

Assessing the Quality of COVID-19 Information on Social Media in Zimbabwe: Implications for Future Crisis Communication

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Abstract

This study examines the quality of COVID-19 information on social media among students in Zimbabwe, focusing on six information quality indicators (comprehensiveness, accuracy, relevance, accessibility, reliability, consistency) to inform future crisis communication strategies. An online questionnaire was administered and 284 respondents participated. Descriptive and inferential statistics (one-way ANOVA and chi-square tests) were employed to analyze the survey data. The results showed that COVID-19 social media information was perceived as accurate (mean = 4.23), accessible (mean = 4.01), comprehensive (mean = 3.89), relevant (mean = 3.65), and consistent (mean = 3.45), while reliability scored lowest (mean = 2.98). Significant associations were found between demographic factors (age and education) and perceptions of information quality. The study also revealed that social media was the primary source of COVID-19 information, with 66% (n=187) of the respondents relying on it. These findings underscore the value of social media for COVID-19 information while raising concerns about reliability. Highlighted is the need to improve credibility and trustworthiness, with emphasis on the importance of trusted channels and demographic considerations. Implications for future crisis communication include enhancing information quality and reliability, addressing information access and equity, tailoring communication for diverse audiences,

empowering public health literacy, and leveraging social media for crisis communication. Further research should explore diverse population groups in Zimbabwe for a more comprehensive understanding of the topic.

Keywords: COVID-19 information quality, social media, students, crisis communication, Zimbabwe.

1. Introduction

The coronavirus disease 2019 (COVID-19) has been one of the most severe global health crises in history, with profound impacts on human health, including physical, oral, and psychological well-being (Afrashtehfar, Jurado, Al-Sammarraie and Saeed, 2023). As of May 2023, global COVID-19-related deaths had reached 6.8 million (Statista, 2024). The World Health Organization (WHO) has declared that although COVID-19 is no longer a public health emergency, it remains a persistent global threat (United Nations [UN], 2023). Ioannidis (2022) emphasizes that the pandemic's enduring consequences on health and society will likely perpetuate its legacy. Effective COVID-19 crisis communication was crucial, relying on factual and persuasive messages to facilitate prevention, early detection, and control of the pandemic (Matthews, Parker, Martineau, Gidengil, Chen and Ringel, 2022). This communication strategy was vital for promoting prevention behaviours and minimizing disease risk among the public (Dubé, Labbé, Malo and Pelletier, 2022). However, crisis communication efforts were significantly hindered during the pandemic due to the "infodemic", an overwhelming volume of unverified information and fake news, largely spread through social media (Bányász, 2023).

Social media was undoubtedly a major channel for global COVID-19 communication, disseminating both medical and general information (Mahmood, Jafree, Mukhtar and Fischer, 2021). Tsao, Chen, Tisseverasinghe, Yang, Li and Butt (2021, p. 175) noted that "With the onset of the COVID-19 pandemic, social media has rapidly become a crucial communication tool for information generation, dissemination, and consumption." Volkmer (2021, p. 7) agreed, stating that "Whether large or small, social media platforms have become major globalized influential communication spaces in the current COVID-19 pandemic." Given the widespread use of social media,

young people worldwide were immersed in the increasingly complex world of COVID-19 crisis communication, as they are active users of these platforms, both creating and consuming content (Volkmer, 2021). Neto, Ferreira, Domingos, Barbosa, Vilharba, Dorneles, Reis, Souza and Graeff (2022) argue that COVID-19 information on social media was often characterized by misinformation, contradictions, and ambiguity, including conspiracy theories, myths, and anti-vaccination sentiments. Although social media created opportunities to keep the public informed and safe, it also undermined the global response and control measures (Neto et al., 2022). According to Volkmer (2021), the spread of falsehoods during the pandemic highlighted the need for global standards to regulate social media platforms.

2. Research Question

This study conducts an online survey of the quality of social media COVID-19 information among students in Zimbabwe, to establish implications for future public health crisis communication. It investigates six information quality dimensions; comprehensiveness, accuracy, relevance, accessibility, reliability, and consistency. These were selected based on their wide recognition and study in health communication as indicators of health information quality (Zhang, Sun and Xie, 2015). The study addresses the primary research question “How do students in Zimbabwe perceive the quality of COVID-19 information on social media in terms of comprehensiveness, accuracy, relevance, accessibility, reliability, and consistency? The specific research questions are:

RQ1: To what extent do students in Zimbabwe perceive social media COVID-19 information as comprehensive, accurate, relevant, accessible, reliable, and consistent?

