

Review Article

The Language of Disaster: A Scoping Review of Framing Strategies in News and Social Media Communication

Aldrin Jotahot^{1,*}

Received: 12 June 2026; Revised: 29 July 2026;
Accepted: 01 August 2026; Published: 06 August 2026

DOI: <https://doi.org/10.66074/Z5N8Y2D7M>

Abstract

This scoping review maps the existing literature on linguistic framing strategies in disaster communication across traditional news media and digital social platforms from 2005 to 2026. Guided by the Arksey and O'Malley framework, the Joanna Briggs Institute (JBI) methodology, and PRISMA-ScR guidelines, the review synthesizes 26 peer-reviewed studies identified through systematic searches of Google Scholar and ScienceDirect. The included literature is analyzed to identify recurring linguistic patterns, distribution across disaster types and media formats, and dominant communication platforms, with the aim of highlighting persistent research gaps. Findings indicate that disaster communication is consistently constructed as a strategic form of discourse characterized by urgent, directive, and action-oriented language designed to promote immediate public compliance. Media reporting further demonstrates a strong reliance on an affective framing repertoire, including fear appeals, emotional urgency, human-interest storytelling, and narratives of resilience. However, these dominant framing practices tend to prioritize short-term response and relief while offering limited attention to structural vulnerability, pre-disaster risk conditions, and long-term mitigation strategies. Methodologically, the literature remains largely text-centric, focusing on written news content and platform-based text communication, particularly on legacy media and X (formerly Twitter). Substantial gaps remain in relation to

¹ Mindanao State
University-Iligan
Institute of
Technology, Iligan,
Philippines
* aldrin.jotahot@
g.msuiit.edu.ph

underrepresented disaster types, limited multilingual datasets dominated by English-language sources, and the lack of attention to multimodal communication forms such as visual and video-based messaging.

Keywords: disaster communication, linguistic framing, news media, social media

1. Introduction

According to the United Nations Office for Disaster Risk Reduction, a disaster is a serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability, and capacity, leading to one or more of the following: human, material, economic, and environmental losses and impacts. Moreover, disasters have always been a devastating experience for the people; thus, there are many preparations and safety precautions prior to, during, and after a disaster to ensure that there are fewer or zero casualties and ensure humans thrive after a disaster. Whether the events are natural hazards such as earthquakes, typhoons, and floods or public health emergencies, they generate a complex communication process that will shape how the people will understand risk and respond to that crisis. In simpler terms, communication in the advent of a disaster plays an important role in cascading information to the public, guiding them on what the correct behaviors are, and instilling in them a perception of responsibility and recovery in the advent of disasters. In this contemporary era, various channels, particularly traditional news media and digital platforms, transmit information about disasters. Platforms include social media posts on various Facebook pages. And the language used in these channels does not just convey information; it also frames events in a way that influences how the public interprets the severity, causes, and consequences of the disasters (Moncada et al., 2024). Hence, examining linguistic framing in disaster communication has become a critical research area in the fields of communication studies, media studies, and linguistics.

Entman (1993) defines framing as something that involves defining problems, diagnosing causes, making moral judgments, and suggesting remedies. With the application of framing theory, the theory will provide a key theoretical lens, which is crucial for understanding how the information about disaster is constructed and presented. Framing in this paper refers to the process by which communicators, speakers, or writers select certain aspects of reality and make them more salient in communication texts, with the objective of promoting a particular interpretation of events—specifically, disasters. Moreover, talking about the discourse of linguistic framing, it is viewed or considered as something that shapes how the audience perceives issues by emphasizing specific elements of a situation while downplaying others. In simpler terms, this kind of selective presentation of issues or information

influences how the public or individuals interpret crises and prepare appropriate responses. Scheufele (1999) further explains framing as something that also affects how audiences process information by deliberately putting guidance or attention to a specific interpretation of an issue.

Recent developments in framing scholarship extend these foundational perspectives by conceptualizing framing as a dynamic, networked process shaped by interactions among media organizations, public institutions, and audiences within digital communication environments (D'Angelo, 2020). Rather than viewing frames solely as products of journalists or media institutions, contemporary framing research recognizes that social media platforms enable users to reproduce, negotiate, and transform frames through sharing, commenting, and other forms of online engagement. This perspective is particularly relevant to disaster communication, where official agencies, news organizations, and citizens collectively shape public interpretations of crises in real time. Accordingly, this review draws on both the classical foundations of framing theory and contemporary perspectives that acknowledge the evolving role of digital and participatory media in constructing disaster narratives.

In addition, despite the growing body of research on disaster communication, the linguistic dimensions of framing across different communication platforms remain fragmented. Existing studies tend to examine either news media discourse or social media communication separately, rather than exploring how linguistic framing operates across all platforms. In addition, much of the research focuses on specific disaster events, limiting the development of a broader understanding of recurring linguistic framing patterns in disaster communication. Basically, this scoping review is relevant because it maps studies on linguistic framing in both social media and news media, regardless of the type of disaster studied. By synthesizing previous studies, this scoping review can identify key themes, theoretical approaches, and methodological trends in the field. It can also highlight areas that require further investigation, such as cross-platform comparisons, multilingual disaster discourse, and the role of emerging digital communication channels in shaping crisis narratives.

This scoping review examines studies published from 2005 to 2026 on linguistic framing strategies used in news media and social media posts. It aims to identify the linguistic features, framing devices, recurring patterns, theoretical approaches, and research gaps in disaster-related communication while exploring their implications for public awareness, risk interpretation, and policy communication. Specifically, the review investigates the linguistic features and framing devices that characterize disaster-related news and posts, the distribution of existing research across different media and disaster types, the platforms most frequently studied, and the gaps that remain in the current literature.

2. Methods

2.1 Review Design

This scoping review is guided by the following frameworks: the Arksey and O'Malley Framework for Scoping Reviews, the Joanna Briggs Institute (JBI) Guidance for Scoping Reviews, and the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR) for reporting. The primary framework guiding the review procedure is the Arksey and O'Malley (2005) framework, which provides a foundational methodological approach for conducting scoping reviews to identify key and important concepts, evidence, and research gaps within a field. The framework outlines a six-stage iterative process that includes identifying the research question, identifying relevant studies, selecting studies, charting the data, collating and summarizing the results, and conducting an optional consultation exercise. To strengthen methodological rigor, the review also follows the Joanna Briggs Institute (JBI) Guidance for Scoping Reviews, which offers detailed recommendations for study selection, data extraction, and evidence mapping. Specifically, the JBI framework guides the data extraction process through the use of standardized data-charting methods that ensure consistency and transparency in capturing relevant information from the included studies. Reporting of the review is guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR), which enhances the quality, transparency, and completeness of reporting. The PRISMA-ScR checklist covers essential components of the review, including the title, abstract, introduction, methods, results, discussion, and funding information, thereby ensuring that the review is reported in a systematic and reproducible manner.

2.2 Eligibility Criteria

The study included empirical research that examined linguistic framing, discourse, narrative framing, or language use in disaster contexts. Eligible studies analyzed content from news media, online news platforms, social media posts, or other digital communication channels related to disasters. Studies employing qualitative and mixed-methods research designs were considered, provided that they generated empirical findings relevant to the objectives of the review. Only studies published in English and appearing in peer-reviewed journals, conference proceedings, or scholarly book chapters, were included. The publication period was limited to 2005–2026 to capture the rapid evolution of digital communication, online news platforms, and social media technologies that have significantly transformed disaster communication practices during this period.

