

Assessing Crisis Communication Approaches In The Ghanaian Health Sector

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Abstract

This research aims to understand how Ghana's health service used crisis communications to communicate with a critical group of stakeholders during the 2022 outbreak of the Marburg virus. This research used a case study approach. In other words, this approach was taken using focus groups, in-depth interviews, and survey techniques to examine the crisis communication activities of Ghana Health Service after the 2022 Marburg outbreak. The study discovered that the public institution had an updated crisis management plan, implemented it consistently, and had a skilled team in charge of communications. To fulfill the information needs of potential clients, interactive platforms were employed, two-way communication was created, messages were more accurately targeted, and press communications were changed. Yet, survey findings revealed Ghana Health Service needed help coordinating messaging during the health crisis. This study will offer the government and other policymakers relevant information on communicating during contagious disease outbreaks within the Ghanaian jurisdiction.

Keywords: Crisis Communication, Ghana Health Service, Marburg.

Introduction

Every organization faces crises (Williams et al., 2017). Large and small enterprises can be affected by health-related product recalls, labour unrest, corporate fraud, violence, or natural disasters (Fearn-Banks, 2011). Thus, managers must learn how to handle such situations and return the organization to normal as quickly as possible (Bundy et al., 2017). Since its discovery in 1967, Marburg has occasionally appeared in the Congo (DRC), South Africa, and Uganda (Wellington et al., 2022). Ghanaians, residents of adjacent African nations, and everyone else in the world are in danger of health security due to the disease's high case fatality rate and high transmission risk (Denkyira et al., 2022). Ghana and other African countries face challenges from the MVD pandemic. Ebola, monkeypox, and other infectious diseases have returned to Africa, severely impacting its health and economic systems (Denkyira et al., 2022).

Countries must work together to combat these highly contagious diseases erupting in Africa's fragile healthcare systems, as the African Union has already noted (Denkyira et al., 2022). A few highly contagious virus cases were recently identified for the first time in Ghanaian territory. However, the current outbreak in Ghana in July 2022 has received noticeably little attention (Reliefweb International, 2022). An evaluation of a victim who passed away 24 hours after presenting to a medical facility in the Ashanti region with symptoms of viral hemorrhagic fever (VHF) was found positive after his passing (Reliefweb International, 2022).

The Ministry of Health, Ghana Health Service, WHO, and other partners responded quickly to the Marburg Virus outbreak, which ended on September 16, 2022. Contact tracing monitored 90 persons (Wellington et al., 2022). The response was expected, given the EBOV epidemics in the region over the preceding decade (Reliefweb International, 2022). According to Dr. Francis Kasolo, WHO Representative to Ghana, Ghana's response to MVD is a success of forethought and action driven by multi-stakeholder collaboration through the "one health" approach, an integrated, unifying approach to balance and optimize the health of humans, animals, and the environment (Reliefweb International, 2022).

The Ministry of Food and Agriculture and the Wildlife Division helped the Ghanaian government implement measures to end the transmission cycle quickly, handle impacted cases to minimize morbidity and mortality, and ensure the continuity of the healthcare system and equal and fair commitment to other long-term medical emergencies (Reliefweb International, 2022). Managers must prepare to handle crises, which can endanger an organization's goals and stakeholder relationships (Bundy et al., 2017).

Crisis plans involve communication. Communication plans should educate stakeholders about hazards, manage the organization's reputation, and other vital duties (Coombs, 2021). We must learn more about how public sector organizations cope and communicate during crises (Kuipers & Welsh, 2017). Most crisis communication literature is conceptual or uses secondary data, with little study on its efficacy. Thus, this study examines how Ghana Health Service used crisis communications to reach key stakeholders during the 2022 Marburg virus pandemic.

Our research questions are: 1) What communication strategies and processes did Ghana Health Service have in place before the events? 2) How did Ghana Health Service alter their communications between the events? 3) How effective were Ghana Health Service communications with their target audience? This study shows how a public sector organization handled the Marburg virus crisis, what it did well, and what may be improved, allowing other public institutions to learn from its experience.

Literature review

The nature of crisis events

Crises often involve considerable uncertainty and complexity, demanding quick decision-making under pressure. Effective crisis management entails responding to the immediate needs of individuals impacted and planning and preparing for future occurrences to reduce their impact and prevent similar crises. Crisis occurrences can vary in severity and form, but they have some traits. Unexpected and disruptive crises can cause urgency and stress. They can harm people and communities and affect social, economic, and political systems.

Crisis events include hurricanes, earthquakes, and floods; pandemics or infectious disease outbreaks; terrorism or violence; financial crises or market crashes; and political crises like coups or revolutions. These catastrophes can significantly impact people and communities and require coordinated responses from different parties to manage the situation. Based on attribution theory, Coombs (2007) established the Situational Crisis Communication Theory (SCCT), which examines communication tactics based on stakeholder attributions for the crisis (Ozanne, Ballantine and Mitchell, 2020). This idea guides crisis response techniques for specific crises to recover organizational reputations (Claeys et al., 2010). According to Situational Crisis Communication Theory (SCCT), the best crisis response matches organizational rhetoric to a situation's reputational hazard (Olsson, 2014).

Crises can pose a hazard to an organization due to ambiguity and uncertainty (Allen & Calliouet, 1994; James & Wooten, 2005). Organizational crises are characterized by ambiguity, significant implications, and pressured decision-making, according to Pearson and Clair (1998). When crises occur, firms need many resources (McConnell & Drennan, 2006). Thus, these incidents can cause financial and reputational damage and possibly cause the organization's collapse. According to another expert, mishandling a crisis, not the crisis itself, can significantly impact a company (James & Wooten, 2005). Stakeholders may refrain from buying the company's products and quit supporting it if crises are handled poorly (Helm & Tolsdorf, 2013).

Crisis management requires preparation, response, and recovery. It involves several actions and plans to reduce the crisis's impact on people and communities, restore normalcy, and prevent recurrence. Crisis management requires public, commercial, nonprofit, and resident cooperation.