RQ2: How do demographic factors such as age, gender, and education level influence students’ perceptions of the quality of social media COVID-19 information?

RQ3: What are the implications of the findings on future crisis communication and public health outcomes in Zimbabwe?

3. Literature Review

In this study, information quality is defined as "useful data that have been processed in such a way as to increase the knowledge of the person who uses the data" (Alshikhi and Abdullah, 2018, p. 39). Information quality assessment is a subjective evaluation of information fitness for use, reflecting the needs and experiences of stakeholders (Alshikhi and Abdullah, *ibid*). Research on information quality has primarily focused on business scholarships (Jiang, Liu, Liu, Chen and Xu, 2021), raising questions about its importance in health settings, particularly during infectious disease outbreaks. The existing literature acknowledges a significant gap in research on information quality in health promotion and disease prevention (Rew, Saenz and Walker, 2018).

This gap is concerning, given the importance of evaluating the quality and effectiveness of health information to determine the impact of public health interventions. Published studies on COVID-19 information quality have mainly focused on developed countries (Stern, Georgsson and Carlsson, 2021; Brown, 2021; Joshi, Kajal, Bhuyan, Sharma, Bhatt, Kumar, Kaur and Arora, 2020; Chan, Sounderajah, Daniels, Acharya, Clarke, Yalamanchili, Normahani, Markar, Ashrafian and Darzi, 2021; Neto et al., 2022). These studies evaluate the quality of COVID-19 information and its impact on prevention, risk perceptions, and general response. To the researcher's knowledge, there are limited studies in Africa, particularly Zimbabwe, that investigate COVID-19 information quality, despite its crucial role in crisis management. This study addresses this research gap, and through tackling this topic, useful insights will be gained concerning best practices for information packaging during future disease outbreaks.

4. Method

4.1 Survey

The survey for this study was conducted during the COVID-19-induced geographical lockdowns and social distancing in Zimbabwe, hence it relied on an online questionnaire to collect data. Purposively targeting students, the survey was administered over three months, between 11 February and 13 May

2023, and took about six minutes to complete (see Appendix). Eligibility to participate in the survey involved being a student, willingness to participate, and being a Zimbabwean national, despite gender, religion, race, or ethnicity.

The online questionnaire was distributed through a link posted on 18 social media podiums catering to various student groups in Zimbabwe, specifically, WhatsApp groups (n=6), Twitter (X) platforms (n=4), Facebook groups (n=6), and LinkedIn communities (n=2). Participants accessed the questionnaire through the shared link, ensuring convenience and anonymity. Participation was voluntary and no incentives were offered to respondents. To ensure a total completion of the survey, the questionnaire was designed to be submittable only after responding to all questions. A total of 284 questionnaires were completed, constituting the study's sample.

4.2 Questionnaire

Structured questions were employed to afford quick and relatively accurate responses. The questionnaire was divided into three subsections which solicited three forms of data respectively; socio-demographic profiles of the respondents, quality of COVID-19 information dispersed via social media, and general information. The sociodemographic traits of age, gender, religion, and level of education were solicited in Section A to investigate these variables' probable influence on perceptions about the quality of social media COVID-19 information. Section B which investigated the quality of Covid-19 information surveyed six indicators of quality (comprehensiveness, accuracy, relevance, accessibility, reliability, and consistency) using a total of five-point Likert scale questions.

The general information segment, Section C, solicited data on the respondent's sources of COVID-19 information, and perceptions about the adequacy of the information attained, as well as its usefulness, using checklist questions. Overall, the online questionnaire instrument was composed of 13 closed-ended questions, ensuring a higher response rate and quicker completion for the benefit of the participants.

4.3 Data Collection

This study used a combination of descriptive and inferential statistics to analyze survey data on COVID-19 information quality. Descriptive statistics, including frequencies and percentages, were employed to summarize and describe the characteristics of data. These findings were visually represented using charts to facilitate clear interpretations. For inferential analysis, one-way ANOVA (using GraphPad Prism version 10.4.2.633) was utilized to compare differences between information quality variables and draw comparisons between the means of sources of COVID-19 information. Specifically, one-way ANOVA was employed to determine whether there were statistically significant differences in the perceived quality of COVID-19 information, and the use of different sources of that information, based on participant responses (n=284). Additionally, chi-square tests were conducted using SPSS version 28.0, to determine significant associations between independent variables (age, level of education, gender, and religion) and information quality variables. All statistical tests were evaluated at a significance level of 0.05, with p-values below this threshold indicating statistical significance. The results were then interpreted in the context of existing literature to provide meaning and support to the findings.

