

**THE IMPACT OF COVID 19 COMMUNICATION ON WELLNESS OF SOUTH EAST RESIDENTS OF NIGERIA: A QUANTITATIVE ANALYSIS**

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**ABSTRACT**

*COVID-19 has come and gone but up until today, the residual effects still lives with the public. Studies have shown that the impact of COVID-19 is diverse. Some school of thought argue that the impact is felt more in terms of the economy while some have said that the impact is felt more on the area of quality of life. Some have also argued that the impact is felt more on family relationships where it has caused isolation and disintegration. This work however singled out one crucial aspect that seems to have a more lasting impact which is mental health and quality of life of the public using residents of South East Nigeria as a case study. The study investigated the influence of COVID-19 Communication on mental health and quality of life of residents in South East Nigeria. The study was anchored on the Framing theory. Using a sample size of 663 respondents drawn from the population using the multi-stage sampling technique, the study found that social media is the dominant channel through which residents in South East Nigeria obtain information on COVID-19 pandemic. The study also showed that COVID-19 communication to a large extent shaped the respondent's opinion about the pandemic. Also, the study showed that, the constant exposure to COVID-19 related information had some negative effects like depression, anxiety, fear and stress on the mental health and quality of life of residents in the South East region. This might be due to the nature of such messages because anecdotal evidence suggests that most of the information are those that concerns the effect of the disease on person and people and also most of this information sometimes were also not very clear and instead of giving the people some sort of relief on what to do, it increased their anxiety, fear and misunderstanding concerning the disease. This findings aligns and upholds literature in this area which shows that media messages on COVID-19 had significant effects on the mental health and quality of life of the public during the pandemic. The study concludes that continuous dissemination of news about the pandemic which particularly focused on the rising number of cases, deaths and health risks, led to increased anxiety, depression, fear and stress among residents and this negatively affected their mental health well-being and overall quality of life. In line with this, the study recommends that communication concerning health issues must be well thought out, streamed and carved in such a way that it will produce the expected results and not fear. The use of fear appeal and other appeals in communicating health information should not be used in cases of pandemic but health communication messages concerning pandemic must be tailored in a way to direct the public on what to do and not to cause fear and anxiety.*

**Keywords: Effect; COVID 19 Communication; Mental Health; Quality of Life; South East Residents**

## **INTRODUCTION**

Research from different parts of the globe largely demonstrate that the different forms of media messages and campaigns on COVID-19 pandemic presented challenges not only for mental health systems, but the quality of life among citizens of most countries (Cumins, Gands & Gandre 2023; Biraaro, 2023). Similarly, Orok, David, Olajide, Sulaiman and Oyewole (2021) discovered that “adults and youths in Nigeria generally faced significant mental health challenges as a result of the COVID-19 pandemic messages that bombarded not only the terrestrial media spaces, but the social media” Orok et. al (2021) further revealed that “most adults of the south western states of Nigeria repeatedly grappled with a number of mental challenges that manifested like: anxiety, depression and at other times, burnout during COVID-19 pandemic” In the same manner, anecdotal evidence from Asia also demonstrated that most countries in Asia had much stress anxiety and depressions engendered by COVID-19 messages from the traditional and social media (Wang, Tee, Fardin, Srichokchatchawan, Habib 2021). While Thailand was identified as having the highest scores mental health problems amongst the citizens, Vietnam had the lowest scores with regards to the effects of media messages on COVID-19 on mental health (Wang, Tee, Fardin, Srichokchatchawan, Habib 2021; Balakrishnan, Kaur, Govaichelvant & Lee, 2021). The statistics presented above are very instructive, given that significant number of citizens of different climes and societies around the globe suffered from the mental challenges induced by the quantity of media messages that bombarded the airwaves on COVID-19. From the foregoing, it might be reasonable to argue that given the challenges people of the South East region of Nigeria faced during the COVID-19 pandemic, the likelihood of also suffering from not only mental health, but the general quality of life during COVID-19 pandemic might be high. On the other hand, there is a possibility that the effect of COVID-19 communication may not high because of the close nature of the family. South East Nigeria are known for being close knit families and there is always two step flow of communication and family as a pressure groups has very strong influence on what people consume, accept and react to so it may not. However, there is also a possibility that due to the existence of environmental, economic hardship and the fact of the novelty of the virus that what was found in literature may also be true. It now becomes necessary to find out the and why.

COVID-19 has undoubtedly been a source of complex and multifaceted stress for many (Chung, Dong & Li 2020). The fears and uncertainty associated with this virus, together with the anxiety and stress that it induces has also remained a huge source of worry (Chung, Dong & Li, 2020, p.12 ; Rajkumar ,2020) somewhat lends credence to the above argument when he opines that:

Following the different safety measures prompted by the quest to proactively manage Corona-virus in different societies through such measures like quarantine, lockdowns and social distancing, it appears that to varying degrees, mental diseases in different geographical and cultural climes appears to have been increasingly exacerbated.

Also, more worrisome is the fact that these careful measures to contain COVID-19 have not only appears to have affected mental health of patients, but somewhat diminished quality of lives among different residents of diverse societies. (Yin & Feng, 2022). Of greater concern more so, is the fact that the stream of newsfeed from the traditional and social media have further complicated situations, given that these media messages have been disproportionately directed toward the COVID-19 infodemic, with little or no consideration for how they might influence people’s mental and general health (Brooks, Webster, Smith, Woodland, Wessely, Greenberg & Rubin 2020). In the same manner, such excessive misinformation and disinformation, especially on social media surrounding COVID-19 also appears to consistently affect people’s mental, physical health and wellbeing (Zheng, Goh & Wen 2020; Vazquez,Dib,Rougeaux,Wells,Fewtrell 2020; Phalswal,Pujari,Sethi & Verma 2023. In recent time, anecdotal evidence has more and more demonstrated that there are increased concerns about social isolation, increased stress, anxiety and depression among patients – all implicated as covertly or overtly being associated with COVID-19 (Vazquez,Dib,Rougeaux,Wells,Fewtrell 2020; Zheng, Goh & Wen 2020). These and so many other concerns, no doubt, create situations that calls for empirical investigation into the extent that COVID-19 communication has affected the mental health and quality of life among residents of South-East, Nigeria.

To this extent, the study intends to investigate the extent that residents of South-East, Nigeria are in reality, exposed to COVID-19 Communication messages on mental health. If they are, to discover the channel of communication that they principally access these messages and the perception they have of COVID-19 media communication messages. Did COVID-19 messages affect the mental health and quality of life of South East residents?

The above, to a reasonable degree, forms the problem that this study investigated.

1. To find out if information on COVID-19 pandemic affected the mental health of residents of South East Nigeria
2. To identify the dominant media channel used by residents of South East Nigeria to obtain information on COVID-19 pandemic.
3. To determine how residents of South East Nigeria perceive COVID-19 communication.
4. To ascertain if information on COVID-19 pandemic affected the quality of life of residents of South East Nigeria.

### **The Media and COVID-19 pandemic**

Research has shown that the media representation of the coronavirus pandemic, especially in the early days of the virus largely shaped people's perception and response to the pandemic. In other words, people were directly or indirectly affected in both their mental and daily lives by the way the media portrayed the virus (Bosworth & Butow, 2020). Health communication plays an important role in health promotion and disease prevention because it increases knowledge, influence perception, and more importantly, reinforce behavioral changes. During the COVID-19 pandemic crisis, timely, accurate, and credible health communication remained the key factor in saving lives as reliable and well-developed health communication is beneficial in advancing new strategies, easing uncertainty, managing and reinforcing the implementation of COVID-19 protective measures ((Anwar, Malik & Raees, 2020; Mheidly & Fares 2020; Finset, Bosworth & Butow, 2020).