Studies were excluded if they did not focus on linguistic, discourse, framing, communication, or language-related aspects of disasters. Research that examined disasters solely from scientific, engineering, medical, or emergency management

perspectives without analyzing language or communication was also excluded. Additionally, studies not written in English and non-empirical publications such as editorials, commentaries, book reviews, and opinion pieces were excluded. Unpublished theses and dissertations were likewise excluded to ensure that the review focused on studies that had undergone formal peer review or scholarly editorial processes. Studies published outside the 2005–2026 timeframe, duplicate records, and studies that did not sufficiently align with the research objectives were also excluded from the review.

2.3 Information Sources and Search Strategy

To identify relevant literature, systematic searches were conducted in Google Scholar and ScienceDirect on March 17, 2026. These databases were selected because they provide broad multidisciplinary coverage of communication, linguistics, media studies, disaster research, and related social science disciplines. Google Scholar was included to maximize the retrieval of diverse scholarly literature, while ScienceDirect was used to identify peer-reviewed journal articles from a curated academic database.

The search strategy was developed using Boolean operators (AND, OR) and phrase searching to combine the key concepts of disaster communication, framing, language, and media. The search strings were adapted to the search interface of each database.

Table 1. Searching keywords.

Database	Search Date	Exact Search Strings	Filters Applied	Screening
Google Scholar	March 17, 2026	("disaster communication" OR "disaster risk communication") AND (framing OR "linguistic framing" OR discourse OR language) AND ("news media" OR newspaper OR "social media" OR Twitter OR Facebook)	English; 2005–2026	30 Pages (n=312)
ScienceDirect	March 17, 2026	("disaster communication" OR "disaster risk communication") AND (framing OR "linguistic framing" OR discourse OR language) AND ("news media" OR "social media")	English; 2005–2026; peer-reviewed research articles	(n=47)

For both databases, the search was limited to English-language publications published between 2005 and 2026. Eligible sources included peer-reviewed journal articles, conference proceedings, and scholarly book chapters. Editorials, commentaries, book reviews, unpublished theses, dissertations, and other non-empirical publications were excluded in accordance with the review's eligibility criteria.

For Google Scholar, the first 30 pages of search results (312 records) were screened because the relevance of studies declined substantially beyond this point. In

ScienceDirect, 47 records returned by the search strategy that satisfied the applied filters were screened.

All retrieved records were manually transferred into a master Google Sheets spreadsheet by recording each study's bibliographic information, including the title, author(s), publication year, source, and URL or DOI where available. Duplicate records were identified through manual comparison of titles, authors, publication years, and publication sources and were removed before the screening process. The remaining studies then underwent title screening, abstract screening, and full-text assessment according to the predefined inclusion and exclusion criteria. Detailed notes, eligibility decisions, and data extraction were subsequently documented in Google Docs to facilitate synthesis and reporting.

2.4 Selection of Sources of Evidence

In selecting sources as evidence, a systematic screening process was followed to ensure the relevance and quality of the studies included in the review. The bibliographic details and peer-review status of all included studies were verified using the publishers' official websites before final inclusion. Only studies published in peer-reviewed journals and eligible scholarly book chapters that satisfied the predefined inclusion criteria were retained. All retrieved records were initially organized in a spreadsheet to facilitate efficient management and tracking of studies. Duplicate records were subsequently identified and removed to prevent the repeated analysis of the same study. The titles of the remaining studies were then screened to determine their relevance to the focus of the scoping review. Following the title screening, the abstracts were examined against the established inclusion and exclusion criteria to assess their potential eligibility. Studies that met the criteria at the abstract level underwent a full-text review, during which their content, context, and overall relevance were carefully evaluated to ensure alignment with the objectives and scope of the review.

3. Data Handling

3.1 Data Charting Process

During the charting process for this scoping review, the studies were gathered from ScienceDirect and Google Scholar and entered into a master Google Sheet. This spreadsheet used a clear table format and a specific marking system, including color-coded labels, to quickly sort and track which studies met the inclusion criteria. For more detailed notes and summaries, the data was moved into Google Docs, providing a simple way to view the information and prepare it for the final paper. This method kept the entire extraction process visually clear and well-organized from start to finish.

1	TITLE	LINK	VERDICT	REASON
2	Disaster linguicism: Linguistic minorities in disasters	Disaster linguicism: Linguistic minorities in disasters Language in Society Cambridge Core	unrelated	Wrong focus
3	Disaster linguistics, climate change semantics and public discourse studies: a semantically-enhanced discourse study of 2011 Queensland Floods	Disaster linguistics, climate change semantics and public discourse studies: a semantically-enhanced discourse study of 2011 Queensland Floods - ScienceDirect	for review	
4	Preparing multilingual disaster communication for the crises of tomorrow: A conceptual discussion	https://www.sciencedirect.com/science/article/pii/S2212420923000699	for review	
5	Developing a multi-level organization-public dialogic communication framework to assess social media-mediated disaster communication and engagement outcomes	https://www.sciencedirect.com/science/article/pii/S036381112030076X	for review	
6	Disaster Risk Communication in Culturally and Linguistically Diverse Communities: The Role of Technology	https://www.mdpi.com/2504-3900/2/19/1256	unrelated	Wrong focus
7	How to transmit disaster information effectively: A linguistic perspective on Japan's Tsunami Warnings and Evacuation Instructions	https://link.springer.com/article/10.1007/s13753-013-0016-8	for review	
8	Analysing media framing of cyclone Amphan: Implications for risk communication and disaster preparedness	https://www.sciencedirect.com/science/article/abs/pii/S2212420921002387	for review	
9	Framing of disaster impact in online news media: a case study from Malawi on flood risk management	https://www.frontiersin.org/journals/communication/articles/10.3389/fcomm.2025.1519357/full	for review	
10	Resilience or Rhetoric? A Framing Analysis of Flood Disaster Reporting in Pakistan's Media	https://www.mdpi.com/2673-5172/6/4/185	for review	

Figure 1. Spreadsheet for data gathering.

3.2 Data Items

To ensure a systematic and organized synthesis of evidence, specific data items were extracted from each study included in the review. These data items were selected based on their relevance to the research objectives and their ability to provide a comprehensive understanding of how linguistic framing in disaster communication has been examined across different contexts. The extracted information enabled the researchers to compare studies, identify patterns and trends, and map the existing body of literature.

The author(s) and year of publication were recorded to establish the source of the study and to track the development of research over time. The language(s) studied were documented to identify the linguistic contexts examined and to determine whether certain languages or regions were more frequently represented in the literature. The research design or method was extracted to classify the methodological approaches employed by researchers, such as content analysis, discourse analysis, corpus linguistics, or mixed-methods designs. The thematic focus was identified to determine the primary issues or topics addressed in each study, including disaster risk communication, media framing, crisis narratives, or social media discourse. The key findings were summarized to capture the major results, conclusions, and contributions of each study to the understanding of linguistic framing in disaster communication. Collectively, these data items facilitated a structured analysis of the literature and supported the identification of recurring themes, methodological trends, and research gaps within the field.

4. Results

4.1. Study Selection Results

The database searches were conducted on March 17, 2026, and yielded 312 records from Google Scholar and 47 records from ScienceDirect. Because Google Scholar retrieves a large number of results with decreasing relevance, only the first 30

pages of search results were screened, following common practice in evidence synthesis. An initial relevance assessment was then conducted based on the study title and apparent relevance to the review topic. Studies that were clearly unrelated to disaster communication, linguistic framing, news media, or social media were excluded at this preliminary stage before formal screening. Following this initial relevance assessment, 137 records were manually transferred into a master Google Sheets database for the formal review process.