Crisis management includes prevention, preparedness, response, and revision (Wut, Xu, & Wong, 2021). Crisis prevention requires spotting warning indicators. Crisis preparedness typically entails crisis management teams, plans, and spokesperson training. The organizational reaction is frequently highlighted. Crisis revision focuses on how we learn from crises (Crandall, Parnell & Spillan, 2013). Crisis management requires risk management since crises frequently result from poor risk management. Health providers that overlook risk management may endanger patients. Dorfman and Cather (2013) define "risk" as harm or loss. "Risk" is the possibility of negative or neutral outcomes from an uncertain event. Risk management aligns an organization's strategic goals by recognizing and minimizing risk exposures. Kash & Darling (1998) believe crises are gradual. Brown (2002, p. 22) says, "the best crisis management is to prevent a crisis occurring in the first place, or that it is much better to anticipate crises than to manage crises".

However, health problems are often unpredictable. A crisis is unpredictable but not unexpected, according to Coombs (2021). The author suggests that wise and successful companies accept that crises are inevitable but cannot anticipate when they will occur. He believes avoiding crises is futile. Organizations should prepare for them to reduce their impact.

The company may fall apart in a crisis. Therefore, it is vital to prepare. Crisis management requires the following steps: (1) Risk assessment: Identifying and assessing probable crisis events. (2) Planning and preparation: Creating crisis response plans, including communication, evacuation, and emergency response protocols. (3) Response and communication: Responding swiftly and decisively to the crisis, giving stakeholders clear and accurate information, and collaborating with other responders. (4) Recovery and restoration: Helping affected people and communities recover, restoring normal operations, and improving crisis management. (5) Prevention and mitigation: Identifying and addressing the crisis event's root causes and taking steps to prevent future crises. Many organizations complete the first three steps.

Cloudman and Hallahan (2006) found that three-quarters of the 126 for-profit, not-for-profit, and government organizations surveyed had a written crisis communications plan and were better prepared for a crisis than those who do not have one. Spillane (2003) showed that just 25% of 190 nonprofit organizations examined had a crisis management team or planned to develop one. Since crises rarely occur in most businesses, these contingencies must be updated, and training must be revised (Hickman & Crandall, 1997; McConnell & Drennan, 2006). A crisis has five stages: detection, prevention/preparation, containment, recovery, and learning (Fearn-Banks, 1996/2011). The company must hurry to mitigate harm if it detects the issue early (Fearn-Banks, 2011). If the response is delayed, the media may speculate or provide inaccurate information, affecting the organization more than the actual problem. Preventing/preparing comes next. During this phase, a modest problem may be resolved without public notice. The crisis cannot be contained within the organization. Planning is crucial to handle the issue and media interest in that circumstance. According to Fearn-Banks (2011), containment reduces the crisis's impact on all parties. Product recalls store closures, evacuation, and other measures may be needed. Recovery, the fourth stage, restores public trust, normalizes operations, and boosts sales to pre-crisis levels.

Communication should be used extensively throughout these stages to express what the organization is doing, support and protect everybody engaged, and clarify the difficulties. Organizations should learn from crises (Fearn-Banks, 2011; James & Wooten, 2005). It is crucial to formally evaluate the crisis plan and communication effort to handle future crises. Organizational leadership may become reactive and defensive during a crisis, preventing organizational learning (James & Wooten, 2005). Finally, substantial post-crisis communication helps restore and minimize reputational damage, according to Coombs and Holladay (2005).

Crisis Communication

Crisis communication is vital to crisis management. It entails timely and effective stakeholder communication to limit the crisis's effects and enable a proper response. Crisis communication reduces confusion, anxiety, and panic and manages public perception. Public relations can significantly reduce or eliminate reputational damage (Allen & Calliouet, 1994). However, crisis communication goes beyond public relations. Crisis communication involves sending and receiving signals to mitigate a crisis's adverse effects and protect the company, stakeholders, and industry (Kim, 2016). Crisis communication demands strategy. Developing communication plans and protocols, identifying key stakeholders and communication channels, and ensuring timely, accurate, and responsive communication are all part of this. Crisis communication should be examined and modified constantly to stay successful and current.

Communication during a health crisis

Communication during a public health emergency like a pandemic focuses on giving accurate and up-to-date information regarding disease spread, treatment choices, and prevention. It is crucial to give people and communities clear instructions on preventing and controlling the disease. Social media, government channels, and healthcare providers communicate.

Gaps of the current crisis communication literature

Most crisis communication literature is conceptual or case study-based. According to Coombs (2021), post-crisis communication research often includes case study-based lists of what to do and what not to do. This strategy generally involves academics offering crisis PR strategies. Many of these studies also require contacting the organization to understand the problem and respond better. Instead, they use content analysis of the media or other secondary sources to assess the organization's response. Case study research is usually dependent on mediated accounts of the crisis, according to Coombs (2021). We must learn more about public sector crisis response methods or how stakeholders react (Ozanne et al., 2020). In addition, Eriksson (2012) and Olsson (2014) also stress the importance of new information technologies in crisis communication and their use. Thus, this study examines GHS's Marburg virus response and how its primary target audience viewed it. We inquired how GHS communicated with community members after the Marburg virus epidemic. Crises create unique publics for organizations, those afflicted, and those unaffected (Coombs, 2021). We examine how well these tactics reached crisis-affected audiences.

Method

This study was case-based. Thus, focus groups, in-depth interviews, and surveys examined Ghana Health Service crisis communication after the 2022 Marburg outbreak.

Participants

This study included adult men and women from the impacted region, district, and neighbourhood. Four regional and district health facilities and the health directorate provided focus group participants. Twenty-four (24) people were randomly assigned to two discussion groups. The principal researcher recruited and trained 5 interviewees. Each interviewer interviews a regional, district, constituency, and community communications manager. Five managers from health facilities and directorates participated. Interviewees averaged 36.62 years (SD = 16.21). Third, a pen-and-paper poll was used to assess the community's assessment of GHS's messaging after the Marburg virus crisis. 760 survey responses were valid.

