

INTERACTIVE ARTICLE COVER

A Sociolinguistic Analysis of Newspaper Coverage and Reader Response to Covid-19 Reports

RUPKATHA JOURNAL
ON INTERDISCIPLINARY STUDIES IN HUMANITIES



About the Journal

Journal DOI	https://dx.doi.org/10.21659/rupkatha
Journal Home	www.rupkatha.com
Indexed by	Scopus Web of Science: ESCI DOAJ

About the Issue

Themed issue	Volume 15, number 1, 2023 Current and Future Directions in TESOL Studies
Edited by	Dr John R. Baker
Issue DOI	https://doi.org/10.21659/rupkatha.v15n1
TOC	https://rupkatha.com/v15n1.php

About the Article

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DOI	https://doi.org/10.21659/rupkatha.v15n1.08	Pages: 1-17
Abstract	https://rupkatha.com/v15n108	
Full-text PDF	https://rupkatha.com/V15/n1/v15n108.pdf	
Article History	First Published: 23 May 2023	
Article Impact	Check Dynamic Impact	
Copyright	Aesthetics Media Services	

A Sociolinguistic Analysis of Newspaper Coverage and Reader Response to Covid-19 Reports

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Abstract

Studies attest to the importance of official languages in health communication in multilingual societies. However, the challenge lies in using an official language in ways that enable both majority and minority language speakers to identify with their sociocultural orientations when using a lingua franca. With the emergence of Covid-19, this challenge has come to the forefront following surveys on citizen responses to health messages. The study examines the themes, narrative viewpoints, language modes of newspaper reports on Covid-19, and reader responses to these reports. We aim to determine the implications of reader response on the credibility, severity, and transmissibility of Covid-19. The contents of three Nigerian newspapers (The Guardian, Punch, and Premium Times) were analyzed using quantitative and discourse analysis. The results showed that the themes of newspaper reports focused on challenges, progress made, preparedness, and containment measures. The language mode was predominantly negative, using fear appeals. Audience responses followed the same themes as the newspapers but demonstrated a remarkable shift in narrative viewpoint and language mode, which in Nigerian style English indicated low source credibility, ethnic divisions, and the denial of the severity and transmissibility of Covid-19. Readers' responses to newspaper coverage of Covid-19 reinforce the view among scholars that trust in information sources is linked to attitudes toward health risks.

Keywords: Covid-19, language, newspapers, reader response, health

1. Introduction

The importance of the mass media in facilitating the exchange of information during health emergencies is well established (Bloom et al., 2017; Williams et al., 2020). Previous studies have demonstrated that trust in information sources is closely linked to citizen attitudes toward health risks during pandemics such as H1N1, Ebola Virus Disease (EVD), and Severe Acute Respiratory Syndrome (SARS) (Coroiu et al., 2020; Teasdale & Yardley, 2011). Notably, the successful collaboration between the media and government during the 2014 Ebola outbreak in Nigeria serves as a benchmark for future health crises (Freeman, 2014).

Regrettably, surveys show that mass media has been criticized globally, to include in Nigeria, for its handling of Covid-19 (Obi-Ani et al., 2020). The media in Nigeria, for instance, received a significant amount of interest in the criticisms trailing the reportage of Covid-19 in Africa (Kazeem, 2020). Nigerian newspapers, particularly, played significant roles in the controversies (e.g., foreign medical aid, herbal treatments) that trailed Covid-19 before Nigeria's index case (February 27, 2020) and since the start of the phased end to lockdown on May 11, 2020 (Moshood, 2020). Due to fragile sociopolitical and health systems amid the population glut, Nigeria has often been linked with a high susceptibility to infectious diseases, making it one of the global flashpoints as Covid-19 began to spread (Kazeem, 2020; Lone & Ahmad, 2020). Language use, framing, and reportorial interests were chief among the important factors that elicited interest and criticisms in the reportage of infectious diseases (WHO, 2020; Zhou, Lai, Zhang, Tan, 2020).

Studies show that the urgent nature of disease emergencies places a great burden on mass media, especially in dealing with the dynamics of trust in health information sources and the readiness of people to comply with health protocols (Iyorza, 2015). The difficulty in addressing this burden leads to remarkable differences in the focal point of media coverage and audience interests and actions during disease outbreaks (Iyorza & Ojorgu, 2020; Leffler, 2015; Piller et al., 2020).

The present study attempts to show the importance of language use in the gap between media reportage of infectious diseases and audience interests in a multi-lingual context. However, the literature tends to show that the majority of content analytical studies on media reportage of health have not given significant attention to the linguistic components of newspaper reportage. Therefore, while studies continue the call for a multi-lingual approach to communicating emergencies in plural societies, the present study notes some caveats that point to the importance of, and how to use, official languages when a society has more than 500 linguistic groups, as is the case in Nigeria.