4.4 Ethical Considerations

The questionnaire instrument commenced with a brief for the respondents, indicating the purpose of the study, the significance of voluntary participation, and the need to provide accurate information. Confidentiality and anonymity were guaranteed, and the survey instrument was young people friendly and culturally appropriate.

5. Findings

The data presented in this section encompasses the results for two research aspects covered by the survey, that is, indicators of COVID-19 information quality (comprehensiveness, accuracy, relevance, accessibility, reliability, and consistency) and general issues in relation to COVID-19 information consumption. The sociodemographic traits of the respondents are summarized

below showing a diverse representation of age groups, gender, educational levels, and religion.

5.1 The Respondents' Sociodemographic Information

The sample of 284 respondents who completed the online survey was constituted of both male and female students enrolled at universities, colleges, and high schools, pursuing various levels of education, belonging to diverse age categories and religious affiliations as captured in Figure 1.

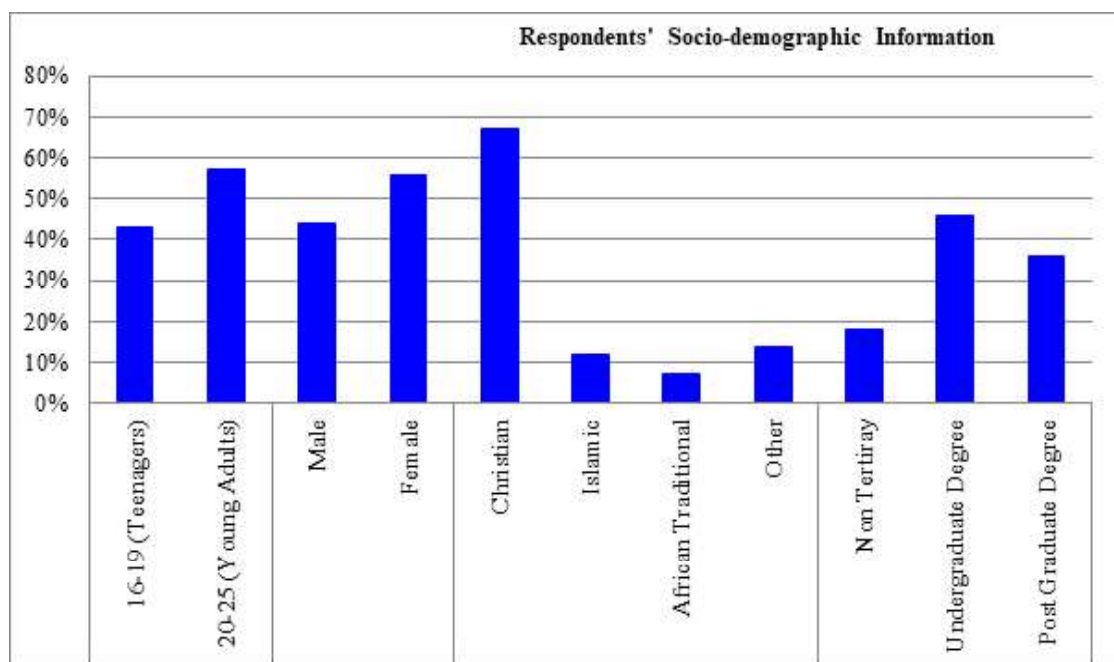


Figure 5.1 Respondents' sociodemographic information

5.2 Quality of COVID-19 Information

The survey results on COVID-19 information quality revealed the diverse perceptions. A considerable number of the respondents (62%, n=176) found the information comprehensive, 73% (n=207) believed it was accurate, 58% (n=165) perceived it as relevant, 67% (n=190) found it accessible, 56% (n=159) thought it was consistent, and just 33% (n=94) considered it reliable. Figure 2 further elaborates these results, showing the respondents' views on a Likert scale from strongly agree to strongly disagree.