Bibliographic information, including the title, author(s), publication year, source, and URL or DOI (where available), was manually recorded in Google Sheets. 16 duplicate records were identified and removed through manual comparison of titles, authors, publication years, and publication sources before the formal screening process. The remaining records subsequently underwent title screening, abstract screening, and full-text assessment according to the predefined inclusion and exclusion criteria.

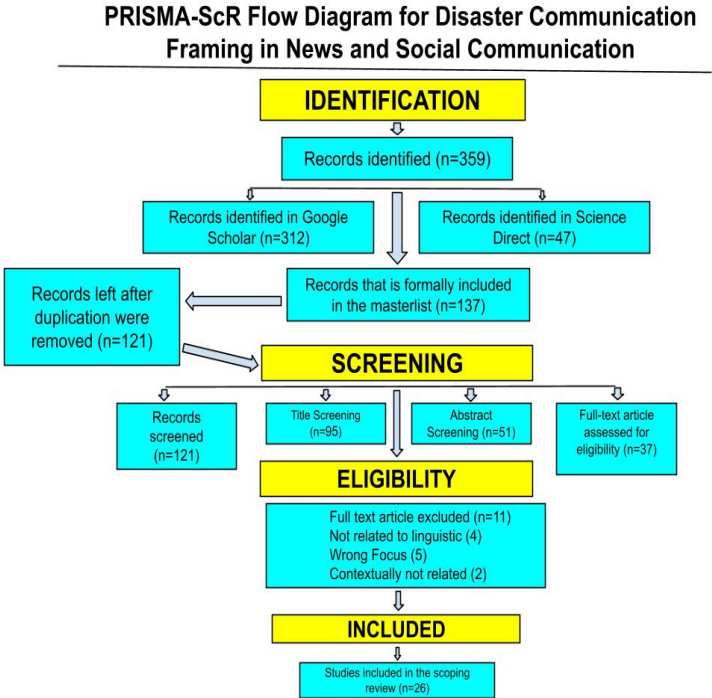


Figure 2. PRISMA flow diagram.

4.2 Characteristics of Included Studies

The final scoping review included 26 peer-reviewed studies published between 2005 and 2026, reflecting approximately two decades of research on linguistic framing in disaster communication. The included studies covered a broad geographical range, with research conducted in the Philippines, Japan, Pakistan, Malawi, the United Kingdom, Australia, the United States, and other international contexts.

The disciplinary distribution demonstrates the interdisciplinary nature of disaster communication research. As shown in Table 2, 10 studies (38.5%) were situated within Disaster Management and Disaster Risk Reduction, 8 studies (30.8%) were grounded in Linguistics and Discourse Studies, 5 studies (19.2%) belonged to Media and Communication Studies, and 3 studies (11.5%) were classified under Environmental and Ecological Communication.

Table 2. Percentage of the disciplines' distribution.

Discipline	Count of studies	Percentage
Disaster Management	10	38.5%
Linguistic Studies	8	30.8%
Media and News Studies	5	19.2%
Environmental & Ecological Studies	3	11.5%

Methodologically, the reviewed literature was dominated by qualitative research designs. The most frequently employed analytical approaches included framing analysis, critical discourse analysis (CDA), content analysis, Systemic Functional Linguistics (SFL), corpus linguistics, appraisal analysis, pragmatic analysis, semantic analysis, and natural language processing. Several studies also adopted systematic literature review methods to synthesize previous evidence on disaster communication.

The disaster contexts represented in the reviewed literature were predominantly natural hazards and public health emergencies. Frequently examined events included floods, typhoons and cyclones, volcanic eruptions, earthquakes, tsunamis, extreme weather events, and the COVID-19 pandemic. Only a limited number of studies addressed broader crisis communication contexts or technological and human-induced disasters.

The reviewed studies analyzed communication across both traditional and digital media environments. Traditional media sources primarily included newspapers, print journalism, television broadcasts, and official government bulletins, whereas digital communication studies examined online news platforms and social media, particularly X (formerly Twitter), Facebook, and other web-based communication channels. Table 3 summarizes the characteristics of the included studies according to publication year, disciplinary field, disaster focus, and analytical approach.

Table 3. Characteristics of the studies.

Year	Lead Authors	Discipline	Disaster Focus	Linguistic/ Analytical Approach
2021	Helen Bromhead	Applied linguistics	Flood	Semantic
2023	Shinya Uekusa	Sociolinguistics	General Crises	Translanguaging
2025	Cara S. Sacyaten	Public Perception/Disaster Communication	COVID-19	Systematic Literature Review
2018	Robert Ogie	Disaster Management	Natural Hazards	Systematic Literature Review
2013	Kyoko Arai	Applied linguistics	Tsunami	Pragmatic and Rhetorical Analysis
2015	John Houston	Disaster Communication	General Disasters	Systematic Literature Review
2025	Hannah Bianca Bailon	Disaster Management	Flood in Malawi	POS tagging
2025	Majid Raza	Environmental Communication	Pakistan Flood	Framing Analysis
2007	Brian Miles	Ecological Economics	General Disasters	Content Analysis
2014	Garry Jay Montemayor	News Communication	Typhoon Yolanda	Linguistic Choices
2020	Reymund Flores	Institution and Disaster Communication	COVID-19	Framing
2025	Muhammad Saleem	Media Studies	Extreme Weather Events	Framing theory
2022	Jiyuon Kim	Disaster Communication	2018 California Camp Fire	Content Analysis
2020	Chang Heon Lee	Social Media Analytics	2013 colorado floods	Natural Language Processing
2024	Tetsuta Komatsubara	Cognitive Linguistics	COVID-19 Pandemic	Cognitive linguistics Approach and Conceptual Metaphor Theory (CMT)
2024	Fatima M. Moncada	Disaster Risk Reduction	Taal Volcano Eruption	Framing Analysis
2018	Yotam Ophir	Media Studies	Infectious Disease Epidemics	Mixed-Method Content Analysis
2023	Romylyn Metila	Media and Communication Studies	COVID-19	Critical Discourse Analysis
2022	Chris Tang	Applied Linguistics	Extreme Temperatures	Pragmatic and Semantic Analysis
2026	Phan Tuan Ly	Corpus Linguistics	Natural Disaster	Systemic Functional Linguistics

2021	Debadutta Parida	Disaster Management	Cyclone Amphan	Content Analysis
2026	Jimboy B. Pagalilauan	Disaster Communication	Typhoon Tino and Tropical Storm Uwan	Appraisal Theory
2022	Stefano Morelli	Disaster Management	Natural Hazards	Systematic Literature Review of Framing Theory
2025	Melani Joy S. Gallardo	Applied Linguistics	COVID-19 Vaccination	Halliday's Transitivity Analysis
2016	Aletheia G. Canubas	Media Studies	Super Typhoon Haiyan (Yolanda)	Content Analysis and Comparative Framing Analysis
2025	Alyssa Manalo	Disaster Communication	Natural Disasters	News Framing

4.3 Synthesis of Results

The synthesis of the 26 included studies revealed several recurring linguistic features and framing devices that characterize disaster communication across traditional news media and digital platforms. These patterns were consistently observed across different disaster contexts, communication channels, and analytical approaches.

