An Evaluation of the Effectiveness of Communication Channels and Campaign Messages Employed in the Fight Against Covid-19 in Anambra State, Nigeria

Martha Chidimma Egenti,[1] Emmanuel Onyeka Ebekue[2] & Kosy Anulika Okafor[3]

1. Department of Linguistics, Nnamdi Azikiwe University
Awka, Anambra State. cm.egenti@unizik.edu.ng

2. Department of Theatre and Film Studies, Nnamdi Azikiwe University
Awka, Anambra State. eo.ebekue@unizik.edu.ng

3. Department of Theatre and Film Studies, Nnamdi Azikiwe University
Awka, Anambra State. ka.okafor@unizik.edu.ng

Abstract

During the last pandemic, information campaigns were principal in the management and prevention of public health challenges of global magnitude, such as the COVID-19 virus. This study evaluated the effectiveness of the communication channels and campaign messages used in the fight against COVID-19 in Nigeria in general and Anambra State in particular. Adopting the survey research design of the quantitative research method, with 210 respondents as the selected sample size, the data for the study were collected from twenty-one local government areas of Anambra State. The findings of the study show that the COVID-19 campaign was very robust in Anambra State, and the messages were quite effective in the management and prevention of the spread of the virus in the state. For instance, among the communication models and campaign messages deployed in the fight against the spread of the virus in Anambra, it was observed that the most potent information sources in the fight against COVID-19 in Anambra were friends, family, and colleagues. While Radio was the most effective channel, about 99% were sent via messages, and about 53% of the people living in Anambra were exposed to the COVID-19 campaign messages in the state. The COVID-19 campaign messages helped the majority of the people living in the state manage the virus, and by implication, it was a successful campaign. However, efforts towards strengthening these channels and/or providing new strategies are recommended for more effective information delivery and management of public health challenges in the future.

Keywords: *Effective Communication, Information Management, Pandemic, Communication Channels*

1. Introduction

The COVID-19 pandemic has become one of the most urgent health concerns the world has witnessed in the 21st century. Since the first cases were reported in Wuhan, China, in late 2019, the infection has spread rapidly to all parts of the world, infecting millions and killing thousands. Nigeria confirmed her index case on February 28, 2020, and throughout the period of the active wave, we witnessed quite a number of infection cases of the virus. Daily infections were first counted in units, later in hundreds, and eventually in thousands. The effect of this pandemic, which spread very quickly throughout the world, was quite disastrous. Beyond the very many deaths that were recorded as a result of the pandemic, the impact on the social life of the world was debilitating. The need to control the trans-border spread of the virus led to the placement of restrictions on international movements and the imposition of lockdowns to limit interpersonal

contact, as the virus was known to spread when people shared close circuits with infected individuals. Thus, most communities were forced to lock down on physical socialization, and this eventually led to new ways of living through virtual interactions. Policies aimed at increasing physical distancing were implemented in various parts of the world. However, many of the policies had a negative impact on people. Pouya Hosseinzadeh, Zareipour, Baljani, and Moradali (2022) posit

> that the implementation of policies such as social distancing and the closure of gathering and interaction centers such as parks, cafes, shrines, schools, universities, etc. has had certain social consequences. Prolonged stay-at-home living in a society with a patriarchal lifestyle will increase the pressure on women to do housework. The economic and psychological dimensions of COVID-19 also affect family members. (2022: Par. 3)

With the easing of lockdowns and border closures, the need for stricter adherence to safety measures became paramount. In the heat of the spread of the virus, it became imperative to communicate necessary strategies and information vital for managing and preventing the spread of the virus. As such, various communication channels were used by governmental and non-governmental institutions and organizations to spread information on COVID-19 to the Nigerian populace. The Nigeria Centre for Disease Control (NCDC) was central to information management and dissemination on COVID-19 safety measures. Social media, in conjunction with other traditional media, were used to disseminate information on the nature of the virus and the necessary measures for prevention. However, with the obvious drop in the spread of the virus and the ease of lockdowns and other social restrictions in most parts of the world, it is imperative to review the communication models used for the management of the pandemic and its attendant crisis in Nigeria so as to ensure increased effectiveness of communication in the management of similar health outbreaks or other social emergencies in the future.

