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Review article

Twitter usage during global pandemic and corporate reputation in Nigeria



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ABSTRACT

This study is a meta-analysis of empirical studies in social media strategies and reputation research. The research goal is to give a clearer idea of the broad directions and paradigm shifts in Twitter usage discourse over the years. Its major goal is to examine thematic trends, theoretical framework and methodology that have characterized the discourse. Sixty relevant articles were identified, coded and content-analyzed. Findings revealed that dominant themes include stakeholder perceptions of communication strategies, social network sites, dynamics of global pandemic (i.e Covid-19 pandemic) and corporate reputation. Also, experiment, case study and survey are the dominant research methods that characterize research in this discourse. Findings also revealed large domination of the Situational Crisis Communication Theory (SCCT) and the Image Repair Theory. However, research in this area lacks significant empirical evidence from Africa and Nigeria in particular, where the global pandemic seems to be a recurring phenomenon. The majority of the reviewed journal articles were conducted in the Western clime, with little attention on Africa. Scholarship needs to move beyond this point to provide a holistic and balanced view on the crisis by exploring cases in Africa and particularly, in Nigeria. This gap will provide an opportunity for understanding the global pandemic (i.e. Covid-19) dynamics in Africa and will further determine whether findings can be consistent across the world.

1. Introduction

Reputation depicts an intangible asset that is extremely hard to copy, which has been established based on past activities and events of corporations and something that builds a firm's perception in its public (Zheng et al., 2018; Shalvee and Saurabh, 2020). Corporate reputation management requires a strategic orientation that defines and preserves the desired positioning of the company consistently. Not only is reputation a dynamic phenomenon, but one that is worth managing well. Ji et al. (2017) placed organization reputation at the core of public relations objectives. A public relations task is the profession that looks at reputation to receive assistance and impact public opinion (Aguilera-Caracuel and Guerrero-Villegas, 2018; Seitel, 2017; Guth and Marsh, 2016). For example, a powerful communication achievement by organizational directors and effective feedback devices from stakeholders is crucial to attaining better knowledgeable decisions that maintain the backing of stakeholders (Boyd and Nicole, 2007; de Graaf and Meijer, 2019; Zheng et al., 2018).

Corporate reputation suggests an extended, cumulative appraisal formed over a long period about the business organization (Miras-Rodríguez, Bravo-Urquiza & Escobar-Pérez, 2020). From the perspective of

practitioners, it is the major basis of organisation survival, competitiveness and profitability. Reputation is therefore a complicated happening but one that deserves proper management (Dimitrova and Jörg, 2018; Kim and Sung, 2020). Corporate reputation management is an aid that comprises 'quality of products and services, potential to innovate, financial stability, value as a long-term investment, skill to entice, create, retain talent; and quality of management and use of corporate assets, Argenti and Druckenmiller (2019) argue that 'organizations are now realizing the significance of corporate credibility to achieve business objectives and remain competitive.' While there are many current cases of companies whose conduct in corporate practice and leadership has damaged their reputations, such as Enron, Tyco, WorldCom and Arthur Andersen, the positive case for credibility is that old stagers such as Johnson & Johnson and Philips and innovators such as Cisco Systems have continued to grow. The largest surge of financial slanders in the United States and Europe, including Spain, has rattled the global financial system in recent years. It has led to a profound confidence catastrophe in the entire information transparency control system provided by all businesses, particularly those receiving citizenship savings (Miras-Rodríguez et al., 2020). Indeed, due to tighter monitoring requirements (Einwiller and Steilen, 2018; DiStaso and McCorkindale, 2017) and the bad image of their audited businesses,

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the financial sector has become one of the most impaired, having a direct effect on their professionals (Grunig, 2001; Appleby-Arnold et al., 2019; Vrontis et al., 2021).

The primary stakeholders that big organisation must show concerned for are: employees, customers, distributors, suppliers, share-holders, financial institutions and analysts, joint venture partners, social action organizations, government regulatory agencies and the general public. The reputation of an organization in the view of these groups will control their readiness to either give or deny (Zhou et al., 2020). Therefore, if organisation customers generate a negative feeling of the company or its products, its sales and profits will notably decrease. Corporate reputation is acknowledged as one of the determinants of competitive performance (Aguilera-Caracuel and Guerrero-Villegas, 2018; Seitel, 2017; Guth and Marsh, 2016), however, to our understanding, the assumed connection is yet to be ascertained in Nigeria. What has been widely observed is that various sectors in Nigeria have suffered so much reputation defects from constant negative media publicity.

Reputation was, is, and always will be of tremendous significance to organisations, whether governmental, commercial, or not-for-profit. To attain their objectives, prosper and stay competitive. A good reputation paves the organisational way to acceptance by stakeholders business. operating in impossible ethical settings – maybe self-created – need to maintain a favourable reputation where feasible. Surprisingly, many companies have not achieved this competitive status in Nigeria because apart from the scarcity of substantiating infrastructural equipment. It is still revealed to reputational problems bothering on inadequate strategies in stakeholders' relationship management, which also influences the optimal sectorial operation. This dysfunctional stakeholders' management and impact on corporate reputations may be the justifications why several firms in Nigeria are still mostly incapable to optimize the chance presented by nearly two hundred million local community for beneficial competitiveness. Finally, the issue is: how ready are Public Relations expert in building and managing corporate reputation to enhance their competitive achievement?