4.3.1 Linguistic Features and Framing Devices Characterized by Disaster-Related News and Posts

The most frequently reported linguistic feature was the use of urgent, directive, and action-oriented language. Studies consistently identified the use of imperative constructions, explicit instructions, and authoritative statements intended to promote immediate public action during emergencies. This pattern was evident across tsunami warnings, weather advisories, disaster bulletins, and social media posts, where messages emphasized evacuation, preparedness, and compliance with official recommendations.

Another dominant pattern was the widespread use of emotional framing. Many studies reported that disaster communication relied heavily on emotionally charged language, particularly expressions of fear, urgency, empathy, loss, and hope. Human-interest narratives focusing on victims, survivors, rescue operations, and community experiences were common across news reports, while social media communication frequently highlighted personal experiences and emotional responses during disaster events.

Several studies also identified the use of metaphorical framing to simplify complex disaster situations. Common metaphorical constructions included war metaphors, health metaphors, and conflict-oriented language, particularly in studies examining public health emergencies such as the COVID-19 pandemic. These

metaphorical expressions were used to communicate risk, emphasize urgency, and make complex crises more understandable to the public.

Grammatical and discourse-oriented analyses were likewise represented in the reviewed literature. Studies employing Systemic Functional Linguistics, Critical Discourse Analysis, and corpus linguistic approaches examined linguistic resources such as modality, transitivity, appraisal, semantic choices, and pragmatic strategies. These analyses demonstrated that disaster communication frequently employed epistemic and deontic modality to express certainty, obligation, and authority, while transitivity patterns commonly represented government agencies and emergency responders as the primary actors in disaster narratives.

The review also identified several recurring framing devices across the literature. Human-interest framing was among the most frequently reported, emphasizing the experiences of affected individuals and communities. Relief and response framing focused on evacuation efforts, humanitarian assistance, and emergency management activities. Resilience and heroism framing highlighted recovery, solidarity, and the actions of responders and government institutions. In addition, official and authoritative framing consistently prioritized institutional sources, official announcements, and government perspectives, while studies of social media communication frequently identified risk, vulnerability, and loss framing as dominant characteristics influencing information sharing and public engagement.

Beyond identifying the dominant linguistic characteristics of disaster communication, the included studies also revealed several methodological and contextual gaps that warrant further discussion.

4.3.2 Distribution of Research Across Media Types and Disaster Types

The included studies examined a range of disaster contexts and communication environments, although their distribution was uneven across disaster types and media platforms.

Natural disasters constituted the most frequently investigated context in the reviewed literature. These included typhoons, floods, earthquakes, tsunamis, volcanic eruptions, cyclones, and extreme weather events. Public health emergencies, particularly the COVID-19 pandemic, also represented a substantial proportion of the included studies. A smaller number of publications examined disaster communication more broadly without focusing on a single disaster event, while relatively few studies addressed technological or other human-induced disasters.

Across communication environments, the reviewed literature analyzed both traditional and digital media. Traditional news media—including newspapers, television broadcasts, and online news websites—were the dominant sources of data in many studies. These investigations primarily examined news reports, feature stories, headlines, editorials, and official disaster announcements published by media organizations.

Digital communication platforms were also widely represented in the literature.

Studies examined social media posts, government announcements distributed through online platforms, and user-generated content related to disaster events. Among the social media platforms, X (formerly Twitter) was the most frequently investigated because of its use during rapidly evolving disaster situations. Facebook was also represented in several studies, particularly those examining public engagement and community communication.

The reviewed studies further demonstrated variation in the communication materials selected for analysis. These included news articles, disaster bulletins, government advisories, press releases, emergency warnings, weather reports, online news reports, social media posts, hashtags, user comments, and public responses. While textual communication constituted the primary source of data, a limited number of studies also incorporated visual or multimodal materials alongside textual analysis.

4.3.3. Platforms and Types Mostly Studied

The reviewed literature examined disaster communication across a variety of communication platforms and message formats. Although both traditional and digital communication environments were represented, and textual communication remained the dominant form of analysis.

Among traditional media, newspapers, online news websites, television broadcasts, official government bulletins, and press releases were the most frequently examined sources. These communication forms were commonly analyzed to investigate news framing, institutional messaging, and public information dissemination during disaster events.

Digital communication studies primarily focused on social media platforms. X (formerly Twitter) was the most frequently investigated platform because of its extensive use during emergencies and the accessibility of publicly available data. Several studies also examined Facebook, while a smaller number analyzed other online communication environments, including websites and digital news platforms.

The communication materials analyzed across the included studies were diverse. Common data sources included news articles, headlines, disaster advisories, weather bulletins, evacuation notices, press releases, official announcements, government social media posts, public posts, hashtags, user comments, and online discussions. Most studies analyzed written textual data, while relatively few incorporated visual images, audiovisual materials, or other multimodal communication forms.

Institutional communication constituted a substantial proportion of the reviewed literature. Government agencies, disaster management organizations, emergency response authorities, and news organizations frequently served as the primary sources of communication examined in the included studies. Several studies also analyzed user-generated content to investigate public responses, information sharing, and online engagement during disaster events.

4.3.4 Research Gaps

The synthesis of the included studies identified several recurring research gaps in the existing literature on linguistic framing in disaster communication. The most frequently reported gap was the continued reliance on text-based communication as the primary unit of analysis. Most studies examined written news reports, government advisories, official announcements, or social media posts, whereas comparatively few investigated visual, audiovisual, or other multimodal forms of disaster communication.

A second recurring gap was the limited attention given to interactional and pragmatic dimensions of communication. While many studies analyzed linguistic structures, framing devices, and discourse strategies, relatively few examined how meaning is negotiated through real-time interactions between institutions, media organizations, and the public during disaster events. The reviewed literature also demonstrated a strong concentration on English-language datasets. Most studies were conducted using English-language news reports, government communications, or social media data, with comparatively fewer investigations examining multilingual communication or disaster discourse in non-English linguistic contexts.

In terms of research context, the literature predominantly focused on natural disasters and public health emergencies, while comparatively limited attention was given to technological disasters, industrial accidents, and other human-induced crises. Similarly, research was concentrated on traditional news media and widely used social media platforms, with fewer studies investigating emerging communication platforms or alternative digital communication environments.

5. Discussion

5.1 Linguistic Framing in Disaster Communication

The mapped evidence demonstrates that disaster communication extends beyond the transmission of factual information and functions as a strategic form of discourse that shapes public understanding, emotional responses, and behavioral intentions during crisis events. Across the reviewed studies, urgent and directive language consistently emerged as a dominant linguistic characteristic, reflecting the practical objective of encouraging immediate protective action. Rather than merely describing disaster events, communication frequently employed imperative constructions, authoritative expressions, and explicit calls to action that guided public decision-making during emergencies. This finding aligns with Arai (2013), who demonstrated that tsunami warning messages become more effective when they employ direct, imperative language that minimizes ambiguity and encourages immediate compliance with evacuation instructions. Similarly, Tang (2022) argued that carefully framed early warning messages influence how audiences interpret risk, emphasizing that linguistic

choices are central to motivating protective behavior during extreme weather events. These studies reinforce the present review's finding that directive language is not merely descriptive but serves a persuasive and action-oriented communicative function.

The widespread use of emotional framing further illustrates that disaster communication performs important interpersonal and social functions. Human-interest narratives, expressions of fear and uncertainty, and messages emphasizing hope, resilience, and collective responsibility were commonly observed across both traditional news media and digital communication platforms. These linguistic choices demonstrate that disaster communication seeks not only to inform audiences but also to influence emotional engagement and facilitate public understanding of complex crisis situations. This observation is supported by Ophir (2018), whose analysis of epidemic news coverage showed that emotional framing plays a significant role in shaping public perceptions of health emergencies by influencing how audiences evaluate risk and uncertainty. Likewise, Kim et al. (2022) found that social media messages emphasizing emotional relevance and carefully framed risk information were more likely to be shared by users, suggesting that emotional framing enhances both engagement and the dissemination of disaster-related information.