Following the World Health Organization's (WHO) guidance on Risk Communication and Community Engagement (RCCE), the African Centre for Disease Control and Prevention (ACDC) put in place systems to "strengthen risk communication, address uncertainty, and manage misinformation," but it appears Nigeria has yet to map out effective communication plans to control the spread of the disease. An essential component of health emergencies and response activities is effective risk communication and community engagement. The need to move away from country-level channels of communication to more diversified grassroots platforms and, in the process, develop newer strategies that would easily be adapted to local needs for communicating not just COVID-19 but other health challenges to the Nigerian populace is therefore critical and urgent.

The WHO Director General, Tedros Ghebreyesus, declared on January 30, 2020, that "the COVID-19 outbreak constitutes a Public Health Emergency of International Concern (PHEIC)". His committee further recommended that "countries should place particular emphasis on reducing human infection, prevention of secondary transmission, and international spread through multi-sectorial communication…." In Nigeria, as in many other African countries, many of the citizens are living in denial of the disease, and some conspiracy theorists are encouraging non-adherence to safety and preventive measures through propaganda, distortions, and other forms of negative persuasive communication. The rising cases of COVID-19 infection in Nigeria in the face of sustained campaigns suggests that information channels may be defective. The term "infodemic," coined by the WHO to describe "the excessive amount of information about the COVID-19 outbreak that makes it difficult to identify or discern essential information," could well be used to

classify Nigeria's channels of information. Exposure to information and messages that downplay the magnitude of the COVID-19 outbreak, deny its existence, or spread false information about its causes, prevention, and cure would only galvanize its further spread. This exposes the need for research that will document and interrogate the communication channels and strategies used in the management of the COVID-19 outbreak. This is necessary as the country will need to develop more effective communication channels and strategies that will be more effective in managing similar pandemics in the future.

2. A Review of Literature

Scholars across the globe have critically studied communicable disease campaigns, with some of the studies focusing specifically on the effectiveness or otherwise of campaigns concerning HIV/AIDS, Lassa fever, Ebola, Avian Influenza, Poliomyelitis, and COVID-19, among others (Uscinski *et al.*, 2010; Mundel, 2013; Nwosu, 2020). While these scholars are of the opinion that factors influencing the effectiveness of such campaigns and adherence to preventive measures are varied, Ladan, Haruna, and Madu (2020) insist that "fake news and misinformation have created confusion and subsequently posed a greater challenge to every effort to curtail the spread of COVID-19" in Nigeria. In the same vein, Nwosu (2020) affirms that "several Nigerians were skeptical about the disease." In the wake of denials, misinformation, and propaganda trailing the COVID-19 pandemic, Balogun (2020) maintains that "segments of these populations live in denial of the virus and, therefore, are susceptible to receiving and sharing distorted information." Although these studies have highlighted communication gaps in the COVID-19 campaign, none have developed templates for more functional strategies.

Because communication is an essential component of the forces that drive human development in any society, Nnadimele, Benson, Nnadimele, and Anyira (2021) observe that in the aftermath of the COVID-19 pandemic, various channels of communication were used in the dissemination of disease information. According to them, “newer apps are reshaping how we communicate and altering the nature of our communication experiences, offering us new ways of receiving information and relating to others” (Nnadimele et al., 2021:4). These different communication channels will be discussed in the following section.

2.1 Different Communication Channels in Information Dissemination

One aspect of communication that is designed to change the behaviour of the public and their health is health communication. According to Chiemena (2021), health communication includes verbal and written strategies to influence and empower individuals, populations, and communities to make healthier choices. With the outbreak of the COVID-19 pandemic, there is an urgent need to inform the public about the risks and preventive measures that must be implemented. Several communication channels have been employed by the government, health institutions, non-governmental organisations and other stakeholders to reach the general public. One of such channels is the mass media. The mass media disseminates information to the public through publication in magazines and newspapers, as well as through programs on radio and television. Ocheni and Nwankwo (2012) acknowledge that the media offer great potential for educating the public about health issues. Commenting on the role of the media in the prevention and control of meningitis in Nigeria, Wogu, Chukwu, Nwafor, Ugwuoke, and Ugwulor-Onyinyechi (2019) describe the media as “a powerful instrument with which to influence health behaviours linked to viral transmission and infection.” They grouped the media into three categories, namely:

1. Mass media (e.g. television, radio)

2. Print media (e.g. magazines and newspapers)
3. New media (e.g., the Internet, mobile phones, search engines, news sites, and other forms of social media).

