



Communication, Local Tradition and Disaster Resilience: A Systematic Literature Review

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Abstract

Communities worldwide are facing increasingly intense natural disasters due to climate change. Numerous studies have been conducted in the field of disaster management, encompassing research on local culture and disaster resilience. This Systematic Literature Review (SLR) aims to examine the importance of traditional knowledge in strengthening disaster resilience and to explore the role of communication in the transmission of local cultural practices related to disasters. The literature search reveals that research on communication related to disaster resilience has grown significantly, reflecting technological advances, particularly in digital platforms. This study highlights the importance of adaptive systems in disaster response, including enhancing communication skills to strengthen community resilience. Methodologically, the Scopus database was used to search for literature from 2015 to 2025 using specific keywords. The keywords used were "disaster" AND "resilience" AND "communication" AND "traditional knowledge" OR "culture" OR "indigenous knowledge" OR "local wisdom." Keywords were modified through inclusion and exclusion criteria. The inclusion criteria covered disaster resilience topics related to local culture. Meanwhile, the

exclusion criteria included publications not in English and research lacking relevance to disaster resilience. The results indicate a lack of communication studies related to local traditional knowledge systems for disaster resilience. Therefore, continued research in this area is crucial.

Keywords: *Disaster Communication, Disaster Resilience, Local Culture*

Abstrak

Masyarakat di seluruh dunia saat ini tengah menghadapi tantangan bencana alam yang semakin intens akibat perubahan iklim. Berbagai penelitian di bidang kebencanaan telah dilakukan, termasuk yang berhubungan dengan budaya lokal dan ketahanan bencana. Tinjauan Literatur Sistematis (SLR) ini berupaya mengidentifikasi signifikansi pengetahuan tradisional dalam meningkatkan ketahanan bencana dan peran komunikasi dalam proses transfer budaya lokal terkait kebencanaan. Dari penelusuran literatur, terlihat bahwa penelitian komunikasi terkait ketahanan bencana telah berkembang secara signifikan, mencerminkan kemajuan teknologi, khususnya di platform digital. Studi ini menekankan pentingnya sistem adaptif dalam respons bencana, termasuk peningkatan komunikasi daring untuk memperkuat ketahanan masyarakat. Secara metodologis, basis data Scopus digunakan untuk mencari literatur dari tahun 2015 hingga 2025 dengan menggunakan kata kunci "*disaster*" AND "*resilience*" AND "*communication*" AND ("*traditional knowledge*" OR "*culture*" OR "*indigenous knowledge*" OR "*local wisdom*"). Kata kunci dimodifikasi berdasarkan kriteria inklusi dan eksklusi. Kriteria inklusi meliputi topik ketahanan bencana yang berhubungan dengan budaya lokal. Sementara kriteria eksklusi meliputi publikasi yang tidak berbahasa Inggris, dan penelitian yang kurang menekankan ketahanan bencana. Hasilnya menunjukkan kurangnya studi di bidang komunikasi yang terkait dengan sistem pengetahuan tradisi lokal untuk ketahanan bencana. Oleh karena itu, penelitian di bidang ini penting untuk terus dilakukan.

Kata Kunci: *Komunikasi Bencana, Ketahanan Bencana, Budaya lokal*

A. Introduction

In recent decades, populations worldwide have been confronting the escalating severity of natural catastrophes driven by climate change (Bridge et al., 2023; Buchecker et al., 2016; Gargiulo et al., 2025; Naz et al., 2021; Tagarev & Ratchev, 2020). Many researchers are developing innovations to address disaster risk. In various regions of Indonesia, such as Palu, Pandeglang, and Banten, cultural and religious norms underpin local behavior in planning and adapting to disasters (Firdaus et al., 2023; Wahyuningtyas et al., 2019; Yulianto et al., 2021). Likewise, many coastal communities in Indonesia possess traditional knowledge of natural signs indicating an impending tsunami, such as in Aceh, the sudden receding of seawater, known in the local Simeulue language as "*smong*". The research explains how traditional knowledge of "*smong*," passed down through songs and stories, saved thousands of Simeulue residents during the 2004 tsunami (Gadeng et al., 2018; Sulistiyan & Zulfa, 2023; Sutton et al., 2020). Therefore, incorporating traditional knowledge and local wisdom into calamity risk-reduction strategies has garnered increasing recognition as an essential element in fostering community resilience. (Allan et al., 2017; Feldman et al., 2016; Lavy & Zavar, 2023; Lesley Hatipone, 2023).