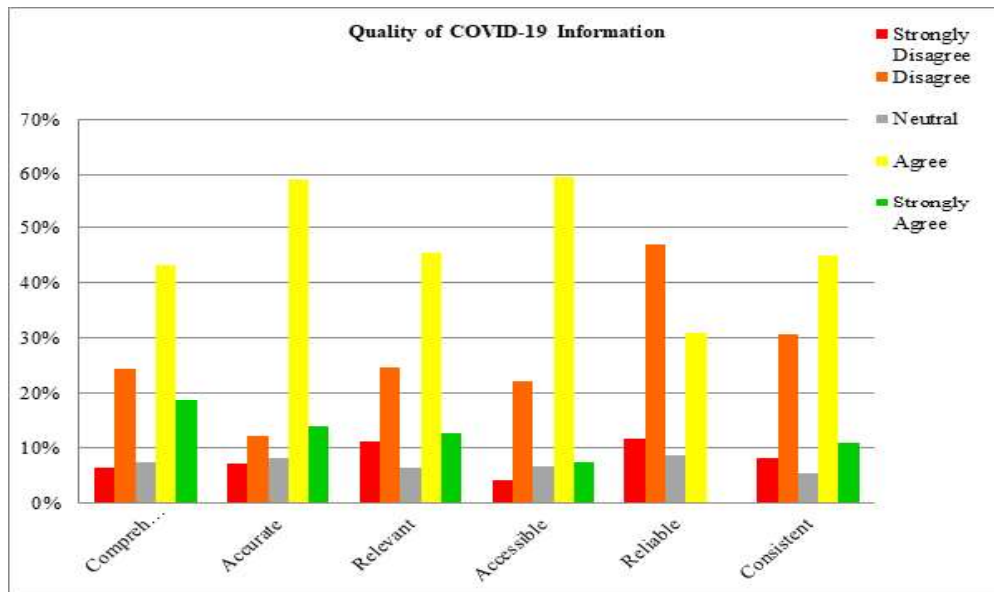


Figure 5.2 Respondents' perceptions of COVID-19 information quality.

5.3 General Perceptions

The respondents' preferences of COVID-19 information sources were assessed, and the outcome is summarized in Figure 5.3.

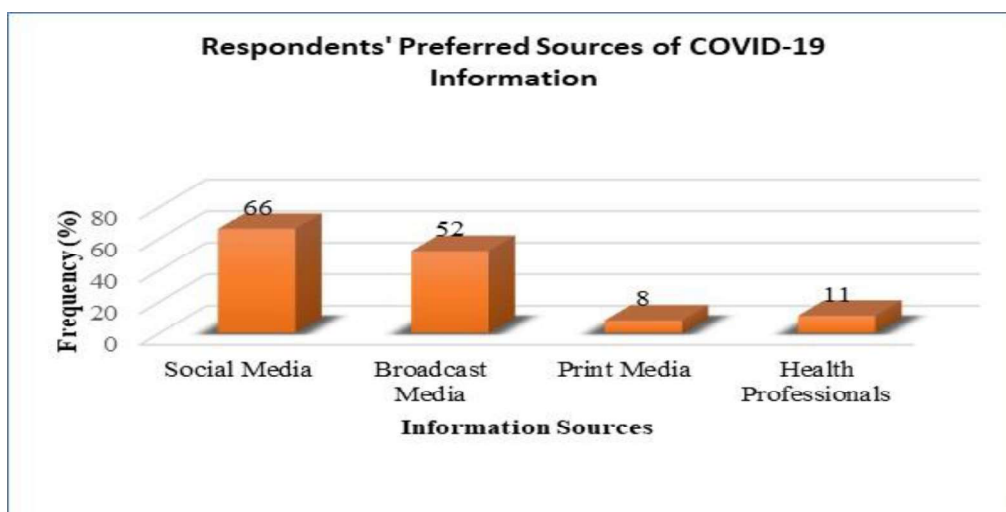


Figure 5.3 Sources of COVID-19 information among the respondents

Despite the varying sources, 57% (n=162) of the respondents perceived COVID-19 information as adequate, and a significant majority (83%, n=236) found it useful.

5.4 Inferential Statistics

One-way ANOVA results for perceived COVID-19 information quality are presented in Table 5.1 below.