Public relations professionals are conscious that many companies would have trouble meeting the needs of their different stakeholders (Merchant and Lurie, 2020; Mañas-Viniegra et al., 2020) as a result of the major disruption caused by the COVID-19 pandemic (Jin et al., 2014; Emmott, 2020). The COVID-19 pandemic is a worldwide coronavirus disease (COVID-19) pandemic caused by severe acute respiratory coronavirus (SARS-CoV-2) syndrome 2 in 2019. In such cases, the media has always played a very important role. During the Polio Eradication Project, Tuberculosis, AIDS, Encephalitis, H1N1Swine Flu, and many other diseases, social media networks spread enormous knowledge. Special articles have been passed on social media sites and even single column news related to it has been released on the front page so that individuals become informed and start taking precautions. Similarly, to inform their different stakeholders of their modus operandi, companies use the website and other social networking sites (Kaur, 2015; McLennan and Howell, 2019; Kish, 2020; Marjorie et al., 2021).

With an abrupt decrease in consumer confidence in traditional advertising, social media marketing has attained significance as an alternative means of promoting products (Brown, 2020; Ashley and Tracy, 2015; Valentini, 2015). It is implied in consumer behaviour publications that corporate reputation have a vital part in social media as well as renewing buying behaviour and increased buying behaviour (Gabriel and Koh, 2016). Social media (SM) is a recent, dynamically expanding platform of interpersonal communication that comes to be a severe challenge for directors in corporate reputation management (Kaur, 2015; McLennan and Howell, 2019). The communication and business landscape has been changed by social media (SM). In current days the rapid development of the internet and social media (SM) has helped to transform the networking landscape in which stakeholders, like their users, can post and share their views (Kaul et al., 2015; Szwajca, 2017; Martínek, 2021). This creates a range of possible risks to both individuals and organizations' credibility and reputation.

Social media is a powerful online reputation management tool. The amount of social media users is deliberately improving at a rate of 20% annually. Social media encompass several websites that permit sending photos, texts, opinion exchange, videos, transmitting current news and so on. Gabriel and Koh (2016) and Marjorie et al. (2021) argued that social media comprising Facebook, WhatsApp, Twitter, among others is an ideal platform for interacting with clients and connecting with workers. One of the most prominent websites is Twitter, which was created in 2006 (in 2016, and with about 330 million monthly active users and 145 million everyday active users), which encourages building networks and groups exchanging photos, information, as well as utilizing applications available on the outlet. Twitter currently ranks among the world's leading social networks. Kaplan and Haenlein (2018) added that the adoption of social networks is very helpful if ever faced with crises, diseases or virus such as COVID-19.

Based on these assumptions, the opinion of consumers on the reputation management of a business is inclined to influence the usage of social media.

Over the decades' intellectuals have exaggerated the advantages of social media in public relations, such as linking individuals (Baruah, 2012), supporting activist movements (Kaur, 2015) and affecting the relationship between organizations and their strategic constituents (El-Kasim and Idid, 2017). Despite the absence of experimental proof to substantiate it (Valentini, 2015), the prevailing PR discourse appears to be excessively optimistic about social media during the pandemic. El-Kasim and Idid (2017) and Stříteský and Stránská (2015) indicate that it is necessary to analyze whether social media supports or hinders media relations, reputation management and crisis management during the pandemic. Likewise, this research recognizes that the use of social media (i.e. Twitter) in Public Relation is not without coerced consequences, especially during the global pandemic (Ehnis and Bunker, 2019; Mirbabaie et al., 2020).

Corona Virus pandemic is now a great concern all over the world. It has already crashed the world economy and also affected various sectors. In the observation of Kent and Taylor (2016) and Brian et al. (2020), the use of Twitter by company executives could harm the reputation of the company. Extensive literature (McLennan and Howell, 2019; Robson and James, 2013; Tench and Jones, 2015) from developed countries have shown that Twitter has become a great way to communicate with the public, promote the products and services of the company online and manage the reputation of the company in improving customer services with social media (Reuter and Kaufhold, 2018; Parul et al., 2020). Currently, there is a lack of study commenced to evaluate the usage of Twitter among PR practitioners and how they affect the organisational reputation building of companies during a global pandemic such as COVID-19. From the above premises, it can be deduced that reputation is an inevitable and essential aspect in the field of the public relations industry. Hence, the study goal was to examine the connection between corporate reputation management and Twitter usage during the Covid-19 pandemic. The achievement of the research goal was also guided by the following research questions:

- 1. What dominant themes are frequently used in the reviewed journal articles?
- 2. What are the dominant theories of communication assigned by researchers in the reviewed journal articles?
- 3. What research methods are employed in the reviewed journal articles?
- 4. What sampling techniques are mostly used for data gathering in the reviewed journal articles?
- 5. What methods of data analysis are frequently employed in the reviewed journal articles?

