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*Review Article*

Crisis Communication in Times of Disasters: Public Perceptions on the Timeliness and Clarity of Safety Announcements: A Systematic Literature Review

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ABSTRACT

This study examines crisis communication during disasters, focusing on the timeliness and clarity of safety announcements and their influence on public perception. Guided by the Situational Crisis Communication Theory (SCCT), which explains how authorities strategically communicate during crises to protect their reputation and build public trust, a systematic literature review was conducted, analyzing 29 articles. Most studies employed qualitative or quantitative methods, with only a few using a mixed-methods design. The crises examined ranged from natural hazards, such as typhoons, floods, cyclones, earthquakes, and tsunamis, to health emergencies, including COVID-19, SARS, MERS, H5N1, and influenza, as well as aviation and organizational crises. Findings indicate that both local and international contexts emphasized the importance of participatory and bottom-up approaches, where communities are active participants rather than passive recipients. Effective strategies also rely on the use of dominant languages, interpersonal communication, clarity, and timeliness. Communities and organizations often trust community radio and social media platforms, such as Twitter, as sources of information that help at-risk residents make appropriate and necessary preparations. Delays caused by inconsistent or overshadowed information, unpreparedness, and slow responses decrease public trust, create confusion, and undermine public compliance. Based on these findings, the study recommends that authorities responsible for crisis communication employ multidimensional crisis communication strategies, enhance message clarity and comprehensibility, prioritize timely and accurate information, adopt participatory approaches, leverage diverse communication channels strategically, foster public trust through transparency, consistency, accountability, and empathy, implement proactive misinformation mitigation strategies, and continuously refine communication strategies based on community or organization needs to improve future emergency responses.

KEYWORDS

Crisis communication; disaster; perceptions; clarity; timeliness.



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1. Introduction

Natural disasters impede development and exacerbate poverty, making them a foremost concern for developing countries such as the Philippines (Niolo, 2024). The Philippines is one of the world's most disaster-prone countries, situated along the boundary of major tectonic plates and at the center of a typhoon belt. As a result, the country regularly experiences floods, typhoons, landslides, earthquakes, volcanic eruptions, and droughts (Bollettino et al., 2018). Similar trends are observed across Asia, where natural disasters negatively affect economic growth (Khan et al., 2023).

While natural hazards are inevitable, their management significantly affects the extent of the ensuing damage; poor management can turn natural events into disasters (Sumaylo, 2024). As highlighted by the Academy of Disaster Reduction and Emergency Management (2021, as cited in Sumaylo 2024), large numbers of deaths and destruction resulting from weak disaster risk reduction management limits opportunities to manage risks and strengthen resilience.

Prior studies in the *International Journal of Disaster Risk Reduction Management (IJDRM)* have also emphasized the critical role of institutional and organizational strategies in disaster preparedness, including risk identification, preparedness, response, recovery, and reduction of natural and man-made disaster risks. Balangoy (2024) argued that the ability to prevent, mitigate, and recover from disasters depends on people and organizations' capacity to participate in disaster risk reduction and management (DRRM). Kaur & Singh (2024) highlighted the pivotal role of the private sector in strengthening resilience through climate-resilient infrastructure, supply chains, and recovery planning. Milenković, Cvetković, & Renner (2024) demonstrated that optimal community resilience can mitigate negative impacts and enable adaptation, thereby reducing the negative consequences of future disasters. Inusa et al. (2024) showed the effectiveness of Geographic Information System (GIS) techniques in flood risk and vulnerability analysis, supporting informed planning of disaster risk reduction strategies. Together, these studies establish a scholarly dialogue on proactive disaster preparedness and highlight lessons applicable to crisis communication in disasters. In this context, crisis communication is defined as the strategic planning and mobilization of essential teams toward a conclusive and fair solution. These processes involve strategizing, planning, and executing actions to mitigate the crisis (Zakaria, Yusnaldi, & Latiff, 2021).

Crises are often perceived as devastating by organizations and stakeholders; however, they can also be managed effectively and may even drive organizational growth or improve prospects when proper crisis management and crisis communication strategies are applied.

Both international and local literature strongly underscore that well-planned crisis communication procedures can save an organization significant effort and, in some industries, even save lives (Zakaria, Yusnaldi, & Latiff, 2021). Crisis communication is crucial not only before and during a crisis but also after the event to ensure organizational recovery and continuity. Studies demonstrate that risk communication guides behavior during crises, such as facilitating wide-area evacuation of community residents during large-scale floods (Suzuki, Watanabe, & Okuyama, 2019), enhancing community preparedness and response (Jayasekara et al., 2021), and combating misinformation and disinformation (Lin, 2022; Wazier, 2023).

Research in the Philippines similarly emphasizes the importance of effective organizational crisis management, government messaging strategies, early warning systems, and the use of both traditional media and social media to deliver comprehensive, transparent, and reliable information, especially in geographically isolated and disadvantaged areas (Reyes et al., 2018; Sumaylo, 2024). Despite these findings, communities continue to face challenges in sending, receiving, understanding, and trusting crisis messages during disasters. They also encounter misinformation, insufficient early warnings, and inconsistent public advisories.

Given these challenges, this study conducts a systematic literature review (SLR) of studies focusing on crisis communication strategies and how the timeliness and clarity of such communication influence public perception. This review provides a structured synthesis of existing knowledge, highlighting recurring challenges, gaps, and effective practices to inform future research and policy development in disaster communication.

1.1 Conceptual Frameworks

This systematic literature review adopts the Situational Crisis Communication Theory (SCCT) developed by W. Timothy Coombs (2007), which is grounded in Attribution Theory. SCCT is one of the most influential theories for understanding crises and response strategies. It posits that individuals will seek the causes of events, and in organizational contexts, stakeholders often blame the organization when a crisis affects its image (Coombs, 1996). SCCT proposes that organizations align their response strategies with the severity and duration of the crisis.