Using *The Guardian*, *Punch*, and *Premium Times* newspapers, we compared the coverage of Covid-19 with the accompanying reader response to newspaper reports. We chose Nigerian newspapers because they were heavily associated with most of the controversies that followed Covid-19 communications in the country (Moshood, 2020; Kazeem, 2020). Furthermore, newspapers contain instant, non-transient reader comments that help measure audience interests and trust in information sources.

Reader response refers to published reactions to the news by the target audience immediately under a story. This excludes letters to the editor. We aimed to identify the sociolinguistic factors in newspaper reports and audience responses to the reports as a basis for recommendations on the effective use of English as a second language to report infectious diseases in a plural society like Nigeria. By sociolinguistic factors, we mean the interface of social factors and language in the process of meaning creation. Such factors include culture, belief systems, social trends, ethnicity, and religion. The cues used to measure newspaper reportage and reader response were themes and source credibility. The sub-cues of language mode, pragmatics, and narrative viewpoints were used in discussing the theme and source credibility, especially in the discourse analysis.

2. Literature Review

2.1 Themes and language use in newspaper reportage of infectious diseases

Expressions of new terms, themes, and concepts (neologisms) are crucial in behavior change communication concerning emerging infectious diseases (EIDs) (Muhammad, et al., 2021). The challenge lies in finding ways to express neologisms to capture the sociolinguistic reality of secondary speakers of English who have to deal with many new and fearful things about EIDs. Culture interfaces with language in the process of meaning creation, for which language is seen as more than a medium of communication (Akwanya, 2022). Language expresses the shared identity and is a basis for perceiving the world and describing reality (Leffler, 2015). In light of this, the importance of language in the fight against EIDs has received greater attention since the emergence of Covid-19 (Jega, 2020; Piller, 2020; WHO, 2020).

Emerging infectious diseases have an uncertain character and produce many different variants in their trajectories, leading to fear and urgent socio-medical measures (Bloom et al., 2017; Fauci, 2001). Covid-19 has exposed the limitations of using official languages such as English to communicate health measures in multi-lingual societies (Iyorza & Ojorgu, 2020). The emergence of new terms and genres, local cultures, social trends, ethnicity, source credibility, and health beliefs impose limitations on the efficacy of official languages such as English (Iyorza & Ojorgu, 2020; Piller, 2020). Asif et al. (2021) report that at the outset of Covid-19, communication (as of January 2020) faced the challenges of "naming and describing the virus: coronavirus, SARS, virus, human-to-human, respiratory, flu-like" (p. 1). Words such as "social distancing, self-isolation, self-quarantine, lockdown, non-essential (as in non-essential travel), and postpone" (p. 2) added to the store of health genres that readers grappled with. In Australia, media coverage of the pandemic was predicated on time (beginning from definitional issues at the early stages) and societal issues, such as the economic and disruptive effects of the pandemic (Zhou et al., 2020). As a result, analysis of newspaper coverage is necessary to assess the reportorial perspectives of Nigerian newspapers.

In Nigeria, the emergence of Covid-19 was given various connotations, e.g., punishment from the gods and the looming end of the world (Jega, 2020). Studies have therefore recommended the interpretation of health terminology in numerous languages to accommodate the speakers of local languages who, consciously (or unconsciously), choose to associate with a message based on the linguistic systems in their minds (Leffler, 2015; Piller et al., 2020; Piller, 2020). As Piller et al. (2020) note: "All this means is that the language challenges of Covid-19 do not only relate to the dissemination of information but also relationship building" (p. 510).

Nigeria, however, has at least 520 indigenous languages and 250 ethnic groups, making it the third most multilingual country in the world (Leffler, 2015). It would be challenging to address all these linguistic interests with a single story. Moreover, a weak crisis communication system and inadequate investment in multilingual competencies during emergencies hinder multilingual communication (Evans, 2020; Piller et al., 2020). Therefore, official languages such as English remain necessary to address social communication challenges in multilingual societies (Leffler, 2015). However, it is necessary to strip English of some perceptions that affect its integrative role in plural societies (Bamgbose, 1999; Chabata, 2013).