The mass media usually play a substantial role during the outbreak of any disease. In this regard, Mheidly & Fares, (2020) assert that "the media provide health information to the public on preventing the spread of diseases" Corroborating the above assertion, Brailovskaia, Cosci, Mansueto and Margraf (2021) observe that inadequate media coverage of disease could increase its spread. They cite the handling of the outbreak of the Ebola outbreak in some African countries in 2014 as a case of reference where poor coverage led to dangers among the people. They also disclose that an inadequate information-sharing system worked against the effective control and management of the Ebola disease. What the above presupposes is that insufficient information could lead to disbelief in the existence of the condition. As to the role the mass media played in preventing the spread of COVID-19 in Nigeria, Obi-Ani, Ezeaku, Ikem, Isiani and Onu (2021) found that both the mainstream media and social media created significant awareness of the COVID-19 pandemic in Nigeria. Their finding indicated that the country's National Centre for Disease Control (NCDC) and other relevant government institutions used the mass media to enlighten the public about the disease and persuade them to take the right measures to avoid the spread of COVID-19. They also found that apart from the NCDC, the Presidential task force on the COVID-19 pandemic in Nigeria and the different states' ministries of health provided information online to help the public control and prevent the spread of COVID-19. The Media was principally considered to have provided essential service to the populations during the world crisis caused by COVID-19. This statement above explicitly underscores the role of mass media in health reporting, especially in curbing spread of infectious disease outbreak. However, research shows that what always raises dust regarding media roles in health reportage is the degree of success or failure recorded by mass media in a particular health outbreak or health challenge compared to the risks (Zhou, Wang, Xia, Xiao & Tang, 2020). Media is the primary source of information and plays vital role in educating the masses. However, when overly eager media sources spread information without proper verification, not only that it can be harmful, it can also have unintended consequences (Islam, Laato, Talukder & Sutinen, 2020). It is

such unintended consequences, especially as it concerns mental and general quality of life that this study investigated.

### **Effect of COVID-19 on Mental and General Health**

Health communication no doubt plays a very important role in health promotion and disease prevention in different societies. This is so because it increases knowledge, influences perception and most importantly, reinforces behavioral changes (Anwar, Malik & Raees, 2020). Interestingly, this very critical role of health communication was visibly noticed During the COVID-19 pandemic crisis, as timely, accurate, and credible health communication messages enabled citizens of many countries manage the pandemic (Mheidly & Fares 2020; Finset, Bosworth & Butow, 2020). This somewhat explains the reason Finset, Bosworth & Butow (2020) argues that “through health communication plans, reliable and well-developed health intervention programmes were developed during COVID-19” These programs Finset, et.al (2020) argue “did not only help in easing uncertainties among citizens, but also helped immeasurably, in reinforcing the implementations of COVID-19 protective measures. However, irrespective of the fact that these messages were particularly tailored to provide increased awareness, knowledge and presumably behaviour change among receivers, it somewhat has had its negative implications, especially, as it concerns mental health state of the residents (Ahmad & Murad, 2020).

Anecdotal evidence has over time demonstrated that negative news can lead to severe mental health issues among consumers (Ahmad & Murad 2020; Kamble, Joshi, Kamble & Kumari, 2022; Misra, Le, Goldmann & Yang 2020). Due to the scale and severity of COVID-19, media attention has been regularly focused on pandemic-related news, which could further affect individuals already facing more significant mental health challenges (Zhao & Zhou, 2020). Research has shown that when news is biased, misleading and deceptive, the adverse effect it produces on personal and population health and well-being could be more pronounced (Wen, Aston, Liu & Ying, 2019). Previous studies found that some media outlets issued biased and misleading reports on COVID-19, and this in turn, facilitated the spread of misinformation on the virus and consequently, generated fear and panic that produced long-term effect on people’s mental health (Jayaseelan, Brindha & Kades, 2020 ; Shahi, Dirkson & Majchrzak, 2021).

There is empirical evidence that a handful of research conducted to examine the public’s anxiety level during the pandemics, such as: Ebola, H7N9 SARS and H5N1 generally suggested that the outbreak of a pandemic is associated with higher level of anxiety among the public (Fullana, Hidalgo-Mazzei, Vieta & Radua, 2020). In this regard, it is important to understand the psychological factors that predict anxiety during the outbreak of a pandemic because health anxiety may lead to clinically significant distress like: anxiety, fear, worry and excessive preventative behaviors such as excessive hand washing, and repeatedly seeking reassurance from medical professional in some people (Fullana, Hidalgo-Mazzei, Vieta & Radua, 2020). Furthermore, due to COVID-19 and its various restrictions, like lockdown, social distancing, people experienced fear, uncertainty, social isolation and many lost track of their normal lives (Mihelj, Kondor & Stetka, 2022).

Similarly, COVID-19 has been found to cause significant physical and psychological impairment, thus leading to decreased health-related quality of life. (Chen, Zhang & Li 2020). Studies showed that all domains of quality of life of people were affected during the lockdown period (Majeed, Irshad, Fatima, Khan & Hassan, 2020). The pandemic outbreak led to a global health crisis that affected the daily lives of citizens, as well as the global economy. In addition, the lockdown, social distancing measures among other COVID-19 safety protocols adopted to curtail the spread of the virus led to dwindling economic activities and somewhat had huge influence on the social life of people (Dwivedi, Hughes, Coombs, Constantiou, Duan, Edwards, Gupta, Lal, Misra, Prashant, Raman, Rana, Sharma & Upadhyay 2020). In addition, COVID-19 provided infodemics that grew at a rapid rate. Infodemics involve the purposeful spread of misinformation and disinformation via the media, particularly the social media platforms. During the peak period of the pandemic, a number of studies showed that COVID-19 infodemics somewhat was taken away from the hands of health experts and this created a situation that fueled public fear, uncertainty, and mistrust, which had personal and economic consequences in most societies (Gijzen, Shields-Zeeman, Kleinjan, Kroon, Van der Roest & Bolier 2020). Sadly, during the pandemic it was clearly

observed in certain economies that such social media platforms like Twitter and Facebook were used as channels of engendering extreme infodemics, as array of topics were publicized as misinformation and disinformation. Oftentimes, these infodemics are powered by interested individuals or groups with ulterior political and economic interests (World Health Organization 2020). Typical slants include the “Chinese virus” narrative, and promoting the use of disinfectants to cure COVID-19. (World Health Organization 2020, Andersen, Rambaut, Lipkin, Holmes & Garry 2020) .

During the early stage of the COVID-19 outbreak, research showed that instead of focusing attention on medical facts and actual viral outbreak, sensationalized coverage using less relevant content by news media outlets whipped up hysteria and fear in the USA on the issues. Similarly, news has focused more on death and grave consequences of the pandemic leading to increased public panic and negative emotions, while giving less attention to information as to how to control the spread and promote healthy practices (Basch, Hillyer, Meleo-Erwin, Jaime, Mohlman & Basch, 2020). The above discoveries somewhat lend strong credence to the fact that COVID-19 have significantly correlated with increased mental health management in different societies of the globe.

In the same manner, COVID-19 has been found to cause significant physical and psychological impairment leading to decreased health-related quality of life. (Chen, Zhang & Li 2020). Studies showed that the entire domains of quality of life of people were affected during the lockdown period (Majeed, Irshad, Fatima, Khan & Hassan, 2020). In fact, it was empirically proven that the COVID-19 outbreak led to increase health crisis globally and consequently created remarkable setback on the daily life of citizens, as well as the global economy.

Prominent among the challenges created by this lockdown was the dwindling economic activities which had huge influence on the social life of people. (Dwivedi, Hughes, Coombs, Constantiou, Duan, Edwards, Gupta, Lal, Misra, Prashant, Raman, Rana, Sharma & Upadhyay 2020). In the same manner, a study by Basch, Hillyer, Erwin, Jaime, Mohlman and Basch, (2020) evaluated the 100 most viewed videos on YouTube with the word “coronavirus”, these together had more than 165 million views as of March 5, 2020, 85% of them belonging to news channels. Interestingly, the study revealed that less than one-third of the videos studied mentioned the recommended prevention measures for the pandemic, less than half mentioned the most frequent symptoms, however, almost 90% of the video commented on deaths, anxiety, and the quarantine status of the pandemic. This study leaves us with an important reflection on the missed opportunities for dissemination of quality information on the prevention of contagion and frequent symptoms of COVID-19 on platforms such as YouTube which are usually consulted as an information source.

The implication of this sort of communication therefore ,is that the receivers of such information are misled and as such, leaving room for increased anxiety, worry and burden – a situation which according to Dwivedi, Hughes, Coombs, Constantiou, Duan, Edwards, Gupta, Lal, Misra, Prashant, Raman, Rana, Sharma and Upadhyay 2020) could affect the general quality of life.