2. Method of study

This study adopted content analysis for the goal of gathering, presenting and analyzing data. Relevant journal articles were content analyzed to answer the research questions. The study population comprised journal articles within the subject areas of social media, Twitter usage, stakeholders/publics, global pandemic and organizational reputation. Table 1 illustrated only the journals that are indexed in respected printing outlets such as Sage Publications, Elsevier Publications, Inderscience Publications, Springer, Allied Academies Publications, Academy of Management Publications, Nature Publications, and Taylor & Francis Publications.

These journals were predominantly published in America, Europe and Asia, with fewer publications from Africa and Nigeria in particular. Relevant books published Master and Doctoral thesis and reports were also used. A literature key search was administered to select online articles on online media communication and reputation strategies. Articles were purposively selected because they had in their topics, abstract or keywords phrases such as social media, Twitter usage/deployment, communication strategies, reputation, organizational/corporate reputation or any of its variations. A total of 118 articles were considered but only 60 articles were considered relevant to the study.

However, from the pool of articles gathered, only peer-reviewed journal articles (51), relevant books (5), published thesis (3) and reports (1) were found suitable and selected for analysis. Personal observation by the researcher was adopted as instrumentation for gathering necessary data from the sampled relevant articles. Out of a total of 118 articles retrieved from the literature search, only 60 were deemed applicable to the research. The unit of analysis is one article. The coding instrument contains mainly five parts. The first aspect codes for the research themes (i.e. research focus). The second aspect codes for theoretical application (i.e. names of theories used. If a manuscript had more than one theory, all theories were considered). The third part codes for

Table 1. Journals that are indexed in a reputable publishing.

Telematics and Information Heliyon Inderscience Publications International Journal of Communication International Journal of	Finformation Management tics FAdvanced Media and FeBusiness Research FCreative Research Thoughts
Elsevier Publications International Journal of Telematics and Informatelyon Inderscience Publications International Journal of Communication International Journal of International Journal of	Finformation Management tics FAdvanced Media and FeBusiness Research Creative Research Thoughts
Telematics and Informate Heliyon Inderscience Publications International Journal of Communication International Journal of International Journal of	tics Advanced Media and BeBusiness Research Creative Research Thoughts
Heliyon Inderscience Publications International Journal of Communication International Journal of International Journal of	Advanced Media and eBusiness Research Creative Research Thoughts
Inderscience Publications International Journal of Communication International Journal of International Journal of	eBusiness Research Creative Research Thoughts
Communication International Journal of International Journal of	eBusiness Research Creative Research Thoughts
International Journal of	Creative Research Thoughts
Emerald Croup Publishing Journal of Product & Br	and Management
Efficial Group Fublishing Journal of Froduct & Br	and management
Sage Journals Methodological Innovat	ions
Journalism and Mass Co	ommunication Quarterly
Communication Research	ch
Journal of Information	Technology
Taylor & Francis Publications Journal of Health Comm	nunication
International Journal of	Advertising
Behaviour & Informatio	n Technology
EBSCO Social Technologies	
International Journal of Technology	Advanced Science and
Professional Journals Public Relations Journal	1
University-Based Journal The Asia Pacific Public	Relations Journal
Global Media Journal	
Journal of Developing A	Areas
Journal of Arts and Soci	ial Sciences
Journal of Computer-Me	ediated Communication
Wiley Publications Corporate Social Responsi	nsibility and Environmental
Psychology & Marketing	g
Journal of Contingencie	es and Crisis Management
Public Administration R	teview
Journal of Contingencie	es and Crisis Management

the research methods (i.e. a review of general methods). The fourth part codes for sampling method and the fifth part codes for data analysis as presented in Table 1.

3. Data presentation and discussion

This section provides the outcomes of the content analysis. An integrative approach was used as trends observed from the findings in each section are discussed in Table 2.

3.1. Thematic trends

Ten themes were identified in the reviewed papers. However, among these were four dominant themes that centred on stakeholder perceptions/responses to communication strategies -28 (31%); online social networks or Social Network systems -23 (26%); Corporate reputation -20 (22%); Global pandemic and Social media -12 (13%); Twitter Informatics -5 (6%) and Tracking and Understanding Public Reaction during a pandemic -2 (1.3%).