Multiple investigations have demonstrated that indigenous and local knowledge systems, developed over generations through direct interaction and observation of the environment, can provide valuable insights for disaster preparedness. This has also been recognized by the United Nations through the United Nations Office for Disaster Risk Reduction (UNDRR) Work Program. This program is a capacity-building initiative included in its disaster risk strategy (UNDRR, 2025). However, a critical challenge lies in effectively communicating and preserving this indigenous knowledge in ways that enhance community resilience while respecting its cultural context and authenticity.

Traditional knowledge comprises complex practices, beliefs, and insights that communities have developed through prolonged engagement with their local environment (Paudel et al., 2024). Traditional knowledge, conveyed across generations via oral transmission, cultural practices, and everyday experiences, has enabled communities to anticipate, prepare for, and adapt to a variety of natural hazards (Deng, 2023; Irwansyah et al., 2024; Ueda, 2019). Traditional wisdom has consistently been demonstrated in disaster risk reduction, both through understanding weather patterns and identifying natural early warning systems (Reyes-García et al., 2019). Therefore, disaster mitigation efforts will be more effective if culture is considered a crucial aspect in reducing vulnerability (Thomas et al., 2019).

Nevertheless, the transmission of traditional knowledge has faced significant challenges in the modern world. Rapid urbanization, technological advances, and evolving social structures have undermined the process of transferring local knowledge (Aswani et al., 2018; Fernández-Llamazares et al., 2021). The increasing intensity and severity of disasters, as well as changing environmental conditions, pose new challenges to the application of traditional knowledge and culture within contemporary disaster risk management frameworks. Effective communication and integration of traditional knowledge with contemporary scientific methodologies are crucial for strengthening community resilience to disasters.

Understanding how to communicate traditional knowledge and local wisdom effectively is essential for several reasons. Firstly, it helps safeguard significant cultural assets that could otherwise be lost to modernization (Sahni & Aulakh, 2021; Zin & Ismail, 2023). Secondly, it allows communities to preserve and enhance their intrinsic resilience capacities (Patel et al., 2017). Thirdly, it promotes the amalgamation of traditional practices with modern disaster management tactics (Kristian & Ikhsan, 2024), potentially producing more effective and culturally appropriate strategies for disaster risk mitigation (Paudel et al., 2024).

This literature review analyzes the mechanisms, challenges, and effective practices for communicating traditional knowledge and local wisdom to improve disaster resilience. The research presented here examines how diverse global communities have preserved and modified their traditional knowledge systems, the roles of various stakeholders in this endeavor, and the effects of different communication strategies on community resilience. The focus is on the convergence of traditional and modern communication methods, the significance of intergenerational knowledge transfer, and the challenges of preserving the authenticity and efficacy of traditional wisdom within current disaster risk reduction frameworks. Specifically, this systematic literature review addresses the lack of communication research on disasters, particularly regarding cultures and local knowledge. Therefore, this systematic literature review addresses the following question: How do literary studies and academic reports, particularly journals, depict and analyze disaster resilience worldwide? What contribution can communication science make to disaster resilience in the community? How does literary research explore the transmission of local traditional knowledge for the purpose of disaster resilience? In this sense, we have seen the relevance between the communication of traditional knowledge or local wisdom and disaster resilience. Communication science can contribute to disaster resilience in the community.

In this article, we argue that research on communication related to disaster resilience has advanced significantly, mirroring broader technological trends, particularly in digital platforms and social media. The rise of social media platforms, including Twitter and Facebook, has revolutionized the distribution of information during disaster events. These platforms facilitate real-time communication, crowd-sourced information, and the swift mobilization of resources. The necessity for adaptive systems in disaster response underscores the critical role of social media in enhancing communication. Furthermore, we observe that social media is vital for promoting a more dynamic online media environment that bolsters community resilience and facilitates discussions following disasters.

There are four distinct components that make up this article. An overview of conventional disaster-related knowledge and its connection to communication as a means of reducing disaster risk is presented in the introduction. The approach used in conducting the systematic literature review is discussed in the second section. In this stage, we applied the PRISMA protocol, used keywords, and selected research papers (see diagram 1).

This systematic literature review aims to gather all pertinent papers and materials that satisfy predetermined inclusion criteria to address a given research issue. (Mengist et al., 2020; Page et al., 2021). It is accomplished through a technique that is replicable, rigorous, and transparent. In the third section, the study's findings are discussed, and

research gaps in the literature are highlighted. In the final section, the research endeavour is brought to a close, and suggestions are offered for further investigation. Furthermore, this research review is to identify critical characteristics that contribute to disaster resilience. Additionally, this review will discuss how these traditions might be maintained and adapted in an era of rapid environmental and social change. With this research, we contribute to a better understanding of how communities can preserve and use their traditional knowledge to strengthen their resilience to natural disasters while adapting to contemporary challenges.