We argue that English as a second language can be used in a way that acknowledges the sociocultural circumstances of the local audiences to enhance message acceptance. Leffler (2015) notes that messages undergo linguistic transpositions in using official languages to speak to people of diverse cultures, which must also be culturally adapted to succeed. Studies are even advancing on what has been called Nigerian pidgin and Nigerian English, which are seen as Nigerian variants that grew out of British Standard English, and which help Nigerians to express their culture (Abel et al., 2016; Gaji et al., 2017; Ogunleke, 2008; Umera-okeke, 2019). The present study examines readers' responses to newspaper reports on Covid-19 to ascertain the linguistic dimensions of reader reactions to communication.

2.2 Source credibility and reader response: a theoretical perspective

The extant literature indicates that reader response to online news is increasing and has emerged as a way to judge newspaper text, readers' beliefs, opinions, and decisions (van Driel, 2021). Beyond this, readers may also respond to other readers' comments, providing an opportunity for interactivity that exposes social attitudes to newspaper reportage (Santana, 2011). Newspaper editors see reader response as a necessary evil, forcing them to show more interest in the persuasive strength of their reports (Santana, 2011).

In their source credibility theory, Hovland et al. (1953) view credibility as an important attribute of persuasive communication. The audience often unwittingly agrees with a source they think makes the more logical argument. In this way, a source has a better chance of winning the audience's trust, and making them more likely to toe a given line of action (Iyorza & Ojorgu, 2020). A persuasive message is more likely to succeed if it fits the patterns of the receiver's understanding, attitudes, values, and goals before an effort is made to dislodge the patterns (Defleur & Ball-Rokeach, 1975).

Similarly, the health belief model (HBM) rests on the assumption that audience responses to a health message are based on the perceived benefits inherent in the message (Rosenstock, 1974). The model postulates that an individual will be persuaded to adhere to a health message based on how much the individual thinks that they are likely to contract a disease, the seriousness of a certain disease, the benefits of taking a prescribed action, factors militating against adherence to health messages, and self-efficacy or an individual's belief in their ability to adhere to a health message. These basic constructs of the HBM are veritable subjects for local language intervention. This was the basis of our effort to determine how readers' responses to health messages reflect their beliefs about disease severity and the credibility of sources, such as reporters and government agents.

2.3 Research questions and hypotheses

The study was guided by the following questions.

1. What were the themes of newspaper coverage and audience responses to the reports on Covid-19?
2. What sociolinguistic factors were reflected in readers' responses to newspaper descriptions of Covid-19 severity, transmissibility, and health warnings?

3. In what ways did reader response show that the readers believe the sources cited in stories, such as reporters, government, health professionals, and eyewitnesses?

We also tested two hypotheses as follows:

H₁: The central message (theme) of newspaper reports is associated with the direction (i.e., language mode) of the reports.

H₂: The type of sources cited in newspaper reports (e.g., government, patients) is associated with the direction of the viewpoints (i.e., language mode) of the sources.

3. Methods

We conducted a content analysis, involving quantitative and discourse analysis, of three major newspapers in Nigeria: The Guardian, Premium Times, and Punch. Premium Times is Nigeria's most popular online-only newspaper and is known for attracting high-level reader comments on their stories. The Guardian and Punch are among Nigeria's oldest modern newspapers and are rated among the top ten most widely read newspapers (Mynaij, 2015). These two newspapers are still widely circulated in both hardcopy and electronic formats.

The first step of data gathering was sample selection. First, we searched the newspapers' homepages using the search word 'news on Coronavirus or Covid-19,' attached to the name of a given newspaper (Natalie & Holmes, 2013; Yang & Ishak, 2012). Next, we delimited our search to stories reported between February 27 (when Nigeria's index case occurred) and May 11 (one week after Nigeria eased the lockdown in Lagos and Abuja, 76 days). The reason is that the study period marked the outbreak of the disease in Nigeria, and scholars are particularly interested in the communication of EIDs at their outset (Piller, 2020). The sample selection initially yielded 469 stories. In the second step, we reduced the number of stories to 157 to only stories that strictly referred to the fight against the outbreak in Nigeria (The Guardian, n = 54; Premium Times, n = 53; Punch, n = 49).

In the next stage, we defined the unit of analysis, which was hard news stories (i.e., the latest breaking or developing, on-the-spot news about the outbreak of Covid-19). Based on the foregoing, we designed the code sheet to be used as the instrument of data collection, where we coded data as follows:

1. Themes: i.e., the subject matter of stories.
2. Sources interviewed in stories: government functionaries (non-medics), eyewitnesses (ordinary individuals), patients, medical experts (government and non-governmental), non-governmental organizations (non-medical ones), non-medical foreign sources, and foreign medical sources.
3. Narrative perspective/point of view: i.e., the major point of view of sources, e.g., in disease severity or projection of fear.
4. Language mode: the tone of comments, the directionality of the comments of sources, e.g., positive, negative, and neutral).
5. Pragmatics: the language of expressions in terms of Standard English and informal expressions.
6. Reader response: reader responses for the focus of comments.