In disaster contexts, SCCT helps explain how crisis communication strategies influence public outcomes

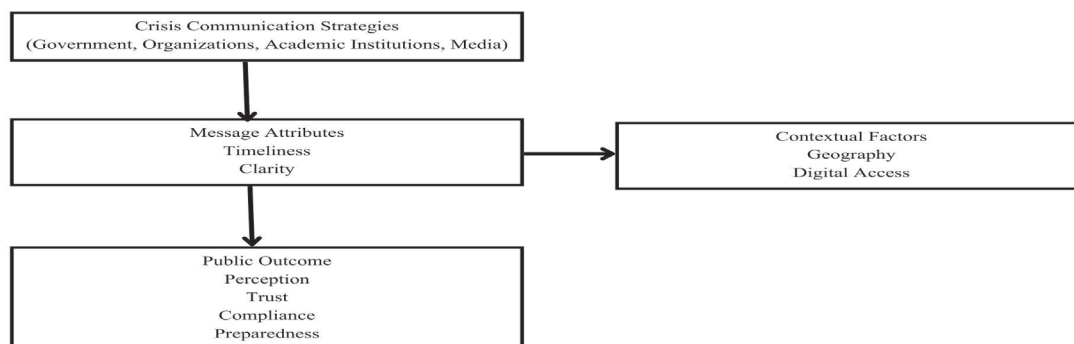
through the mediating role of message attributes, moderated by contextual factors, as synthesized in this review. Across the reviewed studies, crisis communication strategies implemented by organizations, government agencies, academic institutions, media, and other stakeholders during disasters, such as typhoons, floods, landslides, and earthquakes, correspond to SCCT's emphasis on strategic response selection. These strategies include participatory and bottom-up approaches, pre-disaster planning, coordinated information dissemination, and the use of both traditional and digital platforms.

Consistent with SCCT, this review's findings show that the effectiveness of these strategies is mediated by message attributes, particularly timeliness, clarity, language, and cultural sensitivity. This message attributes how crisis responses are framed and delivered, shaping public attributions of responsibility and credibility. Early warnings, regular updates, use of local languages, and culturally sensitive framing emerged as recurring themes across studies that were consistently associated with favorable public responses. ,

The public outcomes identified in this review, namely public trust, perceptions, compliance with advisories, and preparedness actions, align with SCCT's predicted outcomes when appropriate crisis communication strategies are employed. The reviewed evidence demonstrates that when institutions communicate in a timely, clear, and contextually appropriate manner, public trust is strengthened, misinformation is reduced, and compliance with disaster-related advisories increases.

Moreover, this review extends SCCT by highlighting the role of contextual factors as moderators of crisis communication effectiveness. Factors such as geographic location, cultural norms, technological accessibility, and platform availability were found to shape how the public receives, interprets, and acts on messages. Figure 1 illustrates the relationships among these components, showing how crisis communication strategies influence message attributes, which in turn affect public outcomes, all moderated by contextual factors. Conceptually, this review contributes to the literature by mapping SCCT onto disaster communication research, synthesizing empirical evidence that clarifies how theory-driven strategies translate into observable public outcomes, and extending SCCT's application beyond organizational crises to large-scale disaster contexts.

Figure 1. Situational Crisis Communication Theory (SCCT)



2. Objectives of the Study

1. To examine existing literature on crisis communication during disasters, particularly in terms of the timeliness and clarity of safety announcements and their influence on public perception.
2. To identify recurring communication challenges, gaps, and strategies reported in international and local studies, and to highlight areas for future research.

3. Methods

This study used a systematic literature review (SLR) to collect, critically evaluate, and synthesize findings from multiple studies on crisis communication during disasters. SLR offers a broader and more accurate understanding than a traditional literature review by adhering to standardized methodologies/guidelines in systematic searching, filtering, reviewing, critiquing, interpreting, synthesizing, and reporting findings from multiple publications on a topic or domain of interest. This review followed the PRISMA 2020 guidelines to

collate all available empirical evidence that meets a predefined set of eligibility criteria to address a specific hypothesis.

3.1 Data Sources and Search Strategy

Relevant literature was identified using Google Scholar as the primary database. Google Scholar was selected because it provides broad coverage of peer-reviewed research, theses, and scholarly publications on topics such as crisis communication, disaster management, public policy, and media studies. The systematic search was conducted from October 18, 2025, to November 8, 2025. Searches were limited to publications between 2018 and 2024 to ensure recency and relevance in the context of social media and digital communication practices.

Keywords and search string developed based on the study’s focus, including terms such as “crisis communication,” “disaster,” “perceptions,” “clarity,” “timeliness,” and “Asia.” The search aimed to capture both international and regional studies to provide a comprehensive view of the topic.

3.2 Inclusion and Exclusion Criteria

To collect a rigorous and defensible dataset for the review, predefined inclusion and exclusion criteria were applied, as summarized in Table 1. Inclusion criteria are defined as the key features of the target population that the investigators used to answer their research question. In contrast, exclusion criteria are defined as features of potential study participants who meet the inclusion criteria but also have characteristics that could interfere with the study’s success or increase the risk of an unfavorable outcome.