B. Methods

By conducting a comprehensive literature review, we mapped and evaluated research that brings together the ideas of communication, local customs, and disaster resilience. Systematic Literature Reviews (SLRs) are distinct from traditional narrative approaches because they use scientific, transparent, and reproducible methods. This systematic literature review adhered to the requirements established by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) to minimize the possibility of bias and guarantee an all-encompassing approach from the beginning (PRISMA, 2020). A scientific database was utilized to find more trustworthy sources.

The first step was to formulate a research plan and prepare a review protocol. This is done by documenting the background, research questions, inclusion/exclusion criteria (study acceptance criteria), and search strategy. The second step was identifying keywords. For this step, several keywords were used in the Scopus database, such as "communication" AND "local tradition" AND "disaster" AND "resilience." These keywords are important to produce appropriate literature related to the research. However, using these keywords, no literature was found in the Scopus database. We then reduced the keywords and changed them into "communication" AND "disaster" AND "resilience." These three keywords, in contrast, yielded a large body of literature. There were 1665 pieces of literature. Simultaneously, the keywords were updated by adding several words considered synonymous with other keywords, such as "disaster" AND "resilience" AND "communication" AND "traditional knowledge" OR "culture" OR "indigenous knowledge" OR "local wisdom." These keywords gained 84 articles in the Scopus database.

The next step is to filter the data by setting a time frame from 2015 to 2025 to obtain more recent insights. 77 pieces of literature were identified in the filtering process. Subsequently, after identifying the suggested keywords and applying temporal filters. The researchers then evaluate the publications based on the established criteria. The criteria serve as inclusion parameters to refine the selection of articles: the studies primarily focused on the transmission of traditional knowledge in crisis scenarios. The research analyses the development of community resilience. The examination of literature regarding Indigenous knowledge systems in disaster management. The articles are empirical studies. The literature is peer-reviewed. These fundamental notions are the inclusion criteria that might guide the screening process (diagram 1).

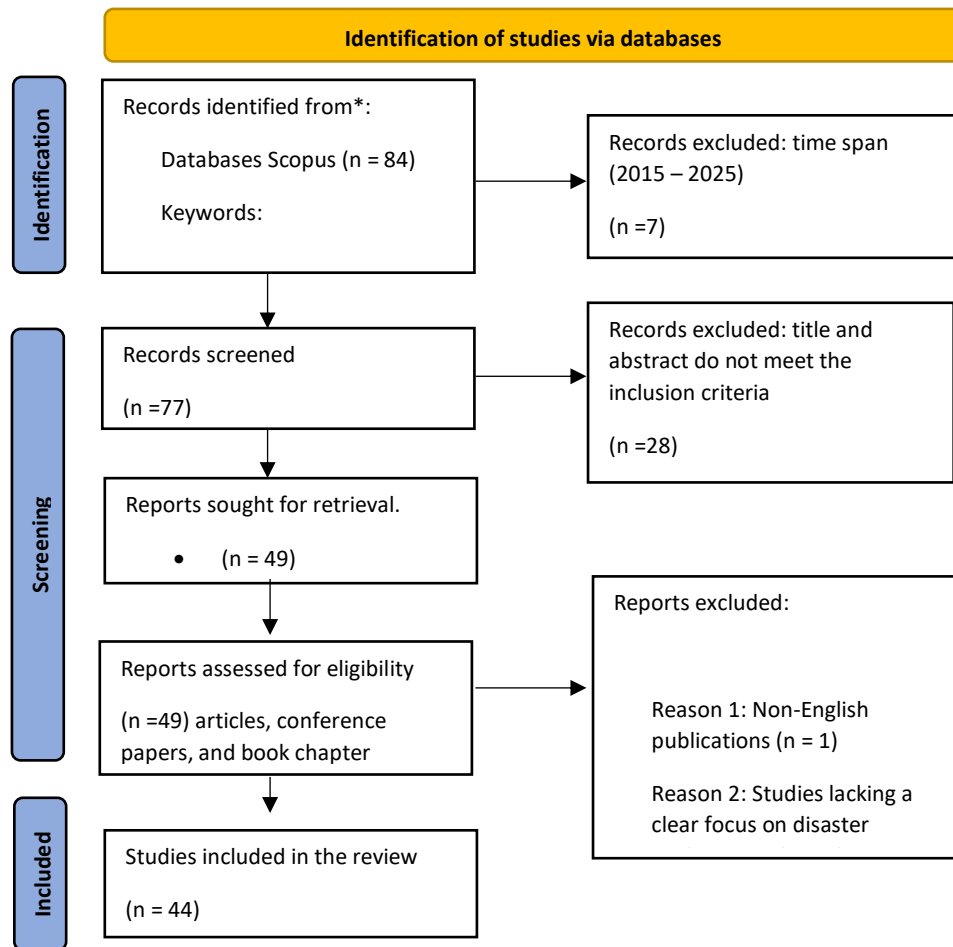


Diagram 1: Prisma Identification of studies via database
Source: Prisma 2020 statement, 2025.