Studies on stakeholder perceptions to global pandemic (i.e. Covid-19) have in recent times, begun to gain prominence in the discourse (Coombs, 2007, 2010, 2015; Heath, 2010; Ulmer et al., 2010; Austin and Jin, 2015; Kim, 2015; Ziek, 2015; Tam and Huang, 2016; among others), as there has been an apparent shift from the organisation-centred crisis communication and response strategy approach. In other words, the initial focus of communication research was an investigation of misdeeds in organizations that led to a global pandemic (i.e. Covid-19). Others focused on communication messages sent by the organizations involved in managing global pandemic (i.e. Covid-19). Little attention was given to stakeholders perspectives. However, this discourse has given a balanced approach as recent studies have been carried out to determine stakeholder response to communication (response) messages. Lee (2004), noted that stakeholder perspectives will provide valuable insights into how individuals understand and react to global pandemic (i.e. Covid-19). Coombs and Holladay (2014), also noted that stakeholder reactions provide assessments of communications effectiveness. Understanding stakeholder reactions is helpful as it can help to develop effective global pandemic (i.e. Covid-19) response strategies for various stakeholders. Crisis communication research also focuses on assessments of global pandemic (i.e. Covid-19) situations, management and the value of communicating before, during and after global pandemic (i.e. Covid-19). The uncertainties that accompany crises require proactive measures by organizational managers in managing crises. One dominant proactive measure is to constantly communicate, especially to stakeholders. Coombs (2004) stressed that effective communication is vital as it can improve or aggravate global pandemic (i.e. Covid-19) situations and influence how it is perceived by stakeholders.

The third dominant theme, communication strategies, focus on how organizational reactions are demonstrated to the public and how these messages are described to repair the organization's reputation. Global pandemic (i.e. Covid-19) response strategies are crucial in determining how stakeholders will perceive the pandemic, its image and reputation (Stephens et al., 2005). Global pandemic (i.e. Covid-19) response strategies can "either improve or make the problem terrible for a company and its diverse stakeholders," (Coombs et al., 2010:337), as the response strategy can be the disparity between organisational success or failure. The fourth dominant theme identified focuses on organizational reputation, which are valuable but intangible organizational assets that could be damaged during a global pandemic (i.e. Covid-19). Kelly (2014), argues that the reputation of an organization is generally measured in the supportive behaviour of its stakeholders. Hence, there are favourable and unfavourable reputations. Other themes identified in the study include communication and social media (10.5%), media coverage of global pandemic (i.e. Covid-19) communication (7.9%), crisis communication and corporate reputation (5.2%), global pandemic (i.e. Covid-19) communication (1.3%) as well as international crisis communication

Table 2. Presentation of dominant themes, theories, methods, techniques and data analysis.

Items	Frequency (Percentage)
Dominant Themes	Stakeholder perceptions/responses to communication strategies – 28 (31%); online social networks or Social Network systems – 23 (26%); Corporate reputation – 20 (22%); Global pandemic and Social media – 12 (13%); Twitter Informatics – 5 (6%) and Tracking and Understanding Public Reaction during a pandemic – 2 (1.3%).
Dominant theories applied (n = 21; f = 73)	SCCT - 27 (37%); Image Repair Theory - 10 (13.7%); Attribution Theory - 9 (12.7%); Stakeholder Theory - 5 (6.3%); Social Gratification Theory - 4 (13.7%); Corporate Apologia Theory 3 (4.1%); Asymmetric Information Theory, Pluralistic Industrial Relations Theory, Organisational Theory, Contingency Theory, Dissonance Theory, Situational Crisis Communication Theory, Situational Theory of Publics, Grounded Theory, Game Theory, Conspiracy Theory, Expectancy Violation Theory, Functional Decision Theory and Reputation Management -1 (1.4%) each
Dominant methods applied (n = 8; f = 61)	Experiment (37.7%); case study (34.4%); survey (14.7%); desk research (4.9%); Textual analysis, Survey and Experiment, in-depth interview and experiment and the Delphi-scenario technique – 1 (1.6%) each. Analysis of Case Study Data (Content analysis -14; content and framing analysis- 2; experiment – 2; in-depth interview – 2 and textual analysis – 1)
Dominant Sampling Techniques (n = 7 ; f = 59)	Purposive sampling techniques (54.8%); Convenience sampling techniques (26.1%) Simple Random (7.1%), Snowball (4.8%), Theoretical (2.3%), Stratified (2.3%), Cluster (2.7%) and the Systematic sampling (2.3%).
Analytic approaches (n9; $f = 59$)	Descriptive statistics - 16 (27.1%) inferential statistics - 15 (25.4%); Descriptive and Inferential statistics - 9 (15.2%); Explanation building method - 7 (11.9%); Chi-Square (12.6%); Correlation (12.9%), Regression analysis - 4 (6.8%); Structural Equation Modeling (SEM) and Multi-level linear regression - 2 (3.4%) each; Multi categorical mediation analysis and hierarchical cluster and inferential analysis 1 (1.7%) each.

Source: Content Analysis, September 2020.

Note: For the dominant theory, if a manuscript had more than one theory, all theories were considered.

(1.3%). The variations that exist in global pandemic communication discourse show the expanding nature in scope as emerging studies are beginning to shift attention to social media and how the media, generally, report global pandemic events.