### **COVID-19 and misleading media Coverage**

The effect of a biased and misleading news is usually disastrous to every society (Nelson, Kagan, Critchlow, Hillard & Hsu 2020). The implication of the foregoing is that when news, especially, health news is portrayed in a manner that it raises fear, anxiety and distress, it creates an unhealthy mental and life situation. The adverse effects of COVID-19 media coverage on personal and population health and well-being was grossly pronounced, especially in 2020 and 2021 (Lelisho, Wotale, & Tareke 2023). The most problematic type of media coverage on COVID-19 involves content that is false and dishonest. While some media practitioners uphold the founding pillars of the industry, journalistic values and ethical standards, the prevalence of narratives referring to the “Wuhan virus,” “Chinese virus,” and “China virus” in other media reports on COVID-19 suggests that some media outlets are fully capable of producing baseless and sensational news directly associating a group of people, nation, and entire race to a virus will inevitably evoke substantial mental health concerns among those targeted (Lelisho, Wotale, Tareke 2023). Another irreversible negative effect of media’s instigation of fake news is the deterioration of public trust around COVID-19. It is

challenging to predict what might happen if people decide to ignore COVID-19 information disseminated through media outlets, where health experts and government officials share the latest developments related to the virus. What is not difficult to imagine is the human and economic consequences tied to a deliberately “ignorant” public. The results could be catastrophic (Cuan-Balthazar, Munoz-Perez, Robledo-vega, Perez-Zepeda & Soto-Vega, 2020; Gao, Ma, Wang, Yang & Zhao, 2020). Misinformation about COVID-19 was proliferated widely on social media, ranging from the peddling of fake cures, such as gargling with lemon or salt water and injecting yourself with bleach (World Health Organization, 2020), to false conspiracy theories that the virus was bio-engineered in a lab in Wuhan (Andersen, Ambaut, Lipkin, Holmes & Garry 2020; Cohen 2020) or that the 5G cellular network is causing or exacerbating symptoms of COVID-19 (BBC News, 2020). Misinformation about COVID-19 is not limited to information that is blatantly true or false, which widens the scope of the problem. For example, although the harms and benefits of hydroxychloroquine as a potential treatment are indeed being studied, there is currently no scientific consensus on its effectiveness (Geleris, Sun, Platt, Zucker, Baldwin, ripcsak 2020; Meyerowitz, Vannier, Friesen, Schoenfeld, Gelfand & Callahan 2020). Thus, even deciding what counts as misinformation about COVID-19 is a complicated matter as insights into the causes of and treatments for the virus develop over time. Nonetheless, it is becoming increasingly clear that misinformation about COVID-19 is a common problem. For example, a poll by Ofcom in the United Kingdom found that almost half (46%) of the United Kingdom population reported exposure to fake news about the coronavirus (Ofcom 2020). Similar results (48%) have been reported by Pew in the United States (Mitchell & Oliphant 2020). Amongst those exposed, nearly two-thirds (66%) reported seeing it on a daily basis, which is problematic as repeated exposure is known to increase belief in fake news (Pennycook, Mcphertes, Bago & Rand 2020). The implication of the submissions above is that misleading media coverage during the pandemic somewhat affected the mental and general health of citizens globally.

### **Framing Theory**

This study is anchored on the Framing Theory. According to McQuail (2005), this is a philosophical postulation that provides an explanation on which news content is typically shaped and contextualized by a media outlet. The frames are cognitive structures that guide the representation of events. In framing, the media devote volume of coverage to a particular issue. In other words, the media through framing make an issue salient and direct audience attention to specific issues, ideas and individuals while downplaying what lies outside the frame (Nwakpoke, Chike, Chukwu, Nwasum, Nwakpu, Ugochukwu, Nwamini, Elem, Iroabuchi & Ogbaeja, 2020). In terms of frame tone, Yas, Jusoha, Streimikieneb, Mardania, Nora, Alatawic, & Umarlebbed (2021) note that “much of media coverage tilt towards the negative than the positive frames” It is noticeable that the media in respect of the COVID-19 pandemic hyped the consequences of the pandemic, focusing more on the danger of the spread of the virus across countries and continents. In this context, therefore, there is a nexus between the study and the theory because the media frame stories, and such stories or words, depending on the content producers, portend to issues like COVID-19 pandemic. In other words, from the postulation of the theory, it might be right to conjecture that the way the media framed the COVID-19 pandemic would have either positively or negatively affected not only the way mental health of the public was portrayed but the general quality of life among the residents of South-East, Nigeria.

The researchers adopted survey research design. The population of the study comprises individuals who are residents of south eastern part of Nigeria. According to the 2022 projected population, these residents 39,383,874. Given that south-east was one of those zones affected by Corona virus and which continued to send different media messages to its citizens on the ways to contain the pandemic, it became a suitable population for this study. The multi-stage sampling technique was used to select the respondents across the different states in the zones for the purpose of instrument administration. The researchers achieved the multi-stage sampling procedure this way: at the first stage; using the table of random sampling, three states (Abia, Anambra and Imo) were chosen at the senatorial district. The second stage of the sample was the selection of local government areas, from each of the senatorial zones in the three chosen states, that is three local government areas to represent each of the senatorial zones, making a grand total of nine local government areas. The third stage involved the selection of towns/communities to represent each of the selected local government areas. While the fourth stage involved the survey of the instrument among the

villages in each of the selected towns/communities. The sample size of this study is 663. This sample was statistically worked out by using Krejcie and Morgan (1970) sampling determining formula. Therefore, 663 copies of questionnaire were distributed to randomly selected respondents (residents of south east). However, 647 copies of the questionnaire were successfully retrieved and analysed.

**RESULTS**

**Demographic Variables**

Variables	Frequency	No.	Percentage
Gender	Male	311	48.1%
	Female	336	51.9%
<b>Total</b>		<b>647</b>	<b>100%</b>
Age Bracket	18-25 years	144	22.2%
	26 – 35 years	268	41.4%
	36-44 years	127	19.6%
	45-49 years	77	11.9%
	50 years and above	31	4.79%
<b>Total</b>		<b>647</b>	<b>100%</b>
<hr/>			
Marital Status			
Married	Single	439	67.9%
	Married	208	32.9%
<b>Total</b>		<b>647</b>	<b>100%</b>
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Educational Qualification	First school Leaving	46	7.11%
	SSCE/Equivalent	79	12.2%
	OND/NCE/PGD	87	13.4%
	First Degree/HND	249	38.5%

The data from the table above shows an almost even distribution between the male and female respondents although the males were a little under sampled. Males represented 48.1% percent of the sample while females were 51.9% percent, an indication that no significant disparity existed between the genders used for the study. Thus, there was 3.8% difference between the number of male and female respondents. In terms of age, 22.2% of the respondents were 18 – 25 years; 41.4% were 26 – 35 years; 19.6% were 36 – 44 years; 11.9% were 45 – 49 years; while 4.79% were 50 and above. Hence, the dominant age bracket was 26 – 35 years, while the least featured was 50 and above. For marital status, 67.9% of the respondents were single as against 32.1% that were married. This amounted to 35.8% difference between the number of single and married respondents. In terms of education, 7.11% of the respondents held First School Leaving Certificate (FSCL) as their highest educational qualification; 12.2% held SSCE/equivalent; 13.4% held OND/NCE/pre-degree diploma; 39.5% held first degree/HND; while 28.7% held postgraduate qualifications. Thus, First degree/HND was the highest qualification while the least featured was FSCL. On the occupation front, 9.11% of the respondents were government workers; another 10.7% professionals in private firms; 6.96% teachers; 6.03% traders’ 23 % students; while 44.2% belonged to other professions unspecified in the questionnaire.

**Research Question 1:** To find out if information on COVID-19 affected the mental health of residents of South East Nigeria?

**Figure 1. View on the Effect of Covid-19 Media Messages on Respondents Mental Health**

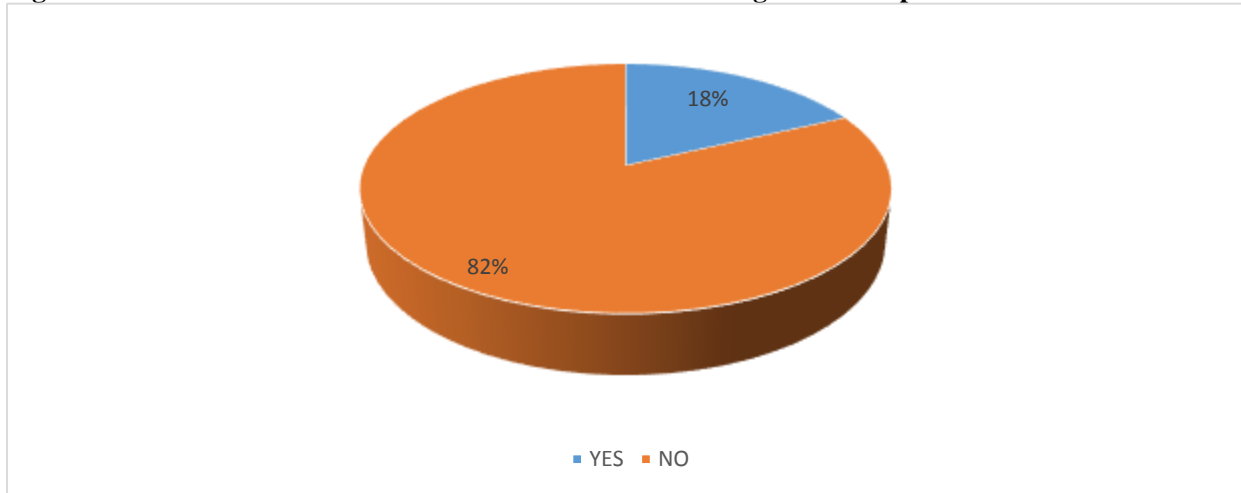


Figure one shows that 82% of the respondents were of the opinion that COVID-19 communication had effects on their mental health, while 18% did not think so. This implies that most of the respondents observed that COVID-19 communication had a significant effect on their mental health. This suggests that the respondents might have been exposed to news reports inducing the above emotion; they might have spoken out of experience.

