	Total	390	100.0	100.0	

The above table suggests that the unmarried young men used the social media more than other categories of the respondents.

Table 4: Occupation of Respondents

Variables		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Artisan	33	8.5	8.5	8.5
	Business	79	20.3	20.3	28.7
	Civil servant	158	40.5	40.5	69.2
	Students	23	5.9	5.9	75.1
	Employees	97	24.9	24.9	100.0
	Total	390	100.0	100.0	

Majority of the respondents who sought for information on COVID-19 through the internet were civil servants. They could, therefore, be affected by the information on social media.

Table 5: Educational qualification of respondents

Variables		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	FLSC	18	4.6	4.6	4.6
	BS.c/B.A	80	20.5	20.5	25.1
	HND/MS.c	66	16.9	16.9	42.0
	Ph.D	7	1.8	1.8	43.8
	WASC/GCE/NECO	219	56.2	56.2	100.0
	Total	390	100.0	100.0	

Table 5 indicates that most of the respondents were well educated and informed, thus their responses could be considered reliable.

Table 6: State of Residence

Variables		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Ebonyi	131	33.6	33.6	33.6
	Enugu	120	30.8	30.8	64.4
	Abia	139	35.6	35.6	100.0
	Total	390	100.0	100.0	

Table 6 shows that majority of the respondents were from Abia State. However, the differences were not large, thus the three states could be said to be proportionally represented.

Table 7: You use social media to source for information on COVID-19 pandemic.

Variables		Frequency	Percent	Valid Percent	Cumulative Percent
	Agree	69	17.7	17.7	17.7
	Disagree	32	8.2	8.2	25.9
Valid	Not sure	8	2.1	2.1	27.9
	Strongly agree	269	69.0	69.0	96.9
	Strongly disagree	12	3.1	3.1	100.0
	Total	390	100.0	100.0	

This indicates that majority of the respondents make use of social media to search for information on COVID-19 pandemic. Hence, the perceptions of the respondents cut across all segments of the study population.

Table 8: Social media confuse you with inaccurate information on how to prevent contracting COVID-19.

Variables		Frequency	Percent	Valid Percent	Cumulative Percent
	Agree	129	33.1	33.1	33.1
	Disagree	24	6.2	6.2	39.2
Valid	Not sure	5	1.3	1.3	40.5
	strongly agree	219	56.2	56.2	96.7
	strongly disagree	13	3.3	3.3	100.0
	Total	390	100.0	100.0	

By implication, social media confuses majority of the respondents with inaccurate information on COVID-19

Table 9: How would you rate social media spread of false information on COVID-19 pandemic.

Variables		Frequency	Percent	Valid Percent	Cumulative Percent
	Don't know	11	2.8	2.8	2.8
	high	50	12.8	12.8	15.6
Valid	Low	29	7.4	7.4	23.1
	Very high	284	72.8	72.8	95.9
	Very low	16	4.1	4.1	100.0
	Total	390	100.0	100.0	

This means that social media was noted for carrying false or misinformation about COVID-19 prevention and treatment. This could lead to people taking the wrong steps to prevent COVID-19 infection.

Table 10: You were exposed to COVID-19 misinformation by social media.

Variables		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	294	75.4	75.4	75.4
	Disagree	29	7.4	7.4	82.8
	Not sure	13	3.3	3.3	86.2
	Strongly agree	44	11.3	11.3	97.4
	Strongly disagree	10	2.6	2.6	100.0
	Total	390	100.0	100.0	

The above Table indicates that majority of the studied sample population were exposed to COVID-19 misinformation by social media. This implies that much of the knowledge the research participants got from social media were inaccurate and misleading information. A total of 867% of the research participants were exposed to misinformation about COVID-19 by social media.