Table 5.1 *Perceived COVID-19 information quality ANOVA results (n=284)*

Information Quality Attribute	Mean	Number of Respondents (n)	F-Value	P-Value
Accuracy	4.23	207	13.10	< 0.001
Accessibility	4.01	190	12.85	< 0.001
Comprehensiveness	3.89	176	12.20	< 0.001
Relevance	3.65	165	11.75	0.002
Consistency	3.45	159	10.90	0.005
Reliability	2.98	94	9.80	0.009

Table 5.2 presents one-way ANOVA results for preferred COVID-19 information sources.

Table 5.2 *Sources of COVID-19 information ANOVA Results (n=284)*

Source	Mean	Number of Respondents (n)	F-Value	P-Value
Social Media	4.56	187	46.20	< 0.001
Broadcast Media	3.98	148	40.85	< 0.001
Health Professionals	1.56	32	25.34	< 0.001
Print Media	1.23	23	22.07	< 0.001

Chi-square test results for statistical association between demographic variables and perceptions of COVID-19 information quality are presented in Table 5.3.

Table 5.3 *Statistical association between demographic variables and perceptions of COVID-19 information quality (p-values)*

Variable	Age (p values)	Gender (p values)	Religion (p value)	Level of Education (p values)
Comprehensive	0.031*	0.063	0.231	0.007*
Accurate	0.022*	0.071	0.510	0.008*
Relevant	0.001*	0.922	0.098	0.000*
Accessible	0.046*	0.436	0.833	0.031*
Reliable	0.029*	0.701	0.067	0.001*
Consistent	0.028*	0.987	0.101	0.061

* $p < 0.05$.

The analysis revealed significant differences in perceived quality of COVID-19 information across attributes, with accuracy and accessibility scoring highest and reliability scoring lowest ($p < 0.01$). A clear hierarchy in information sources was also observed, with social media and broadcast media dominating, while print media and health professionals were less utilized ($p < 0.001$). Furthermore, chi-square tests showed significant associations between age and all six information quality variables ($p < 0.05$), and between education level and five variables ($p < 0.05$). However, no significant associations were found with gender or religion ($p > 0.05$).

6. Discussion

The findings of the current study are useful as they help identify critical gaps in accessing and sharing of COVID-19 information on social media platforms, informing communication interventions for future disease outbreaks. It is quite interesting that the majority of the students who participated in the survey perceived social media COVID-19 information as comprehensive. In health communication, comprehension is equivalent to knowledge acquisition. In turn, knowledge plays a significant role in promoting adherence to protective behaviours as it “supports effective health-related decision making” (Miller, Soederberg, and Katz, 2021, p. 2). Likewise, Jansen, Rademakers, Waverijn, Verheij, Osborne and Heijmans (2018, p. 394) make a significant observation that “health literacy has been associated with health utilization and education attainment.” Thus, the result

of this study showing comprehensiveness of social media COVID-19 information is very important as it signals the presence of information quality which permits successful health communication. Information comprehensiveness is thus analogous to young people's knowledge acquisition in relation to COVID-19, and perhaps adherence to recommended behaviours and access to healthcare services. Notably, the one-way ANOVA results confirmed significant differences in perceived quality dimensions, where comprehensiveness was evaluated positively, although not as strongly as accuracy or accessibility.

Another captivating observation arising from the study is that the majority of those who found COVID-19 social media information comprehensive were pursuing degrees. This is supported by the chi-square test results, which showed a statistically significant association between level of education and perceptions of comprehensiveness ($p = 0.007$). This outcome suggests the probable complexity of COVID-19 information shared on social media platforms, which may be difficult to decipher for those with lower levels of education. Comparatively, prior studies in health communication closely associate education attainment and health communication outcomes (Raghupathi and Raghupathi, 2020; Jansen et al., 2018). Raghupathi and Raghupathi note that "people who are well educated experience better health as reflected in the high levels of self-reported health and low levels of morbidity, mortality and disability. By extension, low educational attainment is associated with self-reported poor health, shorter life expectancy and shorter survival when sick" (p. 78).

Education attainment may thus be argued to enable successful information acquisition and implementation, as well as enhance information quality. In support of the study's outcome, Volkmer (2021, p. 4) also concurs that COVID-19 information shared on social media platforms is indeed complex, noting that it is "an ongoing flow of all types of voices, insights, comments, clips, and statements." The alleged complexity of COVID-19 information may be consequent of the scientific nature of the coronavirus disease itself and the surrounding discourses pertaining to its changing variants, preventive measures, bio-medical research and vaccinations.