**Table 1. Respondents' feeling when exposed to daily news reports on COVID-19 Response Frequency**

Response	Frequency	Percentage
Stress	95	14.7%
Anxiety	120	19%
Depression	382	59%
Fear	35	5.41%
Worry	15	2.32%
<b>Total</b>	<b>647</b>	<b>100</b>

Table 1 shows that among the respondents, 14.7% reported feeling stressed when exposed to daily news reports on COVID-19, 19 % reported feeling anxious, 59% reported feeling depressed , 5.41% reported feeling fear ,while 2.32% of the respondents reported being worried when exposed to daily news reports on COVID-19. From the foregoing, it could be said that majority of the respondents (59%) reported feeling depressed after exposure to daily news reports on COVID-19. Based on this, it could be said that there is a relationship between exposure to news reports and the state of mind of the respondents who were exposed to daily news reports during the outbreak of the pandemic.

Table 1 and figure 1 above provided answer to the first research question. From the responses, it was clear that majority (59%) showed that they felt depressed when exposed to daily news reports on COVID-19, while a greater percentage 82% demonstrated that COVID-19 had effect on their mental health.

Based on the foregoing, the first research question is answered by stating that the information on COVID-19 pandemic adversely affects the mental health of residents of South East Nigeria



**Research question 2:** What was the dominant media channel used by residents of South East Nigeria to obtain information on COVID-19 pandemic?

**Table 2: Respondents’ Major Medium of obtaining COVID-19 News**

Response	Respondents’ Exposure to News	Respondents’ Exposure to News via Radio	Respondents’ Exposure to News Via Television	Respondents’ Exposure to News via Newspaper/ Magazine	Respondents’ Exposure to News via Social media
Agree	38.2% N = 247	3.7% N = 24	18.5% (N = 120)	3.6% (N = 23)	31.7% N = 205
Strongly agree	61.8% N=400	6.5% (42)	13.1% N=85	1.7% N=11	42.5% N=275
Disagree	0% N = 0	43.6% (N = 282)	33% (N = 213)	44.8% N = 290	10.7% N = 69
Strongly disagree	0% N = 0	46.2 (N=299)	35.4% (N=229)	49.9 N=323	15.1% N=98
<b>Total</b>	<b>100%</b> <b>N = 647</b>	<b>100%</b> <b>N = 647</b>	<b>100%</b> <b>N = 647</b>	<b>100%</b> <b>N = 647</b>	<b>100%</b> <b>N = 647</b>

Table 2 above provided answer to research question 2. The table shows that 100% of the respondents were exposed to COVID-19 news. 3.7 % of the respondents agreed that radio news was the dominant media channel they used for getting information on COVID-19. 6.5% of the respondents strongly agreed. 43.6% of the respondents disagreed that radio was the dominant media channel they used in obtaining COVID-19 information while (46.2 %) of the respondents strongly disagreed that radio was their most utilized medium for obtaining COVID-19 information. For that of the television, data generated from the table shows that (18.5 % )of the respondents agreed that television was the dominant media channel they used for getting information on COVID-19, (13.1%) of the respondents’ strongly agreed , (33% )of the respondents disagreed that television was the dominant media channel they used in obtaining COVID-19 information while (35.4 % ) of the respondents strongly disagreed that television was their most utilized medium for obtaining COVID-19 information. On the other hand,(3.6%) of the respondents’ agreed that newspapers/ magazines was their go to source for news on COVID-19, (1.7 % )of the respondents strongly agreed that newspapers/magazines was the dominant media channel they used for getting information on COVID-19, 44.8% of the respondents disagreed that newspapers/magazines was the dominant media channel they used in obtaining COVID-19 information while (49.9 % ) of the respondents strongly disagreed that newspapers/magazines was their most utilized medium for obtaining COVID-19 information. For that of the social media, data generated from the table indicates that (31.7 % )of the respondents agreed that social media was the dominant media channel they used for getting information on COVID-19, (42.5%) of the respondents’ strongly agreed , (10.7% )of the respondents disagreed that social media was the dominant media channel they used in obtaining COVID-19 information while (15.1%) of the respondents strongly disagreed that social media was their most utilized medium for obtaining COVID-19 information. Reading the data it is apparent that the dominant media channel respondents’ used for obtaining information on COVID-19 in the South East was the social media.

From the foregoing therefore, the answer to research question 2 is provided by stating that the social media was the dominant media channel residents of South East Nigeria used to obtain information on COVID-19 pandemic.

**Research Question 3:** What is the perception of South East residents’ regarding COVID-19 communication?

**Figure 2:** Did COVID-19 Communication Contain any form of False Information?

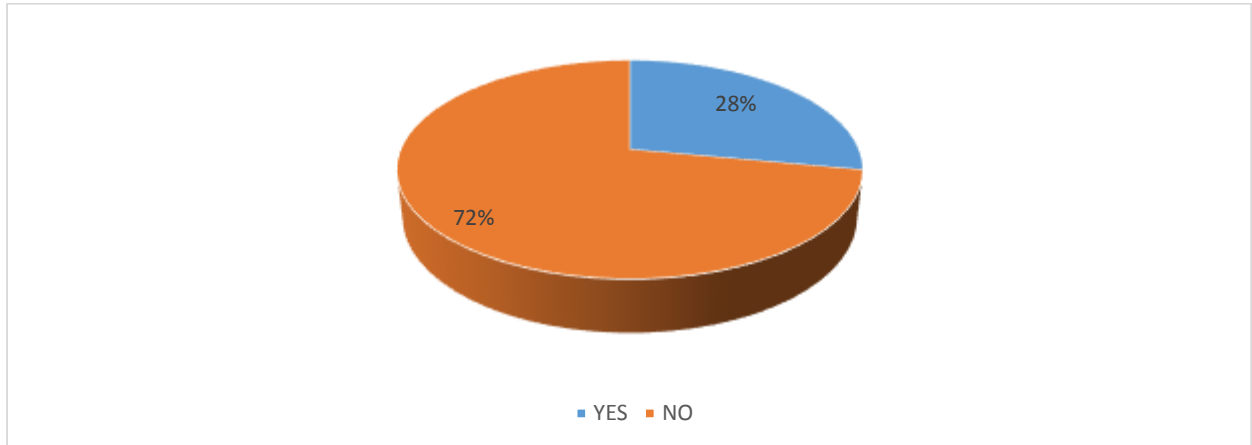
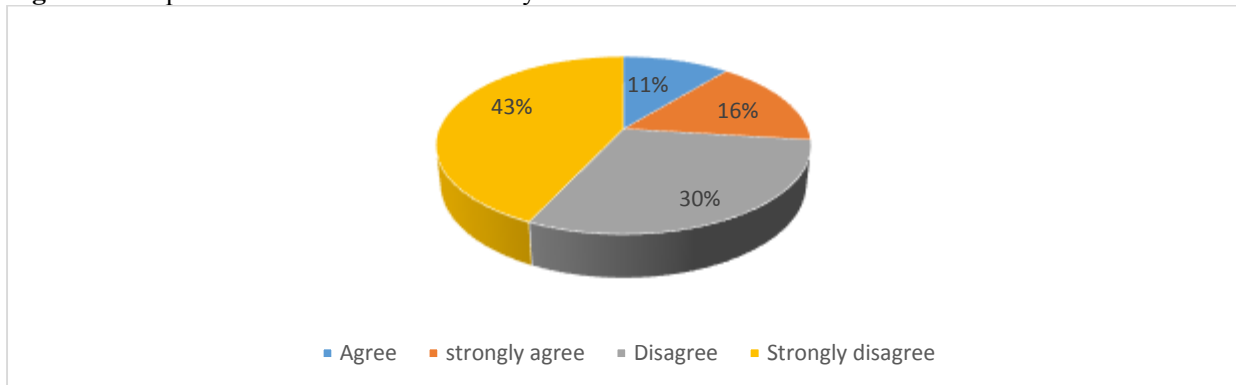


Figure 2 shows that 72% of the respondents were of the opinion that COVID-19 communication contained false information, while 28% did not think that COVID-19 communication contained false information. Data from the figure demonstrates respondent’s opinion concerning the information on COVID- 19 as inaccurate. The implication may be seen from the angle of the dominant belief concerning social media channel as majorly containing fake news and it could also arise from the fact of the controversy surrounding COVID-19 itself which had majority of the people confused and unbelieving about the COVID-19 issue.