The authors further argued that "the primary purpose of media campaigns during disease outbreaks is to elicit population behaviour change, which leads to disease prevention and control."

Dogari et al. (2018), in their study, opine that there are two main types of media in Nigeria, which include private media and government-owned media. Apuke (2017) asserts that in Nigeria, radio reaches more people than television, although a lot of Nigerians with both low and high literacy, as well as low and high class, also use the television. The author mentions some examples of the private press in Nigeria, which include Television Continental (TVC) news, Africa Independent Television (AIT), Daily Trust, Daily Sun (including online newspapers), etc. The government-owned media include the Nigerian Television Authority (NTA), the Federal Radio Corporation of Nigeria (FRCN), and so on. In another study that examines television news coverage of the COVID-19 pandemic in Nigeria, Apuke, O.D., and Omar, B. (2021) compare selected privately and government-owned media, that is, AIT and NTA, in terms of their frequency of coverage, prominence, and manner of reportage. The findings of the study suggest that media ownership and politics play a large role in the coverage of COVID-19 in Nigeria, following the fact that private media had more negative stories telecasted on its headlines than government-owned media outlets, which focus more on politics and political officials, making the issues of the pandemic understandable from political and economic perspectives. As a result, little attention is paid to the precautionary measures for the prevention of the virus. The study, therefore, concludes that ownership and politics play a role in the coverage of COVID-19 in Nigeria, and there are also significant differences in the coverage of the pandemic across private and government TV stations in Nigeria.

Stressing the importance of health campaigns, Nwosu and Adum (2021) argue that "in recent times, media platforms such as radio, television, newspapers, flyers, brochures, the internet, and social media tools (Twitter, Facebook, YouTube, etc.) have remained vital in the dissemination of health messages." They add, however, that "the exposure of individuals to health messages does not in itself determine the success of the message or the ability of the receivers of those messages to understand, internalise, and comply with the messages."

Uzochukwu, Nwosu, & Okeke (2022:8) note that in order to curb the spread of the Corona virus in Nigeria, "a large number of precautionary measures were disseminated through divergent media channels, including the social media, traditional media, advertising media channels, and interpersonal communication channels." They acknowledge that the feats that were achieved in managing the pandemic can be attributed to not just proper healthcare facilities but also the impact of the media in the country.

In their study on evaluating the use of public relations strategies in managing COVID-19 pandemic-related crises by the Anambra state government, Nwafor, Omoevah, and Umuze (2022) look at the actions and inactions taken by the Anambra state government in order to manage all the COVID-19-related crises. The study uses the library research method while focusing on secondary data sources to carry out the research. It was found out that the Anambra state government used public relations strategies like press releases, press conferences, announcements, town hall meetings, etc. to disseminate information. They also employed various media platforms like ABS radio and television, newspapers, Facebook, WhatsApp, and Twitter. The study recommends that the state government should employ such PR strategies in handling other issues

of concern in Anambra State owing to their effectiveness in handling COVID-19 pandemic-related crises.

Iloanusi, Mgbere, Iloanusi, Yunusa, and Essien (2021) carry out a cross-sectional study of COVID-19-related information sources and prevention practices in Nigeria, using Onitsha as a case study. The researchers did a retrospective analysis of a cross-sectional survey of 140 respondents obtained from in-person interviews conducted in Onitsha in March 2020. Descriptive and inferential statistics were used to describe the study population and determine the associations. The study identified the internet/social media (63.6%), radio (61.4%), and television (58.6%) as the topmost COVID-19 information sources, while the least used sources were newspapers (33.6%) and religious places of worship (39.3%). The researchers also noted significant variations in the choice of COVID-19-related information sources across different educational levels and age groups. The use of the internet, social media, WhatsApp, text messages, and religious places of worship were significantly associated with the implementation of COVID-19 preventive practices. The study concluded that public health authorities can improve the mass adoption of COVID-19 preventive measures by utilising the identified effective information sources to design targeted education awareness campaigns.