Subsequently, complete research articles that explicitly identify the research design are included as data in this study. This is performed to achieve comprehensive research results. We did not strictly adhere to the first criterion because there was limited literature that covered all three themes simultaneously. In this analysis, we focus on adhering to the second and third requirements to obtain a more extensive body of literature while also referring to the concepts to be discussed.

In the initial screening, we examine the title and the abstract to acquire a brief understanding of the literature review. After reviewing the titles and abstracts, 49 papers were identified. Articles that failed to meet the inclusion criteria were removed. We have established exclusion criteria to streamline the data extraction process. The exclusion criteria include the following: first, publications not in English, and second, studies lacking a clear emphasis on disaster resilience. Six pieces of literature were excluded for one non-English work, and after reviewing the introduction briefly, five others were set aside due to a lack of clear focus on the required term. In total, 44 articles were examined and analysed.

We used PRISMA tools to conduct a thematic analysis. Thematic analysis was performed to uncover recurring themes and patterns within qualitative data (Clarke & Braun, 2017).

C. Results and Discussion

Technically, to obtain a more in-depth understanding of the topics of “Disaster Communication,” “Local Traditions,” and “Disaster Resilience,” the authors searched the Scopus database for prior research using keywords associated with these topics. The searches using these keywords yielded several studies across various fields. Each of these studies offered valuable insights into disaster resilience research across various places and countries.

Using the PRISMA tool, we examined the titles and abstracts to gain specific knowledge of the literature. Subsequently, after reviewing the titles and abstracts, 49 papers were identified. Nonetheless, the results show that the investigated articles that appeared to fail the inclusion criteria were removed. We also left out some criteria to make the data extraction process easier. The exclusion criteria are as follows: first, publications not in English; second, studies without a clear focus on disaster resilience. One non-English work was not included, and five others were not included because they didn't clearly focus on the required term after a quick look at the introduction. A total of 44 articles were scrutinized and analyzed. Utilizing PRISMA tools for thematic analysis to identify recurring themes and patterns at this stage is essential.

Notably, research on communication approaches adapted to local culture and informed by local traditions or cultures remains very limited, particularly in reputable international journals. A comprehensive literature search in the Scopus database identified only two studies that combine the three concepts (Fakhriati et al., 2023; Minguez Garcia et al., 2024). Some literature related to disaster resilience found only discusses two concepts, such as local culture and disaster resilience (Alhadi et al., 2023; Firdaus et al., 2023; Galarza-Villamar et al., 2018; Latai-Niusulu et al., 2023; Nadzirah et al., 2025; Nakileza et al., 2017; Paudel et al., 2024; Santiago-Gómez & Rodríguez-Rodríguez, 2023; Wardekker et al., 2023; Yang, 2024), or communication and disaster resilience (Liu, 2022; Okeukwu-Ogbonnaya et al., 2024; Pavese et al., 2020; Rice & Jahn, 2020; Rogers et al., 2016; Shittu et al., 2018; Spialek et al., 2016, 2019, 2023; Spialek & Houston, 2022).

This literature study has been divided into three primary sections as seen in Table 1: Disaster Resilience, Local Traditional Knowledge, and Communicating Local Traditional Knowledge for Disaster Resilience. This procedure is followed to ensure the key concepts are understood in an understandable and straightforward way.

Disaster and Community Resilience

The conceptualization of “community resilience” is an essential component in disaster resilience. Certain studies have highlighted the importance of individual and communal abilities to adapt and recuperate, whereas others have underscored the influence of social, economic, and infrastructural elements in determining community resilience. (Cuthbertson et al., 2023; Imperiale & Vanclay, 2016; Patel et al., 2017). Furthermore, the United Nations Office for Disaster Risk Reduction (UNISDR) provides an additional definition

of community resilience in relation to a disaster. According to UNISDR, community resilience is defined as "the ability of a system, community, or society exposed to hazards to resist, absorb, accommodate, and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions" (Rogers et al., 2016). The varied definition of this term has enriched the framework of community resilience.