**Figure 3:** Respondents’ view on the credibility of COVID-19 News



In Figure 3, the data shows that 11% of the respondents agreed that all COVID-19 news was credible, 16% of the respondents strongly agreed that all COVID-19 news was credible, 30% disagreed that all COVID-19 news was credible while 43% strongly disagreed that all COVID-19 news was credible. This implies that majority of the respondents (73%) see COVID- 19 information as not credible while 27% see it as credible. This data agrees with data from figure one above which shows that majority of the respondents are of the opinion that some COVID-19 Information was inaccurate.

**Table 4:** Respondents’ View on COVID-19 Communication as Propaganda

Response	Frequency	Percentage
YES	569	87.9%
NO	78	12.1%
<b>Total</b>	<b>647</b>	<b>100%</b>

Table 4 shows that 87.9% of the respondents were of the opinion that COVID-19 news contain propaganda, while 12.1% did not think so. This implies that most of the respondents observed that COVID-19 news contains some elements of propaganda. This may suggest that the respondents might have been exposed to COVID -19 news reports that they felt evidence of propaganda. Figure 2 and 3 and table 4 above provided the answer to research question 3. From the responses of these tables and figures, it was evident that majority (72%) of the respondents were of the view that Covid-19 news and messages contained false information. Similarly, majority of the respondents (73%) perceived Covid-19 news as not credible. Likewise, higher percentage (87.9%) of the respondents perceived Covid-19 communication as propaganda. From the foregoing therefore, it may be stated in answer to the third research question that South East residents’ perceived Covid-19 communication as having elements of falseness, being less credible and containing traces of propaganda.

**Research Question 4:** To ascertain if information on COVID-19 pandemic affected the quality of life of residents of South East Nigeria?

**Figure 4: Respondents Opinion about Effect of Media Reports on COVID-19 on their Quality of Life.**

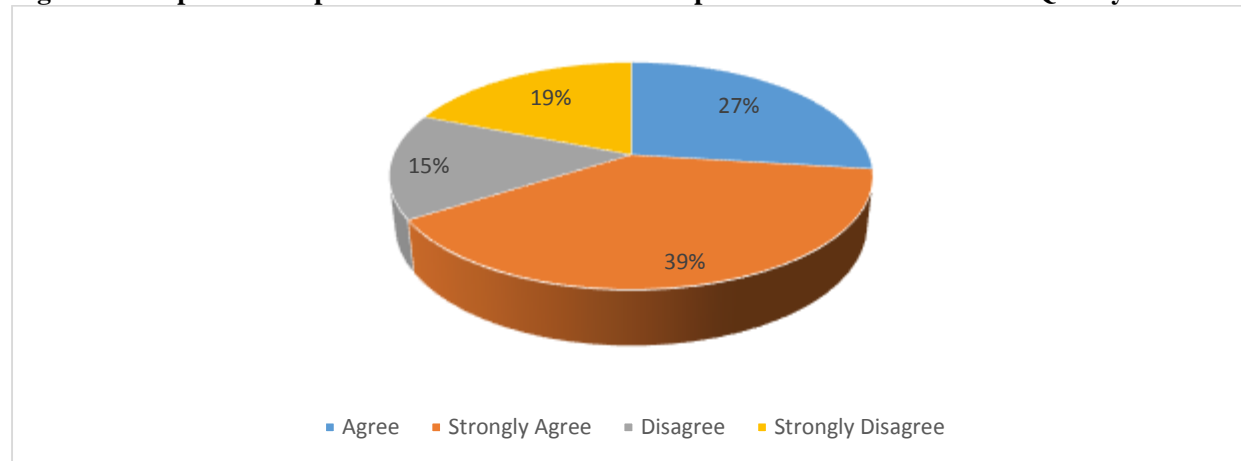


Figure 4 shows that (27%) of the respondents’ agree that their quality of life was affected by the media reports on COVID-19 while 39% of them strongly agreed that media reports on COVID-19 affected their quality of life .On the other hand, 15% of the respondents hold an opposing view because they don’t believe that media reports on COVID-19 had any effect on their quality of life,19% of the respondents hold similar view because they strongly disagreed that media reports on COVID-19 had any effect on their quality of life. This implication of the present data is that to a large extent, media reports on COVID-19 affected the quality of life of the respondents in one way or another as could be seen in the number of respondents who hold the view that COVID -19 media reports affected their quality of life.

**Table 5: Respondents’ rating on how media reports on COVID-19 affected their quality of life**

Response	Frequency	Percentage
Very bad	346	53.5%
Bad	156	24.1%
Moderate	65	10.1%
Good	33	7.26%
Very Good	47	5.10%
<b>Total</b>	<b>647</b>	<b>100%</b>

Table 5 shows that 53.5 % of the respondents’ rated their quality of life very bad as a result of media reports on COVID-19 , 24.1 % of the respondents’ rated their quality of life bad ,10.1% of the respondents rated their quality of life moderate ,7.26 % of the respondents rated their quality of life good while 5.10% of the respondents rated their quality of life very good as a result of media reports on COVID-19 pandemic .This

means that majority of the respondents (53.5%) rated their quality of life very bad as a result of media reports on COVID-19.

It against the data gathered from figure 4 and table 5 that the researchers provide the answer to research question 4 by inferring that information on COVID-19 did not only affect the quality of life of South East residents, it affected it very badly.

### **Discussion of Findings**

The first finding of the study indicated that the information on COVID-19 pandemic adversely affects the mental health of residents of South East Nigeria. This finding is somewhat instructive as it lends credence to fact that the way a media message is constructed, especially health messages can positively or negatively affect the people who such message is exposed to (Wakefield, Loken, & Hornik, 2010). Interestingly, the present work is also in agreement with Gilbert, *Basran*, Plowright, and McEwan (2023) who also discovered that the content of messages on COVID-19 somewhat affected the mental health of receivers of such messages. Similarly, Werg Semo, & Frissa (2020) found that the impact of media messages on COVID-19 especially, in the early stage of the pandemic was somewhat adverse. From the foregoing therefore, one might argue, that beyond the very important role of the media as a platform for dissemination of COVID-19 control measures, creation of awareness and attitudinal change, they also created, through their false and propagandistic messages, fear, anxiety and worry that *exacerbated* the mental health of receivers of such messages.

In the same vein, the second finding of the study demonstrated that 42.5% of the respondents who are in the majority used the social media for obtaining COVID-19 information. This work was able to establish that social media platforms were more dominant in the spread of COVID-19 information during the pandemic, even though the conventional media platforms like: radio, tv, newspapers/magazines were also used by respondents for obtaining COVID-19 information. This finding indicates that the dominant media channel used for obtaining COVID-19 information by respondents' in South East Nigeria was social media The finding reflects the results of previous studies such as (Ying Ho, Chen, Cheng-Fang &Yen 2020; Liu and Liu, 2020; Dhanashree, Garg , Chauhan, Bhatia, Sethi and Chauhan, 2021 ; Ying, Chen, Cheng-Fang and Yen, 2020) which revealed heavy reliance on the Social media for information dissemination during the COVID-19 pandemic.

Similarly, the third finding reveals that the residents of the South East perceived COVID-19 communication as having elements of falseness, being less credible and containing traces of propaganda. It might be important to note that social media remained one of the very popular channels through which COVID-19 communication was made increasingly available to the audience in the early days of the pandemic and given that the social media has over time, been implicated as having that penchant to spread false information (*Buchan, 2020*) this situation is even worsened based on the fact that individuals who most times encounter false information on social media may continue to actively spread it further (*Buchan, 2020*). Interestingly, other studies *Bayer, olznagel, Lubianiec, Pinteá, Schmitt, Szakacs, & Uszkiewicz (2021)*; *Shahi, Dirkson, Majchrzak, (2021)*, *Ngozika, Chinenye, & Mathias (2020)*, *Uzochukwu, Nwosu and Okeke (2022)* in the same way, discovered just like the present study, that most people who were exposed to COVID-19 messages saw it as propagandistic, falsity and at other times, less credible. This situation largely played out particularly in Nigeria, where members of the public largely perceived the news and information on COVID-19 as either a hoax, false and/or deceptive (*Uzochukwu, Nwosu & Okeke, 2022*). From the foregoing it is glaring that most COVID-19 messages that were disseminated to the public, especially those ones sent through online platforms had traces of deception.