Procedure

All focus groups and in-depth interviews started with informed consent. 9–12 people participated in each of the five focus groups. One person in each group moderated the 50–55-minute, audio-recorded group conversation. Each focus group session began with a brief explanation of the research topic and focus group regulations. In-depth interviews were audio-taped and lasted 20–30 minutes.

The qualitative research instrument's semi-structured interview guide was utilized for focus groups and in-depth interviews. Questions on the health institutions' communication strategies before the crisis, how they adjusted them during and after the crisis, and whether they thought the communication was effective. The community's Marburg virus problem was highlighted.

The survey was conducted in July 2022. After the July 2022 Marburg virus outbreak, this study examined communication attitudes. Respondents rated communication on a twelve-item, seven-point Likert scale after the Marburg virus outbreak. The scales measured "attitude toward the company," "attitude toward the act," and "attitude toward the website," respectively. Table II contains items. Respondents then selected all media they utilized to get information and chose their favourite. Respondents also inquired about the Marburg virus's impact on work and life. Finally, respondents were asked to evaluate post-crisis communication. Respondents were encouraged to submit additional comments or explanations throughout the survey. 20 unidentified adults from the community's regional hospital pre-tested the poll. One of the writers spoke with each respondent individually to identify flaws and make minor modifications to the survey's phrasing and structure.

The survey was administered at 10 in numerous crisis regions for primary data collection. These locations were chosen to guarantee that respondents in those locations were included, providing a representative sample of the stakeholder population. As mentioned, the poll assessed stakeholders' opinions on the GHS's communication after the Marburg virus crisis. Despite the region's health problem, GHS had to use the most significant healthcare plan to prevent its recurrence and ripple impact. One of the writers spoke with each respondent individually to identify any difficulties, then made minor modifications to the survey's phrasing and presentation.

Content Analysis of social media sites

The survey was done at 10 throughout multiple crisis zones for primary data collecting. After the survey was completed, one of the writers spoke with each responder to identify any issues and slightly modified the survey wording and presentation.

Results and Discussions

Results

We start by discussing the qualitative findings, which look at the first and second research questions, and then we move on to the quantitative survey results, which look at the third research question.

Ghana Health Service strategy and response

Ghana Health Service had a solid crisis plan, according to the head of public relations, and it was created after the institution understood it was necessary "after health sector reforms after the country gain republic status in the 1960s". (Interview 1). This included an extensive communication plan and trained communication staff. According to one regional Director in charge of communication, GHS's ability to handle a crisis was tested, especially during the EBOLA and COVID-19 pandemic, and necessary changes were made to the plans. Thus, GHS's strategy complied with world best practices which conformed to the framework by Coombs (2007).

Following the sudden outbreak of the Marburg virus (July 19 2022) within the Ashanti region, the key aim was "to be alert and respond quickly, mount strong surveillance, get the community involved and coordinate efforts that can stop an outbreak in its tracks before it ravages communities", (Interview 1). When a crisis happens, an organization should first communicate to protect its target audience physically and psychologically (Coombs, 2021). The Marburg virus crisis within the affected regions and the entire country was unknown at that stage.

Press releases were provided to the media and hosted on the social media platforms of GHS. Still, despite these efforts, the western region director explained, "it proved a bit challenging to obtain

sufficient coverage as the pandemic was limited to a few regions and not the entire country" (Interview 3). To address this hitch, the PR outlet of GHS altered their strategy, and news media were invited into the information ministry conference room for nationwide broadcast/footage of the Marburg virus challenge in the affected regions and its nuances. While there, the media were provided with "the message the GHS wanted broadcast" (Interview 3). In addition, healthcare managers and communication officials also used other platforms which were modern and had reach to spread the crisis at hand. As a result, the communication team used Facebook, email, WhatsApp, Twitter and Instagram, and radio and TV, as important mediums to deliver initial information. For instance, emails were used to disseminate information to regional health directors for onward transmission to the various districts through staff durbars and sending of instant messages. These messages were generic and initially carried the simple instructing information of "being on alert, staying of affected persons, wishing people well, and urging them to report to the nearest facility about symptoms and being each other's keeper" (Interview 4). Offering "Instructing information" involves communicating to stakeholders the measures they should take to shield themselves from the physical risks posed by a crisis (Coombs, 2021). As the crisis matured, these instructing messages began to give more detailed information as they came to hand.

In addition to email, residents of the affected area and the entire country were contacted using media vehicles such as "YouTube videos, Instagram videos, Facebook videos, and WhatsApp videos featuring the DG of GHS, and social media such as Facebook and Twitter" (Interview 4). The Facebook page of GHS was used to disseminate relevant information such as "Simple Facts About the Marburg Virus Disease; Q&A - Marburg Virus Disease (MVD)" for a platform with 16K followers. This page was initially updated with the same information sent via email, as it was believed that this media vehicle would increase the reach or "the likelihood that the relevant stakeholder would obtain the information" (interview 5). In addition, GHS's Twitter account, which has 12.2K followers, was also flooded with a press release with updated information on the Marburg virus crisis. One communication manager indicated that "factual information bred confidence" (Interview 5). The Twitter page targeted supporting stakeholders as they were deemed to have unique information needs due to their limited time listening to traditional platforms for relevant news. Studies on crises indicate that interactive information is more effective than static information for individuals impacted by the crisis (Procopio and Procopio, 2007). "Stakeholders are able to receive authentic, transparent conversation in a human voice," which is critical to those experiencing a disaster (Veil et al., 2011, p. 115). In addition, the PR outfit of GHS found that social media was not preplanned but grew with the realization that traditional informational practices, such as press releases, needed to be faster to capture the rapidly changing communication environment (Olsson, 2014).