In spite of the fact that there are a few distinct interpretations of the term, a scholar contends that adaptive capacity is an essential component of community resilience (Cretney, 2016). This aspect emphasizes the ability to respond to unexpected events and mitigate the consequences of similar occurrences in the future. According to the findings of researchers, adaptive capacity is defined as the capacity to acquire and utilize knowledge gained from prior experiences in order to better prepare oneself for potential challenges (Lerner & Van Praag, 2024). It is concluded that community resilience is vital to effectively address the complex challenges posed by natural disasters.

Several studies have examined the multifaceted aspects of community resilience, encompassing the influence of social capital, economic assets, and physical infrastructure (Alhadi et al., 2023; Burnside-Lawry & Carvalho, 2016; Lee, 2019; Lerner & Van Praag, 2024; Upadhyay & Sa-ngiamwibool, 2021). Establishing networks via community-based organizations is a method to address all dimensions. Further research indicates that communities possessing robust social networks and economic resources have greater resilience during disasters (Lee, 2019). Furthermore, external networks bolster resilience in scenarios of low disaster frequency, while internal networks augment resilience in contexts of high disaster frequency (Lee, 2019). Others demonstrated that community resilience is associated with robust social relationships and networks (Cretney, 2016). The conclusion was derived from the case study of the community organization "Project Lyttelton," situated in the suburb of Lyttelton, the epicenter of the catastrophic Christchurch earthquake on 22 February 2011. The study highlighted the significance of grassroots organizations in disaster response, potentially enhancing social support and social learning for community resilience (Cretney, 2016). The resources and tactics disseminated by the community via networking enhance their feeling of community, social cohesiveness, and social capital (Imperiale & Vanclay, 2016).

The other investigation indicates that community-based organizations substantially enhance disaster coping and resilience by serving as a conduit between the government, stakeholders, and community members (Drennan & Morrissey, 2019; Liu, 2022; Liu & Zhao, 2023). To establish commitments among societal constituents for improved readiness to natural disaster threats, it is essential to align the perspectives of stakeholders, including government officials, local authorities, and community leaders, such as religious, traditional, and young leaders (Alhadi et al., 2023; Luleci et al., 2024). Effective resilience initiatives frequently require close cooperation among all relevant stakeholders, leveraging the distinct expertise and resources of each group.

Governments have a crucial role in disaster management. The local governing body is a primary entity in disaster response and significantly impacts disaster resilience within the community (Lee, 2019). According to a descriptive statistical analysis of coastal communities in Florida, USA, some findings indicate that the local government's understanding of hazard

risk issues facilitates the implementation of resilience policies (Kim et al., 2024). The study highlights local government managers' understanding of how disaster risk affects sustainability and climate change adaptation plans. Moreover, decentralizing political authority to local governments, as noted by Tselios & Tompkins (2017), has reduced the human toll of natural disasters, including fewer fatalities and fewer individuals affected. Nonetheless, the research indicates that it is effective only in high-income countries, whereas disadvantaged regions would continue to face challenges in realizing the benefits of decentralization due to budgetary constraints. All constraints may exacerbate economic losses by increasing asset exposure in affluent areas (Tselios & Tompkins, 2017).

Other studies also highlighted conventional crisis management strategies, specifically the 'command and control' strategy typically employed by governments, for failing to acknowledge local community capabilities, hence impeding recovery efforts (Imperiale & Vanclay, 2016). Furthermore, numerous NGOs circumvent governmental agencies, perceived as excessively hierarchical, to adequately serve communities (Gladfelter, 2018). Occasionally, local communities fail to comprehend and accept governmental directives, resulting in inadequate local planning and administration (Asadi, 2023). It frequently results in government disaster resilience programs being misaligned (Alhadi et al., 2023). Moreover, the government's participation in disaster risk management is frequently impeded by political conditions, as exemplified in the Philippines case, where the contest for socio-spatial authority between central and local power structures has compromised urban institutions (Gera, 2018). This report highlights the Metropolitan Manila Development Authority's (MMDA) inadequacies, particularly its inability to finalize or execute flood control projects owing to insufficient collaboration with other agencies and Local Government Units (LGUs). Incorporating community-based strategies into disaster planning and implementation is ideal, as it empowers communities to take responsibility for their recovery and leverage local skills, capabilities, and resources, thereby enhancing their resilience during the recovery phase. (Drennan & Morrissey, 2019).