Table 1. Criteria for inclusion and exclusion

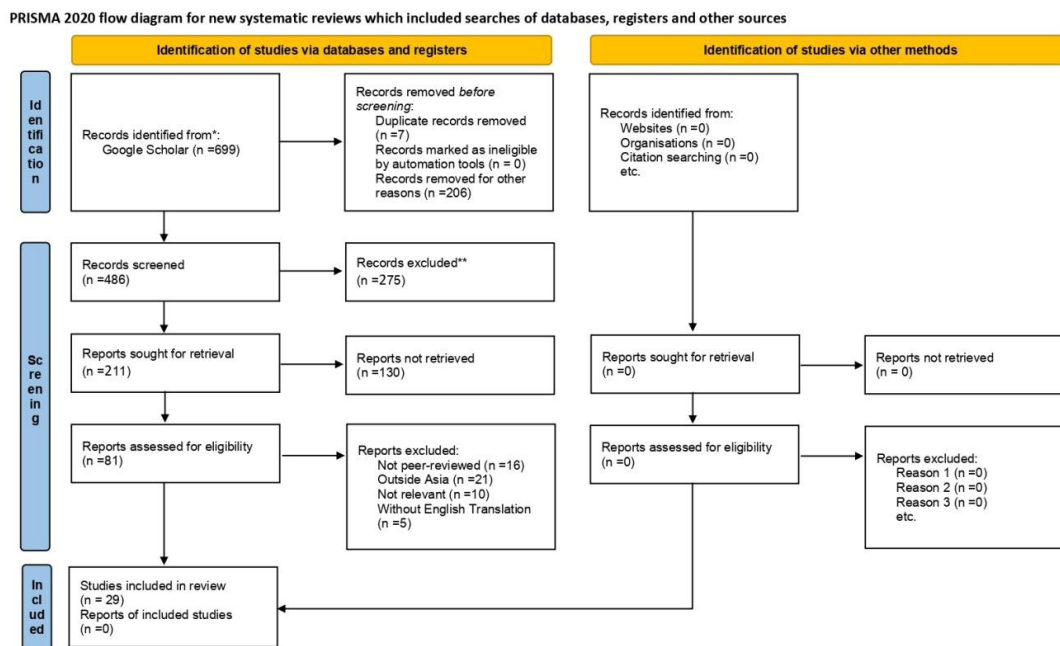
Parameters	Inclusion Criteria	Exclusion Criteria
Journal/ Publication Type	Peer-reviewed journals, conference proceedings, full-text theses/dissertations, full-text government/educational institutional reports on communication or crisis management	Non-academic sources (blogs, opinion articles, non-reviewed papers)
Language	English as the medium of writing	Other languages without English translation
Year of Publication/ Timeframe	2018-2024 (to ensure recency and relevance in the context of social media and digital communication practices)	Publications prior to 2018, unless highly significant to the theoretical framework
Demographic Location	Asia	Studies outside Asia, unless highly relevant
Descriptor	Crisis Communication, Disaster, Perceptions, Clarity, Timeliness, Asia	Studies not related to education, crisis announcements, or public safety

3.3 Screening Process

After identifying the inclusion and exclusion criteria, the study followed PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses), an evidence-based minimum set of items for reporting systematic reviews and meta-analyses. The PRISMA flow diagram is a four-phase diagram (Identifying, Screening, Eligibility, and Finalizing). It depicts the flow of information through these phases of a systematic review, mapping the number of records identified, included, and excluded, as well as the reasons for exclusions.

Initially, 699 records were identified through Google Scholar. After removing duplicates, inaccessible and ineligible records (not full texts), and assessing the remaining studies against inclusion and exclusion criteria, such as being peer-reviewed, conducted within Asia, relevant to the focus of the study, and written or translated in English, a total of 29 articles were retained for analysis. The detailed screening process and reasons for exclusion at each stage are presented in Figure 2 (PRISMA 2020 Flow Diagram).

Figure 2. PRISMA 2020 flow diagram



3.4. Data Extraction and Synthesis

The 29 selected articles were analyzed using an author matrix to systematically extract relevant information, including authors, key concepts, research gaps, objectives, research design and methodology, findings, conclusions, and recommendations. The extracted data were then synthesized under five thematic areas: (1) Crisis Communication Strategies, (2) Timeliness of Safety Announcements, (3) Clarity and Comprehensibility of Messages, (4) Public Perception and Trust.

4. Results and Discussions

A total of 29 studies published between 2018 and 2024 were included in this systematic review. Most studies used qualitative methods (n=18), followed by quantitative (n=8), with the remainder employing mixed-method research designs, reflecting the diverse research designs in the field of crisis communication. Geographically, the studies primarily focused on Asia, including the Philippines, China, Taiwan, South Korea, Bangladesh, Indonesia, Sri Lanka, Thailand, and Malaysia, highlighting both regional and contextual variations in disaster communication practices. The studies explored multiple settings, including higher education institutions, government agencies, community organizations, and firms, emphasizing the critical role of social media, digital platforms, and participatory strategies in effective crisis management. The studies examined crises ranging from natural hazards such as typhoons, floods, cyclones, earthquakes, and tsunamis to health emergencies including COVID-19, SARS, MERS, H5N1, and influenza, as well as aviation and organizational crises.

Collectively, these studies demonstrate several recurring patterns. Effective crisis communication consistently emphasizes timeliness, clarity, and participatory approaches, leveraging appropriate communication channels including social media, community radio, face-to-face interaction, and multilingual or culturally adapted messaging. Organizational and governmental strategies that integrate stakeholder engagement, local context, and pre-crisis planning are more likely to foster public trust, compliance, and resilience. The summarized characteristics of these studies are presented in Table 2.

Table 2. Characteristics of studies used in the SRL .

No.	Authors	Year	Study Title	Research Type
1	Nielo, L. C. G.	2024	A disaster communication plan for higher education institutions in the island province of Occidental Mindoro, Philippines	Mixed-method