Unlike many institutions facing challenges, the GHS had to deal with EBOLA, COVID-19, and Marburg virus relatively quickly. This allowed the organization to learn from each event, change the way it reacted, and evaluate the change. According to the PR Director of Ghana Health HS, key learnings included the PR outfit needing to work in shifts due to the demand for information outside regular business hours. More importantly, the team learned which media vehicles the stakeholders preferred and refined how they used them. For example, after the virus outbreak in July 2022, email, Twitter, Facebook, and Instagram were used to inform stakeholders. However, by July 19, 2022, the Marburg virus crisis, email, Twitter, and Facebook also provided a means to engage in two-way dialogue with stakeholders (see Table 1).

In the initial stages, Twitter and Facebook served as another forum "to post the same information which was being sent to stakeholders via email and posted on the website" (Interview 2). This was beneficial as it increased the reach of the message. For instance, following the outbreak of the virus in July 2022, the PR directorate increased the number of posts by 57% (140 in July 2022, 245 in October 2022, 120 in July 2022, 231 in October 2022). More importantly, however, was the increase in user comments (from 354 to 552; 223 to 311). While learned adult stakeholders primarily read Twitter and Facebook posts after the virus outbreak in July 2022, they began to engage in dialogue with communication officials and other stakeholders. Table I Twitter and FB Page activity.

GHS recognized this, and in July 2022, they were interacting with stakeholders by answering individual questions and providing support "on a more one-to-one basis" (Interview 2) (See Table I. Interestingly,

however, comments from stakeholders and interactions decreased after September 2022. This two-way dialogue, while allowing for community residents' questions to be answered and a more human, friendly persona to be portrayed" (Interview 2), did challenge the communication team. Specifically, there were so many questions the team could not keep up with one of the managers stating, "it is often difficult to manage expectations in social media" (Interview 3). As a result, other stakeholders answered their neighbours' concerns. According to the PR managers, these responses could have been more accurate. The PR unit provided correct responses when possible, but this was only sometimes possible given the large number of posts. As well as information being communicated by the PR unit at the HQ of GHS, the communication team, the 16 regional health directorates, and 275 district health directors also interacted with stakeholders concerning education on the Marburg virus and its nuances. One of the managers suggested this was a situation that had the potential to cause confusion and communicate contradictory information; however, he felt that "(GHS) had done an outstanding job at avoiding this issue through close relationships with the regional and district health directorates and providing them with specific information to be communicated to residents and other stakeholders in the affected areas and the entire country at large" (Interview 1).

Overall, the PR unit of GHS believed that the institution's communication with its stakeholders in the affected region and the nation at large concerning the Marburg virus was on point and effective. The PR unit at the HQ of GHS believed that due to their previous experience with other health crises, such as covid 19 here in Ghana in March 2020, and their ability to communicate quickly, the July 2022 communication was better than that which followed the different variants of covid 19 which preceded the Marburg virus in July 2022. Additionally, one of the managers in the region claimed that the communication following the Marburg virus outbreak in July 2022 was the "best as we were highly experienced with their procedures by that point" (Interview 1). Notably, the Marburg virus crisis was detected on July 19, 2022, while the country was grappling with the dreaded covid-19 pandemic. The timing of the outbreak was of the essence as it had varied implications for the affected region/ entire nation and those assigned to communicate about it. For instance, the PR unit of GHS had to consider residents in the affected area because they were going about their routine activities without restriction after reviewing protocols of the dreaded pandemic (covid 19).

Survey Findings

The survey was distributed to 800 residents in the affected regions of Ashanti and Western. 760 of the residents in both areas completed the survey with a response rate of 95%. As residents of diverse backgrounds in the affected regions were surveyed, residents ranged in age from 18-65 years old.

Principal component analysis (PCA) was conducted to assess the underlying structure of the scales used. For this analysis and given that all respondents were asked to rate the same scales, only data from the Marburg virus crisis, which occurred in July 2022, was used to determine factor structure.

Using PCA, the values for the Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Bartlett's test of sphericity were .90 and .916, respectively. The analysis revealed two distinct factors which explained 64.43% of the variance, with these two factors being named: (1) usefulness and (2) complete and timely information. The Cronbach's alpha for both factors was .86 and .88, respectively, thus indicating a high level of scale reliability.

To understand how respondents evaluated the communication they received during the Marburg virus outbreak on July 19 2022. Sample t-tests were conducted for the scale items which comprised each factor. The results (see Table 2) show that the means for all items were significantly higher for the period of the outbreak of the Marburg virus.

Two questions were asked regarding the extent to which respondents believed the Marburg virus influenced the living and working conditions of residents. This was important as it was thought that the more one was affected, the less satisfied they would be with the communication. Regarding working, 86.4% of respondents identified themselves as highly influenced by the Marburg virus outbreak. Being "highly affected" was determined through a score of 4 or 5 (i.e., greater than neutral) on a seven-point scale. A more significant percentage of residents in the two regions felt that their living situation was highly affected by the July 19, 2022, Marburg virus outbreak-72.4%.

The higher impact on living and working is not surprising given that sample 109, infected and tested at WHO accredited facility, was spread across both regions.

Independent sample t-tests were conducted to determine if those respondents who identified as having their jobs highly affected by the Marburg virus evaluated the communication they received differently from those whose job was less affected by the Marburg virus. The findings (see Table 3) indicate that those whose jobs were highly influenced by July 19, 2022, Marburg virus outbreak believed the communication they received was significantly less effective in terms of usefulness than those whose jobs were less affected.

Moreover, significant differences between the two groups were also found for each of the eight items which comprised this scale. In contrast, those who identified as having their job highly affected by the July 19 Marburg virus outbreak did not evaluate the communication they received to be any different in terms of completeness and timeliness when compared to those who were less affected (based on the total scale and individual item means).