The local knowledge and tradition for disaster resilience

Local knowledge, comprising factual awareness, collective efficacy, community training, and education, is recognized as a critical element of disaster resilience (Galarza-Villamar et al., 2018; Patel et al., 2017; Yang, 2024). Research findings demonstrate that communities with a thorough comprehension of hazards, vulnerabilities, and local resources and networks are more proficient in planning for, responding to, and recovering from catastrophes. (Bakić & Ajdukovic, 2021). Moreover, local knowledge empowers communities to engage in catastrophe risk reduction and management efforts, cultivating a sense of ownership and agency that bolsters resilience. (Patel et al., 2017; Santiago-Gómez & Rodríguez-Rodríguez, 2023).

Local culture, encompassing beliefs, indigenous knowledge, values, customs, and social frameworks, can serve as an effective technique for mitigating disaster risk. (Alhadi et al., 2023; Firdaus et al., 2023; Minguez Garcia et al., 2024; Wardekker et al., 2023). Local culture can sometimes create disaster awareness (Nadzorh et al., 2025). This means that

cultural and religious values contribute to regulating community behavior in disaster management and more effective adaptation (Firdaus et al., 2023).

The effectiveness of local knowledge in disaster resilience lies in its context-specific nature. For example, traditional navigational knowledge among Pacific Island communities helps predict approaching storms, while their food preservation techniques ensure post-disaster survival (Latai-Niusulu et al., 2023). These practices are adapted to local conditions and resources. All of these capacities have developed over generations through direct experience in dealing with natural hazards (Paudel et al., 2024).

However, this traditional system is not without challenges. Urbanization, migration, and modernization threaten the preservation and transmission of local knowledge (Zhang, 2020). Furthermore, innovations in disaster technology have been implemented in various countries. This aligns with the Hyogo Framework for Action 2005-2015, the World Conference on Disaster Reduction held in Hyogo, Japan, in 2005. The framework emphasizes using knowledge, innovation, and education to create a culture of safety and resilience at all levels to reduce disaster risk. (UNISDR, 2017; United Nations, 2005). The newest framework for disaster risk reduction, 'the Sendai Framework for Disaster Risk Reduction 2015-2030,' also included technology and research along with a more people-centered preventive approach to disaster risk. These initiatives encompass early warning systems, robust infrastructure, and disaster management measures (Paudel et al., 2024; UNDRR, 2015, 2021).

High expectations for disaster technology often lead formal disaster management agencies to prioritize technical solutions over cultural practices, creating a disconnect between official and community-based approaches (Paudel et al., 2024). In Ghana, for example, due to the intensity of natural disasters over the past two decades, disaster management agencies have called for the use of more innovative tools and technologies for future resilience and sustainability (Wormenor & Asibey, 2025), yet most communities have not yet adapted to technology. Nonetheless, restricted local technical expertise and low literacy rates, combined with the isolation of these communities, result in the majority of individuals relying predominantly on traditional and local coping strategies to mitigate disaster risks, a common occurrence in Northern Ghana (Ngwese et al., 2018).

The integration of traditional culture into disaster resilience has been widely practiced, particularly in developing countries. Sudan, for example, instituted Taya, a conventional community-oriented flood-control system for early warning, aimed at safeguarding the small island of Tuti, situated at the confluence of the White and Blue Nile Rivers in the heart of the Sudanese capital. (Minguez Garcia et al., 2024). The Taya method is considered effective, as evidenced by the absence of casualties during the 2020 floods, despite significant devastation elsewhere in Sudan. Nepal, India, and Bangladesh are countries with well-preserved traditional practices. These nations have revitalized their cultural values through a process of "learning by doing" (Paudel et al., 2024). Several countries have effectively utilized cultural heritage in disaster risk reduction, including Brazil, Egypt, and Uganda. The Quilombola community in Brazil uses traditional knowledge, including indigenous plant species and detailed mapping of high-altitude terrain, to strengthen resilience to climate change. In Egypt, the cultivation of native sycamore trees, traditionally recognized for their ability to reduce soil salinity, and the implementation of an

early warning system using the ancient Coptic calendar based on the Nile water level are considered remedies for climate change-related problems. Furthermore, the Kasese people in Uganda possess traditional knowledge for interpreting weather patterns, facilitating early warning systems, and conserving natural resources (Bhatia & Shukla, 2024).

Alhadi et al. (2023) studied the significant influence of local culture on disaster resilience, focusing on the vulnerability of residents of Nagari Mandeh, Indonesia, to natural disasters such as earthquakes, floods, and tsunamis. The research demonstrated that indigenous knowledge can effectively mitigate the risk of calamities by aligning with the community's social and cultural framework. The study identified several supporting factors, including social capital that enhances relationships and communication within the community, the integration of traditional and governance frameworks, and environmental conservation through community-driven mangrove conservation (Alhadi et al., 2023). However, this study did not explicitly address the communication context within disaster risk reduction initiatives.