In the same vein, the fourth research question indicated that information on COVID-19 did not only affect the quality of life of South East residents, it affected it very badly. Of course, the finding at this point is predictable, given that the pandemic which arrived with its scourge, economic retrogression, political instability and other social quandaries would expectedly, affect the quality of life of the population. The rationality behind these researchers position at this point is that diseases, pandemics and maladies of the ilk of the pandemic would ordinarily produce adverse effects on the quality of life of the populace. Interestingly,

the present study shares similar position with WHO, (2023); Sharifi, Khavarian-Garmsir (2020). This explains the reason WHO (2023) clearly notes that:

The COVID-19 pandemic led to dramatic loss of human lives worldwide and presented an unprecedented challenge to public health, food systems and the world of work. The economic and social disruption caused by the pandemic was devastating, as tens of millions of people were opened to the risk of falling into extreme poverty.

Little wonder WHO (2023) explains that “after the challenges of COVID-19, the number of undernourished people, currently estimated at nearly 690 million, could increase by up to 132 million by the end of the year”

### **Conclusion**

From the study, it becomes clear that the constant exposure to COVID-19 related news and information had a significant negative effect on the mental health and quality of life of individuals in the South East region. This was because the media focus on the negative aspect of the pandemic which included the rising number of cases, deaths and health risks, these messages basically led to increased anxiety, depression, fear and stress among residents. These situations therefore affected their mental health, well-being and overall quality of life. This upholds the postulation of the framing theory that in framing, the media devote volume of coverage to a particular issue. In other words, the media through framing make an issue salient and direct audience attention to specific issues, ideas and individuals while downplaying what lies outside the frame (Nwakpoke , Chike , Chukwu, Nwasum, Nwakpu, Ugochukwu , Nwamini, Elem, Iroabuchi & Ogbaeja, 2020). In terms of frame tone, Yas, Jusoha, Streimikieneb, Mardania, Nora, Alatawic, & Umarlebbed (2021) note that “much of media coverage tilt towards the negative than the positive frames” It is noticeable that the media in respect of the COVID-19 pandemic hyped the consequences of the pandemic, focusing more on the danger of the spread of the virus across countries and continents. Consequently, the constant bombardment of news and information about the virus somewhat contributed to increased anxiety, fear and stress among the population. We understand from communication theories that the constant exposure to negative information produces negative effects and that seems to be the reason behind the anxiety ,fear and negative effects on mental health not really because the pandemic have spread but because of the nature of the communication itself, the intensity of the communication and the way it is communicated so that in future, it becomes necessary that communication concerning health messages should be clear, simple ,unambiguous and intentionally couched in a way that will induce positive response from the public and not cause fear. It is this underlying tone and nature of the message that has led to this stress on mental well-being and quality of life.. It is therefore against the discoveries of this study that the following recommendations were made

- That the government and health authorities should communicate COVID-19 information in an unambiguous ,clear ,simple and easy to understand language intentionally so that the message will communicate exactly the intention of the health institution concerning such cases. This will help to reduce confusion and uncertainty -associated with the messages among the population – a challenge that has been identified to lead to mental health and low quality of life.
- Messages concerning health issues should be guarded in such a way to reduce the amount of fake information because another thing discovered in the study was that there were too many information on social media concerning the pandemic and most of this information were fake and this contributed in no small measure to the negative effects of COVID-19 information on the mental health and quality of life of residents of South East ,Nigeria.
- Mental health services should be readily available for residents in the South East region. This includes counseling, therapy, and other forms of support that can help individuals cope with the stress and anxiety associated with COVID-19.

- Mental health should be given priority in policy decisions related to COVID-19. This includes the allocation of resources to mental health services and programs, as well as the inclusion of mental health experts in decision-making processes.
- Community engagement and awareness-raising activities should be conducted to promote mental health and enhance quality of the people's life. This includes providing information on coping mechanisms such as resilience, hope, and positive thinking, as well as fostering community support and solidarity during a pandemic.
- The study also identified the detrimental effect of misinformation on mental health and quality of life and as such strongly advocate that authorities should adopt strategies to counteract and refute false information promptly. This, the researchers note, can be achieved through targeted campaigns, fact-checking initiatives and partnerships with credible sources to ensure that reliable information reaches residents.

### References

- Ahmad, A. R., & Murad, H. R. ,(2020). The Impact of Social Media on Panic during the COVID-19 Pandemic in Iraqi Kurdistan: Online Questionnaire Study. *J. Med. Internet Res.* 22 (5), e19556. doi:10.2196/19556
- Anwar, A., Malik ,M., Raees ,V., ( 2020) .Role of Mass Media and Public Health Communications in the COVID-19 Pandemic. *Cureus* 12(9): e10453. doi:10.7759/cureus.10453
- Andersen, K.G., Rambaut, A., Lipkin, W.I.,(2020).The proximal origin of SARS-CoV-2. *Nat Med* 26, 450–452 (2020). <https://doi.org/10.1038/s41591-020-0820-9>
- Balakrishna, A., Walsh EC, Hamidi A, Berg S, Austin D, Pino RM, Hanidziar D, Chang MG, Bittner EA. (2021). An examination of sedation requirements and practices for mechanically ventilated critically ill patients with COVID-19. *Am J Health Syst Pharm.* 2021 Oct 25;78(21):1952-1961. doi: 10.1093/ajhp/zxab202. PMID: 33993212; PMCID: 33993212
- Basch ,C.H., Hillyer ,G.C., Meleo-Erwin ,Z.C., Jaime, C., Mohlman, J.,& Basch, C.E.,(2020). Preventive Behaviors Conveyed on YouTube to Mitigate Transmission of COVID-19: Cross-Sectional Study. *JMIR Public Health Surveill.* 2020;6:e18807. Erratum in: *JMIR Public Health Surveill.* 2020; 6:e19601. [PMC free article] [PubMed] [Google Scholar]
- Bayer, J., Holznagel, B., Lubianiec, K., Pintea, A., Schmitt, J.B., Szakacs, J., & Uszkiewicz (2021). Disinformation and propaganda: impact on the functioning of the rule of law and democratic processes in the EU and its Member States: 2021 update. Retrieved from:[https://www.europarl.europa.eu/RegData/etudes/STUD/2021/653633/EXPO\\_STU\(2021\)653633\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2021/653633/EXPO_STU(2021)653633_EN.pdf).
- Bergquist, R., Kiani, B., Manda, S. , (2020).First year with COVID-19: Assessment and prospects. *Geospat Health.* 2020 Nov 26;15(2). doi: 10.4081/gh.2020.953. PMID: 33461262.
- Brailovskaia, J.,Cosci, F.,Mansueto, G., Margraf, J., (2021).The relationship between social media use, stress symptoms and burden caused by coronavirus (Covid-19) in Germany and Italy: A cross-sectional and longitudinal investigation, *Journal of Affective Disorders Reports*, Volume 3, 2021, 100067, ISSN 2666-9153, <https://doi.org/10.1016/j.jadr.2020.100067>. (<https://www.sciencedirect.com/science/article/pii/S2666915320300676>)
- Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. ,(2020). The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. *The Lancet*, 395(10227), 912-920
- Buchan, T. , (2020). Why do people spread false information online? The effects of message and viewer characteristics on self-reported likelihood of sharing social media disinformation. *PloS ONE* 15 (10), 17-33