Ananian, Doebbeling, Mejia, Wine, Houchins, Infurna, & Pishko (2021), in their research on the preferred communication channels among older adults during COVID-19, found out that older adults relied heavily on technology to facilitate communication with family and friends. They include texting, phone calls, email, video calls or conferences (e.g., Zoom), WhatsApp, and social media, primarily Facebook. One-on-one meetings and small group gatherings were other communication channels used, but more preference was given to digital communication technology. Notwithstanding the different communication channels in communication about health-related diseases, there are factors affecting the successful dissemination of information about COVID-19 identified in the literature, which are beyond the scope of this paper. The existing literature has shown the different communication channels used in information dissemination. The subsequent section discusses these information sources and their effectiveness in information delivery during the COVID-19 pandemic.

3. Methodology

3.1. Research Questions

This research was basically designed to provide answers to the following research questions that will help in revealing the effectiveness of the information channels used in the management and Spread of COVID-19 information in Anambra State:

1. What are the information sources employed in the dissemination of COVID-19 campaign in Anambra?
2. What are the information channels employed in the dissemination of COVID-19 campaign in Anambra?
3. To what extent were the people in Anambra exposed to COVID-19 information and campaign?
4. How clear and informative were the COVID-19 campaign messages?
5. How effective were the COVID-19 campaign messages in Anambra?

3.2 Sample Demography

The research sampled adult Nigerians between the ages of 18 and above, selected from the twenty-one local government areas of Anambra State. A total of two hundred and ten respondents were sampled for the study in order to examine the public's view regarding the effectiveness of communication channels in the dissemination of COVID-19 information. Ten respondents were selected from each local government area.

3.3 Research Design

The research was designed to give a quantitative clue to the performance of the communication channels employed in the fight against COVID-19 in Anambra State.

3.4 Study Area

The study was carried out in the twenty-one local government areas of Anambra State across the three senatorial zones (Anambra South, Anambra North, and Anambra Central).

3.5 Data Collection: The data collection instrument for the survey was through questionnaires

4. Presentation and Analysis of Data

4.1 Demographic Variables

Table 1: Demographic data

Variables	Items	Frequency	Percentage
Sex	Male	99	47.1
	Female	111	52.9
	Total	**210**	**100.0**
Educational Qualification	FSCLC, SSCE and Equivalent	60	28.6
	NCE/OND/Pre-degree Diploma	54	25.7
	Bachelor's/HND	81	38.6
	Postgraduate qualifications	15	7.1
	Total	**210**	**100.0**
Occupation	Civil servants	26	12.4
	Self-employed professionals	32	15.2
	Professionals employed in private firms	23	11.0
	Traders	53	25.2
	Artisans	18	8.6
	Students	51	24.3
	Others	7	3.3
	Total	**210**	**100.0**
Residency	Urban	125	59.5
	Rural	85	40.5
	Total	**210**	**100.0**

Table 1 shows that a total of 210 respondents were surveyed. Out of the 210 respondents, the sex variables show that 99 people, who constitute 47.1 percent of the respondents, are male, while 111 people, who constitute 52.9 percent of the respondents, are female.

The educational qualification variables show that 26.8% of the respondents have an education cap of either the First School Leaving Certificate (FSLC) or Senior School Certificate Examination (SSCE), while 25.7% of the respondents have an education cap of the Nigeria Certificate of Education (NCE), Pre-National Diploma (PND), or Pre-Degree Diploma. More so, the variables also show that 38.6% of the respondents have a degree or HND certificate, while 7.1% of the respondents have obtained a degree in postgraduate studies.

In the same vein, the education variables show that 12.4% of the respondents are civil servants, 15.2% are self-employed, 11% of the respondents are professionals employed in the private sector, 25.2% are traders, 8.6% are artisans, 24.3% are students, and 3.3% of the respondents are others who do not belong to any of the above trades or did not want to disclose information regarding their professional or trade engagement.

4.2 Research Question 1: What are the information Sources employed in the dissemination of the COVID-19 campaign in Anambra?