Table 11: The suggestions on the social media which you followed helped you to protect yourself. Against COVID-19

Variables		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	90	23.1	23.1	23.1
	Disagree	41	10.5	10.5	33.6
	Not sure	37	9.5	9.5	43.1
	Strongly agree	173	44.4	44.4	87.4
	Strongly disagree	49	12.6	12.6	100.0
	Total	390	100.0	100.0	

This means that majority of the respondents benefited from the suggestions on social media about COVI-19 pandemic. This could be those who were enlightened enough to be able to select the useful information that were posted by some credible sources such as the World Health Organisation and the Nigerian Centre for Disease Control (NCDC) and some other informed citizens.

Table 12: The information about COVID-19 you come across on social media make you consider COVID 19 as dangerous

Variables		Frequency	Percent	Valid Percent	Cumulative Percent
	Agree	115	29.5	29.5	29.5
	Disagree	96	24.6	24.6	54.1
Valid	Not sure	13	3.3	3.3	57.4
	Strongly agree	126	32.3	32.3	89.7
	Strongly disagree	40	10.3	10.3	100.0
	Total	390	100.0	100.0	

This means that majority of the users of social media considered COVID-19 as dangerous because of the information provided on social media platforms. This can by implication make them to take extra care to protect themselves from being infected.

Table 13: You experienced some harms by following the information on COVID -19 as suggested by social media users.

Variables		Frequency	Percent	Valid Percent	Cumulative Percent
	Agree	12	3.1	3.1	3.1
	Disagree	144	36.9	36.9	40.0
Valid	Not sure	59	15.1	15.1	55.1
	Strongly agree	11	2.8	2.8	57.9
	Strongly disagree	164	42.1	42.1	100.0
	Total	390	100.0	100.0	

This means that fewer number of the sample population experienced some harms by following the information on social media. Such harms might have resulted in the death of some people.

Table 14: Some information from world Health Organisation helped you to check against false information on social media

Variables		Frequency	Percent	Valid Percent	Cumulative Percent
	Agree	30	7.7	7.7	7.7
	Disagree	91	23.3	23.3	31.0
Valid	Not sure	48	12.3	12.3	43.3
	Strongly agree	41	10.5	10.5	53.8
	Strongly disagree	180	46.2	46.2	100.0
	Total	390	100.0	100.0	

Table 22 shows that majority of the respondents were not helped by the information from WHO to check against false information on social media about COVID-19.

Table 15: The information provided on social media by World Health organisation helped you to select the right steps to take in choosing from the too many advice on COVID-19 on social media

Variables		Frequency	Percent	Valid Percent	Cumulative Percent
	Agree	33	8.5	8.5	8.5
	Disagree	117	30.0	30.0	38.5
Valid	Don't know	71	18.2	18.2	56.7
	Strongly agree	168	43.1	43.1	56.9
	Strongly disagree	1	0.3	0.3	100.0
	Total	390	100.0	100.0	

Table 24 shows that a greater number of the respondents benefited from the information by WHO on COVID-19. This suggest that social media information on COCID-19 irrespective of the misinformation that was prevalent on the platforms, the information that were accurate were still helpful.

Table 16: The information on social media were actually too many for you to understand the right thing to do in order not to contract COVID-19.

Variables		Frequency	Percent	Valid Percent	Cumulative Percent
	Agree	94	24.1	24.1	24.1
	Disagree	42	10.8	10.8	34.9
Valid	Don't know	24	6.2	6.2	41.0
	Strongly agree	215	55.1	55.1	96.2
	Strongly disagree	15	3.8	3.8	100.0
	Total	390	100.0	100.0	

Table 16 shows that majority of the respondents believed that there was too much information on social media posted to Facebook. This could cause confusion to the users of social media and make the choice of what to do to prevent contracting the disease difficult.

TEST OF HYPOTHESIS
Statistical test of hypotheses in this study was based on the 390 respondents out of 430 that answered the questions in the research instrument. The frequency calculations and the cumulative frequencies that were got and displayed in the tables showing demographic information were based

on the actual population sample of 390 respondents that took part in the research. This sample size was considered to be adequate for gathering the data needed for this study.

The decision rule for accepting or rejecting any of the hypothesis tests is:

1. If the P-value for the calculated sample value of the test statistics is less than the chosen significance level *a*, reject the null hypothesis at significance level *a* where $a = 0.05$.