To measure inter-coder reliability, we adopted Cohen's Kappa (k) symmetric measure of agreement, which yielded a figure of .79 for all the coding categories. Cohen's Kappa (k) usually ranges from -1 to +1. Therefore, .79 shows a high level of agreement among the three coders. Additionally, the coders worked on a subsample comprising 10% of the total sample, as Wimmer and Dominick (2003) recommended.

Discourse analysis was used to examine the textual reports from the newspapers. This was to respond to research questions 2 and 3, which involve textual data. The same code sheet for the quantitative analysis was used for the discourse analysis. The qualitative analysis was, therefore, also based on the valence and thematic focus of the reports, as well as an extended analysis based on the contexts of reportage and pragmatics (how language was used).

4. Results

4.1 Research question 1

What were the themes of newspaper coverage and audience responses to the reports on Covid-19?

Analysis of the themes of Covid-19 reports by the three newspapers is presented in Table 1. The discourse analysis responds to the second part of the question, the themes of the audience's responses. The themes of newspaper stories were the preparedness of the government, challenges encountered in the fight against Covid-19, progress made in the fight, and the containment measures used. The analysis revealed that progress made had the highest number of both negative and positive reports.

4.2 H₁: The central message (theme) of newspaper reports on Covid-19 is associated with the direction (i.e., language mode) of the reports

The direction of the newspaper stories based on themes is also presented in Table 1 to help address hypothesis 1. The Pearson Chi-square value is 21.868 with a p -value of 0.001 at 6 degrees of freedom. With $p < 0.05$, the direction (language mode) is significantly influenced by the theme of the stories. This implies that the positive, negative, and neutral direction of stories depends on the theme of the story. For instance, stories on containment measures and challenges are more likely to be negative relative to those on progress and preparedness.

Table 1: Themes and directionality of COVID-19 stories

The subject matter of the story	Direction			Total
	Positive	Negative	Neutral	
Preparedness	5	18	3	26
Challenges	1	29	8	38
Progress made	18	28	6	52
Containment measures and ease of lockdown	1	25	5	31
Total	25	100	22	147

Chi-square value = 21.868, df = 6, p value = 0.001

4.3 H₂: The type of sources cited in newspaper reports (e.g., government, patients) is associated with the direction of the viewpoints (i.e., language mode) of the sources

Table 2 presents the results of the analysis for hypothesis 2. The table shows that 60% of the information sources were government-related (NCDC officials, health experts). This is unsurprising, as the media depended heavily on the presidential task force on Covid-19 and the Nigeria Centre for Disease Control (NCDC) for information. The table also shows that the dominant mode (direction) of the comments from the sources was negative. The Chi-square measure of association between story source and language mode (direction) has a value of 8.681 and a *p*-value of 0.370 at 8 degrees of freedom. With a *p*-value greater than 0.05 level of significance prescribed for the study, it implies that the mode of (direction) comments are likely to be negative, irrespective of source.

Table 2: Story sources and directionality of comments on COVID-19

Story source	Direction			Total
	Positive	Negative	Neutral	
Government functionaries (non-medics)	12	48	8	68
Eye witness (non-patient)	4	11	3	18
Patients	0	4	0	4
Medical experts (irrespective of affiliation)	7	17	4	28
Political opposition	0	18	3	21
NGOs-non-medical (all organizations and groups)	0	4	0	4
Non-medical foreign sources	0	7	0	7
Medical foreign sources	1	6	0	7
Total	24	115	18	157

Chi-square value = 8.681, df = 8, *p* value = 0.370

4.4 Research Question 2: What sociolinguistic factors were reflected in readers' responses to newspaper descriptions of Covid-19 severity, transmissibility, and health warnings?

Figure 1 contains the categorization of the responses of the readers. The discourse analysis draws from this categorization to answer research question 2.