Table 2: Respondents' Source of Exposure to COVID-19 Campaign

Response	**NCDC**	**State Ministries of Health**	**Family/Friends/ Colleagues**	**Religious Groups**	**NGOs**	**WHO**
Yes	42.2% N=95	31.0% N=65	50.0% N=105	49.5% N=104	24.8% N=52	22.9% N=48
No	54.8% N=115	69.0% N=145	50.0% N=105	50.5% N=106	75.2% N=158	77.1% N=162
Total	**100% N=210**	**100% N=210**	**100% N=210**	**100% N=210**	**100% N=210**	**100% N=210**

Discussion of Findings

The items in Table 2 show the source from which the respondents accessed the information they have on COVID-19. Out of the 210 respondents, the figures in column 2 show that 45.2% of the respondents accessed COVID-19 information given by the NCDC, while 54.8% averred not to have accessed any COVID-19 information from the NCDC. The implication is that the majority of the respondents were not privy to the COVID-19 campaign carried out by the NCDC.

Column 3 of Table 2 shows that, out of the 210 respondents, only about 31% averred to have been exposed to the COVID-19 campaign by the state ministries of health, while 69% of the respondents were not in any way exposed to the COVID-19 campaign messages pushed out by the State's Ministry of Health. The implication is that the COVID-19 campaign activities of the State Ministries of Health only reached about 31% of people in Anambra.

Column 4 shows the number of respondents whose COVID-19 information source was mostly their friends, family, and colleagues. The figures in the column show that 50% of the respondents accessed their COVID-19 information from families, friends, and colleagues, while another 50%

confirmed not having gotten information on COVID-19 from friends, family, and colleagues. The implication is that about half of the population of people living in Anambra accessed COVID-19 campaign information from their peers, family members, or colleagues.

Column 5 shows that out of the 210 respondents, 49.5% were privy to COVID-19 campaign information from religious groups, while 50.5% did not get information on COVID-19 from their religious groups. The implication is that religious groups played an effective role in spreading information on COVID-19 to almost half of the population living in Anambra.

Column 6 shows the spread of the COVID-19 campaign carried out by NGOs in Anambra State. The figures show that only about 24.8% of the respondents were exposed to the COVID-19 campaigns by NGOs, while about 75.2% of the respondents were unexposed to the COVID-19 campaigns of NGOs in Anambra. The implication is that COVID-19 campaign activities by NGOs in Anambra reached only about ¼ of the people living in the state.

Column 7 shows that out of the 210 respondents that participated in the study, only about 22.9% of the respondents accessed the COVID-19 campaign activities of WHO, while 77.1% of the respondents were oblivious to the COVID-19 campaign activities of WHO. The implication is that less than ¼ of the people living in Anambra were informed by the COVID-19 campaign activities of WHO.

These findings show that of the many sources used for the dissemination of information on COVID-19, the peer-to-peer source had the widest reach amongst people living in Anambra State, Nigeria. The implication is that information passed down through the informal means of peer-to-peer has the most reach. Findings also revealed that religious houses are also potent means of information dissemination, as they have the second-widest reach.

4.3 Research Question 2: What are the information channels employed in the dissemination of the COVID-19 campaign in Anambra?

Table 3: Respondents' Channels of Exposure to COVID-19 Campaign

Response	Phone SMS	Billboards	Social Media	Town and market calls and Meetings	Television	Radio	Newspapers (print and online)
Yes	41.4% N=87	10.0% N=21	55.2% N=116	21.9% N=46	35.7% N=75	57.1% N=120	11,0% N=23
No	58.6% N=123	90.0% N=189	44.8% N=94	78.1% N=164	64.3% N=135	42.9% N=90	89.0% N=187
Total	**100% N=210**	**100% N=210**	**100% N=210**	**100% N=210**	**100% N=210**	**100% N=210**	**100% N=210**

Discussion of Findings

Table 3 shows the information channels through which the respondents accessed their information on COVID-19. The figures in Column 2 show that 41% of the respondents accessed the COVID-19 information via phone SMS, while 58% of the respondents did not access information on COVID-19 via phone SMS.

Figures in column 3 show the number of people who accessed COVID-19 information via Billboard publications. The data show that out of the 210 respondents, only about 10% were privy to COVID-19 campaigns carried via billboards, while about 90% of the respondents did not access COVID-19 information via the billboards.

Column 4 seeks to determine the percentage of the respondents that accessed information on COVID-19 via social media. The data in the column show that 55.2% of the respondents accessed information on COVID-19 via social media, while 44.8% of the respondents did not access information on COVID-19 via social media.