It is not surprising that most respondents perceived COVID-19 information dispersed in social media platforms as accurate. The one-way ANOVA results showed that accuracy (mean = 4.23) was rated significantly higher than both reliability (mean = 2.98) and consistency (mean = 3.45), indicating strong confidence in the statistical and factual elements of the information. In Zimbabwe, as elsewhere in the world, the widely circulated COVID-19 information was statistical data (numbers and percentages) that reported on new and cumulative infection rates and related mortality cases (Dzobo, Chitungo, and Dzinamarira, 2020; Makombe, 2021). This numerical data likely influenced users' perceptions of accuracy. Although social media also disseminated narratives and debates on safety of treatments and vaccines, statistical data dominated, lending credibility to the information in users' eyes.

Relevance, which determines purposefulness of information, is a significant quality of health communication. The survey results showing a dominant perception of information relevance are positive. The Chi-square test indicated a strong association between age, education, and relevance perception ($p = 0.001$ and $p = 0.000$ respectively), reflecting demographic differences in evaluating information quality. As Miller et al. (2021) posit, successful communication is based on pre-conceived needs for information, which may result in higher information relevance perceptions. When COVID-19 premiered in March 2020 in Zimbabwe, demand for health information increased as the public tried to understand this novel disease (Dzobo et al., 2020). Thus, relevance became a basic requirement. Interestingly, female students constituted the majority of those who viewed social media COVID-19 information as relevant, although the chi-square test indicated no association between gender and information relevance perceptions. This aligns with Alsharawy's (2021) findings that women in the United States reported greater fear and higher COVID-19 risk perceptions than men.

Similarly, studies by Rodriguez-Besteiro et al. (2022) and Giordani et al. (2021) revealed heightened infection susceptibility perceptions among Spanish and Brazilian women, supporting the notion of gendered information sensitivity. The discrepancy between the negative chi-square test results and

the observed relationship between female users and information relevance perceptions may be attributed to the complex interplay of demographic factors and individual experiences, suggesting that while gender alone may not be a significant predictor, it could be influential when intersecting with other factors such as risk perception and information sensitivity.

In line with social media's widespread use among young people in Zimbabwe and globally, the survey showed that more than two-thirds of the respondents found COVID-19 information accessible via social media. The one-way ANOVA revealed that accessibility (mean = 4.01) was perceived significantly more positively than reliability. Moreover, Chi-square tests showed accessibility was significantly associated with both age ($p = 0.046$) and education ($p = 0.031$), underlining the influence of demographic characteristics on perceived ease of access. Accessibility alludes to information abundance enabled by social media interactivity. Dzobo et al. (2020), Makombe (2021) and Mahmood et al. (2021) note the rise in information demand after Zimbabwe declared COVID-19 a national disaster on 17 March 2020. This abundance was made possible by increased Internet access in Zimbabwe (Taruvunga, Chikohora, Jere and Dool, 2020). Doyle, Bandason, Dauya, McHugh, Grundy and Dringus (2021) reported that nearly all youths and adults in the country have access to the Internet and social media, affirming the survey's results. Accessibility of information is critical, as it shapes health behaviour and contributes to disease prevention.

The outcome indicating minimal perceptions of information reliability is undesirable. Only 33% of the respondents perceived COVID-19 information as reliable, and the one-way ANOVA confirmed this as the lowest-rated quality dimension. Significant associations were found between reliability and both age ($p = 0.029$) and education ($p = 0.001$). These results reflect the public's critical evaluation of the content they encountered. Agbasiere (2024) notes that misinformation was rampant in social media during the pandemic, with myths such as COVID-19 being caused by 5G radiation or vaccines being vehicles for microchip implantation. It is therefore not surprising that the majority of the respondents, bearing diverse socio-demographic traits, expressed doubt over the reliability of COVID-19

information shared on social media. In this regard, Volkmer (2021) postulates that distorted crisis content on social media is difficult to authenticate, leading to perceived unreliability. This unreliability hampers national crisis communication efforts, which depend on public trust and accurate information dissemination.