Independent sample t-tests were also conducted to determine if those respondents who identified as having their living situation highly affected by the Marburg virus evaluated the communication they received differently than those whose living situation was less affected (see Table 4). The communication following the July 19 Marburg virus outbreak was found to have been deemed more useful overall by those whose lives were less affected by the virus outbreak compared to the highly influenced group. However, only two individual scale items (accurate and resourceful) were found to differ between the groups. Group differences were not found for perceptions of complete and timely information for the July 19, 2022, Marburg virus outbreak.

Respondents were asked which media they used to gather information following the outbreak of the Marburg virus in July 2022. Email, Facebook, Twitter, the Ghana Health Service website and WhatsApp were the most popular, followed by gaining information from peers and family members (see Table 5). It became apparent that Facebook and email accounted for the most preferred source of information gathering during the outbreak. Because 79% of the respondents were technology savvy, it became evident from the results that a higher percentage (28%) claimed their preferred source for information gathering on the outbreak was Facebook. Emails, Twitter, WhatsApp, and the GHS website accounted for the 72% preference for information gathering about the virus outbreak, as shown in Table 6.

Resident's Qualitative View

Researchers also asked the residents to offer qualitative views concerning their perceptions of the GHS's communication. 67% of respondents chose to take the opportunity to provide additional comments in the survey. The researchers evaluated these responses in terms of whether they were positive, negative or provided a mixed evaluation of GHS's communication. Regarding communication following the Marburg virus outbreak on July 19, 2022, 71% gave positive comments, 14% gave negative comments, and 15% gave mixed comments. These responses were similar to the quantitative data in that the residents in the affected regions were more optimistic about GHS's July 19, 2022, communication of the Marburg virus outbreak.

Table 7 provides examples of the comments provided by residents. In general, residents in the affected regions were appreciative of GHS. They seemed to realize the magnitude of what the public health authority was facing after the July 19, 2022, Marburg virus outbreak. "Considering the circumstances, I believe that the PR division of GHS performed to the best of its abilities". Respondents also found the nature of the communication to be empathetic. In addition, several residents in the affected regions commented on how useful it was to receive information from Facebook. However, not all comments were as positive regarding the propagation of information on the outbreak of the Marburg virus on July 19, 2022. For example, a few residents who commented indicated they were disappointed with GHS not providing timely information.

Discussion

In this research, the authors assessed the communication approach of Ghana Health Service (GHS) during the outbreak of the Marburg virus on July 19, 2022. It became evident that in their crisis response GHS followed many of the steps suggested as best practices in the literature (Coombs, 2007). They had an updated crisis management plan and a designated, trained crisis management team. When the outbreak began, the organization put their plan to the test. The communication team focused on

providing instructive information, which is appropriate for crises that prompt little attribution of organizational responsibility by stakeholders, such as natural disasters or what is referred to as victim crises (Coombs, 2007; Coombs & Holladay, 2002).

Despite these efforts, GHS managers and its PR unit quickly determined that the outbreak of the Marburg virus brought significant and immediate changes to the communication environment. Thus, they adjusted to the new communication situation by quickly organizing new approaches to ensure they reached their target audience during these circumstances (Coombs, 2021; Palttala et al., 2012). For instance, the team worked in shifts to manage the increased information needs, used new media vehicles, designed new messages, adjusted their public relations strategy, and designed specific approaches and messages for different groups within their target audience (e.g., residents of the affected regions). Some scholars argue that the organization exhibited a type of improvisation, where the composition and execution of the plan are constrained in time, known as extended routine learning (Ozanne et al., 2020). In this type of improvisation, an organization applies existing core competencies to solve new problems. The communication team had always been responsible for communicating with the nation on health-related issues; however, during the Marburg virus outbreak, they had to extend these core competencies to solve new communication problems to ensure they reached their target audience. Eriksson (2012) argues that a new method of crisis communication is emerging, where the significance of top-down, pre-planned crisis communication is decreasing due to the rise of improvised interactive programs conducted by experienced operational professionals, who are usually those nearest to the crisis event. Our findings help to substantiate the above argument.

The Manager of GHS and the PR unit did several activities well during the outbreak of the Marburg virus. For instance, in both our quantitative and qualitative survey results, the residents in the affected regions reported that the GHS did a good job communicating with them after the Marburg virus outbreak in July 2022. Additionally, our survey results show that residents preferred getting information from Facebook because they were technology savvy. Thus, the PR unit of GHS increased their usage of this media vehicle during the crisis and increased the number of interactions with affected residents by answering the questions posed, better meeting residents' information needs. Guth and Alloway (2008) argue that as communication channels become more fragmented, reaching stakeholders through their preferred media is essential, especially in crisis settings. Our findings also indicated that contrary to what the communication team assumed, residents needed to believe that GHS consistently maintained the effectiveness of its messaging throughout the outbreak. Our findings show that GHS should have evaluated the target audience during and after a crisis to ensure their information needs were addressed.

From our findings, this study saw that residents in the affected regions rated the communication effectiveness for the July 19, 2022, Marburg virus outbreak lower for all the items we measured. Further, the findings indicate that those whose jobs were highly affected by the July 2022 Marburg virus believed the communication they received was significantly less effective in terms of usefulness compared to those whose jobs were less affected. The above could be because of the data gathering timing and the reason residents grappled with the earlier covid 19 pandemic, which was still lingering within the jurisdiction. Fast forward, GHS and the Health Ministry of Ghana had experienced concurrently two health challenges (Covid-19 and Marburg virus). Thus residents in the affected regions may have had higher expectations of GHS's ability to communicate with them effectively. As was explained by Coombs (2006), crisis history refers to whether an organization has faced a similar crisis or crises in the past, and it is suggested to be a critical factor in determining reputational threat (Coombs & Holladay, 2002). A history of crises intensifies attributions of crisis responsibility and indirectly affects the reputational threat to the organization (Coombs, 2021).