The frequent use of metaphorical framing likewise highlights the role of language in simplifying complex and uncertain events. Metaphors related to war, conflict, and health emergencies enable communicators to present unfamiliar or rapidly evolving disasters through concepts that are already familiar to audiences. While these linguistic strategies may improve message accessibility, they also shape how disasters are interpreted by emphasizing particular dimensions of a crisis while giving less attention to others. Komatsubara (2024) similarly observed that metaphorical framing in newspaper coverage of the COVID-19 pandemic transformed abstract public health risks into more familiar conceptual domains, thereby facilitating audience comprehension while simultaneously privileging certain interpretations over others. Such findings illustrate the dual role of metaphor as both a cognitive resource for simplifying complexity and a framing device capable of influencing public understanding of crises.

Grammatical and discourse-oriented analyses were likewise represented in the reviewed literature. Studies employing Systemic Functional Linguistics, Critical Discourse Analysis, and corpus linguistic approaches examined linguistic resources such as modality, transitivity, appraisal, semantic choices, and pragmatic strategies. These analyses demonstrated that disaster communication frequently employed epistemic and deontic modality to express certainty, obligation, and authority, while transitivity patterns commonly represented government agencies and emergency responders as the primary actors in disaster narratives. Comparable observations were reported by Ly et al. (2026), who found that modality choices in news discourse strengthened institutional authority by expressing varying degrees of certainty and obligation during natural disasters. Similarly, Gallardo et al. (2025) demonstrated that transitivity patterns in Philippine news discourse foregrounded institutional actors

while backgrounding affected communities, illustrating how grammatical choices contribute to the construction of particular social realities during crises.

The review also identified several recurring framing devices across the literature. Human-interest framing was among the most frequently reported, emphasizing the experiences of affected individuals and communities. Relief and response framing focused on evacuation efforts, humanitarian assistance, and emergency management activities. Resilience and heroism framing highlighted recovery, solidarity, and the actions of responders and government institutions. In addition, official and authoritative framing consistently prioritized institutional sources, official announcements, and government perspectives, while studies of social media communication frequently identified risk, vulnerability, and loss framing as dominant characteristics influencing information sharing and public engagement. These findings correspond with Entman's (1993) argument that framing operates by making selected aspects of reality more salient, thereby shaping how problems are defined, causes are interpreted, and appropriate responses are understood. They also support D'Angelo's (2002) view that framing should be understood as a multidimensional research paradigm in which linguistic choices, institutional practices, and audience interpretation collectively contribute to the construction of media narratives. Within disaster communication, these framing devices function not only as journalistic strategies but also as mechanisms that influence public understanding, trust, and collective action during crises.

5.2 Distribution Across Media and Disaster Types

The distribution of the reviewed literature reveals that disaster communication research has developed unevenly across disaster contexts and media environments. The predominance of studies on natural hazards and public health emergencies reflects the substantial communicative demands generated by these events, which often require rapid dissemination of information, coordinated public responses, and continuous media coverage. Consequently, these disasters have become central contexts for examining how language and framing influence public understanding during crises. This concentration is consistent with the broader disaster communication literature, which has increasingly focused on high-frequency and high-impact events because they generate extensive public discourse and provide rich sources of communicative data (Houston et al., 2015). Similarly, Morelli et al. (2022) observed that studies of disaster risk communication have largely centered on natural hazards and health emergencies, reflecting the urgency and visibility of these crises in both scholarly and media discourse.

In contrast, the limited attention given to technological disasters, industrial accidents, and other human-induced crises suggests that important dimensions of disaster communication remain insufficiently explored. These events often involve complex issues of institutional accountability, risk governance, and public trust, all of which are fundamentally shaped through communication. Expanding research beyond

natural hazards would therefore provide a more comprehensive understanding of how framing operates across different types of disasters and crisis situations. This observation echoes the findings of Sellnow and Seeger (2013), who argued that crisis communication research should encompass a broader range of hazards because different disaster contexts produce distinct communicative challenges and require different framing strategies. Human-induced crises, in particular, often involve contested narratives, responsibility attribution, and reputational concerns that differ substantially from those associated with natural disasters. Broadening the scope of linguistic framing research would therefore contribute to a more nuanced understanding of how communication functions across diverse emergency contexts.

The findings also indicate that traditional news media continue to play a significant role in disaster communication research despite the rapid expansion of digital communication platforms. News organizations remain influential because they function as primary sources of verified information during emergencies and frequently shape the narratives that are subsequently circulated through digital media. This continued emphasis demonstrates that legacy media remain important agenda setters even within increasingly networked communication environments. This finding is consistent with Chadwick's (2017) concept of the *hybrid media system*, which argues that traditional and digital media increasingly interact rather than operate as separate communication environments. During disasters, established news organizations continue to provide authoritative information that is subsequently amplified, contested, and redistributed across social media platforms. Likewise, Takahashi et al. (2015) demonstrated that information shared through Twitter during Typhoon Haiyan frequently originated from or referenced institutional and mainstream news sources, illustrating the continuing influence of legacy media in shaping online disaster narratives.

At the same time, the growing body of research examining social media reflects the transformation of disaster communication into a more participatory and interactive process. Unlike traditional media, digital platforms enable public authorities, journalists, emergency responders, and citizens to simultaneously create, share, and reinterpret disaster-related information. This shift suggests that framing is no longer produced exclusively by institutional actors but increasingly emerges through interactions among multiple communicative participants within digital networks. This participatory communication environment aligns with the work of Liu, Xu, and Tsai (2020), who proposed that social media facilitate dialogic communication between organizations and the public during disasters, enabling reciprocal information exchange rather than one-way dissemination. Similarly, Houston et al. (2015) emphasized that social media have fundamentally transformed disaster communication by allowing citizens to participate actively in information production, verification, and dissemination. Such developments reinforce contemporary perspectives that view framing as a dynamic and negotiated process shaped by multiple actors rather than solely by journalists or governmental institutions.

Collectively, these patterns demonstrate that contemporary disaster

communication operates within hybrid media environments where traditional journalism and digital communication coexist and influence one another. Understanding this interaction is essential for explaining how disaster narratives are produced and interpreted across modern communication systems. The convergence of traditional and digital communication platforms also suggests that future linguistic framing research should adopt cross-platform analytical approaches capable of examining how frames evolve as messages move between institutional media, social networking sites, and user-generated content. Such approaches would provide a more comprehensive understanding of the increasingly interconnected communication ecosystem that characterizes contemporary disaster discourse.

5.3 Communication Platforms and Evolving Communication Practices

One of the most evident patterns emerging from this review is the continued dominance of text-based communication in disaster communication research. Although the reviewed studies examined communication across both traditional and digital platforms, the overwhelming majority focused on written discourse, including news articles, official advisories, press releases, and social media posts. This methodological preference reflects the long-standing influence of linguistic, discourse analytic, and framing approaches within communication research, where textual data remain the primary source for examining meaning construction. This predominance is likewise reflected in disaster communication scholarship, where textual materials remain the most accessible and systematically archived sources for discourse and framing analyses (Morelli et al., 2022). While these approaches have generated important insights into linguistic framing, they also reveal a methodological tendency to privilege verbal communication over other semiotic resources, potentially overlooking the increasingly multimodal nature of contemporary disaster messaging.