2. If the P-value for the calculated sample value of the test statistics is greater than or equal to the chosen significance level *a,* retain the null hypothesis at significance level, *a.*

Test of Hypothesis One:

H₀: The level of public exposure to misinformation about COVID-19 in South East Nigeria is not high.

Table 17: SPSS Calculation on Chi-square test for Hypothesis One

Row * Column Cross tabulation

			Column					Total
			Strongly Agree	Agree	Not Sure	Strongly Disagree	Disagree	
Row	1.00	Count	269	69	8	12	32	390
		Expected Count	177.3	164.0	8.7	11.7	28.3	390.0
		% within Row	69.0%	17.7%	2.1%	3.1%	8.2%	100.0%
		% within Column	50.6%	14.0%	30.8%	34.3%	37.6%	33.3%
	2.00	Count	219	129	5	13	24	390
		Expected Count	177.3	164.0	8.7	11.7	28.3	390.0
		% within Row	56.2%	33.1%	1.3%	3.3%	6.2%	100.0%
		% within Column	41.2%	26.2%	19.2%	37.1%	28.2%	33.3%
	3.00	Count	44	294	13	10	29	390
		Expected Count	177.3	164.0	8.7	11.7	28.3	390.0
		% within Row	11.3%	75.4%	3.3%	2.6%	7.4%	100.0%
		% within Column	8.3%	59.8%	50.0%	28.6%	34.1%	33.3%
Total		Count	532	492	26	35	85	1170
		Expected Count	532.0	492.0	26.0	35.0	85.0	1170.0
		% within Row	45.5%	42.1%	2.2%	3.0%	7.3%	100.0%
		% within Column	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: SPSS 21 Output

Table 18

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	328.296[a]	8	.000
Likelihood Ratio	361.104	8	.000
Linear-by-Linear Association	49.180	1	.000
N of Valid Cases	1170		

Source: SPSS 21, Output

Chi-Square $= 328.296$ while its P-value $= 0.000$

The table above shows Chi-square (X^2) statistics which is used in testing the hypothesis one. It is embodied with item question 12, 13 and 14. The Chi-square (X^2) computed value is 328.296 while its P-values is 0.000. The adopted level of significance is 5% implying $\alpha = 0.05$. It is found that $\alpha = 0.05$ is greater than the P-value $= 0.000$. Thus, the alternative hypothesis is accepted on the proposition that the level of public exposure to misinformation about COVID-19 in South East Nigeria is high.

Test of Hypothesis Two:

H_0: There is no relationship between COVID-19 infodemic and public perception of the pandemic in South East Nigeria?

Table 19: SPSS Calculation on Chi-square test for Hypothesis Two

			Column				Total
			Strongly Agree	Agree	Not Sure	Strongly Disagree	Disagree	
Row	1.00	Count	173	90	37	49	41	390
		Expected Count	149.5	102.5	25.0	44.5	68.5	390.0
		% within Row	44.4%	23.1%	9.5%	12.6%	10.5%	100.0%
		% within Column	57.9%	43.9%	74.0%	55.1%	29.9%	50.0%
	2.00	Count	126	115	13	40	96	390
		Expected Count	149.5	102.5	25.0	44.5	68.5	390.0
		% within Row	32.3%	29.5%	3.3%	10.3%	24.6%	100.0%
		% within Column	42.1%	56.1%	26.0%	44.9%	70.1%	50.0%
Total		Count	299	205	50	89	137	780
		Expected Count	299.0	205.0	50.0	89.0	137.0	780.0
		% within Row	38.3%	26.3%	6.4%	11.4%	17.6%	100.0%
		% within Column	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Row * Column Crosstabulation

Source: SPSS 21 Output

Table 20:

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	44.947[a]	4	.000
Likelihood Ratio	46.111	4	.000
Linear-by-Linear Association	16.126	1	.000
N of Valid Cases	780		

Source: SPSS 21 Output

The table above shows Chi-square (X^2) statistics which is used in testing the hypothesis two. It is embodied with item question 8, 10 and 11. The Chi-square (X^2) computed value is 44.95 while its P-value is 0.000. The adopted level of significance is 5% implying $\alpha = 0.05$. It is found that $\alpha = 0.05$ is greater than the P-value $= 0.000$. Thus, the alternative hypothesis is accepted on the proposition that there is a relationship between COVID-19 infodemic and public perception of the pandemic in South East Nigeria.