Furthermore, Coombs (2007c) suggests that an informational or instructional communication strategy, as GHS was using, may need to be revised when an organization has had a history of health crises. When faced with a history of crises, managers must adjust their communications to account for possible past crises that relevant publics are aware of (Coombs, 2021). The Ghana Health Service and the PR unit needed to move from providing just instructing information to delivering "adapting information," which helps people cope with the psychological threat of the crisis (Coombs, 2007, p. 165). As Coombs

(2021) explains, the uncertainty of a crisis produces stress for stakeholders. To cope with this psychological stress, stakeholders need information about what has happened and what corrective actions are being taken to minimize the impact of the crisis on them. Thus, affected residents needed consistent and definitive information on how GHS would manage the impact of the July 19, 2022, Marburg virus outbreak on their daily activities or, specifically, their jobs.

Also, given the negative feelings of several affected residents after the July 2022 Marburg virus outbreak, it would have been appropriate to undertake extensive post-crisis communication to repair GHS's reputation (Coombs & Holladay, 2005). Several approaches could have been used. GHS could have used primary crisis response strategies of apology or rebuild or a secondary crisis response strategy known as "victim" (Coombs, 2007c, p. 170). For instance, GHS could have apologized for not providing consistent information during the challenging times. Alternatively, a victim strategy reminds affected residents that GHS was also a victim of the crisis. Finally, GHS could use a rebuild strategy to improve its reputation by offering material and symbolic forms of aid to affected residents to offset the impacts of the health crisis.

Subsequent to the outbreak of the Marburg virus in July 2022, GHS has now invested in a mass texting service to provide consistent messages to all residents in Ghana for critical events. This tactic may help to alleviate the inconsistency of messaging that the affected residents complained about regarding the July 19, 2022, communication. This method was successfully employed after March 20, 2020, COVID-19 pandemic, where text was used to communicate to citizens that Greater Accra, Tema, and Ashanti Region were in lockdown.

Finally, while social media was a handy tool to communicate with affected residents of the two regions during the crises, it provided the organization with several challenges. Social media enables the community to become part of the crisis communication response by enabling private individuals to provide information (Veil et al., 2011). While the residents became contributors to information on Facebook, the information they posted was only sometimes accurate. Furthermore, social media empowers stakeholders to generate and circulate their content, leading to a decentralized distribution of information that can undermine official control, a prospect that is often intimidating for organizations (Veil et al., 2011). Nevertheless, social media can be a highly effective means of communication during a crisis (Ozanne, 2019). Social media provides direct access between consumers and the organization; it works well when other modes of communication fail, as often is the case in disaster situations; it provides rapid dissemination of information; and commenting online shows concern and gives the impression that the organization is not avoiding the incident (Veil et al., 2011). However, when appropriately managed, it can accurately protect the organization's ability to communicate information and its reputation (Kaplan & Haenlein, 2010). Thus, the communication staff needed to increase their presence on the sites to moderate the pages and maintain the quality of information (Kaufhold & Reuter, 2016).

GHS could have also expanded their use of social media. In order to provide residents with a means to contribute and connect in the aftermath of the events, GHS could have created additional social media sites beyond the instructional or informational sites they provided. Olsson (2014) explains that this is a "resilience-oriented communication approach that focuses on providing information that is critical for communities and individuals to survive and revive in the event of a crisis" (p. 117). Research has found that during crises, individuals feel a need to contribute and, by doing so, are better able to cope with the enormity of the situation, as participation can help restore a sense of control in an uncertain situation (Sutton et al., 2008; Veer et al., 2016). Disaster research has also found that new information technologies can be valuable tools for activating social networks, reducing uncertainty, and maintaining a sense of community by linking and sharing information (Ozanne & Ozanne, 2016; Procopio & Procopio, 2007).

Theoretical and Practical implications

This study is significant in the sense that it can contribute to academic literature as well as practical crisis communication strategy, by evaluating the communication strategy used by Ghana Health Service (GHS) during Marburg virus disease outbreak on 19th July, 2022. This research also extends the extant literature of crisis communication frameworks (Coombs, 2007; Coombs & Holladay, (2002) indicating that GHS followed some best practices and yet provided areas in which they were deficient. In doing so, the research advances our knowledge of the functioning of public health institutions in rapidly evolving crisis contexts by adding to our understanding about how improvisation and adaptation are key parts of crisis communication, and how continuously stated audience perceptions provide invaluable information.

From an academic standpoint, this research extends the domain of crisis communication rooted on Coombs' (2021) situational crisis communication theory (SCCT) model to real-world public health crises. It also extends the idea of deeper routine learning (Ozanne et al., 2020) and provides rich insight into how organizations leverage pre-existing capabilities for emergent communication problems. The research also contributes to the expanding scholarship on digital communication in the context of crisis, underscoring that social media can play a multifaceted role for organizational engagement with stakeholders (Veil et al., 2011; Kaplan & Haenlein, 2010). These results may indicate a broader need to align content strategy with what the audience is talking about, with listening as a key feature for organizations, especially during an unprecedented public health and economic crisis.

The research thus provides practice-relevant results and recommendations for crisis management personnel, public health agencies or government communication departments. Policymakers, public-relations teams and healthcare institutions are among potential non-academic stakeholders who could use the study's results. The research contributes to an increased understanding of the need for moving from one-way informational communication to "adapting information" (Coombs, 2007) and offers practical suggestions on how transparency can be maintained in times of crisis, expectations managed, and engagement enhanced through digital mediums. These improvements are essential for enhancing the ability of institutions to meet the many and various needs of communities in times of crisis.

Conclusion

This study assessed GHS and two regions in Ghana which experienced the Marburg virus employing a case study method. The study aimed to appreciate how GHS used crisis communications to communicate with a critical group of stakeholders, how their approach evolved during the crisis, and how effective their communication was. It became evident that GHS did several activities well during the health crisis to communicate with their target audience. In particular, GHS can be commended for their communications after the July 19, 2022, Marburg virus outbreak, which was positively evaluated by their target audience. In addition, when they recognized the changed communication environment, they improvised by quickly organizing new approaches to ensure they reached their target audience. However, GHS struggled to maintain the effectiveness of their communication during the crisis by failing to monitor the residents' information expectations, adjust their strategy given their history of crisis events, integrate their communications across the organization, and manage misinformation on social media.