- Chen ,K.Y, Li, T., Gong ,F.H., Zhang ,J.S, Li ,X.K. ,(2020).Predictors of Health-Related Quality of Life and Influencing Factors for COVID-19 Patients, a Follow-Up at One Month. *Front Psychiatry*. 2020;11(July):1–6. doi: 10.3389/fpsyt.2020.00668. pmid:32733299
- Chung R.Y., Dong ,D., Li ,M.M.,(2020). Socioeconomic gradient in health and the covid-19 outbreak. *BMJ*. 2020 Apr 1;369:m1329. doi: 10.1136/bmj.m1329. PMID: 322383
- Cuan-Baltazar J.Y. Muñoz-Perez M.J., Robledo-Vega C., Pérez-Zepeda M.F., Soto-Vega E., (2020). Misinformation of COVID-19 on the Internet: Infodemiology Study. *JMIR Public Health Surveill*. 2020 Apr 9;6(2):e18444. doi: 10.2196/18444. PMID: 32250960; PMCID: PMC7147328
- Dhanashree, Garg, H., Chauhan ,A., Bhatia, M.,Sethi ,G., Chauhan ,G., (2019).Role of mass media and it’s impact on general public during coronavirus disease 2019 pandemic in North India: An online assessment. *Indian J Med Sci* 2021;73(1):21-5.-World Health Organization Director-General’s Opening Remarks at the Mediafrom:<https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---20-march-2020> [Last accessed on 2020 Mar 20][Google Scholar]
- Dwivedi ,Y.K., Hughes, D.L., Coombs, C., Constantiou ,I., Duan ,Y., Edwards, J.S., Gupta, B., Lal ,B., Misra ,S., Prashant, P., Raman, R., Rana, N.P., Sharma, S.K., Upadhyay ,N., (2020). 'Impact of COVID-19 pandemic on information management research and practice: transforming education, work and life', *International Journal of Information Management*, 55, pp.102211
- Finset ,A., Bosworth, H., Butow ,P., Gulbrandsen ,P., Hulsman ,R.L, Pieterse, A,H., Street, R., Tschoetschel,R., & Van Weert ,J. ,(2020).Effective health communication - a key factor in fighting the COVID-19 pandemic. *Patient Educ Couns*. 2020 May;103(5):873-876. doi: 10.1016/j.pec.2020.03.027. PMID: 32336348; PMCID: PMC718002
- Fullana ,M.A., Hidalgo-Mazzei ,D., Vieta, E., Radua ,J.,(2020). Coping behaviors associated with decreased anxiety and depressive symptoms during the COVID-19 pandemic and lockdown. *J Affect Disord*. 2020 Oct 01;275:80–81. doi: 10.1016/j.jad.2020.06.027. <http://europepmc.org/abstract/MED/32658829> .S0165-0327(20)32385-5 [PMC free article] [PubMed] [CrossRef] [Google Scholar]
- Gao, J., Zheng, P., Jia ,Y., Chen, H., Mao, Y., Chen ,S., Wang, Y., Fu, H., Dai, J., (2020).Mental health problems and social media exposure during COVID-19 outbreak. 2020;15(4):e0231924. doi: 10.1371/journal.pone.0231924.<https://dx.plos.org/10.1371/journal.pone.0231924>. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
- Geleris ,J., Sun ,Y., Platt ,J., Zucker, J., Baldwin ,M., Hripcsak ,G., Labella ,A., Manson ,D.K., Kubin ,C., Barr ,R.G., Sobieszczyk, M.E., Schluger ,N.W., (2020). Observational Study of Hydroxychloroquine in Hospitalized Patients with Covid-19. *N Engl J Med*. 2020 Jun 18;382(25):2411-2418. doi: 10.1056/NEJMoa2012410. Epub 2020 May 7. PMID: 32379955; PMCID: PMC7224609.
- Gijzen, M., Shields-Zeeman, L., Kleinjan, M., Kroon, H., Van der Roest, H., Bolier, L. (2020). The bittersweeteffects of COVID-19 on mental health: Results of an online survey among a sample of the Dutch population.osf.io. 2020. <https://doi.org/10.3390/ijerph17239073> PMID: 33291765.
- Gilbert, P., Basran, J., Plowright, P., & McEwan, K., (2023). How Messages about COVID-19 May Have Affected People’s Sense of Threat and Mental Health. *EC Psychology and Psychiatry*. 12, 47-57.[IP1]
- Habib, M.A., Dayyab ,FF.,M Iliyasu ,G., Habib, A.G., (2021). Knowledge, attitude and practice survey of COVID-19 pandemic in Northern Nigeria. *PLoS One*. 2021 Jan 14;16(1):e0245176. doi: 10.1371/journal.pone.0245176. PMID: 33444360; PMCID: PMC7808653.
- Hall ,H. , (2020)The effect of the COVID-19 pandemic on healthcare workers' mental health. *JAAPA*. 2020 Jul;33(7):45-48. doi: 10.1097/01.JAA.0000669772.78848.8c. PMID: 32590533.
- Islam ,M. S., Sarkar, T., Khan, S. H., Mostofa Kamal, A..H., Hasan ,S. M. M., Kabir ,A., Yeasmin ,D., Islam ,M. A., Amin Chowdhury, K. I., Anwar, K. S., Chughtai ,A. A.,& Seale H. (2020). COVID-19–related infodemic and its impact on public health: A global social media analysis. *The American Journal of Tropical Medicine and Hygiene*, 103(4), 1621–1629. <https://doi.org/10.4269/ajtmh.20-081>
- Jayaseelan ,R., Brindha, D., &Kades, W. ,(2020).Social media reigned by information or misinformation about COVID-19: a phenomenological study. *SSRN Electron J*.

2020. <https://doi.org/10.2139/ssrn.3596058>. This qualitative study explores whether social media is diffusing information or misinformation to the public about the COVID-19 pandemic
- Kamble ,S., Joshi ,A.,Kamble ,R., & Kumari ,S.. ( 2022).Influence of COVID-19 Pandemic on Psychological Status: An Elaborate Review. *Cureus*. 2022 Oct 1;14(10):e29820. doi: 10.7759/cureus.29820. PMID: 36337829; PMCID: PMC9622468.
- Lelisho ,M.E., Wotale ,T.W., & Tareke ,S.A., (2023). Prevalence and associated factors of insomnia symptoms during the COVID-19 pandemic lockdown among Mettu town residents. *PLoS One*. 2023 Mar 14;18(3):e0279624. doi: 10.1371/journal.pone.0279624. PMID: 36917577; PMCID: PMC10013898.
- Li, T., Gong ,F.H., Zhang ,J.S, Li ,X.K. ,(2020).Predictors of Health-Related Quality of Life and Influencing Factors for COVID-19 Patients, a Follow-Up at One Month. *Front Psychiatry*. 2020;11(July):1–6. doi: 10.3389/fpsy.2020.00668. pmid:32733299
- Liu ,J& Liu ,S., (2020). The management of coronavirus disease 2019 (COVID-19). *J Med Virol*. 2020 Sep;92(9):1484-1490. doi: 10.1002/jmv.25965. Epub 2020 May 22. PMID: 32369222; PMCID: PMC7267323.
- Majeed, Mehwish ,Irshad, Muhammad , Fatima, Tasneem , Khan, Jabran , Hassan, Muhammad & Mubbashar}, (2020).Relationship Between Problematic Social Media Usage and Employee Depression: A Moderated Mediation Model of Mindfulness and Fear of COVID-19}, *JOURNAL={Frontiers in Psychology}*, VOLUME={11}, YEAR={2020}, URL={<https://www.frontiersin.org/articles/10.3389/fpsyg.2020.557987>}, DOI={10.3389/fpsyg.2020.557987}, ISSN={1664-1078},
- McQuail, D. (2005). *Mass Communication Theory*. London: Sage Publications.
- Mheidly, N.U, & Fares, J.,(2020). Leveraging media and health communication to overcome the COVID-19 infodemic. *J Public Health Pol*. 2020;41:410–20. [PMC free article] [PubMed] [Google Scholar]
- Mihelj ,S ., Kondor, K., & Štětka ,V.,(2021). Audience engagement with COVID-19 news: the impact of lockdown and live coverage, and the role of polarization. *Journal Stud*. 2021 May 25;23(5-6):569–587. doi: 10.1080/1461670x.2021.1931410. [CrossRef] [Google Scholar]
- Mitchell, A., & Oliphant, J. B. ,(2020). Americans Immersed in COVID-19 News; Most Think Media Are Doing Fairly Well Covering It. *Pew Research Center*. Available online at: <https://www.journalism.org/2020/03/18/americans-immersed-in-covid-19-news-most-think-media-are-doing-fairly-well-covering-it/> (accessed March 18, 2020).
- Nelson, T., Kagan ,N., Critchlow ,C., Hillard ,A., Hsu ,A., (2020). The Danger of Misinformation in the COVID-19 Crisis. *Mo Med*. 2020 Nov-Dec;117(6):510-512. PMID: 33311767; PMCID: PMC7721433.
- Neureiter, A., Stubenvoll, M., & Kaskelvicute, R ., Matthes, J., (2020).Trust in Science, Perceived Media Exaggeration About COVID-19, and Social Distancing Behavior}, *JOURNAL={Frontiers in Public Health}*, VOLUME={9}, YEAR={2021}, URL={<https://www.frontiersin.org/articles/10.3389/fpubh.2021.670485>}, DOI={10.3389/fpubh.2021.670485}, ISSN={2296-2565},
- Ngozika,A. ,Obi-Ani, Chinenye Anikwenze & Mathias Chukwudi ,Isiani ., Bradley,C. ,Freeman (Reviewing editor) (2020) .Social media and the Covid-19 pandemic: Observations from Nigeria, *Cogent Arts & Humanities*, 7:1, DOI: 10.1080/23311983.2020.1799483
- Nwakpu, E. S., Ezema, V. O., & Ogbodo, J. N., (2020). Nigeria media framing of coronavirus pandemic and audience response. *Health Promotion Perspectives*, 10(3), 192MN
- Nwakpoke ,O.J.,Onwe, E. C., Chukwu, J., Nwamini, S. C., Nwankwo, S. U., Elem, S., Ogbaeja, N.I Nwasum, C. J., Nwakpu, E. S., & Ogbodo, J. N. (2020). Analysis of Online Newspapers’ Framing Patterns of COVID-19 in Nigeria. *European Scientific Journal*, ESJ, 16(22), 217. <https://doi.org/10.19044/esj.2020.v16n22p217>