However, contemporary disaster communication extends far beyond written language. Public agencies, news organizations, and individual users increasingly communicate through photographs, infographics, videos, livestreams, maps, and other visual or audiovisual formats that shape how disaster information is interpreted and shared. These multimodal forms of communication have become particularly prominent on digital platforms, where visual content often attracts greater public attention and engagement than text alone. The limited representation of these communication forms in the reviewed literature suggests that current research has not fully captured the complexity of disaster communication in contemporary media environments. This observation is supported by Kress (2010), who argues that communication in digital environments is inherently multimodal, with meaning emerging from the interaction of linguistic, visual, spatial, and other semiotic resources rather than from language alone. Similarly, Jewitt (2014) emphasizes that multimodal communication has become a defining characteristic of digital media, requiring analytical approaches capable of examining how different modes work together to construct meaning. Applying these perspectives to disaster communication

suggests that exclusive reliance on textual analysis may overlook important visual and interactive framing strategies that shape public interpretation of crises.

The findings also demonstrate the growing importance of digital platforms in disaster communication. Social media have transformed disasters from events communicated primarily by institutional actors into dynamic communication environments characterized by continuous interaction among governments, journalists, emergency responders, and the public. Information now circulates rapidly through reposting, commenting, hashtags, and user-generated content, allowing disaster narratives to evolve in real time. As a result, framing is increasingly influenced not only by media organizations but also by the participatory practices of online communities. Houston et al. (2015) similarly noted that social media have expanded the communicative roles of citizens from passive recipients of information to active contributors who generate, verify, and redistribute disaster-related content. Likewise, Liu et al. (2020) argued that digital platforms foster dialogic communication by facilitating reciprocal interaction between organizations and the public, thereby reshaping how disaster information is produced, interpreted, and circulated. These developments reinforce the present review's finding that framing within digital environments is increasingly collaborative and continuously negotiated among multiple communicative actors.

These developments highlight the need for methodological approaches capable of examining communication across multiple modes and platforms simultaneously. Future research would benefit from integrating multimodal discourse analysis, visual communication analysis, digital ethnography, and computational approaches with established linguistic and framing methodologies. Such integration would provide a more comprehensive understanding of how language, images, audiovisual materials, and platform affordances interact to shape public understanding and responses during disasters. From a methodological perspective, this integration reflects the growing recognition that complex communication environments require equally multidimensional analytical frameworks (Jewitt, 2014). Combining linguistic analysis with multimodal and computational approaches would enable researchers to examine not only what disaster messages say but also how visual design, platform affordances, and audience interaction collectively influence framing processes. Such an approach would advance disaster communication research by capturing the full range of communicative practices through which contemporary disaster narratives are constructed and negotiated across media environments.

5.4 Implications for Framing Theory and Future Research

This scoping review contributes to disaster communication research by providing a comprehensive synthesis of how linguistic framing has been examined across different disaster contexts, communication platforms, and analytical traditions. Rather than focusing on a single disaster event or communication channel, the review demonstrates that linguistic framing is a recurring feature of disaster communication

regardless of the type of hazard or media environment. This broader perspective highlights the consistency of framing strategies across diverse communicative settings while also revealing important gaps in the existing body of knowledge. These findings contribute to the broader understanding of framing as a process through which communicators select, emphasize, and organize aspects of reality to construct particular interpretations of events. As Entman (1993) emphasized, framing involves making certain aspects of perceived reality more salient in communication texts, thereby influencing how audiences define problems, identify causes, make judgments, and consider possible solutions. The present review extends this understanding by demonstrating how these framing processes operate consistently across different disaster contexts and communication environments.

The findings further reinforce the continuing relevance of framing theory in understanding disaster communication. Consistent with Entman's (1993) perspective, the reviewed studies demonstrate that disaster messages selectively emphasize particular aspects of reality, including urgency, institutional authority, vulnerability, resilience, and recovery, thereby shaping how disasters are interpreted by the public. Likewise, Scheufele's (1999) framing process model is reflected in the interaction between message production and audience interpretation, illustrating that framing influences not only the construction of disaster messages but also their reception and circulation. The consistency of these patterns across the reviewed literature suggests that framing remains a valuable analytical framework for examining how disaster narratives are constructed and how communicative choices influence public understanding. However, the findings also indicate that contemporary disaster communication requires framing theory to account for increasingly complex communication environments in which messages are produced, modified, and circulated across multiple platforms.

At the same time, the review indicates that contemporary disaster communication extends beyond the assumptions of classical framing theory. Increasingly networked communication environments allow governmental agencies, journalists, emergency responders, and citizens to simultaneously create, reproduce, and negotiate disaster narratives through digital platforms. This shift suggests that framing should be understood as a dynamic and collaborative process occurring across interconnected communication networks rather than as a unidirectional process controlled exclusively by institutional media. Contemporary perspectives on framing therefore provide a useful extension of the foundational work of Entman and Scheufele by recognizing the participatory and networked character of digital communication. This interpretation is consistent with D'Angelo's (2002) argument that framing should not be understood as a single theoretical tradition but as a multiparadigmatic field that incorporates different perspectives on message construction, interpretation, and social influence. Furthermore, the emergence of social media environments supports the view that frames are increasingly negotiated among multiple actors rather than simply transferred from media producers to audiences. Chadwick's (2017) concept of the hybrid media system further explains this transformation by illustrating how

traditional media institutions and digital platforms interact in shaping contemporary information flows.

The review also identifies several priorities for future research. Greater attention should be given to multimodal communication, including visual, audiovisual, and interactive forms of disaster messaging that increasingly shape public understanding across digital platforms. Expanding research to include multilingual and cross-cultural communication would improve the representativeness of the evidence and strengthen understanding of disaster communication in diverse linguistic contexts. Future studies should also examine technological and human-induced disasters, which remain comparatively underrepresented despite their growing societal significance. Methodologically, integrating discourse analysis with computational techniques, multimodal analysis, and digital communication research would provide a more comprehensive understanding of how framing operates within rapidly evolving media ecosystems. These recommendations reflect broader developments in communication research, where digital transformation has challenged researchers to move beyond text-centered approaches and examine how multiple modes, technologies, and social actors collectively influence meaning-making processes. As digital platforms continue to reshape crisis communication practices, future framing research should consider not only what messages communicate but also how platform structures, audience participation, and multimodal resources contribute to the construction of disaster narratives.

Collectively, these findings demonstrate that disaster communication research is evolving alongside broader changes in media technologies and public communication practices. By synthesizing current evidence and identifying emerging directions, this review provides a foundation for future investigations into how linguistic framing influences public understanding, risk perception, and communication during disasters in increasingly complex and interconnected communication environments.

5.5 Limitations

This scoping review has several methodological limitations that should be considered when interpreting the findings. First, the search strategy was limited to Google Scholar and ScienceDirect. Although these databases provide broad multidisciplinary coverage and access to high-quality peer-reviewed literature, relevant studies indexed exclusively in other databases, such as Scopus, Web of Science, or discipline-specific repositories, may not have been captured. Consequently, some relevant studies on linguistic framing in disaster communication may have been omitted. This limitation is consistent with evidence synthesis research showing that no single database provides exhaustive coverage of the scholarly literature and that database selection can influence the comprehensiveness of review findings (Haddaway et al., 2015).