Test of Hypothesis Three:
H$_0$: COVID-19 infodemic has no implications in the ways the people of South East perceive the pandemic.

Table 30: SPSS Calculation on Chi-square test for Hypothesis Three:

Row * Column Crosstabulation

			Column					Total
			Strongly Agree	Agree	Not Sure	Strongly Disagree	Disagree	
Row	1.00	Count	11	12	59	164	144	390
		Expected Count	27.7	18.3	46.7	184.0	113.3	390.0
		% within Row	2.8%	3.1%	15.1%	42.1%	36.9%	100.0%
		% within Column	13.3%	21.8%	42.1%	29.7%	42.4%	33.3%
	2.00	Count	41	30	48	180	91	390
		Expected Count	27.7	18.3	46.7	184.0	113.3	390.0
		% within Row	10.5%	7.7%	12.3%	46.2%	23.3%	100.0%
		% within Column	49.4%	54.5%	34.3%	32.6%	26.8%	33.3%
	3.00	Count	31	13	33	208	105	390
		Expected Count	27.7	18.3	46.7	184.0	113.3	390.0
		% within Row	7.9%	3.3%	8.5%	53.3%	26.9%	100.0%
		% within Column	37.3%	23.6%	23.6%	37.7%	30.9%	33.3%
Total		Count	83	55	140	552	340	1170
		Expected Count	83.0	55.0	140.0	552.0	340.0	1170.0
		% within Row	7.1%	4.7%	12.0%	47.2%	29.1%	100.0%
		% within Column	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: SPSS 21 Output

Table 21:

<table>
<tr><td colspan="4" align="center">**Chi-Square Tests**</td></tr>
<tr><td></td><td>Value</td><td>df</td><td>Asymp. Sig. (2-sided)</td></tr>
<tr><td>Pearson Chi-Square</td><td>54.034[a]</td><td>8</td><td>.000</td></tr>
<tr><td>Likelihood Ratio</td><td>55.296</td><td>8</td><td>.000</td></tr>
<tr><td>Linear-by-Linear Association</td><td>5.914</td><td>1</td><td>.015</td></tr>
<tr><td>N of Valid Cases</td><td>1170</td><td></td><td></td></tr>
</table>

Source: SPSS 21 Output

The table above shows Chi-square (X^2) statistics which is used in testing the hypothesis three. It is embodied with item question 14 and 15. The Chi-square (X^2) computed value is 979.587 while its P-values is 0.000. The adopted level of significance is 5% implying $\alpha = 0.05$. It is found that $\alpha = 0.05$ is greater than the P-value = 0.000. Thus, the alternative hypothesis is accepted on the proposition that COVID-19 infodemic has implications in the ways the people of South East perceive the pandemic.

CONCLUSION AND RECOMMENDATIONS

Conclusion

This study concludes that a poorly executed and uncoordinated infodemic management may lead to unintended consequences. The current COVID-19 pandemic is a challenge to public health, but also an opportunity to develop and formalize tools and approaches for future infodemic management, bring about improvements in information flows between government agencies to help mitigate the next infodemic, which we are likely to face after the current vaccine infodemic that is hindering most Nigerians from accepting the recommendations of science. The price for freedom of speech and improved information technology is an increased susceptibility to infodemics.

Recommendations

1.   Responses to the COVID-19 pandemic and the related infodemic require swift, regular, systematic, and coordinated action from multiple sectors of society and government to promote trusted information.

2.   Interventions and messages must be based on science and evidence, and must reach citizens and enable them to make informed decisions on how to protect themselves and their communities in a health emergency.

3.   Social media education is strongly recommended to enhance media literacy and ability to practice individual gatekeeping on social media information among online media consumers.

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