3.2. Theoretical trends

Articles were coded based on the availability of theories. When an article had more than one theory, all the theories were eventually collated and counted. Of the seventy (70) reviewed articles, fifty-five (55) were theory-driven, while all theories counted were seventy-three (73). The most cited theory was the Situational Crisis Communication Theory (SCCT), which was adopted by 27 (37%) studies. The SCCT was closely followed by the Image Repair Theory 10 (13.7%) and Attribution Theory 9 (12.7%). The Stakeholder Theory (6.3%) was adopted in five studies while the Social-Mediated Crisis Communication (SMCC) Model (13.7%) was adopted in four studies. Also, the Corporate Apologia Theory (4.1%) was adopted in three studies. Other theories adopted in the reviewed journal articles were used once (see Table 1).

The SCCT, developed by Timothy Coombs, offers a conceptual link between the global pandemic (i.e. Covid-19) response strategies and the crisis situation and further prescribes various response strategies that could be used when faced with certain global pandemic (i.e. Covid-19) situations. Fediuk et al. (2010) opines that SCCT is a framework that predicts how stakeholders discern communication strategies. The Image Repair/Restoration Theory, on the other hand, focuses on what organizations can say and do (communicative messages) when faced with a crisis like the global pandemic (i.e. Covid-19) that threatens to damage their image and reputation. The Attribution Theory helps researchers to comprehend how the public probe for causes of global pandemic (i.e. Covid-19) and make judgments (blame) after careful analysis. This is because when crises occur, the public search for the cause, why it happened and seek to know who to apportion the responsibility.

It could be implied that communication researchers consider the importance of theory-driven research. Theories are vital tools, especially in communication research, as it gives the study a complete wholeness when complemented with reviewed literature and findings of a study. The knowledge and application of theories help researchers to join a global discussion and meaningfully contribute to efforts aimed at solving problems with global standardized practices (Olorunnisola, 2007). Findings from this study are consistent with those of An and Cheng (2010), who in their study on Research Trends in Crisis Communication Research, found SCCT (20%) as the most frequently cited theory. Other frequently used theories include Issue/Crisis Management Theory

(18.6%), Image Restoration Theory (10%), and Apology Theory (8.6%). Others include Attribution Theory (4.3%), Contingency Theory (4.3%) Situational Theory (2.9%) and Organizational Theory (2.9%). Besides, Avery and Lariscy (2010) also reported similar findings in their study. They found the Image Repair Theory and the SCCT as frequently used by Public Relations researchers.

3.3. Methodological trends

It is evident from Table 1 that studies in online social media and crisis communication are dominated by a mixed-method approach, integrating quantitative and qualitative methods. Data disclosed that experiment (37.7%) and case study method (34.4%) dominated the studies. This was followed by the survey (14.7%) and desk research (4.9%). Other methods, such as, textual analysis, mixed methods, which consisted of survey and experiment, in-depth interview and experiment and the Delphi-scenario technique, were all represented by one (1.6%) article each. However, content analysis was frequently used as a method of data gathering for case study approaches rather than as a stand-alone research method. Research in the field of global pandemic (i.e. Covid-19) and crisis communication has largely been dominated by the case study approach as the main methodology (An and Cheng, 2010; Elliot, 2010; Holladay, 2010; Kelley, 2014; Claeys and Cauberghe, 2015).

The case study approach is an in-depth study of certain individuals, event, organizations, or processes. This approach is employed to evaluate one or more certain cases with rich context and can give a comprehensive and holistic knowledge of the case been reviewed (Yin, 2009; cited by Xu and Li, 2013). Case studies commonly concentrate on press releases and public opinions given by an organization (Holladay, 2010). Similar findings were observed by An and Cheng (2010), who found large numbers of case studies that employed qualitative content analysis and in-depth interviews. They opined that since crises are largely contingent on many situational factors, a case study offered a more direct and convenient approach to examine the context of crises. This implies that some studies within this discourse may not be useful if used with experimental or other qualitative methods.

Eisenhardt (1989) cited by Huang (2006:186) makes a case for case study approach over the experimental method by noting that "by giving the kind of information that experimental methods cannot, case studies offer the prospect of new insights into the relationships between the pertinent variables". However, because not all global pandemic (i.e. Covid-19) and crisis communication strategies are the same, stakeholder perceptions also differ. It, therefore, becomes difficult to generalize research findings. Holladay (2010), argued that findings from case

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studies could be difficult to generalize because they focus on a single organization in a particular global pandemic (i.e. Covid-19) situation and may lack meaningful correlations to another global pandemic (i.e. Covid-19) situations. Similarly, Claeys and Cauberghe (2015) opined that case studies are not the best method to test the causality between independent and dependent variables (Coombs, 2007). Perhaps, these shortcomings observed by crisis communication scholars in case study methods are the reasons for the higher use of experimental studies. Hence, findings from this study found an experimental method to be slightly higher than the case study approach.

3.4. Sampling technique trend

Table 1 shows that purposive sampling techniques (54.8%) and convenience sampling techniques (26.1%) were mostly employed in the reviewed journal articles. Other sampling techniques found in the reviewed studies are as follows: Simple Random (7.1%), Snowball (4.8%), Theoretical (2.3%), Stratified (2.3%) and Systematic Sampling (2.3%). The implication of this is that nonprobability sampling methods were frequently used in these studies. The findings from this research are related to those of An and Cheng (2010), who also found that nonprobabilistic methods (snowball and purposive sampling) instead of the probabilistic methods (systematic sampling and random sampling) were largely employed in social media and crisis communication study.