The respondents overwhelmingly agreed that COVID-19 information on social media was consistent, although ANOVA findings placed consistency (mean = 3.45) below both accuracy and accessibility. Age was significantly associated with perceptions of consistency ($p = 0.028$), suggesting generational differences in information assessment. Consistency in this context reflects the steady flow of content during the pandemic. Volkmer (2021, p. 4) observed that “COVID-19-related information is communicated continuously,” contributing to a persistent crisis communication environment. The World Health Organization referred to this period as an “infodemic” due to the overabundance of information (Pennycook, McPheters, Zhang, Lu, and Rand, 2020). The dominance of consistent information on social media helped foster a culture of health communication that shifted public reliance from traditional to informal digital platforms.

The finding that social media was the main source of COVID-19 information aligns with ANOVA results that revealed significant differences between sources. Social media (mean = 4.56) and broadcast media (mean = 3.98) were significantly more relied upon than print media and health professionals. This supports the notion that digital media dominated the information ecosystem during the pandemic. Mahmood et al. (2021, p. 2) note that “social media usage has escalated, and it has quickly established itself as a critical medium of communication.” Unlike traditional media, social media enables rapid and interactive communication. Prior studies (Jang and Baek, 2019; Mhlanga, Muzingili, Dudzai and Mhlanga, 2021) confirm that during infectious disease outbreaks, the public tends to prefer social media. In Zimbabwe, social media served to disseminate urgently needed information, reduce anxiety, and support public psychological well-being (Mhlanga et al., 2021).

Additionally, the finding that the majority viewed social media information as adequate may be attributed to its digital convenience. However, while students perceived COVID-19 information as adequate, Mhlanga et al. (2021, p. 257) reported that “In Zimbabwe, communities in marginalized and hard to reach areas are the most susceptible to infectious diseases because of insufficient information.” This digital divide led to inequitable access to life-saving information. For future health crises, strategies must be devised to ensure inclusive and equitable access to information for all societal segments, regardless of geography or connectivity. The perception of social media information as useful underlines its value in providing public awareness during a disruptive time. Tsao et al. (2021) highlight that the ability of social media to enable sharing of opinions and coping mechanisms was crucial. Volkmer (2021) emphasized the role of digital platforms in continuing education and information flow during lockdowns. The survey’s result reinforces that social media served as a critical public health communication tool that promoted knowledge, behaviour change, and virus containment.

6.1 Implications for Future Crisis Communication

The COVID-19 pandemic highlighted critical issues surrounding information dissemination and quality, particularly through social media. Focusing on students in Zimbabwe, this study reveals both the strengths and limitations of social media as a source of pandemic information. The implications of these findings are essential for future crisis communication preparedness, as they offer lessons on how to improve health communication, enhance information reliability, and ensure equitable access to vital information. Some of the important implications of the study’s outcome include the following.

6.2 Enhancing Information Quality and Reliability

The study reveals a notable dichotomy; while social media was widely used and considered accessible and comprehensive for COVID-19 information, its reliability was heavily questioned by the respondents. This highlights the need for critical evaluation and verification of information on social media,

particularly for health-related topics. A mere 33% of the respondents trusted the accuracy of pandemic information on these platforms, likely due to widespread misinformation. This indicates a critical need for strategies that improve the reliability of social media content in future health crises. As highlighted by Agbasiere (2024), strengthening verification mechanisms such as fact-checking and establishing partnerships between health authorities and social media platforms can help prevent the spread of misinformation. Additionally, authorities should focus on creating verified accounts or badges to distinguish credible sources, thereby reinforcing user trust in pandemic information (Geels, Graßl, Schraffenberger, Tanis and Kleemans, 2024).

6.3 Addressing Information Access and Equity

The study also highlights social media's accessibility, with 67% of the respondents finding COVID-19 information readily available through these platforms. This ease of access likely contributed to social media's popularity as a source of information during the pandemic. However, accessibility was limited to those with internet and digital device access, highlighting digital divides that could prevent other demographic groups to obtain timely information. This issue highlights the need for a multi-platform communication strategy that integrates traditional media, such as radio and television, with digital outlets. According to Hannes, Thyssen, Bengough, Dawson, Paque and Talboom (2024), by ensuring a diverse media approach, public health agencies can promote inclusivity and bridge informational gaps, particularly in rural or underserved communities with limited digital access. Equitable access to public pandemic information is crucial for ensuring widespread understanding and adherence to health guidelines.