Column 5 presents the percentage of the respondents that accessed information on COVID-19 via Town/Market calls and meetings. The collated data set shows that while 21.9% of the respondents had access to COVID-19 messages via town/Market calls and meetings, 78.1% of the respondents were not privy to COVID-19 messages disseminated via the medium.

The data in column 6 interrogates the reach of COVID-19 messages via the television medium. The available data show that 35.7% of the respondents accessed COVID-19 messages via the television, while 64.3% were unaware of COVID-19 campaign messages passed via the television.

In the same vein, column 7 interrogates the reach of the radio medium in the spread of COVID-19 messages. The collated data show that 57.1% of the respondents were privy to the COVID-19 campaigns done over the radio, while about 42.9% did not access COVID-19 messages passed via the medium.

Column 7 interrogates the reach of the Newspaper medium (Print and Online) in the COVID-19 campaign. Of the 210 respondents, 11% accessed COVID-19 information passed via the newspaper, while 89% were unaware of COVID-19 campaign activities conducted via the print medium. The implication is that out of the 7 information media channels under study, COVID-19 campaigns conducted over the radio had the widest reach among the people in Anambra State, with a 57.1% reach. The social media, however, had a 55.2% reach among the people in Anambra State. The conclusion that can be drawn from this is that the radio medium was the most effective medium through which people accessed information on COVID-19.

4.4 Research Question 3: To what extent were the people in Anambra exposed to COVID-19 information and campaigns?

Table 4: Respondents' Exposure to COVID-19 Campaign

Response	Frequency	Percentage	Response
Yes	209	99.5	Yes
No	1	0.5	No
Total	**210**	**100.0**	**Total**

Table 5: Respondents' Frequency of Exposure to COVID-19 Campaign

Response	Frequency	Percentage
Always	113	53.8
Sometimes	89	42.4
Rarely	8	3.8
Total	**210**	**100.0**

Table 6: Respondents' views as to whether COVID-19 information was well spread in their locality

Response	Frequency	Percentage
Yes	187	89.0
No	23	11.0
Total	**210**	**100.0**

Discussion of Findings

Following the results of the findings, Table 4 shows the respondent's exposure to the COVID-19 campaign. Out of the 210 respondents who participated in the survey, 209, which constitutes about 99.9% of the respondents, have been exposed to the COVID-19 campaign, while just one respondent, which is just 0.5% of the respondents, has not had any exposure to the COVID-19 campaign. The implication is that most of the people living in Anambra have, at one time or another, been exposed to the COVID-19 campaign in the state.

Table 5 shows respondents' frequency of exposure to COVID-19 campaigns in the state. Out of 210 respondents, 113, making up 53.8% of the respondents, had frequent exposure to COVID-19 campaigns; 89, making up 42.4% of the respondents, sometimes had exposure to the COVID-19 campaign messages; and 8 respondents, making up 3.8% of the total respondents, were rarely exposed to the COVID-19 campaign messages.

Table 6 answers the question on the wellness of the spread of COVID-19 information in Anambra. Out of the 210 respondents surveyed, 89% are of the opinion that COVID-19 information was well spread in their localities, while 11% have opinions on the contrary. With the overwhelming positive opinion, the implication is that the COVID-19 campaign was well spread in Anambra.

4.5 Research Question 4: How clear and informative were the COVID-19 campaign messages?

Table 7: Respondents' Rating of COVID-19 Messages in Terms of Clarity

Response	Frequency	Percentage
Very clear	93	44.3
Clear	109	51.9
Unclear	8	3.8
Total	**210**	**100.0**

Table 8: Respondents' Rating of COVID-19 Messages in Terms of Informativeness

Response	Frequency	Percentage
Very informative	80	38.1
Informative	123	58.6
Rarely informative	7	3.3
Total	**210**	**100.0**

Discussion of Findings

Table 7 rates the COVID-19 messages in Anambra in terms of the clarity of the information made available to the people. Of the 210 persons surveyed, 44.3% were of the opinion that the messages were very clear, 51.9% were of the opinion that the messages were clear, and 3.8% of the respondent population believed that the messages were unclear. The simple deduction from this is that the COVID-19 campaign messages in Anambra were clear.