Communicating Local Traditional Knowledge for Disaster Resilience

Numerous scholars have examined the significance of communication in strengthening community resilience. (Shittu et al., 2018; Spialek et al., 2016, 2023; Spialek & Houston, 2019). Spialek et al. (2016) investigated the association between disaster communication strategies and community perceptions of resilience in the aftermath of the 2013 Central Illinois tornadoes. The study identifies a disaster communication ecology that includes routine communication sources (e.g., local media), community organizations, and disaster-specific communication sources (e.g., tornado sirens and social media). These communication sources help communities exchange information, provide social support, and make sense of the disaster. They find that disaster communication positively influences community perceptions of resilience, particularly regarding connection and care, transformative possibilities, and disaster response. Residents who participate in increased disaster communication perceive their communities as more compassionate and better able to learn from disasters. The research indicates that public health and emergency management authorities ought to design strategies that involve residents in local resilience initiatives via effective communication. (Spialek et al., 2016).

Additionally, Rice & Jahn (2020) examined communication within the framework of catastrophe resilience. Their research on disaster mitigation in the United States examines how communities retain and disregard lessons from past disasters through conventional communication strategies, with a specific focus on disaster preparedness. The authors analyze two situations utilizing a practice lens: (1) a local Office of Emergency Management (OEM) modifying national policies while recalling local disaster experiences, and (2) a persistent struggle between the United States Forest Service (USFS) and a community organization, which led to forgetting lessons from previous wildfires. Both cases are examined through the lens of practice. Specifically, the research demonstrates that resilience is a communicative accomplishment shaped by the convergence of practices at the national, organizational, and community levels. The research highlights how national, organizational,

and community levels of resilience intersect in day-to-day behaviors, which in turn shape how lessons learned from previous disasters are remembered or forgotten.

The emergence of social media platforms, such as Twitter and Facebook, has revolutionized the dissemination of information during disasters. (Spialek & Houston, 2019). The platforms enable real-time communication, crowdsourced information, and rapid mobilization of resources (Okeukwu-Ogbonnaya et al., 2024). Shittu et al. (2018) examined communication failures through observations of past disaster responses, such as those in the Katrina and Haiti disasters, due to information overload and biases. The study underscores the necessity of adaptive systems in disaster response and accentuates the significance of social media in improving communication. Spialek et al. (2016) emphasized the vital importance of social media in their recommendations to foster a more dynamic online media landscape that facilitates discussions and initiatives to enhance community resilience following disasters. (Spialek et al., 2016).

Information dissemination is another important challenge in disaster-resilient communication. When a community has a good understanding of disaster-related information, the community will be prepared before a disaster occurs. This, in turn, increases disaster resilience. However, some challenges may arise from mismanaging information. The study by Mazzoglio et al., (2021) examined the role of disaster reports (DRs) in enhancing risk resilience, particularly in the context of flood management in Italy. Scholars argue that traditional DRs are often inaccessible to the general public due to their technical language and impersonal nature. They propose transforming DRs into "disaster tales" (DTs), incorporating storytelling, personal accounts, and multimedia elements to make the information more engaging and reliable. The approach mainly aims to improve public understanding of flood risks and encourage better self-protection behaviors. The authors emphasize the importance of integrating videos, photos, and interactive tools to create a more immersive and emotionally resonant experience for the audience.

Another perspective on communication for disaster resilience, specifically regarding earthquakes in Indonesia, was presented by Fakhriati et al. (2023). Their research delineates three modalities of disaster communication employed by local communities: human-to-God, human-to-nature, and human-to-human. Such communication methods, termed "triangular communication," are profoundly embedded in local culture and religion, serving a vital function in disaster mitigation and recovery.