Second, the review included only publications written in English and published between 2005 and 2026. Consequently, relevant studies published in other languages

or outside the specified publication period may have been excluded, potentially limiting the global representation of disaster communication research. Since disaster communication is influenced by linguistic, cultural, and regional contexts, restricting the review to English-language publications may have reduced the inclusion of evidence from disaster-prone regions where research is published in local languages. Peters et al. (2020) likewise noted that eligibility criteria, including language and publication period, inevitably shape the scope of evidence synthesized in scoping reviews and should therefore be acknowledged when interpreting findings.

Third, consistent with the objectives of a scoping review, this study sought to map the breadth and characteristics of the available literature rather than critically appraise the methodological quality or risk of bias of the included studies. As such, the findings provide an overview of existing evidence but should not be interpreted as an assessment of the strength or quality of that evidence. This approach is consistent with the methodological purpose of scoping reviews, which emphasizes identifying, mapping, and synthesizing the available body of literature rather than evaluating the quality of individual studies (Arksey & O'Malley, 2005; Levac et al., 2010). Similarly, Munn et al. (2018) distinguish scoping reviews from systematic reviews by explaining that the primary objective of scoping reviews is to examine the extent, range, and nature of existing research and to identify knowledge gaps rather than generate evidence for effectiveness or causal inference.

Despite these limitations, the review provides a comprehensive synthesis of current research on linguistic framing in disaster communication and identifies key methodological trends, thematic patterns, and directions for future research. By systematically mapping the available evidence across different disaster contexts, communication platforms, and analytical approaches, this review offers a valuable foundation for future systematic reviews and empirical investigations that can further evaluate the quality of evidence and expand coverage across databases, languages, and underrepresented disaster contexts.

6. Conclusion

This scoping review mapped the existing literature on linguistic framing in disaster communication published between 2005 and 2026, synthesizing evidence from 26 peer-reviewed studies across news media, social media, government advisories, and other communication platforms. The findings indicate that disaster communication research remains predominantly text-centered, with linguistic framing commonly characterized by urgent, directive, and action-oriented language intended to influence public understanding, risk perception, and protective behaviors. The review also revealed important patterns in the existing literature, including the predominance of studies on natural disasters, the extensive use of English-language datasets, and the limited attention given to technological and human-induced disasters, multilingual contexts, and multimodal forms of communication. By systematically mapping the available evidence, this review provides a comprehensive overview of

how linguistic framing has been examined in disaster communication while identifying key research gaps that warrant further investigation. The use of the Arksey and O'Malley framework, together with the JBI guidance and the PRISMA-ScR reporting framework, ensured a transparent and structured synthesis of the existing literature that may serve as a useful foundation for future evidence syntheses and empirical studies in this field.

Future research should expand beyond text-based analyses by incorporating visual, audiovisual, and multimodal approaches to better reflect the increasingly diverse communication environments through which disaster information is produced and consumed. Greater attention should also be given to technological and human-induced disasters, multilingual and cross-cultural contexts, and underrepresented regions to develop a more inclusive understanding of linguistic framing across different disaster settings. Addressing these gaps will contribute to a more comprehensive understanding of disaster communication and support the development of evidence-informed communication strategies that enhance public preparedness, improve risk communication, and strengthen community resilience before, during, and after disasters.

Acknowledgment

Sincere appreciation is given to all peer reviewers for their valuable comments and suggestions, which helped the author to improve the quality of the manuscript.

Conflict of Interest Statement

The author declares no conflict of interest.

References

- Arai, K. (2013). How to transmit disaster information effectively: A linguistic perspective on Japan's tsunami warnings and evacuation instructions. *International Journal of Disaster Risk Science*, 4(3), 150–158. <https://doi.org/10.1007/s13753-013-0016-8>
- Arksey, H., & O'Malley, L. (2005). Scoping studies: Towards a methodological framework. *International Journal of Social Research Methodology*, 8(1), 19–32. <https://doi.org/10.1080/1364557032000119616>
- Bailon, H., Boersma, K., Orellana-Rodriguez, C., & Van Den Homberg, M. (2025). Framing of disaster impact in online news media: A case study from Malawi on flood risk management. *Frontiers in Communication*, 10, Article 1519357. <https://doi.org/10.3389/fcomm.2025.1519357>
- Bromhead, H. (2021). Disaster linguistics, climate change semantics, and public discourse studies: A semantically enhanced discourse study of the 2011 Queensland floods. *Language Sciences*, 85, Article 101381. <https://doi.org/10.1016/j.langsci.2021.101381>

- Canubas, A. G., Barroga-Jamias, S., & Tirol, M. S. (2016). Framing Super Typhoon Haiyan by Philippine and international online news sites. *Philippine Journal of Development Communication*, 8, 80–118. <https://pjdc.uplb.edu.ph/wp-content/uploads/2022/07/PJDC-8-2-04.pdf>
- Chadwick, A. (2017). *The hybrid media system: Politics and power* (2nd ed.). Oxford University Press. <https://doi.org/10.1093/oso/9780190696726.001.0001>
- D'Angelo, P. (2002). News framing as a multiparadigmatic research program: A response to Entman. *Journal of Communication*, 52(4), 870–888. <https://doi.org/10.1111/j.1460-2466.2002.tb02578.x>
- Entman, R. M. (1993). Framing: Toward clarification of a fractured paradigm. *Journal of Communication*, 43(4), 51–58. <https://doi.org/10.1111/j.1460-2466.1993.tb01304.x>
- Flores, R., & Asuncion, X. V. (2020). Toward an improved risk/crisis communication in this time of the COVID-19 pandemic: A baseline study for Philippine local government units. *Journal of Science Communication*, 19(7), A09. <https://doi.org/10.22323/2.19070209>
- Gallardo, M. J. S., Isiang, R. R. D., Gatao, J. D., Labayan, K. L. C., & Alawi, T. O. (2025). Framing social reality through language: A transitivity analysis of news discourse in the Philippines. *International Journal of Research and Innovation in Social Science*, 9(9), 1067–1078. <https://doi.org/10.47772/IJRIS.2025.90900095>
- Haddaway, N. R., Collins, A. M., Coughlin, D., & Kirk, S. (2015). The role of Google Scholar in evidence reviews and its applicability to grey literature searching. *PLOS ONE*, 10(9), e0138237. <https://doi.org/10.1371/journal.pone.0138237>
- Houston, J. B., Hawthorne, J., Perreault, M. F., Park, E. H., Goldstein Hode, M., Halliwell, M. R., Turner McGowen, S. E., Davis, R., Vaid, S., McElderry, J. A., & Griffith, S. A. (2015). Social media and disasters: A functional framework for social media use in disaster planning, response, and research. *Disasters*, 39(1), 1–22. <https://doi.org/10.1111/disa.12092>
- Jewitt, C. (Ed.). (2014). *The Routledge Handbook of Multimodal Analysis* (2nd ed.). Routledge.
- Kim, J., Wang, Y., Ma, L., & Chatham, A. (2022). Engaging the public in disaster communication: The effect of message framing on sharing intentions for social media posts. *International Journal of Strategic Communication*, 16(4), 649–662. <https://doi.org/10.1080/1553118X.2022.2033979>
- Komatsubara, T. (2024). Framing and metaphor in media discourse: Multi-layered metaphorical framings of the COVID-19 pandemic in newspaper articles. In *The Routledge handbook of language and mind engineering* (pp. 274–292). Routledge. <https://api.taylorfrancis.com/content/chapters/oa-edit/download?identifierName=doi&identifierValue=10.4324/9781003289746-23&type=chapterpdf>
- Kress, G. (2010). *Multimodality: A social semiotic approach to contemporary communication*. Routledge. <https://doi.org/10.4324/9780203970034>
- Lee, C. H., & Yu, H. (2020). The impact of language on retweeting during acute natural disasters: Uncertainty reduction and language expectancy perspectives. *Industrial Management & Data Systems*, 120(8), 1501–1519. <https://doi.org/10.1108/IMDS-12-2019-0711>