2	Ullah, M. S.	2023	Keep me safe from cyclones: Community radio and disaster campaign in the coastal areas of Bangladesh.	Qualitative
3	Hu, C., Yun, K. H., Su, Z., & Xi, C.	2022	Effective crisis management during adversity: Organizing resilience capabilities of firms and sustainable performance during COVID-19	Qualitative
4	Li, Y., Chandra, Y., & Fan, Y.	2022	Unpacking government social media messaging strategies during the COVID-19 pandemic in China	Qualitative
5	Sumaylo, D. J.	2024	Pre-disaster communication and engagement in isolated communities: Power, relationships, and experiences in the Philippines	Qualitative
6	Hidayat, M. N.	2024	Exploring the role of social media in disaster management: A case study of the 2021 South Kalimantan flood	Qualitative
7	Utomo, C. N., Liew, K. W., Ramakrishnan, K., Hoe, E. G. B., Wong, K. C., Wah, Y. C., & Abbas, S. K. S.	2024	Assessment of crisis management in higher education institutions towards academic quality and impacts on students	Quantitative
8	Jayasekara, R. U., Jayathilaka, G. S., Siriwardana, C., Amaratunga, D., Haigh, R., Bandara, C., & Dissanayake, R.	2021	Identifying gaps in existing early warning mechanisms and evacuation procedures for tsunamis in Sri Lanka, with a special focus on the use of social media	Quantitative
9	Reyes, J., Matro, R. L. C., & Oliva, M.	2018	Social media for civic participation, communication, and coordination of disaster relief: Twitter usage in the Philippines during Typhoon Nockten	Quantitative
10	Lin, Y. C. J.	2022	Establishing legitimacy through the media and combating fake news on COVID-19: A case study of Taiwan	Mixed-method
11	Lee, K. M., & Jung, K.	2019	Factors influencing the response to infectious diseases: Focusing on the case of SARS and MERS in South Korea	Qualitative
12	Suzuki, T., Watanabe, T., & Okuyama, S.	2019	Facilitating community risk communication for wide-area evacuation during large-scale floods	Qualitative
13	Nilupaer, J.	2019	Utilization of crowdsourcing and volunteered geographic information in international disaster management.	Qualitative
14	Ronny, R., Herdiansyah, H., & Panjaitan, B. S. P.	2023	Glimpsing Indonesia's social media discourse: What goes on during the COVID-19 infodemic	Qualitative
15	Fu, Y., Liu, L., & Yuan, D.	2024	What leads to effective emergency management? A configurational analysis of empirical cases of local Chinese governments	Qualitative

16	Koswatte, I., & Fernando, C.	2022	Policy development for crisis management in the context of Sri Lanka	Mixed-method
17	Saptorini, E.	2024	Beyond the newsroom: Making news in three Indonesian news organisations during the COVID-19 pandemic	Qualitative
18	Hong, Y., Xie, F., An, X., Lan, X., Liu, C., Yan, L., & Zhang, H.	2023	Evolution of public attitudes and opinions regarding COVID-19 vaccination during the vaccine campaign in China: Year-long infodemiology study of Weibo posts	Quantitative
19	Wang, J., Zhou, Y., Zhang, W., Evans, R., & Zhu, C.	2020	Concerns expressed by Chinese social media users during the COVID-19 pandemic: Content analysis of Sina Weibo microblogging data	Quantitative
20	Yang, T. U., Noh, J. Y., Song, J. Y., Cheong, H. J., & Kim, W. J.	2021	How lessons learned from the 2015 Middle East respiratory syndrome outbreak affected the response to coronavirus disease 2019 in the Republic of Korea	Qualitative
21	Babayeva, S.	2024	<div style="border: 1px solid black; padding: 5px; display: inline-block;">Crisis communication challenges in Türkiye's centralized disaster response: A case study of the Kahramanmaraş earthquakes</div>	Qualitative
22	Zakaria, M. H. F., & Yusnaldi, N.	2021	Crisis communication strategies during the code red phase of the aviation industry and media framing discrepancies: Case of Malaysia Airlines twin tragedy	Qualitative
23	Chattaraj, D., Mohanty, S., & Satpathy, A.	2021	Communicating through a pandemic: Insights on crisis communication from Steel Authority of India Limited, Rourkela Steel Plant	Quantitative
24	Indrayani, I. I.	2024	Gen Z's ethical approaches in crisis communication on social media: Evidence from Indonesia	Qualitative
25	Chuang, S.	2024	A glance at the COVID-19 epidemic control system in Taiwan: Implications for organizational crisis management and leadership in black swan events	Qualitative
26	Meesangkaew, N.	2019	The effects of internal crisis communication on communication satisfaction, employee satisfaction, organizational commitment, and turnover intention for Thai hotel employees	Quantitative
27	Zarei, L., Shahabi, S., Sadati, A. K., Tabrizi, R., Heydari, S. T., & Lankarani, K. B.	2021	Citizens' expectations from government in response to the COVID-19 pandemic: A qualitative study in Iran	Qualitative
28	Sharma, B., & Tham, A.	2021	Cultural influences on disaster recovery and impact on tourism: The case of Nepal earthquakes	Qualitative
29	Akarasewi, P.	2018	A strategy for the Thai Department of Disease Control for use in internal communication in situations such as the MERS, H5N1, and influenza crises	Qualitative

4.1 Crisis Communication Strategies

Crisis communication is the collection, processing, and dissemination of information required to address a crisis (Coombs, 2010, as cited by Nwogwugwu, 2018). Effective communication strategies are critical to ensure public safety and minimize the negative consequences of emergencies. Across Asia, studies consistently emphasized the importance of participatory and bottom-up approaches over one-way and top-down approaches (Ullah, 2023; Suzuki, Watanabe, & Okuyama, 2019; Nilupaer, 2019). Ullah (2023) demonstrated that community radio in isolated coastal areas and offshore islands in Bangladesh reduced losses during cyclones by delivering hazard-related programs and early warnings in local dialects, thereby increasing preparedness and enabling timely evacuation. Similarly, Suzuki, Watanabe, and Okuyama (2019) reported that applying a bottom-up approach in evacuation planning during landslides in Japan improves coordination between governments and residents. (Nilupaer, 2019) further stated that crowd sourcing and volunteered geographic information (VGI) transformed disaster response during earthquakes, tsunamis, and typhoons by enabling timely information exchange and enhancing citizen engagement. This recurring pattern across countries shows that communication is effective when communities are involved in planning and decision-making, allowing for direct sharing of information and feedback to support ownership of response actions.

In the Philippines, pre-disaster communication in geographically isolated and disadvantaged areas (GIDAs) remains largely one-way, with limited access to information and restricted community feedback (Sumaylo, 2024). Communities considered interpersonal, primarily face-to-face, communication to be the most effective mode. To address this gap, Sumaylo (2024) proposed the 'PRE Transformative Engagement (PRETE) Framework,' which requires customization, localization, and mainstreaming of pre-disaster communication. Similarly, Nielo (2024) recommended incorporating disaster communication strategies in Higher Education Institutions (HEIs) in Occidental Mindoro and proposed the creation of Safeguard against Natural Disasters of Academes through Actions (SANDATA) to secure a disaster-resilient academic environment.