This study was limited to just GHS in two regions which encountered the Marburg virus crisis without considering the other 14 remaining regions. Further, the study only assessed the perceptions of one of GHS's target audiences, and we could only survey this audience at one point. Specifically, this research was premised on the perceptions of residents who were working in the formal sector, and it is not known how the communications received might have been evaluated by residents who worked in the informal sector, such as farmers, artisans, amongst others who might have different information needs and media preferences. More research is needed to explore how other public sector organizations communicate during crises and with other target audiences. Future research should also explore how organizations maintain internal and external marketing communication integration during crisis events. Finally, further research is needed to explore the effectiveness of different communication strategies used both during, instructive, and adaptive and after a crisis event, victimage or apology.

References

1. Allen, M. W., & Caillouet, R. H. (1994). Legitimation endeavors: Impression management strategies used by an organization in crisis. *Communications Monographs*, 61(1), 44-62.
2. Brown, A. (2002). Avoiding unwelcome surprises. *The Futurist*, 36(5), 21.
3. Bundy, J., Pfarrer, M. D., Short, C. E., & Coombs, W. T. (2017). Crises and crisis management: Integration, interpretation, and research development. *Journal of management*, 43(6), 1661-1692.
4. Claeys, A. S., Cauberghe, V., & Vyncke, P. (2010). Restoring reputations in times of crisis: An experimental study of the Situational Crisis Communication Theory and the moderating effects of locus of control. *Public Relations Review*, 36(3), 256-262.
5. Cloudman, R., & Hallahan, K. (2006). Crisis communications preparedness among US organizations: Activities and assessments by public relations practitioners. *Public Relations Review*, 32(4), 367-376.
6. Coombs, W.T. (2021). *Ongoing crisis communication: Planning, managing, and responding*. Sage publications.
7. Coombs, W. T. (2007). Protecting organization reputations during a crisis: The development and application of situational crisis communication theory. *Corporate reputation review*, 10, 163-176.
8. Coombs, W. T. (2006). The protective powers of crisis response strategies: Managing reputational assets during a crisis. *Journal of promotion management*, 12(3-4), 241-260.
9. Coombs, W. T., & Holladay, S. J. (2005). An exploratory study of stakeholder emotions: Affect and crises. In *The effect of affect in organizational settings* (Vol. 1, pp. 263-280). Emerald Group Publishing Limited.
10. Coombs, W. T. (2007). *Crisis management and communications*. A discussion document.
11. Retrieved February 18, 2023, <http://www.instituteforpr.org/topics/crisis-management-and-communications/>
12. -communications/
13. Coombs, W. T., & Holladay, S. J. (2002). Helping crisis managers protect reputational assets: Initial tests of the situational crisis communication theory. *Management communication quarterly*, 16(2), 165-186.
14. Crandall, W.R., Parnell, J.A. and Spillan, J.E. (2013). *Crisis management: Leading in the new strategy landscape*. Sage Publications.
15. Denkyira, S. A., Adesola, R. O., Idris, I., Yelarge, K., Tiekua Asaaseasa, K., Danquah, C. A., & Opuni, E. (2022). Marburg virus in Ghana: a public health threat to Ghanaians and to Africans. *Public Health Challenges*, 1(4), e32.
16. Dorfman, M. S., and Cather, D. A. (2013). *Introduction to risk management and insurance*. Prentice Hall.
17. Fearn-Banks, K. (2011). *Student Workbook to Accompany Crisis Communications*. Routledge.
18. Guth, D. W., & Alloway, G. A., 2008. Untapped potential: Evaluating state emergency management agency web sites 2008. Retrieved February 13, 2023, from <http://people.ku.edu/dguth/WebVersionEMA.pdf>
19. Helm, S., & Tolsdorf, J. (2013). How does corporate reputation affect customer loyalty in a corporate crisis?. *Journal of Contingencies and Crisis Management*, 21(3), 144-152.
20. James, E. H., & Wooten, L. P. (2005). Leadership as (Un) usual:: how to display competence in times of crisis. *Organizational dynamics*, 34(2), 141-152.
21. Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business horizons*, 53(1), 59-68.
22. Kash, T. J., & Darling, J. R. (1998). Crisis management: prevention, diagnosis and intervention. *Leadership & organization development journal*, 19(4), 179-186.
23. Kaufhold, M. A., & Reuter, C. (2016). The self-organization of digital volunteers across social media: The case of the 2013 European floods in Germany. *Journal of Homeland Security and Emergency Management*, 13(1), 137-166.
24. Kuipers, S., & Welsh, N. H. (2017). Taxonomy of the crisis and disaster literature: Themes and types in 34 years of research. *Risk, Hazards & Crisis in Public Policy*, 8(4), 272-283.
25. McConnell, A., & Drennan, L. (2006). Mission impossible? Planning and preparing for crisis 1. *Journal of Contingencies and Crisis management*, 14(2), 59-70.
26. Newell, S. J., & Goldsmith, R. E. (2001). The development of a scale to measure perceived corporate credibility. *Journal of business research*, 52(3), 235-247.
27. Olsson, E. K. (2014). Crisis communication in public organisations: Dimensions of crisis communication revisited. *Journal of Contingencies and Crisis management*, 22(2), 113-125.. <https://doi.org/10.1111/1468-5973.12047>
28. Ozanne, L. K., Ballantine, P. W., & Mitchell, T. (2020). Investigating the methods and effectiveness of crisis communication. *Journal of Nonprofit & Public Sector Marketing*, 32(4), 379-405.
29. Ozanne, L. K. (2019). Creating value to mitigate disaster harm: how the sharing economy can support consumers and policy makers. In *Handbook of the Sharing Economy* (pp. 254-265). Edward Elgar Publishing.