- Lievac, D., Colquhoun, H., & O'Brien, K. K. (2010). Scoping studies: Advancing the methodology. *Implementation Science*, 5, 69. <https://doi.org/10.1186/1748-5908-5-69>
- Liu, W., Xu, W. W., & Tsai, J. Y. J. (2020). Developing a multi-level organization-public dialogic communication framework to assess social media-mediated disaster communication and engagement outcomes. *Public Relations Review*, 46(4), Article 101949. <https://doi.org/10.1016/j.pubrev.2020.101949>
- Ly, P. T., Truc, H. N. T., & Khanh, K. M. (2026). Modality in news discourse on natural disasters: A study of the United Kingdom press. *Thu Dau Mot University Journal of Science*, 8(1), 1–20. <https://doi.org/10.37550/tdmu.EJS/2026.01.693>
- Manalo, A. S. (2025). Media framing of disaster responses in the Philippines. *Southeast Asian Media Studies Journal*, 7(1), 1–22. <https://seamsa.org/wp-content/uploads/2025/12/seamsj-7.1-alyssa-s.-manalo-media-framing-1-22-published.pdf>
- Metila, R. A., Morallo, A. B., & Zara, N. O. (2024). Discourse analysis of news frames in Philippine banner stories on COVID-19: Implications for media and information literacy during crises. *Media Asia*, 51(1), 81–101. <https://doi.org/10.1080/01296612.2023.2241743>
- Miles, B., & Morse, S. (2007). The role of news media in natural disaster risk and recovery. *Ecological Economics*, 63(2–3), 365–373. <https://doi.org/10.1016/j.ecolecon.2006.08.007>
- Moncada, F. M., Martinez-Villegas, M. M., & Perez, J. S. (2024). Framing analysis of the print media coverage of the 2020 Taal volcano eruption. *International Journal of Disaster Risk Reduction*, 100, Article 104162. <https://doi.org/10.1016/j.ijdr.2023.104162>
- Montemayor, G. J. (2017). Communicating risks, risking (mis)communication: Mass media and the science of disasters. *Kasarinlan: Philippine Journal of Third World Studies*, 32(1–2), 181–204.
- Morelli, S., Pazzi, V., Nardini, O., & Bonati, S. (2022). Framing disaster risk perception and vulnerability in social media communication: A literature review. *Sustainability*, 14(15), Article 9148. <https://doi.org/10.3390/su14159148>
- Munn, Z., Peters, M. D. J., Stern, C., Tufanaru, C., McArthur, A., & Aromataris, E. (2018). Systematic review or scoping review? Guidance for authors when choosing between a systematic or scoping review approach. *BMC Medical Research Methodology*, 18, 143. <https://doi.org/10.1186/s12874-018-0611-x>
- Ogie, R. I., James, S., Moore, A., Dilworth, T., Amirhasemi, M., & Whittaker, J. (2022). Social media use in disaster recovery: A systematic literature review. *International Journal of Disaster Risk Reduction*, 70, Article 102783. <https://doi.org/10.1016/j.ijdr.2022.102783>
- Ophir, Y. (2018). Coverage of epidemics in American newspapers through the lens of the crisis and emergency risk communication framework. *Health Security*, 16(3), 147–157. <https://doi.org/10.1089/hs.2017.0106>
- Pagalilauan, J. B., Romero, M. A., Cruz, E. T., & Hernandez, R. R. (2026). Emotional framing in disaster communication: An analysis of PAGASA bulletins and media coverage of typhoon Tino (Kalmaegi) and severe tropical storm Uwan (Fung-Wong) in 2025. *International Journal of*

Research and Innovation in Social Science, 10(2), 3960–3966.

<https://doi.org/10.47772/ijriss.2026.10200288>

- Parida, D., Moses, S., & Rahaman, K. R. (2021). Analysing media framing of cyclone Amphan: Implications for risk communication and disaster preparedness. *International Journal of Disaster Risk Reduction, 59*, Article 102272. <https://doi.org/10.1016/j.ijdrr.2021.102272>
- Peters, M. D. J., Godfrey, C. M., Khalil, H., McInerney, P., Parker, D., & Soares, C. B. (2020). Guidance for conducting systematic scoping reviews. *JBIM Evidence Synthesis, 18(10)*, 2119–2126. <https://doi.org/10.11124/JBIES-20-00167>
- Raza, M., Khalil, H., Fareed, M., Eneizat, M. F., Ab Ul Hassan, A., & Faizuddin, A. (2025). Resilience or rhetoric? A framing analysis of flood disaster reporting in Pakistan's media. *Journalism and Media, 6(4)*, Article 185. <https://doi.org/10.3390/journalmedia6040185>
- Sacyaten, C. S. (2025). Crisis communication in times of disasters: Public perceptions on the timeliness and clarity of safety announcements: A systematic literature review. *International Journal of Disaster Risk Management, 7(2)*, 193–208. <https://doi.org/10.18485/ijdrm.2025.7.2.11>
- Saleem, M., Gul, S., & Khan, K. (2025). Framing through weather reports: A corpus-assisted ecolinguistic analysis. *Journal of Social Sciences Research & Policy, 3(3)*, 676–691. <https://doi.org/10.71327/jssrp.33.676.691>
- Scheufele, D. A. (1999). Framing as a theory of media effects. *Journal of Communication, 49(1)*, 103–122. <https://doi.org/10.1093/joc/49.1.103>
- Sellnow, T. L., & Seeger, M. W. (2013). *Theorizing Crisis Communication*. Wiley-Blackwell.
- Takahashi, B., Tandoc, E. C., Jr., & Carmichael, C. (2015). Communicating on Twitter during a disaster: An analysis of tweets during Typhoon Haiyan in the Philippines. *Computers in Human Behavior, 50*, 392–398. <https://doi.org/10.1016/j.chb.2015.04.020>
- Tang, C. (2022). ‘Amber alert’ or ‘heatwave warning’: The role of linguistic framing in mediating understandings of early warning messages about heatwaves and cold spells. *Applied Linguistics, 43(2)*, 227–248. <https://doi.org/10.1093/applin/amab020>
- Tricco, A. C., Lillie, E., Zarin, W., O’Brien, K. K., Colquhoun, H., Levac, D., Moher, D., Peters, M. D. J., Horsley, T., Weeks, L., Hempel, S., Akl, E. A., Chang, C., McGowan, J., Stewart, L., Hartling, L., Aldcroft, A., Wilson, M. G., Garritty, C., ... Straus, S. E. (2018). PRISMA extension for scoping reviews (PRISMA-ScR): Checklist and explanation. *Annals of Internal Medicine, 169(7)*, 467–473. <https://doi.org/10.7326/M18-0850>
- Uekusa, S., & Matthewman, S. (2023). Preparing multilingual disaster communication for the crises of tomorrow: A conceptual discussion. *International Journal of Disaster Risk Reduction, 87*, Article 103589. <https://doi.org/10.1016/j.ijdrr.2023.103589>

Author Contributions: Jotahot, A.; Study design, method conception, data collection, data analysis and manuscript writing.