The usage of non-probability sampling methods in the discipline has also been studied by Weisberg (2005), and the following points were brought out. First, the practice of the non-random method does not require underlying theories or a certain number of participants. Second, several studies either explicitly utilize non-probability sampling or do so implicitly. Third, the balancing of survey cost and survey errors can occasionally rationalize the usage of non-probability sampling.

The reviewed journals probably adopted the non-probability sampling techniques because it pertains to the identification and selection of people or groups of people that are well-informed and experienced with a manifestation of interest. In addition to experience and knowledge, it promotes the meaning of availability and readiness to partake, and the capacity to convey experiences and viewpoints in an expressive, articulate, and thoughtful way. Unlike the probability sampling methods, which purposely comprise a different cross-category of ages, cultures and backgrounds. The notion behind snowball sampling and purposive could since it focuses on the individual with specific characteristics who can be of better assistance to the relevant research.

3.5. Data analysis trend

Data from Table 1 reveals that the and inferential statistics and descriptive statistics are the repeatedly used method of data analysis in the reviewed journal articles. Descriptive statistics (27.1%) presented the highest of 16 out of the total of 59 articles sampled, closely followed by inferential statistics 15 (25.4%). It is, however, noteworthy that 9 (15.2%) studies combined both the descriptive and inferential data analysis method, while 7 (11.9%) employed the explanation building method of analysis. Other methods of data analysis revealed in the data are, OLS Regression Analysis 4 (6.8%) while the Thematic Analysis, Structural Equation Modeling (SEM), Multi-level Linear Regression were employed in 2 (3.4%) studies each and Multi Categorical Mediation Analysis and Hierarchical Cluster and Inferential Analysis 1 (1.7%) were employed once each in the studies.

4. Conclusion

This paper placed much emphasis on understanding global pandemic (i.e. Covid-19) and response dynamics from an organizational standpoint and how managers navigated through the crisis. Based on the papers reviewed, it can be concluded within this discourse that there is a shift to a stakeholder standpoint, where stakeholders are recognized as an

integral part of the crisis communication discourse. This paper established that a global pandemic (i.e. Covid-19) can also affect stakeholders and influence the way stakeholders perceive organizational reputations. To minimize the reputational damages and stakeholder agitations, resulting from unexpected crises, the financial sector must adopt relevant global pandemic (i.e. Covid-19) response strategies, as the choice of an appropriate strategy will, to a large extent, shape stakeholders perceptions of online social sites and organizational reputation.

The globe is generally confronting misinformation as Covid-19 rather heightened the growth and spread of misinformation via a diverse media outlet. The Struggle to defeat the pandemic crucially relies on the people having proper attitudes and beliefs. However, the Novel Corona Virus outbreak is largely followed by erroneous news stories for the strategic profit on the different media outlet, presenting a danger to all the ongoing contributions. After a thorough presentation of data and discussion of the findings, it was found that stakeholder perceptions and reactions to worldwide pandemic (i.e. Covid-19) communication techniques, social media (i.e Twitter) and crisis communication, crisis communication strategies and corporate reputation are the four important topics that dominate academic publications on global pandemic, social media and crisis communication discourse.

Furthermore, the research indicated that the Situational Crisis Communication Theory (SCCT) and the Image Repair Theory were greatly cited theories in crisis communication study, while survey, experiment and case study were the prominent study method that defines researches within the discourse. The research also disclosed non-probability sampling techniques of convenience sampling and purposive were the main sampling methods embraced by researchers in the discourse, while the inferential and descriptive statistics were the oftentimes used method of data analysis.

For this purpose, besides counteracting against the Covid-19 pandemic, the Social Media pandemic also requires scrutiny as both viruses and misinformation circulate at the exact rate, having similar effects and challenging the universal healthcare and reputation today. Thus, the print media also should possess the interest and decisive about the problems that are not merely a national necessity but also a global need to fight universal crises, like the COVID-19 pandemic. Avoiding exaggeration, blame games, politics and fake news, the newspapers and other media platforms should play major parts in educating policymakers and the mass population to confront crises and to come out in even better shape. In this respect, precision nudges should be the prime emphasis for the media outlets to positively counter the surge of misinformation during the widespread pandemic. Scholars are required to move beyond this level to deliver a balanced and holistic perspective on the global pandemic (i.e. Covid-19) by investigating cases in Africa and, specifically, in Nigeria.

Declarations

Author contribution statement

Mary ADELUA: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Wrote the paper.

Tunji OYEDEPO: Contributed reagents, materials, analysis tools or

Odion Odiboh: Contributed reagents, materials, analysis tools or data.

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Data availability statement

Data will be made available on request.

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Declaration of interests statement

The authors declare no conflict of interest.

Additional information

No additional information is available for this paper.