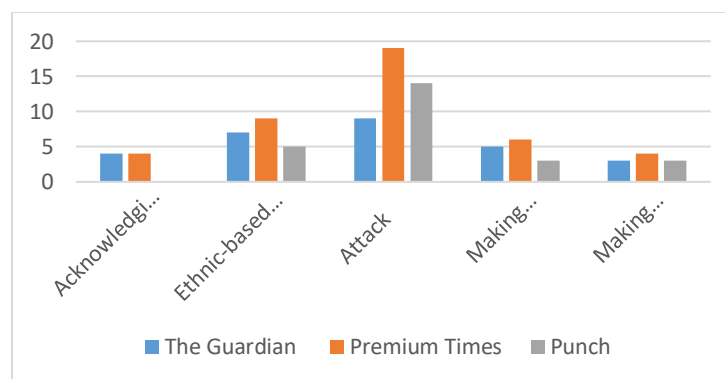


Figure 1: Type of audience responses

There were 95 responses in total across the 157 stories (Figure 3). Some stories had multiple responses, which were counted individually rather than as a single response. About 25% of the stories did not have any response. Reader comments were predominantly negative in terms of language mode, with the narrative viewpoints mainly expressing dissatisfaction with the Covid-19 situation. Regarding pragmatics, reader comments reflected ethnic profiling, high-level colloquialisms, and informality, which pointed to adaptations of Standard English to Nigerian variants.

4.5 Research Question 3: In what ways did reader response show that the readers believe the sources cited in stories, such as reporters, government, health professionals, and eyewitnesses?

4.5.1 Discourse Analysis

Discourse analysis was used to answer the above question and questions 1 and 2 in terms of using newspaper excerpts to discuss the themes and sociolinguistic factors in reader responses to newspaper reports. Discourse analysis was therefore conducted based on themes as well as narrative viewpoint, mode, pragmatics, and reader responses to newspaper reports. Given the prose nature of the reports, we captured the themes, narrative viewpoints, pragmatics, and language modes together in the analysis to show the flow of the reports as narrated individual accounts. The discourse analysis focused, first, on the newspaper accounts, and, secondly, on readers' responses. The latter was also analyzed based on themes, narrative viewpoint, and language mode.

4.5.2 Themes, Narrative Viewpoints, and Language Mode of Newspaper Reports

The focus or themes of the stories were categorized as follows: (a) challenges, (b) progress made, (c) preparedness, and (d) containment measures.

a. Challenges and Containment Measures:

The majority of stories in the three newspapers focused on the challenges facing the fight against Covid-19. The narrative viewpoints mostly used to describe the incidence of Covid-19 were difficulty, controversy, chaos, and fear. Therefore, the language mode of newspaper reports was inevitably negative due to the challenges confronting the containment measures, fears of the fast spread of the disease, and the threats posed by tracking cases. Some stories reflected the fear factor directly, such as the one in Punch (May 3, 2020):

I infected four persons with Covid-19, says el-Rufai.

The reason for the story, as shown in comments by Nasir el-Rufai, then incumbent governor of Kaduna State, was to startle the public into believing that Covid-19 was real. A story in The Guardian (April 26, 2020) had the headline:

Why the controversy over FG's Covid-19 palliatives persists.

The introduction reads: "The distribution of palliatives by the federal government to cushion the coronavirus disease (Covid-19) effect on poor and vulnerable Nigerians in parts of the country has been nothing short of bedlam."

The newspapers also carried regular updates on the incidence of the disease, such as the following story in *Punch*, April 22, 2020:

UPDATED: Nigeria's coronavirus cases exceed 1000, death toll now exceeds 32.

b. Progress made and preparedness of government: The narrative point of view in the stories on progress was success or otherwise of lockdown and other directives on Covid-19 patients treated or discharged as well as progress on the procurement of medical supplies. However, 44% of stories under progress and/or preparedness were still negatively slanted because the government's effort to contain the virus indicated mishandled progress or indications of unpreparedness. For example, a story in the *Premium Times* (March 31, 2020) reads:

Coronavirus: Nigeria is able to test between 500 and 1000 a day.

While the story indicated a step forward, the report still implied how much Nigeria was lagging in testing capacity. Another report in *The Guardian* (April 25, 2020) was titled:

Covid-19 lockdown: Hunger obeys no order, say Nigerians defying stay-at-home directive.

The story chronicled many instances where widespread violations of prescribed health measures hampered the government's containment measures. Some of the headlines indicating 'progress' as a narrative viewpoint include:

The Guardian (April 23, 2020): FG to fight COVID-19 with additional 75 ventilators, 36,000 kits, 331,000 PPE.

Premium Times (April 16, 2020): Coronavirus: Gombe governor unveils isolation, treatment centres.

Premium Times (April 7, 2020): What Northeast states are doing to stem the spread of Covid-19.

4.5.3 Reader Response and Source Credibility

Similar to the focus of newspaper reports, reader response also dwelt on containment efforts, progress, challenges, and preparedness of government and fear. Expectedly, therefore, Covid-19 figures, handling of the spread of the disease and people in isolation centres, controversies about child beggars (or the *almajiri*) in Northern Nigeria, mysteries of strange illness in Kano and Bauchi States, distribution of palliatives, and 'premature' easing of lockdown attracted the majority of the negative response. Regarding how language was used (pragmatics), the newspapers opted for

Standard English, while reader reactions were mainly uncouth attacks, ethnic slurs, and allusions to religious beliefs about Covid-19. Some comments reflected the perception of the severity of the disease, such as comments that Africans do not die from Covid-19.