Four recent studies published in the *International Journal of Disaster Risk Management (IJDRM)* further underscore the importance of institutional and technological strategies in disaster communication. Balangoy (2024) emphasized the roles of technology, community involvement, proactive plans and activities, disaster preparedness, and an established early warning system in reducing or eliminating the impact of disasters. This highlights how structured communication channels and localized messaging enhance community responsiveness. Kaur & Singh (2024) highlighted integrating Disaster Risk Management (DRM) as a strategic Corporate Social Responsibility (CRS) activity for building a resilient society using Public Private Partnerships (PPPs) to minimize the negative impact of disasters. This suggests that formal institutional communication strategies, through organizations and partnerships, play a critical role in disaster preparedness and public awareness. Milenkovic, Cvetković, and Renner (2024) demonstrated that measuring and monitoring community resilience through models such as the Baseline Resilience Indicators for Communities (BRIC) and Disaster Resilience of Place (DROP) can help ensure effective disaster risk management and improve community resilience worldwide. Inusa et al. (2024) demonstrated the application of GIS techniques in flood risk analysis, illustrating the technology's role in guiding planning and disaster risk reduction.

Organizational strategies also contribute to resilience. Hu et al. (2022) showed that Chinese firms with varying financial capabilities leveraged cognitive and behavioral capabilities to survive severe COVID-19 disruptions. In India, the Steel Authority developed a mobile app containing all information and guidelines for employees regarding COVID-19 precautions, prevention, testing, and treatment (Chattaraj, Mohanty, & Satpathy, 2021). In China, Fu, Liu, and Yuan (2024) reported that leadership attention allocation, resource management, and social participation were key in mitigating disaster losses. Similarly, Lee & Jung (2019) highlighted that information sharing and onsite responses were key factors during infectious disease outbreaks in Korea.

Media organizations, as formal institutions, also exemplify organizational strategies during crises. Saptorini (2024) reported that the COVID-19 pandemic affected the newsroom operations of three TV organizations, particularly news production, content quality, and proximity to government sources. Liputan6.com and BBC Indonesia shifted to digital operations while maintaining audience engagement through digital storytelling, whereas SCTV maintained routines and increased airtime for each newscast to sustain viewership and advertising revenue. These adaptations highlight how news organizations strategically modify internal workflows and stakeholder communication to maintain operational continuity and trust during crises.

Internal communication and employee engagement are also crucial. Meesangkaew (2019) found that during political instability in Thailand, internal crisis communication affected hotel employees' job satisfaction, organizational commitment, and turnover intention, underscoring the need to assess employees' attitudes toward management strategies, organizational communication, and the work environment. Similarly, Akarasewi (2018) noted that Thailand's Department of Disease Control, despite being well-organized and having a strong network, faced communication delays due to strong cultural influences, hierarchical systems, and occasional breakdowns in coordination during COVID-19. In Malaysia, HEIs integrated online learning into the curriculum and provided training to students on platforms used in online learning to minimize disruption and maintain academic quality (Utomo et al., 2021)

Governmental communication strategies are critical to public trust and legitimacy. Li, Chandra, and Fan (2022) reported that China employed four situational crisis communication strategies—Instructing Information, Adjusting Information, Advocacy, and Bolstering— during COVID-19 to achieve agile governance. Taiwan implemented daily briefings with sign language interpretation, social media posts in multiple languages, and a “humor over rumor” strategy featuring engineered memes to counter misinformation and enhance public awareness (Lin, 2021).

However, gaps in responsiveness and policy consistency can undermine government communication. Zarei et al. (2021) observed that the Iranian government did not fully meet citizens’ expectations during the COVID-19 pandemic, leading to a decline in public trust. Koswatte and Fernando (2022) similarly highlighted that inconsistencies in government policies and a lack of public participation in controlling the COVID-19 pandemic negatively affected legitimacy. In Indonesia, misinformation on social media hindered the disaster management process, suggesting the need for synergy, unified social media accounts, standardized hashtags, and clear messaging (Wazier, Herdiansyah, & Panjaitan, 2023).

A consistent theme across studies is the importance of using the proper communication channels for the right audience. Generation Z in Indonesia relies on social media to acquire information and engage with their peers during crises (Indaraya, 2024). During the 2021 big flood in South Kalimantan, both traditional media and modern technology played a crucial role in disseminating timely updates (Hidayat, Fahrianoor, and Siswanto, 2024). In the Philippines, especially in GIDAs, communities still prefer interpersonal, face-to-face communication (Sumaylo, 2024).

These results show that crisis communication is more effective when community members are involved in all planning steps and when communications are conducted in localized dialects. The recurring emphasis on participatory and bottom-up approaches across countries suggests that communities respond effectively when crisis information reflects their emotions, perceptions, adaptability, interpretations, and language (Ullah, 2023; Suzuki, Watanabe, and Okuyama, 2019; Sumaylo, 2024; Nilupaer, 2019). This explains why studies in the Philippines, Bangladesh, and Japan consistently highlight that dominant languages, interpersonal communication, and collaborative decision-making create community resilience and build trust.

Governments, organizations, and academic institutions must restructure crisis communication strategies to encourage citizen participation. Policymakers should integrate the pre-crisis planning, creation of crisis teams, direct stakeholder communication, media management, and localized content. Organizations must adopt proactive internal communication to facilitate achievement and foster high levels of employee engagement, and to be responsive during crises.

The findings from the Philippine settings corroborate those of international studies. Interpersonal communication, particularly face-to-face, is preferred by communities in GIDAs, paralleling Bangladesh’s community radio in isolated areas, while Sumaylo’s PRETE framework aligns with Japan’s bottom-up evacuation planning (Ullah, 2023; Suzuki, Watanabe, and Okuyama, 2019; Sumaylo, 2024). Across Asia, participatory approaches consistently reduced disaster losses due to improved public compliance, as people can explain their vulnerabilities and priorities, enabling responsive measures to be designed and implemented.