References

- Aguilera-Caracuel, J., Guerrero-Villegas, J., 2018. How corporate social responsibility helps MNEs to improve their reputation. The moderating effects of geographical diversification and operating in developing regions. Corp. Soc. Responsib. Environ. Manag. 25 (4), 355–372.
- An, S.K., Cheng, I.H., 2010. Crisis Communication Research in Public Relations Journals: Tracking, 65. The handbook of crisis communication.
- Appleby-Arnold, S., Brockdorff, N., Fallou, L., et al., 2019. Truth, trust, and civic duty: cultural factors in citizens' perceptions of mobile phone apps and social media in disasters. J. Contingencies Crisis Manag. 27 (4), 293–305.
- Ashley, C., Tracy, T., 2015. Creative strategies in social media marketing: an exploratory study of branded social content and consumer engagement. Psychol. Market. 32 (1), 15–27.
- Avery, E.J., Lariscy, R.W., 2010. Fema and the Rhetoric of Redemption: New Directions in Crisis Communication Models for Government Agencies. The handbook of crisis communication, pp. 319–334.
- Boyd, D.M., Nicole, B.E., 2007. Social network sites: definition, history, and scholarship. J. Computer-Mediated Commun. 13 (1), 210–230.
- Brown, A., 2020. Coronavirus: the World Health Organization is becoming the planet's most important social media influencer. Forbes, 16 March. Available at: https://www.forbes.com/sites/abrambrown/2020/03/16/coronavirus-the-world-health-organization-is-becoming-the-worlds-most-important-social-media
- -influencer/#c5a31725321b.
 Claeys, A.S., Cauberghe, V., 2012. Crisis response and crisis timing strategies, two sides of the same coin. Pub. Relations Rev. 38 (1), 83–88.
- Coombs, W.T., 2004. Impact of past crises on current crisis communication: Insights from situational crisis communication theory. J. Bus. Commun. (1973) 41 (3), 265–269.
- Coombs, W.T., 2007. Protecting organization reputations during a crisis: The development and application of situational crisis communication theory. Corp. Reput. Rev. 10 (3), 163–176.
- Coombs, W.T., Frandsen, F., Holladay, S.J., Johansen, W., 2010. Why a concern for apologia and crisis communication? Corp. Commun.: An Int. J. 337.
- Coombs, W.T., Holladay, S.J., 2014. How publics react to crisis communication efforts: Comparing crisis response reactions across sub-arenas. J. Commun. Manag.
- Coombs, W.T., Frandsen, F., Holladay, S.J., Johansen, W., 2010. Why a concern for apologia and crisis communication? Corp. Commun.: An Int. J.
- de Graaf, G., Meijer, A., 2019. Social media and value conflicts: an explorative study of the Dutch police. Publ. Adm. Rev. 79 (1), 82–92.
- Dimitrova, D.V., Jörg, M., 2018. Social media in political campaigning around the world: theoretical and methodological challenges. Journal. Mass Commun. Q. 95 (2), 333–342.
- DiStaso, W., McCorkindale, T., 2017. Social media: uses and opportunities in public relations. Global Media J. 5 (2), 75–82.
- Ehnis, C., Bunker, D., 2019. Repertoires of collaboration: incorporation of social media help requests into the common operating picture. Behav. Inf. Technol. 39 (3), 343–359.
- Einwiller, S., Steilen, S., 2018. Handling complaints on social network sites an analysis of complaints and complaint responses on Facebook and twitter pages of large US companies. Publ. Relat. Rev. 41 (2), 195–204.
- Elliot, J.D., 2010. How do Past Crises Affect Publics' Perceptions of Current Events? An Experiment Testing Corporate Reputation during an Adverse Event. The handbook of crisis communication, pp. 205–220.
- El-Kasim, Mukhtar, Idid, Syed Arabi, 2017. PR practitioners' use of social media: validation of an online relationship. J. Komunikasi Malays. J. Commun. 33 (1), 212–228.
- Emmott, R., 2020. Russia Deploying Coronavirus Disinformation to Sow Panic in West, EU Document Says, p. 2020. URL: https://tinyurl.com/yx42jzyh. (Accessed 18 March 2020).
- Fediuk, T.A., Pace, K.M., Botero, I.C., 2010. Crisis Response Effectiveness: Methodological Considerations for Advancement in Empirical Investigation into Response Impact. The handbook of crisis communication, pp. 221–242.
- Heath, R.L., 2010. Crisis Communication: Defining the Beast and De-Marginalizing Key Publics. The handbook of crisis communication, pp. 1–13.