In summary, the language mode was negative, while the narrative viewpoint reflected low source credibility expressed in terms of dissatisfaction with the efforts of the government, media, and health experts. Some readers made comparisons between Covid-19 and Ebola containment efforts. The ethnic-based comments also pointed to low source credibility and were directed at sources such as government officials (NCDC director, governors, and the incumbent president), the media, and health agencies. The following exemplify some of the responses:

While the figures began to mount by March 2020, the following was one of the responses to a report in Punch, March 22, 2020, with the headline *Lagos confirms three new cases of Coronavirus*.

If you don't test all the contacts of the positive cases, but you continue waiting for people showing symptoms, this pandemic will become worse, not all people show symptoms when infected, and they can spread it even without symptoms. This is not Ebola, so your Ebola manual will not work.

Ethnic sentiment was shown in the following response to a Premium Times (May 11, 2020) story addressing the escape of patients from isolation centres:

Distribution of these palliatives must not be done on the basis of political party affiliations or ethnic or religious affiliation. The palliatives must be for ALL persons! ... Smuggling people in trucks conveying cows [speaking against Fulani herders] must be visited with severe punishment!

The Guardian's story (April 17, 2020) on conflicting Covid-19 figures attracted negative, ethnic, and attack comments:

Nyamiri [slur word depicting a person from the Igbo ethnic group] is in charge of NCDC. Why would they bother to interact with such an agency. I am sure as we speak, they are planning to have one of 'their own' to take over.... Everything is political in Kano. Amongst others, keep tabs on their current, Director of Public Health, Wada. They know that crisis magnitude will determine how much money they'll get.

Some responses attacked the media for creating confusion, such as the following reactions to a Premium Times story (May 11, 2020) on the incidence of Covid-19 in Nigeria:

143 deaths is false. Bauchi alone has 150 then Kano? Then Lagos? Please do not add to the confusion [...] Give correct information lets know what we are dealing with. ...Needless to say religious sentiments, politics and corruption have played an ignoble part in doing what is timely and right to ameliorate the situation. Only time will tell.

In a May 3, 2020 story, Punch reported a startling headline: *NCDC says Covid-19 cases will increase as lockdown ends* today. The attack on NCDC reads:

- a. Am ashamed of this so called NCDC leaders, only 20,000 test has been done so far. Then why the one month lockdown?
- b. Oga DG, your pay cheque is guaranteed with extra daily allowances. Over 90% of Nigerians hustle daily in order to feed. Yes virus spread could increase. Yes deaths could increase. Hunger is a major killer also.
At lock down your testing is near zero %

The following response was a suggestion based on a report in *The Guardian* May 7, 2020, with the headline: *Buhari orders assessment of plant-based cough mixture as possible treatment for Covid-19*.

The Madagascar herbal remedy is outside the profit empires of the pharmaceuticals and is African. It is up to us, therefore, to conduct the right trials and, if proven, produce this for our people without the attendant 'foreign debts' that characterize current drugs of international or non-African origins.

5. Discussion

The study examined the themes, source credibility, and reader response to newspaper reports on Covid-19. The objective was to ascertain the implications of reader response to source credibility, the severity, and transmissibility of Covid-19. Analysis was based on the themes, narrative viewpoints, pragmatics, and language modes of reports from three top newspapers in Nigeria between February 27, 2020 (diagnosis of index case) and May 11, 2020, when the country eased lockdown, as cases were starting to spike.

Research question 1 aimed to ascertain the themes of newspaper coverage and audience responses to the reports on Covid-19. Results indicated that the themes of newspaper stories were challenges, progress made, preparedness, and containment measures. Audience responses followed these themes, showing a remarkable narrative viewpoint and pragmatics shift. Remarkably, Nigerian newspapers did not focus on definitional issues and Covid-19 terminology (as themes). This stands in contrast to what was done in Australia, where media coverage of the pandemic was predicated on definitional issues at the early stages (Asif et al., 2021; Zhou et al., 2020), as the extant literature has shown that an explanation of the key issues, such as social distancing and non-essential travel, has been important in audience's willingness to adhere to Covid-19 health warnings (Asif et al., 2021).