30. Palttala, P., Boano, C., Lund, R., & Vos, M. (2012). Communication gaps in disaster management: Perceptions by experts from governmental and non-governmental organizations. *Journal of contingencies and crisis management*, 20(1), 2-12.
31. Pearson, C. M., & Clair, J. A. (1998). Reframing crisis management. *Academy of management review*, 23(1), 59-76.
31. Procopio, C. H., & Procopio, S. T. (2007). Do you know what it means to miss New Orleans? Internet communication, geographic community, and social capital in crisis. *Journal of applied communication research*, 35(1), 67-87.
32. Reliefweb International. Beating Marburg virus outbreak: Ghana's journey to victory. Reliefweb International; [updated 2023 April; cited 2023 Feb 14]. Available from: <https://reliefweb.int/report/ghana/ beating-marburg-virus-outbreak-ghanas-journey-victory>
33. Spillan, J. E. (2003). An exploratory model for evaluating crisis events and managers' concerns in non-profit organisations. *Journal of contingencies and crisis management*, 11(4), 160-169.
34. Sutton, J. N., Palen, L., & Shklovski, I. (2008). Backchannels on the front lines: Emergency uses of social media in the 2007 Southern California Wildfires.
35. Veer, E., Ozanne, L. K., & Hall, C. M. (2016). Sharing cathartic stories online: The internet as a means of expression following a crisis event. *Journal of Consumer Behaviour*, 15(4), 314-324.
36. Veil, S. R., Buehner, T., & Palenchar, M. J. (2011). A work-in-process literature review: Incorporating social media in risk and crisis communication. *Journal of contingencies and crisis management*, 19(2), 110-122.
37. Wellington, J., Nur, A., Nicholas, A., Uwishema, O., Chaito, H., Awosiku, O., ... & Onyeaka, H. (2022). Marburg virus outbreak in Ghana: An impending crisis. *Annals of Medicine and Surgery*, 81.
38. Williams, T. A., Gruber, D. A., Sutcliffe, K. M., Shepherd, D. A., & Zhao, E. Y. (2017). Organizational response to adversity: Fusing crisis management and resilience research streams. *Academy of management annals*, 11(2), 733-769.
39. Wut, T. M., Xu, J. B., & Wong, S. M. (2021). Crisis management research (1985–2020) in the hospitality and tourism industry: A review and research agenda. *Tourism Management*, 85, 104307.

Table I a. Facebook Page Activity

Events	No. of Post	Total Comment	Average # Comments/Post	Interactions
July, 2022	140	354	2.53	54
October,2022	245	522	2.13	135

Table I b. Twitter Page Activity

Events	No. of Post	Total Comment	Average # Comments/Post	Interactions
July, 2022	120	223	1.94	44
October,2022	231	311	1.35	122

Table II. July,2022 Communication Received

	July,2022	t	Sig.
Usefulness			
Accurate	3.79	11.58	.000
Fluent	3.65	8.92	.000
Useful	3.72	12.87	.000
Compassionate	4.15	13.42	.000
Informative	3.46	10.84	.000
Knowledgeable	3.73	10.6	.000
Helpful	3.67	12.8	.000
Resourceful	3.65	12.1	.000
Complete			
Timely			
Fast	3.77	11.2	.000
Complete	3.46	10.9	.000

Too Much Information	2.92	8.72	.000
Timely	3.46	9.4	.000

Table III. Communication based on the influence of work.

	Low Effect on Work (July) (N= 20)	High Effect on Work(July) (N= 760)	t	Sig.
Usefulness	4.3	3.74	4.77	.000
Accurate	4.45	3.81	3.75	.001
Fluent	4.40	3.61	4.29	.000
Useful	4.20	3.73	2.01	.046
Compassionate	4.50	4.15	2.22	.033
Informative	4.30	3.61	2.81	.006
Knowledgeable	4.45	3.7	4.91	.000
Helpful	4.10	3.69	2.41	.022
Resourceful	4.35	3.64	28.29	.000
Completely Timely	3.78		1.60	.123
Fast	4.10	3.87	0.82	.420
Complete	3.85	3.50	1.39	.178
Too much information	3.25	2.96	1.28	.212
Timely	3.90	3.53	1.62	.118

Table IV. Communication based on the influence of living situation.

	Low Effect on living situation (July) (N=295)	High Effect on living situation(July) (N= 360)	t	Sig.
Usefulness	3.88	3.64	2.30	.023
Accurate	3.96	3.65	2.33	.021
Fluent	3.75	3.55	1.48	.140
Useful	3.79	3.59	1.34	.182
Compassionate	4.33	3.96	1.90	.060
Informative	3.73	3.48	1.61	.110
Knowledgeable	3.89	3.84	0.41	.689
Helpful	3.78	3.55	1.69	.093
Resourceful	3.77	3.47	2.06	.042
Completely Timely	3.51	3.36	0.82	.415
Fast	3.90	3.82	0.01	.990
Complete	3.47	3.45	-0.02	.983
Too much Information	3.10	2.78	1.54	.125
Timely	3.57	3.39	1.08	.280

Table V. Channel used access information.

Channel	July 2022
Email	75.4
Facebook	73.2
Twitter	63.9
WhatsApp	43.0
Peers and Family members	41.6
Ghana Health Service website	62

Table VI. Most liked channel for accessing information.

Channel	July 2022
Email	20
Facebook	28
Twitter	12
WhatsApp	14
Peers and Family members	5
Ghana Health Service website	21

Table VII. Example of qualitative comments from the survey.

Event	Comment
July 2022	Considering the circumstances, I believe that the PR division of GHS performed to the best of its abilities.
July 2022	Excellent job! I appreciate being kept well-informed and the empathetic response to those who were most affected by the virus. Thank you very much! You did a great job, especially considering the unexpected nature the Marburg virus.
July 2022	The PR unit of Ghana health service effectively engaged with affected residents on Facebook by responding promptly.
July 2022	I perceived a lack of transparency in the communication provided. The information shared was insufficient and not delivered in a timely manner