4.2 Timeliness of Safety Announcements

The perceived timeliness of information release (PTIR) refers to the public’s overall assessment of the interval between the generation of information and its dissemination. The timeliness of information release is a crucial factor influencing individuals’ subjective well-being (Ma & Zhou, 2024). Providing regular updates keeps stakeholders informed and safe. Ullah (2023) reported that early forecasts and cyclone warnings via community radio in Bangladesh alerted at-risk people to make adequate preparations and to carry out timely evacuations, leading to a reduced number of deaths and property losses. Similarly, Suzuki, Watanabe, and Okuyama (2019) found that early issuance of evacuation information during large-scale floods in Japan enabled citizens to initiate evacuation plans and secure safe evacuation destinations. However, failures to communicate promptly can have serious consequences. Jayasekara (2021) noted that poor last-mile dissemination of tsunami warnings, inadequate repetition of notices, and lack of prior alerts caused public confusion and reduced evacuation efficiency in Sri Lanka. Hidayat, Fahrianoor, and Siswanto (2024) emphasized that quick information dissemination on social media during floods enhanced the safety and well-being of residents in Indonesia, highlighting the role of modern communication channels in enhancing timeliness.

Challenges to timely communication are particularly pronounced during crises involving hierarchical decision-making or complex coordination. Akarasewi (2018) observed that Thailand’s Department of Disease Control (DDC) follows hierarchical, top-down communication paths, which led to delays in field responses under incomplete information and occasional difficulty coordinating with other organizations. Similar delays were observed during the Kahramanmaras earthquakes in Turkey (Babayeva, 2024) and in Korea (Lee & Jung, 2019), where highly centralized interactions led to inefficient coordination and crisis communication among stakeholders. Some contexts demonstrate effective, timely communication despite challenges. Chuang (2024)

highlighted that Taiwan's COVID-19 control system relied on rapid, structured dissemination of updates to maintain public safety. Yang et al. (2021) showed that South Korea successfully applied lessons from the 2015 MERS outbreak to achieve a timely and effective COVID-19 response. Zakaria, Yusnaldi, and Latiff (2021) noted that the timely release of information does not always mean minutes or an hour; for instance, during the Malaysia Airlines Twin Tragedy, the first official news was released approximately six hours after the disappearance of flight MH370. While perceived as delayed by the media and the public, this timing was appropriate to avoid inaccurate or misleading news. This highlights that immediate reporting without thorough verification can lead to misinformation, panic, and safety risks.

In the Philippine context, timely communication remains a challenge, particularly in academic institutions and GIDAs. Delays occur due to communication challenges, the absence of disaster communication plans, hierarchical approval processes, and infrastructure damage (Niello, 2024; Sumaylo, 2024; Reyes et al., 2018). These findings align with the international context, emphasizing that timely crisis communication depends on the structured dissemination of information through appropriate channels. Delays, whether due to hierarchy, location, or technical difficulties, compromise public safety (Ullah, 2023; Suzuki, Watanabe, and Okuyama, 2019). This highlights the need for pre-planned and adaptive strategies in high-risk areas.

Timeliness allows people to be alerted and warned to take necessary precautions. Delays often arise from hierarchical decision-making, where the first responders must seek approval from higher management. Delays also occur during verification to ensure accuracy and avoid misinformation. Zakaria, Yusnaldi, and Latiff (2021) explained that in the media, timeliness emphasizes reporting news while it is still relevant and fresh, whereas organizations balance accuracy with immediacy. In the aviation industry, reporting six hours after an incident may not feel "instantaneous," but this delay ensures that the information is credible.

The successful early warning systems of Bangladesh and Japan align with Niello's and Sumaylo's findings in the Philippines. Collectively, these studies demonstrate that timely communication is crucial because it ensures that authorities, organizations, and communities receive, understand, and act on alerts to save lives and minimize the impact of disasters.

4.3 Clarity and Comprehensibility of Messages

Clarity is defined, according to the Oxford dictionary, as the state of being free from doubt, ambiguity, or difficulty, to be distinct and well defined. Making something clear is equivalent to making it understood and to removing what is unwanted from it. The lack of clarity, in turn, can make documented insights or practices difficult to understand or apply; it can hinder knowledge transfer or make assessing intellectual capital tiresome and difficult. Obtaining accurate situational details at the onset of a crisis depends on clear and concise communication. Strategies are needed to increase message clarity.

Studies on higher education institutions highlight that clarity is a pressing communication issue. In the Philippines, Niello (2024) found that stakeholders in HEIs often struggled with the technical jargon used in communication updates and warnings, leading to confusion. This underscores the need for simplified communication materials that use clear language and avoid excessive technical terms. Similar concerns were reported by Utomo et al. (2024) in Malaysia, who highlighted that effective crisis communication in HEIs requires clear information about the Crisis Management Plan during both pre-pandemic and COVID-19 periods. These findings emphasized that consistent and understandable messaging influences stakeholders' awareness and preparedness during crises.

At the community level, clarity of messages is important for timely action. Ullah (2023) noted that although community radio policy in Bangladesh directs broadcasters to use formal Bangla, broadcasters intentionally used local languages in cyclone-related programs to help locals better understand them. In Japan, Suzuki, Watanabe, and Okuyama (2019) found that wide-area flood evacuation plans were more effective when residents participated in decision-making, demonstrating how participatory communication enhances clarity. In GIDAs in the Philippines, Sumaylo (2024) observed that residents preferred interpersonal, face-to-face communication because Local Disaster Risk Reduction Management Councils transmitted the information downloaded from the National Council to the communities without the effort of local language translation. Localization and contextualization of messages increase comprehension and encourage compliance with safety orders.

Social media clarity also influences message comprehension. During COVID-19, Li, Chandra, and Fan (2022) found that China's government use of emotional, situational, advocacy-style, and protective messages as a framing tactic reduced coordination costs and misinformation. Lin (2022) showed that Taiwan's government used graphics, numbers, memes, "humor over rumor," and multiple languages to increase public awareness and public trust. Conversely, Wazier (2023) found that unclear and incomplete government social media posts in Indonesia led to misinformation and distrust.