Results of the test of hypothesis 1 showed that the positive, negative, and neutral direction of stories depends on the theme of the story. Accordingly, most newspaper stories on the theme of progress (e.g., claims about a cure) and challenges (e.g., procurement of test kits) used language that evoked fear, controversy, confusion, and a sense of unpreparedness. Appeals to fear, controversy, and confusion may elicit a response of belief in Covid-19 to trigger compliance with health measures. However, scholars insist that fear appeals can be counterproductive (Ugwu, 2015). For instance, even if readers felt the fear of being infected, as some comments indicated, the fear seemed to have been diminished by reader comments that Africans do not die of Covid-

19. This was also bolstered by allegations by readers that Covid-19 figures were falsified and that there was selective enforcement of the lockdown based on ethnicity and state of origin.

The results of the test of hypothesis 2 indicated that the language mode (directionality) of newspaper reports was likely to be negative irrespective of the source interviewed in a story. This further aligns with the results of hypothesis one, which showed that the slant of the reports depended on the themes, which were, in turn, likely to be negative. This may have been a precursor to the similarity in the language mode of newspaper stories and those of audience responses, possibly indicating the link between media exposure and reader perception of health risks (Zhou et al., 2020).

Research question 2 aimed to examine the sociolinguistic factors reflected in reader responses to newspaper descriptions of Covid-19 severity, transmissibility, and health warnings. We found that audience responses to newspaper reports on Covid-19 figures, travel restrictions, testing capacity, and herbal treatments exhibited narrative viewpoints, which reflected social factors such as ethnicity, low source credibility, and negative perceptions of health risks. These responses led to comparisons between Nigeria's political situation and the distribution of palliatives. It also led to attacking the ethnic origin of the health officials and the politicians connected with the fight against Covid-19. The language associated with Nigeria's politics (such as political party affiliations) and ethnic divisions, such as ineptitude and marginalization (rendered as: 'they are planning to have one of 'their own' to take over') permeated audience responses. The consequence was that some readers said it was better to contract Covid-19 than to sit indoors and die from hunger. These responses bolster scholars' view that trusts in information sources is linked with attitudes to health risks (Coroiu et al., 2020; Williams et al., 2020). It also aligns with studies in several countries (e.g., Nigeria) where the audience accused the media and government of sensationalizing news and misrepresenting issues (Obi-Ani et al., 2020).

Reader comments were also in the Nigerian style informal forms, albeit uncouth. Scholars have emphasized the necessity of tailoring the language of infectious diseases to suit identified audience interests in terms of relationship building, linguistic transpositions, and cultural adaptations (Leffler, 2015; Piller et al., 2020). This can help address some factors constraining English from performing an integrative role in pluralistic societies (Chataba, 2013). Scholars have argued that Nigerian English can be used as a formal variety of English (Gaji et al., 2017). Therefore, it is commendable that a few reports focused on themes that reflected reader concerns, such as the absence of palliatives amid the lockdown. This may give readers the impression that someone is thinking like them, while the story could use the opportunity to pass important messages about Covid-19 severity and transmissibility. However, the report could have a greater impact if it included portions that align with the way readers use language, such as:

If you stay inside (stay indoors) house, you fit die (might die), if you dodge enter hustle (sneak out to do business), you go get sick (you will contract the virus) and still die. But it is better if you no catch sickness which fit kill before the virus (it's better to avoid contracting the virus which kills far faster than hunger).

This kind of construction can be italicized and used as parenthetical inserts to show its unique structure, which is necessary due to the debated nature of the formality of such expressions and the dilemma experienced by some reporters and readers about the acceptability of such narrative forms in formal settings. However, it may serve as a bridge towards making the Nigerian variety an accepted formal way of writing in the process of fully domesticating Standard English (Bamgbose, 1995; Ogunleke, 2008). The BBC has already created an online platform in which Nigerian Pidgin is exclusively used as a formal language of reporting. Alternatively, newspapers can create sections that identify such reports and their forms.

Research question 3 explored the ways in which reader response reflected reader believability in the sources cited in stories, such as reporters, government, health professionals, and eyewitnesses. To expound further on the findings of research question 2, we found that reader response reflected low source credibility because the readers doubted Covid-19 figures, accused the government of playing politics with the disease, and of giving preferential treatment to people from certain ethnic groups in appointments and enforcement of travel restrictions. In condemning the rate of Covid-19 infection tests conducted by the NCDC, there were comments such as, 'This is not Ebola so your Ebola manual will not work.' On accusations of selective enforcement of travel restrictions, there were comments such as, 'Smuggling people in trucks conveying cows must be visited with severe punishment!' In accusing the NCDC of falsifying Covid-19 infection figures, a reader said: 'They [health officials] know that crisis magnitude will determine how much money they'll get.'