Huang, Y.H., 2006. Crisis situations, communication strategies, and media coverage: A multicase study revisiting the communicative response model. Commun. Res. 33 (3), 180–205

- Gabriel, S.P., Koh, C., 2016. Social media use by public relations practitioners: an exploratory study. J. Develop. Area. 50 (5), 469–477.
- Ji, Y.G., Li, C., North, M., Liu, J., 2017. Staking reputation on stakeholders: how does stakeholders' Facebook engagement help or ruin A company's reputation? Publ. Relat. Rev. 43 (1), 201–210.
- Jin, Y., Liu, B.F., Austin, L.L., 2014. Examining the role of social media in effective crisis management: the effects of crisis origin, information form, and source on publics' crisis responses. Commun. Res. 41 (1), 74–94.
- Kaur, K., 2015. Social media creating digital environmental publics: case of lynas. Publ. Relat. Rev. 41 (2), 311–314.
- Kelley, K.M., 2014. Stakeholder Perceptions of a University Response to Crisis. Leadership and Policy Analysis. East Tennessee State University.
- Kim, Y., 2015. Toward an ethical model of effective crisis communication. Bus. Soc. Rev. 120 (1), 57–81.
- Kim, Taeyeon, Sung, Yongjun, 2020. CEOs' self-disclosure on Instagram and consumerbrand relationships: the moderating effect of relationship norms. Int. J. Advert. (1), 1–25
- Kish, K., 2020. Paying attention: big data and social advertising as barriers to ecological change. Sustainability 12 (24), 10589.
- Lee, B.K., 2004. Audience-oriented approach to crisis communication: A study of Hong Kong consumers' evaluation of an organizational crisis. Commun. Res. 31 (5), 600–618
- Mañas-Viniegra, L., Núñez-Gómez, P., Tur-Viñes, V., 2020. Neuromarketing as a strategic tool for predicting how Instagramers have an influence on the personal identity of adolescents and young people in Spain. Heliyon 6 (3), e03578.
- Marjorie, D., Brittany, M., Barbara, J.P., 2021. Social media influencers: a route to brand engagement for their followers. Psychol. Market. 38 (1), 101–112.
- Martínek, P.A., 2021. Mapping methods of research on consumer engagement with brands on social media: a literature review. Method. Innovat. 14 (1), 205979912098538.
- McLennan, A., Howell, G., 2019. Social networks and the challenge for public relations. Asia Pac. Publ. Relat. J.
- Merchant, R.M., Lurie, N., 2020. Social media and emergency preparedness in response to Novel coronavirus. JAMA 23. 29–31.
- Mirbabaie, M., Bunker, D., Stieglitz, S., Marx, J., Ehnis, C., 2020. Social media in times of crisis: learning from Hurricane Harvey for the coronavirus disease 2019 pandemic response. J. Inf. Technol. 35 (3), 195–213.
- Olorunnisola, A.A., 2007. Publishing internationally as scholarly conversation: the value of literature-and theory-driven research questions. J. Commun. Lang. Arts 2, 113–135.
- Parul, J., Zulfia, Z., Imran, M., 2020. Opioids on twitter: a content analysis of conversations regarding prescription drugs on social media and implications for message design. J. Health Commun. 25 (1), 74–81.
- Reuter, C., Kaufhold, M.A., 2018. Fifteen years of social media in emergencies: a retrospective review and future directions for crisis Informatics. J. Contingencies Crisis Manag. 26 (1), 41–57.
- Shalvee, K., Saurabh, S., 2020. Role of mass media and communication during pandemic key role at crucial stage: categories and challenges. Int. J. Creat. Res. Thoughts 8 (5).
- Stříteský, V., Stránská, A., 2015. Complaining behaviour in social media. Soc. Technol. 5 (1), 22–31.
- Tam, L., Huang, P., 2016. Organisational crises in the Media: crisis response strategies and news coverage. Asia Pacific Pub. Relations J. 17 (1), 78–90.
- Ulmer, R.R., Sellnow, T.L., Seeger, M.W., 2010. Considering the Future of Crisis Communication Research: Understanding the Opportunities Inherent to Crisis Events through the Discourse of Renewal. The handbook of crisis communication, pp. 691–697.
- Valentini, C., 2015. Is using social media "good" for the public relations profession? A critical reflection. Publ. Relat. Rev. 41 (2), 170–177.
- Vrontis, Demetris, Makrides, Anna, Christofi, Michael, Thrassou, Alkis, 2021. Social media influencer marketing: a systematic review, integrative framework and future research agenda. Int. J. Consum. Stud. 14.
- Xu, K., Li, W., 2013. An ethical stakeholder approach to crisis communication: A case study of Foxconn's 2010 employee suicide crisis. J. Bus. Ethics 117 (2), 371–386.
- Yin, R.K., 2009. Case study research: Design and methods, 14. Sage, Thousand Oaks, CA, pp. 69–71. The Canadian Journal of Action Research, 1.
- Ziek, P., 2015. Crisis vs. controversy. J. Contingencies Crisis Manag. 23 (1), 36-41.
- Zheng, B., Liu, H., Davison, R.M., 2018. Exploring the relationship between corporate reputation and the public's crisis communication on social media. Publ. Relat. Rev. 44 (1), 56–64.
- Zhou, S., Barnes, L., McCormick, H., Cano, M.B., 2020. Social media influencers' narrative strategies to create eWOM: a theoretical contribution. Int. J. Inf. Manag. 13, 102293.