6.4 Tailoring Communication for Diverse Audiences

Further, the study reveals that perceptions of COVID-19 information quality differed based on educational level and age, suggesting that demographic factors influence how individuals evaluate information. For instance, university students pursuing degrees and degree holders were more likely to perceive the information as comprehensive, suggesting that the complexity of

the content may challenge those with lower education levels. This highlights the need for tailored communication strategies that adapt content to different educational backgrounds or age groups. Simplifying complex medical information without compromising accuracy can enhance comprehension and engagement (Fogwill and Manataki, 2024). This approach supports informed decision-making across diverse populations and promotes the adoption of recommended health behaviors during pandemics.

6.5 Empowering Public Health Literacy

Moreover, the study highlights a concerning gap in students' critical evaluation skills, particularly in assessing the quality of health information in Zimbabwe. This highlights the need for educational interventions that focus on developing media literacy and critical thinking skills to help students effectively navigate and evaluate online health information. Enhancing public health literacy should therefore be a priority for future pandemic preparedness. Governments and health organizations could implement educational campaigns focused on media literacy, helping individuals develop the skills to discern credible sources and debunk misinformation. For example, integrating health literacy modules into school curricula or conducting public workshops can foster a more informed and resilient public. As Khorram-Manesh, Goniewicz and Burkle (2024) postulate, in the context of pandemic response, an educated population capable of critically evaluating information is better positioned to follow verified guidelines, reducing the impact of misinformation.

6.6 Leveraging Social Media for Real-Time Updates

While the study shows some limitations, it also highlights the advantages of social media for timely information delivery. The respondents perceived the information as relevant, with 83% finding it useful, showing that social media effectively filled the need for real-time updates. In future pandemics, as also suggested by Lal, Ashworth, Dada, Hoemeke and Tambo (2022), health authorities could exploit social media's reach by using it to disseminate frequent updates and guidance. According to Lal et al. (ibid), this is critical

for early detection and diagnosis, prompt treatment, and effective control of pandemics. Using analytics to monitor trending misinformation can enable authorities to adopt social media for rapid corrective measures, maintaining public trust and adherence to health protocols (Agbasiere, 2024).

The implications of this study for future pandemic preparedness are profound. Improving information reliability, ensuring equitable access, tailoring communication to diverse audiences, enhancing public health literacy, and deploying social media are all essential steps. Addressing these areas can help the Zimbabwean government and public health agencies to create a more robust framework for future pandemic communication, ensuring that reliable information reaches all individuals, especially the students in this case, enabling them to make informed health decisions and reduce the spread of infectious diseases.

7. Conclusion

The study indicated that, although COVID-19 information accessed and shared on social media platforms in Zimbabwe was mostly perceived quality data by students, it was also considered unreliable. In essence, lack of reliability of social media COVID-19 information undermined its usability and ability to support information needs, as well as negatively impacted on the intervention efforts which depended on changing behaviour through communication. There is no fixed method for enforcing reliability of public health information, rather the ability to distinguish between falsehoods, myths, and misconceptions versus facts by social media users is essential. Further, since information quality is determined by the user's mental attributes (age and level of education) it can be viewed as a product of positive mental insights. This has implications for practice and policy in relation to strategic crisis communication, signaling the importance of considering cognitive factors such as intellectual and age diversity, in order to enhance health information quality. Moreover, given that social media was identified as the main source of COVID-19 information amongst students in Zimbabwe, intensifying its use for disseminating timely disease prevention messages in this population may be strategic and rewarding.

8. Limitations

This study has a few limitations. The first limitation is its sample, which is restricted to students, excluding the rest of the Zimbabwean population groups, who also access the same information and are active users of social media. However, a study of various population groups would have been unrealistic and too broad for the scope of this research, compelling the need to impose population boundaries. Future research should expand to include perspectives from diverse social groups, such as adults and adolescents, to provide a more comprehensive understanding of the topic. This is crucial as different social groups may experience and interact with social media differently, influencing their perceptions and evaluations of COVID-19 information.

This line of inquiry may broaden our understanding of the quality and impact of social media COVID-19 information in Zimbabwe. The second key constraint is based on the research's approach to data quality assessment. Whilst data quality assessment ideally incorporates measuring three dimensions of information quality; data, data use, and data collection processes (Chen, Hailey, Wang and Yu, 2014), this study focused only on the dimension of data, concentrating on six indicators of quality. Thus, the limitation of this study rests in its exclusion of data use and data collection processes, owing to limited access to databases as well as the wide breadth of public health information. More research efforts should focus on evaluating the quality of data use and data collection processes of COVID-19 information accessed via social media in Zimbabwe or related contexts.

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