The foregoing raises important questions about source credibility, which, in turn, call attention to news values. News values are the basis for selecting a story due to what is considered its most important attributes, such as audience interest, disaster, oddity, controversy, impact, or prominence of personalities. News value helps to set the language mode of a story because a story emphasizing oddity (uniqueness or oddness of a situation), for instance, will have a style of word choice tending towards eccentricity. The questions raised are: (1) what tone of language is needed to manage panic and to make the audience believe the source of information about health protocol? (2) Which news values can help to tie in audience interests in the language of reportage during health emergencies? (3) Which other sources can journalists use during disease outbreaks to boost audience believability of sources? These questions echo the views in studies and health communication theories on the importance of reportorial style, source credibility, and choice of words (Iyorza & Ojorgu, 2020; Santana, 2011; van Driel, 2021; Zhou et al., 2020).

To bolster the need to reconsider language mode, we note that newspaper reports about the claims of a cure for Covid-19, the number of infected people, tracking of the contacts of positive cases, and concerns raised by medical personnel should have helped to reassure people. Instead, they portrayed chaos and hopelessness, e.g., the purported sacking of a professor in a university for claiming to have found the cure for Covid-19 (The Guardian, April 29, 2020). This was why, ironically, some stories about progress were negative in the slant. Possibly, this also accounted for the high level of the attack in reader response directed towards the sources of information such as the newspapers, government, and health bodies. For instance, rather than the headline - *NCDC says Covid-19 cases will increase as lockdown ends today* (Punch, May 3, 2020), a reporter

concerned about reducing panic can change the narrative viewpoint by emphasizing mandatory containment measures (such as the use of face masks in public) spoken about in another paragraph to appeal to various companies to assist in producing protective equipment. Such a headline can read: *NCDC rolls out tougher measures to contain COVID-19 as lockdown ends*. Another example is: *End of lockdown: DG tasks Nigerians on compliance with protective measures*. A subordinate headline (rider) can refer to fears of rising cases if measures are violated. This way, the story can maintain its impact.

However, one implication of the theme and language mode of stories is that reporters primarily prioritize headlines that can immediately capture readers' attention. As noted by Ugwu (2015), the media tend to emphasize controversy rather than consensus and represent issues in terms of polarities rather than complexities. This results in utilizing news values such as oddity, impact, or controversy. It also leads to sourcing the majority of news from government officials and medical experts. Nevertheless, when readers seek updates that provide reassurance, news values such as oddity and controversy may need to be reevaluated, particularly in the context of health emergencies. Excessive reliance on government and health experts as sources can lead to a credibility crisis due to the social and power distance between these sources and the readers (Leffler, 2015).

Therefore, the theme, narrative viewpoint, and mode of newspaper reports on EIDs should focus on ethnic unity (i.e., how the various parts of the country cooperate in the fight) and political harmonization among the states and religions. This also implies that source credibility may increase if religious sources and local authorities are used as major sources in a significant number of stories. Such an approach can address the concerns expressed in studies that emphasize the importance of aligning the language of newspaper reports with local cultures, social trends, ethnicity, source credibility, and health beliefs (Ahmad, 2020; Piller, 2020).

Moreover, newspapers should recognize that coverage of health emergencies ought to aim to address misconceptions, controversies, uncertainties, fears, and disagreements, which are inherent challenges in addressing community-wide health issues (Campbell, 2014; Iyorza & Ojorgu, 2020; van Driel, 2021).

6. Conclusion

In exploring the linguistic components of Covid-19 reportage, the study has added an important dimension to the existing literature on media reportage of health. It has shown the significance of language in the gap between media reportage of infectious diseases and audience interests in a multi-lingual context. The themes of newspaper coverage did not differ from those of reader response. However, the newspapers differed from the readers in terms of narrative viewpoint. Readers' responses reflected the political, ethnic, and religious divides in Nigeria. The fear appeal that should have induced compliance with health measures apparently led to angry retorts on the difficulty of adhering to the health measures. This raised questions about health beliefs, source credibility, language mode, and message effectiveness. We posit that the process of meaning creation through official languages should consider the social factors impelling responses to health messages, such as the type of sources. Local authorities and citizens should also become

major sources of health information, not in terms of being health experts themselves, but rather in supporting and reinforcing the messages of the experts.

The study is limited to three newspapers. A future study can be carried out with a higher number of newspapers, and can cover the post-pandemic period. Moreover, online reader responses may not necessarily be a faithful reflection of all readers' opinions. Reader comments, however, offered the advantage of real-time response, with the potential to reflect public opinion.

Declaration of Conflicts of Interests:

The authors declare no potential conflicts of interest.

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