Table 9 rates the COVID-19 messages spread in Anambra in terms of informativeness. 38.1% of the survey population are of the opinion that the COVID-19 campaigns in the state were very informative; 58.6% are of the opinion that the campaigns were informative; and 3.3% believe that the campaigns were rarely informative. From this data set, one can believe that the COVID-19 campaign messages spread in Anambra during the outbreak of the COVID-19 pandemic were informative and, as such, useful.

4.6 **Research Question 5: How effective were the COVID-19 campaign messages in Anambra?**

Table 9: Respondents' views as to whether COVID-19 information helped people manage the disease

Response	Frequency	Percentage
Strongly agree	66	31.4
Agree	101	48.1
Neutral	20	9.5
Disagree	20	9.5
Strongly disagree	3	1.4
Total	**210**	**100.0**

Mean = 2.0143

Table 10: Respondents' Overall Rating of COVID-19 Campaign

Response	Frequency	Percentage
Very effective	111	52.9
Fairly effective	87	41.4
Rarely effective	12	5.7
Total	**210**	**100.0**

As to whether the COVID-19 information helped people manage the disease, 31.4% of the respondents agreed very strongly that the information helped people manage the COVID-19 disease in the state. 48.1% simply agreed that the COVID-19 information helped them manage the disease in Anambra. 9.5% of the respondent population were neutral, while another 9.5% disagreed, and 1.4% strongly disagreed that the COVID-19 campaign in Anambra helped them manage the COVID-19 disease. This data set shows that the COVID-19 campaign messages in the state helped people manage the disease. Therefore, one can conclude that the COVID-19 campaign messages in Anambra State were quite effective.

Table 10 shows respondents' overall rating of the COVID-19 campaign in Anambra. As such, while 52.9% of the respondent population is of the view that the COVID-19 campaigns in the state were very effective, 41.4% rated the campaign fairly effective, and 5.7% rated it rarely effective.

This data set, however, shows that the COVID-19 campaign in Anambra was successful and effective.

5.0 Summary of Findings and Conclusion

5.1 Summary of Findings

This research was designed to provide answers to five basic research questions that were designed to review the performance of the COVID-19 communication models and campaign messages deployed in the fight against the spread of the virus in Anambra. The findings show that:

i. Family, friends, and colleagues were the most potent information sources in the fight against COVID-19 in Anambra.
ii. Radio was the most viral and/or effective channel used in the communication of COVID-19 campaign messages in Anambra. This is in line with Apuke's (2017) and Iloanusi, Mgbere, Iloanusi, Yunusa, and Essien's (2021) observations that the radio tops the list with regard to wider coverage in information delivery.
iii. 99% of the people living in Anambra were exposed to COVID-19 campaign messages, while about 53% of the people living in Anambra were frequently exposed to COVID-19 campaign messages in the state.
iv. The COVID-19 campaign messages were clear to most of the people living in the state.
v. The COVID-19 campaign messages helped the majority of the people living in the state manage the virus, and by implication, it was a successful campaign.

6.0 Conclusion

COVID-19 was a much-dreaded evil that disrupted the socio-economic order of the world. Its management led to the establishment of policies aimed at reducing physical human clusters and directly impacting the lives of individuals around the world. Due to its novel nature, information management was one of the most difficult aspects of the challenges, especially for countries with low communication infrastructures like Nigeria. However, the wave of COVID-19 has come and gone, and Nigeria has survived it beyond popular projections. Performance assessment tests like this are always necessary to identify weaknesses and challenges in public information management. This research is just one of many on information management. This research, if not anything else, has revealed valuable and effective communication channels that worked best in preventing and managing the spread of the virus. Efforts should now be put in place to strengthen these channels and possibly create new ones that can improve the effectiveness of information sharing and management in public health crisis situations.

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REFERENCES

Ananian, C.D., Doebbeling, B., Mejia, G.M., Wine, H., Houchins, M., Infurna, F., & Pishko, C. (2021). Preferred Communication Channels Among Older Adults During COVID-19. *Innovation in Aging.* Vol. 5, No. S1.