Table 1. Literature Review Findings

Focus Theme	Author	Findings
Disaster and Community Resilience	Cuthbertson et al., 2023; Cretney, 2026; Imperiale & Vanclay, 2016; Lerner & Van Praag, 2024; Burnside-Lawry & Carvalho, 2016; Lee, 2019; Patel et al., 2017; Rogers et al., 2016; Drennan & Morrissey, 2019; Liu, 2022;	- Adaptive capacity is an essential component of community resilience. - The influence of social capital, economic assets, and physical infrastructure strengthens community resilience. - All the resources can be gained through networking both externally and internally. - Although the government has a critical role in disaster management, several studies criticize the 'command-and-control' strategy employed by governments for failing to acknowledge local

	Liu & Zhao, 2023	community capabilities, hence impeding recovery efforts.
Local Tradition and Disaster Resilience	Alhadi et al., 2023; Allan et al., 2017; Bakić & Ajduković, 2021; Feldman et al., 2016; Firdaus et al., 2023; Galarza-Villamar et al., 2018; Imperiale & Vanclay, 2016; Latai-Niusulu et al., 2023; Lavy & Zavar, 2023; Lesley Hatipone, 2023; Nadzirah et al., 2025; Nakileza et al., 2017; Ngwese et al., 2018 Patel et al., 2017; Paudel et al., 2024; Santiago-Gómez & Rodríguez-Rodríguez, 2023; Wardekker et al., 2023; Wormenor & Asibey, 2025; Yang, 2024; Zhang, 2020	- Local culture, encompassing beliefs, indigenous knowledge, values, customs, and social frameworks, can serve as an effective technique for mitigating disaster risk because it creates disaster awareness. - Several countries have effectively utilized cultural heritage in disaster risk reduction, including Northern Ghana, Sudan, Nepal, India, Bangladesh, Brazil, Egypt, and Uganda.
Communication and Disaster Resilience	Liu, 2022; Mazzoglio et al. 2021; Okeukwu-Ogbonnaya et al., 2024; Pavese et al., 2020; Rice & Jahn, 2020; Rogers et al., 2016; Shittu et al., 2018; Spialek et al., 2016, Spialek, 2019; Spialek, 2023; Spialek & Houston, 2022	- Disaster communication ecology that includes routine communication sources (e.g., local media), community organizations, and disaster-specific communication sources (e.g., tornado sirens and social media) helps communities exchange information, provide social support, and make sense of the disaster. - Communication positively influences community resilience perceptions, particularly in relation to connection and care, transformative possibilities, and disaster response. - Transforming DRs into "disaster tales" (DTs), incorporating storytelling, personal accounts, and multimedia elements to make the information more engaging and reliable. - Integrating videos, photos, and interactive tools to create a more immersive and emotionally resonant experience for the audience
Integration of Communication, Disaster Resilience, and Local Tradition	Fakhriati et al., 2023. Minguez Garcia et al., 2024	- Three modalities of disaster communication employed by local communities: human-to-God, human-to-nature, and human-to-human. Such communication methods, termed "triangular communication," are profoundly embedded in local culture and religion, serving a vital function in disaster mitigation and recovery

		- The Tuti people (Tawatas) developed the Taya, a traditional early warning, community-based flood management system.
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Taken together, these studies indicate a limitation in research on culturally adapted communication strategies that consider local traditions and culture. This is supported by the review results: 84 documents were identified using particular keywords pertaining to local culture, disaster resilience, and communication; however, only two studies integrated all three concepts (Fakhriati et al., 2023; Minguez Garcia et al., 2024). The gap underscores the need for more research and initiatives to enhance heritage-based adaptation techniques and to further study the revitalization of indigenous knowledge for disaster resilience. While this study did not explicitly address the impact of communication, it suggested that future research should focus on the transfer of information about local culture in relation to disaster resilience.

D. Conclusion

The transmission of local traditional knowledge for disaster resilience is both challenging and vital. Communities can improve their adaptive capacities and develop strategies for sustainable resilience by valuing traditional knowledge and incorporating it into their practices. Based on an evaluation of the relevant literature, this investigation highlights numerous noteworthy aspects. First and foremost, there is a lack of research on the application of local knowledge and traditional practices in disaster risk reduction, particularly in communication. Second, while several nations—such as Sudan, Indonesia, Nepal, India, and Bangladesh—recognize the importance of traditional and indigenous knowledge in disaster risk reduction policies, there remains a lack of comprehensive documentation and effective dissemination of these practices. The practices hinder the effective implementation of these policies and undermine their preservation and transfer to future generations. In the third place, there is a lack of integration with larger emergency management agencies and organizations, which affects disaster resilience programs. Fourth, the number of people who participate in disaster awareness initiatives is not particularly high. For this reason, there is a need for greater participation and education among community members. Finally, to enhance community resilience, it is essential to expand access to expert knowledge and facilitate effective contact with non-governmental groups. Therefore, future research should increase use of traditional knowledge, communication, and disaster resilience terminology. Ultimately, initiatives in contemporary and forthcoming research should focus on establishing frameworks for the equitable transfer of knowledge and on addressing the challenges of documenting and preserving local and traditional knowledge.

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