- Ofcom , (2020). Half of UK Adults Exposed to False Claims about Coronavirus. Available online at: <https://www.ofcom.org.uk/about-ofcom/latest/features-and-news/half-of-uk-adults-exposed-to-false-claims-about-coronavirus> (accessed May 18, 2020).
- Ohme ,J., Vanden Abeele, M.M.P., Van Gaeveren ,K., Durnez ,W., & De Marez ,L. ,(2020). Staying informed and bridging "social distance": smartphone news use and mobile messaging behaviors of Flemish adults during the first weeks of the COVID-19 pandemic. *Socius*. 2020 Sep 03;6:2378023120950190. doi: 10.1177/2378023120950190. [https://journals.sagepub.com/doi/10.1177/2378023120950190?url\\_ver=Z39.882003&rfr\\_i=ori:rid:crossref.org&rfr\\_dat=cr\\_pub%3dpubmed](https://journals.sagepub.com/doi/10.1177/2378023120950190?url_ver=Z39.882003&rfr_i=ori:rid:crossref.org&rfr_dat=cr_pub%3dpubmed) .10.1177\_2378023120950190 [PMC free article] [PubMed] [CrossRef] [Google Scholar]
- Orok ,E., Ndem E., Daniel ,(2021). Knowledge, attitude and perception of medical students on COVID-19 vaccines: A study carried out in a Nigerian University JOURNAL=Frontiers in Public Health VOLUME=10 YEAR=2021 URL=<https://www.frontiersin.org/articles/10.3389/fpubh.2021.942283> DOI=10.3389/fpubh.2021.942283 ISSN=2296-2565
- Oyewole, A.O., Barrass ,L., Robertson, EE., G Woltmann, J., O'Keefe, H., Sarpal ,H., Dangova ,K., Richmond, C., Craig ,D., (2021). COVID-19 Impact on Diagnostic Innovations: Emerging Trends and Implications. *Diagnostics*. 2021; 11(2):182. <https://doi.org/10.3390/diagnostics11020182>
- Pennycook, G., McPhetres ,J., Zhang ,Y., Lu ,J.G., Rand, D.G. ,(2020). Fighting COVID-19 Misinformation on Social Media: Experimental Evidence for a Scalable Accuracy-Nudge Intervention. *Psychol Sci*. 2020 Jul;31(7):770-780. doi: 10.1177/0956797620939054. Epub 2020 Jun 30. PMID: 32603243; PMCID: PMC7366427.
- Phalswal ,U., Pujari, V., Sethi ,R., Verma ,R., (2023). Impact of social media on mental health of the general population during Covid-19 pandemic: A systematic review. *J Educ Health Promot*. 2023 Jan 31;12:23. doi: 10.4103/jehp.jehp\_460\_22. PMID: 37034873; PMCID: PMC10079172.
- Sabina, M., Katherine, K., & Václav S., (2022). Audience Engagement with COVID-19 News: The Impact of Lockdown and Live Coverage, and the Role of Polarization, *Journalism Studies*, 23:5-6, 569-587, DOI: 10.1080/1461670X.2021.1931410
- Rajkumar, R. P. , (2020). COVID-19 and mental health: A review of the existing literature. *Asian Journal of Psychiatry*, 52, 102066.
- Shahi ,G.K.,Dirkson ,A.,& Majchrzak, T.A. ,(2020). An exploratory study of COVID-19 misinformation on Twitter. *Online Soc Netw Media*2021;22:100104. doi:10.1016/j.osnem.2020.100104. pmid:33623836 CrossRefPubMedGoogle Scholar
- Sharifi ,A., & Khavarian-Garmsir ,A.R., (2020). The COVID-19 pandemic: Impacts on cities and major lessons for urban planning, design, and management. *Science Total Environ* 1 (20), 794-799.
- Uzochukwu, Nwosu & Okeke, (2022). Audience exposure, awareness and compliance with Covid-19 pandemic messages in Nigeria: A study of residents of Anambra state 2 (2), 1-19.
- Vazquez-Vazquez, A., Dib ,S., Rougeaux ,E., Wells, J.C., Fewtrell, I M.S., (2020). The impact of the Covid-19 lockdown on the experiences and feeding practices of new mothers in the UK: Preliminary data from the COVID-19 New Mum Study. *Appetite*. 2021 Jan 1;156:104985. doi: 10.1016/j.appet.2020.104985. Epub 2020 Oct 7. PMID: 33038477; PMCID: PMC7538871.

- Wakefield, M. A., Loken, B., & Hornik, R. (2020). Use of Mass Media Campaigns to Change Health Behavior. *Lancet*, 376, 1261-1271.  
[https://doi.org/10.1016/S0140-6736\(10\)60809-4](https://doi.org/10.1016/S0140-6736(10)60809-4)
- Wang ,C., Tee ,M., Roy, A.E., Fardin ,M.A., Srichokchatchawan ,W., Habib, H.A.,Tran ,B.X., Hussain ,S., Hoang, M.T., Le ,X.T., Ma, W., Pham ,H.Q., Shirazi ,M., Taneepanichskul ,N., Tan, Y., Tee, C., Xu, L., Xu ,Z., Vu, G.T., Zhou ,D., Koh ,B.J, McIntyre, R.S, Ho, C., Ho, RR..C Kuruchittham ,V. , (2021).The impact of COVID-19 pandemic on physical and mental health of Asians: A study of seven middle-income countries in Asia. *PLoS One*. 2021 Feb 11;16(2):e0246824. doi: 10.1371/journal.pone.0246824. PMID: 33571297; PMCID: PMC7877638
- Werg Semo, B., & Frissa, S. (2020). The mental health impact of Covid-19 pandemic: Implications for sub Saharan Africa. *Psychology Research and Behaviour Management* 13 (5), 713-230
- WHO, (2023) WHO on Covid-19 on people’s livelihoods, their health and our food systems. Retrieved from: <https://www.who.int/news/item/13-10-2020-impact-of-covid-19-on-people%27s-livelihoods-their-health-and-our-food-systems>
- World Health Organization, (2020a). COVID-19 and violence against women: What the health sector/system can do. WHO, 26 March 2020. <https://www.who.int/reproductivehealth/publications/emergencies/COVID-19-VAW-full-text.pdf>[Google Scholar]
- Yas, H., Jusoh, A., Abbas, A. F., Mardani, A., & Nor, K. M. (2020). A review and bibliometric analysis of service quality and customer satisfaction by using Scopus database. *International Journal of Management (IJM)*, 11(8).
- Yin, F., Feng ,Z. , (2022).The Effect of COVID-19 Safety Protocols on Hospital Workers' Mental Health: A Moderated-Mediation Model of COVID-19 Anxiety and Psychological Resilience. *Behav Sci (Basel)*. 2022 Nov 25;12(12):477. doi: 10.3390/bs12120477. PMID: 36546960; PMCID: PMC97741
- Ying Ho , Chen ,Y.L.,Yen, C.F. , (2020).Different impacts of COVID-19-related information sources on public worry: An online survey through social media. *Internet Interv*. 2020 Dec;22:100350. doi: 10.1016/j.invent.2020.100350. Epub 2020 Oct 12. PMID: 33072524; PMCID: PMC7550055
- Zhao, N.,& Zhou, G., (2020). Social media use and mental health during the COVID-19 pandemic: Moderator role of disaster stressor and mediator role of negative affect. *Applied Psychology: Health and Well-being*, 12(4), 1019–1038. <https://doi.org/10.1111/aphw.12226>
- Zheng, Y. , Goh, E. ,& Wen, J., (2020).The effects of misleading media reports aboutCOVID-19 on Chinese tourists’ mental health: a perspective article. *Anatolia*.2020;31(2):337–
- Zhou, W., Wang ,A., Xia ,F., Xiao ,Y., &Tang ,S., (2020). Effects of media reporting on mitigating spread of COVID-19 in the early phase of the outbreak. *Mathematical Biosciences and Engineering*, 17(3), 2693–2707.