Apuke, O. D. (2017). Another look at the political economy of the mainstream and new media: The capitalists' influence *Journal of Mass Communication & Journalism*, 7(4), 1–18. https://doi.org/10.4172/2165-7912.1000341

Apuke, O.D., & Omar, B. (2021). Television News Coverage of COVID-19 Pandemic in Nigeria: Missed Opportunities to Promote Health Due to Ownership and Politics *SAGE Open*, 1-3. https://doi.org/10.1177/21582440211032675

Balogun, Omorinshola. (2020) Nigeria's COVID-19 communications needs to be more inclusive *Business* Day. Retrieved from https://businessday.ng/opinion/article/nigerias-covid-19-communications-needs-to-be-more-inclusive/

Chiemena, N.O. (2021). The challenges of communicating the dangers of COVID-19 to the public: a discourse *Journal of Communication and Health Studies,* 12 (5), 123–133.

Dogari, K.A., Shem, W., & Apuke, O.D. (2018). Media ownership, funding, and challenges: implications for state-owned media survival in Nigeria *International Journal of Communication Research.* 8(3), 230–240.

Hosseinzadeh, P., Zareipour, M., Baljani, E., & Moradali, M. R. (2022). Social Consequences of the COVID-19 Pandemic. A Systematic Review. *Invest Educ Enferm*, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9052715/.

Iloanusi, S., Mgbere, O., Iloanusi, N.R., Yunusa, I., & Essien, E.J. (2021). COVID-19-related information sources and prevention practices in Nigeria: A cross-sectional study *Journal of Health and Social Sciences.* 6(4): 566-579. DOI:10.19204/2021/cvdr9

Ladan, A., Haruna, B. & Madu, U. A. (2020). COVID-19 pandemic and social media news in Nigeria: The role of libraries and library associations in information dissemination. *International Journal of Innovation and Research in Educational Sciences,* 7 (2), 2349-5219

Nnadimele, O.I., Benson, O.V., Nnadimele, I.J., & Anyira, I.Z. (2021). Strategies for Effective Communication Toward Information Services Delivery for Sustainable Development in Post-COVID-19 Pandemic Era *Library Philosophy and Practice (e-journal). 6578.* https://digital commons.uni.edu/libphilprac/6578

Nwafor, G.U., Omoevah, B.A., & Umuze, A.N. (2022). Evaluating the Use of Public Relations Strategies in Managing COVID-19 Pandemic-Related Crises in Anambra State Government. *International Journal of General Studies (IJGS).* Vol. 2, No. 1, 106–124.

Nwosu, F. (2020) COVID-19: Imperative of strategic communications in overcoming the challenges of Corona virus pandemic in Nigeria. https://techeconomy.ng/2020/04/covid-19-imperative-of-strategic-communications-in-overcoming-the-challenges-of-coronavirus-pandemic-in-nigeria/

Nwosu, C.J., & Adum, N.A. (2021). Bad cholesterol buildup: traditional channels as viable alternatives for health communication in rural areas *International Journal of Humanities and Social Studies*, 9(9), 144–148.

Ocheni, S., & Nwankwo, B. C. (2012). The role of mass media in rural information system in Nigeria *Studies in Sociology of Science*, 10–14. Doi:10.3968/jsss.1923018420120303.1935

Uscinski, J. E. (2020). Why do people believe COVID-19 conspiracy theories? *The Harvard Kennedy School (HKS) Misinformation Review*, 1, Special Issue on COVID-19 and Misinformation.

Uzochukwu, C.E., Nwosu, C.J., & Okeke, A.O. (2022). Audience Exposure, Awareness, and Compliance with COVID-19 Pandemic Messages in Nigeria: A Study of Residents in Anambra State *Journal of Communication and Media Studies, Vol.* 2, No. 2, 1–19.

World Health Organization. (2020) WHO Director-General's Opening Remarks at the Media Briefing on COVID-19 https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---16-november-2020

WHO World Health Assembly. 2020, May 17-21 https://www.who.int/about/governance/world-health-assembly (link is external)

Wogu, J.O., Chukwu, C.O., Nwafor, K.A., Ugwuoke, J.C. & Ugwulor-Onyinyechi, C.C. (2019). Assessing the Role of the Media in the Prevention and Control of Meningitis in Nigeria. *Journal of International Medical Research.* 48(1) 1-5.