Despite these efforts, gaps remain in message clarity, especially when technical information and media framing distort public understanding. For instance, in the aviation industry, the Malaysia Airlines MH370 disap-

pearance led to discrepancies and misunderstandings due to media framing. Fake news and images about the tragedy spread on social media, leading to conspiracy theories (Zakaria, Yusnaldi, & Latiff, 2021). Sharma and Tham (2021) highlighted that cultural influences in Nepal, such as ethnic representation and hierarchical social structures, complicate communication, emphasizing the need for context-sensitive strategies. Hong et al. (2023) further stressed the need for completeness of information and straightforward language in COVID-19 vaccination communication to ensure understanding.

These results indicate that communication often fails due to technical, cultural, and language barriers, as well as a lack of community participation. In the Philippines, HEI stakeholders were confused by jargon (Niello, 2024), while GIDAs' communities preferred face-to-face and local-language communication (Sumaylo, 2024). Similarly, studies from Malaysia, Bangladesh, Japan, and Taiwan emphasized adapting messages to local dialects, cultural contexts, and audience preferences to improve understanding (Utomo et al., 2024; Ullah, 2023; Suzuki, Watanabe, and Okuyama, 2019; Lin, 2022).

Participants better understand information that resonates with their expected practices, common language, and daily experiences. Participatory communications, such as community involvement in disaster planning, are a pivotal element, as they ensure that plans are not only comprehensive but also culturally relevant, inclusive, and responsive to the realities faced by diverse populations.

Organizations must invest in solidifying messages, localizing languages, raising cultural awareness, and training communicators to adapt to evolving crises. Combining visual communication, localized language, and interpersonal interaction provides universal clarity, especially in isolated areas and multicultural contexts. Academic institutions, organizations, and governments should test messages to determine whether the communications are working for their target audiences or need adjustment before wide dissemination. Social media should complement, not contradict, traditional media in urgent communications.

Cross-national evidence reinforces these findings. In Bangladesh, the use of local dialects by community radio increased the comprehensibility, clarity of information, and reliability of warning messages for vulnerable people in isolated coastal areas and offshore islands (Ullah, 2023). In Japan, participatory planning, particularly the establishment of a regional cooperation system, increased citizens' evacuation rates because the roles of each organization were explained clearly and comprehensively (Suzuki, Watanabe, and Okuyama, 2019). Taiwan's government integrated multilingualism, sign language interpretation, live-streamed press briefings, memes, and "humor over rumor" to ensure public understanding (Lin, 2022). In Malaysia, Utomo et al. (2021) found that HEIs improved understanding by providing training on online learning platforms and clearly structured instructions during COVID-19. Collectively, these corroborations demonstrate that clarity is most effective when combined with localization, cultural adaptation, participatory engagement, and visual or interactive channels. This pattern strongly supports the conclusion that plain-language, audience-centered communication is critical for effective crisis response across contexts.

4.4 Public Perception and Trust

Public perception is simply the type of information obtained from a public opinion survey. In this sense, public opinion is the aggregate of views held by a group of people who are asked directly what they think about particular issues or events. Public trust, on the other hand, is understood to be the willingness and sincerity of all citizens or community groups to trust the government's authority or power to implement policies determined according to their implementation (Daraba, 2021).

Within this context, public trust becomes a crucial factor in crisis and risk communication, particularly toward institutions perceived as reliable sources of information. In the Philippines, Reyes et al. (2018) found that during Typhoon Nockten, Filipinos relied on Twitter as a trusted social media platform to share secondhand updates on the typhoon's status, relevant actions, and steps taken to help those affected immediately. Social media users believed in Twitter's ability to call for social action.

Internationally, similar trends are observed. Ullah (2023) found that people in Bangladesh trust community radio as a source of information during cyclones, tuning in three to five times per day. They relied more on the forecasts and recommendations provided by community radio due to the simplified delivery in regional dialects and the use of specific location names familiar to listeners. Likewise, in Taiwan, Lin (2022) emphasized that the government's prompt action and use of multimedia to inform the public of prevention measures, quarantine rules, and mask rationing build public trust and maintain legitimacy.

Conversely, trust can deteriorate when communication is delayed, inconsistent, or overshadowed by misinformation and in Indonesia, Wazier, Herdiansyah, & Panjaitan (2023) noted that the "infodemic" worsened public trust in the government's COVID-19 response by circulating misinformation that created confusion and undermined public compliance. Similar issues emerged in Nepal, where Sharma & Tham (2021) observed that the government's unpreparedness and very slow response during the earthquake weakened public trust. In contrast, Yang et al. (2021) highlighted that the Republic of Korea's lessons from the 2015 MERS-CoV outbreak, such as identifying weaknesses in healthcare systems and the infectious disease control and management sys-

tem, enabled the country to flatten the COVID-19 epidemic curve in 2021 and earn public trust. Meanwhile, Zarei et al. (2021) reported that the Iranian government's delayed pandemic response undermined the limited trust citizens had, while the media's delayed dissemination of information pushed the people to turn to unofficial sources.

Public perception and trust are closely linked to timeliness and clarity. Effective communication strategies enhance trust and public compliance, while delays, misinformation, and policy inconsistency undermine it.

These findings reveal that public trust is influenced not only by the presence of communication but also by the readiness, responsiveness, effectiveness, and satisfaction with existing disaster plans. Trust increases when the public perceives that authorities prioritize honesty, accuracy, empathy, and timeliness in their communication. Additionally, acknowledging mistakes, addressing fake messages through direct and indirect communication, and providing regular updates using multiple channels aligned with cultural and linguistic contexts contribute to higher levels of public trust. When messages become complicated due to the overuse of technical jargon, inconsistent policies, and delayed action, trust erodes.

Furthermore, communities tend to trust channels that demonstrate timeliness and credibility, such as community radio in Bangladesh (Ullah, 2023) or social media platforms like Twitter during Typhoons in the Philippines (Reyes et al., 2018), due to their distinctive early-warning broadcasting and real-time update features. This shows that trust is cumulative: it builds not only during crises but also over time through consistent, reliable actions and behaviors.

In dealing with crises, governments and organizations must ensure proper procedures, clarity in the devolution of power and authority, good capacity, innovative digital tools, effective policies, the provision of real-time and accurate information, and the creation of localized content to foster trust and reduce stigmatization.

Trust in government and organizations significantly affects whether individuals listen to and follow advice. Where trust is low, people may disengage from official messages and turn to alternative sources of information, reducing communication effectiveness. Evidence from Taiwan, Bangladesh, and South Korea (Lin, 2022; Ullah, 2023; Lee & Jung, 2019) consistently demonstrates that simplified and timely messages, the use of common language, and prompt responses strengthen public trust. In contrast, studies from Indonesia, Nepal, and Iran (Indrayani, 2024; Sharma & Tham, 2021; Zarei et al., 2021) show that unpreparedness, slow response, and delayed communication undermine trust, leading to neglect and noncompliance. These cross-country patterns strongly corroborate the claim that trust is linked to the combined effectiveness of speed, accuracy, clarity, and crisis-communication strategies, each reinforcing the others in shaping public perception.

These findings can be mapped conceptually onto the Situational Crisis Communication Theory (SCCT). Crisis communication strategies identified in the review correspond to SCCT's strategic response selection, while message attributes such as timeliness, clarity, and cultural adaptation serve as mediators influencing public trust, perception, and compliance. Contextual factors, including geographic location, cultural norms, and technological accessibility, act as moderators that shape how messages are received and acted upon. By explicitly linking SCCT to the observed patterns across countries, this review demonstrates that theory-driven strategies are effective in fostering trust and compliance during disasters. Conceptually, this extends SCCT beyond organizational crises, demonstrating its applicability to disaster-communication contexts and highlighting how strategy, messaging, and context interact to produce public outcomes.

5. Conclusions

To examine crisis communication during disasters, particularly the timeliness and clarity of safety announcements and their influence on public perception, this study relied on a systematic review of 29 articles on crisis communication published between 2018 and 2024. The results highlight that effective crisis communication is multifaceted, requiring dialogical, inclusive, and community-driven approaches that use locally owned communication and appropriate channels. It also requires multilingualism, prioritizing dominant languages, timely and verified information, and innovative digital tools. The adoptions of new policies, modification of internal workflows, and stakeholder communication, as well as awareness of people's expectations, are also important to effective crisis communication.

The timely dissemination of critical information, such as early warnings and forecast alerts, enables organizations and communities to take necessary precautions, including early evacuation, to reduce the negative impacts of a crisis. Delays in warnings due to policy inconsistencies, unpreparedness, lack of disaster management plans, and hierarchical structures can lead to severe losses and damage. While studies emphasize the importance of timeliness, they also remind us that information accuracy must not be neglected in pursuit of speed to avoid the spread of misinformation. The use of proper communication channels, such as community radio and social media platforms, ensures that timely information reaches the target audiences and helps prevent confusion and misinformation.

Clarity and comprehensibility of messages emerged as foundational, as simple, direct information can be easily absorbed during a crisis. Culturally contextualized and locally tailored messages enable communities

to understand and respond to the situation quickly. Excessive use of jargon and technical terms may vitiate meaning and lead to misinterpretation. This, in turn, may fuel rumors or, in the worst case, the spread of fake news.

Public perception and trust are closely linked to the consistency, transparency, and accuracy of communication. Studies across Asia indicate that delayed responses, policy inconsistencies, and centralized decision-making by official sources worsened public trust, undermined public compliance, and encouraged reliance on alternative, potentially unreliable sources. The use of strategic, innovative multimedia formats can broaden the reach and accessibility of crisis messages.

Overall, this review underscores that effective crisis management is not merely the dissemination of information but also involves participatory and bottom-up approaches, community engagement, transparent and timely messaging, culturally and locally appropriate strategies, and building public trust to ensure community preparedness and compliance.

6. Recommendations

Based on the evidence synthesized in this review, the following recommendations are proposed for policymakers, government agencies, academic institutions, firms, and organizations responsible for crisis communication:

1. Policymakers, organizational leaders, and community outreach coordinators should adopt multidimensional and participatory communication strategies. Combine top-down and bottom-up communication approaches. Encourage face-to-face interactions and participatory dialogues in which citizens can provide feedback and contribute to decision-making through simplified messages.

2. Crisis communication teams in governments, non-governmental organizations, and academic institutions should enhance the clarity and cultural relevance of messages. Use local dialects, culturally appropriate expressions, and simple language. Incorporate various multimedia materials (videos, infographics, and audio messages) to improve comprehension, and avoid technical or idiosyncratic words that may disengage audiences and divert attention from critical information.

3. Government agencies, emergency response authorities, and organizations managing public information must prioritize the timeliness and accuracy of information. They must disseminate critical messages promptly while maintaining accuracy through multiple channels, including traditional and new media, to ensure public safety. Any delays may necessitate efforts to dispel misinformation.

4. Media managers, social media teams, and public information officers should leverage diverse communication channels strategically. Integrate traditional media (TV, radio, newspaper) with platforms (social media, mobile app) to reach a wide audience despite technological and demographic barriers.

5. Policymakers, agency leaders, and communication officers should foster public trust through transparency, consistency, accountability, and empathy by ensuring preparedness, prompt responses, competent policies, acknowledgment of mistakes, real-time updates, and culturally sensitive communication practices. Trust is earned through consistent performance and proven credibility over time, not only during crises.

6. Media organizations, journalists, educational institutions, and technology platform providers should implement proactive misinformation mitigation strategies, such as promoting news literacy and strong professional journalism, investing in tools that detect misinformation, reducing financial incentives of individuals who profit from spreading fake news, improving online accountability, and emphasizing credible sources.

7. Crisis communication managers, policy evaluators, and academic researchers must modify, refine, and adapt communication strategies. Conduct post-crisis analysis, gather public feedback, test messaging strategies, and refine approaches to improve future emergency response.

In conclusion, the foundation of effective crisis communication includes clarity, timeliness, community participation, multi-channel communication, and trust building. Effective strategies not only support emergency response but also enhance preparedness and compliance.

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