A THEORETICAL FRAMEWORK ON DISASTER COMMUNICATION

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Abstract

Disasters are extraordinary situations that carry uncertainty of their effects the entire society, especially the regions affected by the disaster, economically, sociologically, culturally, socially and psychologically. Disasters need to be evaluated with the principle of unpredictability and handled strategically; therefore it is a necessity to ensure the correct flow of information between many disciplines. Introducing information and communication strategies from scientists to political leaders, from experts to opinion leaders ensures success in the effective management of the disaster. With communication activities carried out before disasters, it is possible to reduce the effects of damage to the society in the face of disaster. After possible disasters, in addition to assessing risks and losses, keeping the crisis management plan and communication channels open throughout the disaster is of critical importance in providing all kinds of support to disaster areas. Finally, the media has a role in fulfilling the obligation and responsibility of opinion leaders and decision makers to provide accurate, fast, effective and up-to-date news to the victims and the whole society, from the interpersonal level to the mass communication level. Within the scope of this study, disaster communication is explained through models created by communication professionals and is shaped by the strategies in the literature on disaster communication.

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1.   Introduction

In an era characterized by the ever-present threat of natural and human-made disasters, the significance of effective disaster communication cannot be overstated. These critical moments, marked by uncertainty, fear, and swift-changing circumstances, demand a well-orchestrated flow of information to guide both immediate response and long-term recovery efforts. Disaster communication is the linchpin that connects authorities, responders, and the affected public, serving as a vital conduit for information dissemination, coordination, and reassurance.

The complexity of disaster management is amplified by the diversity of disaster types and their far-reaching impacts on societies and individuals. From natural catastrophes like hurricanes, earthquakes, and wildfires to human-made crises such as industrial accidents or pandemics, each presents a unique set of challenges that necessitate specialized communication strategies. In the face of these challenges, effective communication stands as the first line of defense, allowing for the timely transmission of crucial information. It empowers communities to make informed decisions, it guides first responders to where they are needed most, and it offers solace and direction in times of distress.

The rapid development of technology and the prevalence of media have ushered in a new era of disaster communication. Timely and accurate information can now be disseminated to a global audience almost instantaneously. However, it is essential that these advancements are harnessed thoughtfully, addressing the need for clear, consistent, and accessible communication that accommodates the diverse needs of communities. In this context, disaster communication becomes a multidisciplinary endeavor, requiring the cooperation of professionals in various fields to ensure that, when disaster strikes, not only prepared but also connected in our response.

Disasters present society with extraordinary, unpredictable challenges that transcend economic, sociological, cultural, social, and psychological boundaries. Their impact is pervasive, particularly in regions directly affected by catastrophe. The fundamental characteristic of disasters is their inherent unpredictability, necessitating strategic management and a seamless flow of information across diverse disciplines. This information exchange encompasses a wide spectrum, involving scientists, political leaders, experts, and influential opinion leaders who collectively contribute to effective disaster management.

Effective disaster management relies on the introduction of comprehensive information and communication strategies that mitigate the adverse consequences of potential disasters.

Preemptive communication efforts can significantly reduce the societal fallout when crises emerge. Moreover, post-disaster response involves the sustained execution of crisis management plans and open communication channels, playing a pivotal role in providing vital support to affected regions.

In this intricate communication network, the media stands out as a linchpin, bearing the critical responsibility of delivering accurate, rapid, and up-to-date information to both victims and the wider society. This study explores the multifaceted domain of disaster communication, offering insights derived from models developed by communication professionals and informed by the extensive literature on disaster communication strategies.

In this context, studying disaster communication academically is of great importance in increasing society's resilience and preparedness in the face of natural or human-made disasters. During disasters, effective communication plays a crucial role in disseminating timely and accurate information, assisting evacuation efforts, and minimizing panic. An academic focus on disaster communication allows researchers and practitioners to develop strategies that can close communication gaps, encourage community participation, and facilitate a coordinated response to reduce the impact of disasters.

A striking example that highlights the importance of disaster communication occurred during the earthquake that hit Turkiye on February 6, 2023. It was Turkiye's most severe quake since 1999, when one of similar magnitude devastated Izmit and the heavily populated eastern Marmara Sea region, killing more than 17,000 (Kawoosa & Chowdhury, 2023).

The catastrophe highlighted the critical need for well-coordinated and accessible communication channels to rapidly disseminate information, manage resources efficiently, and provide support to affected communities. Lessons learned from such events underscore the urgency of academic research in disaster communication and guide the development of effective communication protocols that can be applied in future crises.

Looking to the future, it becomes clear that Turkiye's academic literature can benefit significantly from the increasing academic interest in disaster communication. Emphasizing current areas such as digital disaster communication, disaster literacy, and post-disaster researches can enable communities to better understand and respond to potential threats. By developing a comprehensive understanding of communication dynamics after disasters, Turkiye can strengthen its resilience, improve its response mechanisms, and make valuable contributions to the global discourse on disaster management.

When the national literature is examined, it is important to highlight some academic studies that contribute to this field recently. For example, Boztepe Taşkıran (2023) determined the limits and framework of disaster communication in her article where she included definitions for disaster communication. In her study, Boztepe Taşkıran (2023) examines effective disaster communication, the importance and responsibilities of decision makers in the management of disaster communication, and the role and position of the media in disaster communication.

Another recent study that stands out in the national literature was conducted by Akkoyun (2023), and the study touched upon the disaster reality after the 2023 Turkiye earthquake and the role of communication tools and mass media. In his article, Akkoyun (2023) evaluated post-disaster media products within the framework of disaster communication awareness. The sample of the study consists of disaster's media visibility after the 2023 Turkiye earthquake.

In this framework, it is thought that increasing disaster communication studies in national and international literature and intensifying discussions and research in this field will contribute to the measures to be taken against possible disasters. With this study, it is aimed to provide literature support for research and discussions by contributing to the disaster communication literature.

2. Concept of Disaster

Disaster is a concept that expresses extraordinary situations and conditions. In the definition of the Turkish Language Association (2023), disaster is expressed as "destruction caused by various natural events". The Oxford Dictionary (2023) defines disaster as "an event that causes great harm". Merriam-Webster Dictionary's (2023) definition of a disaster is "a sudden calamitous event bringing great damage, loss, or destruction".
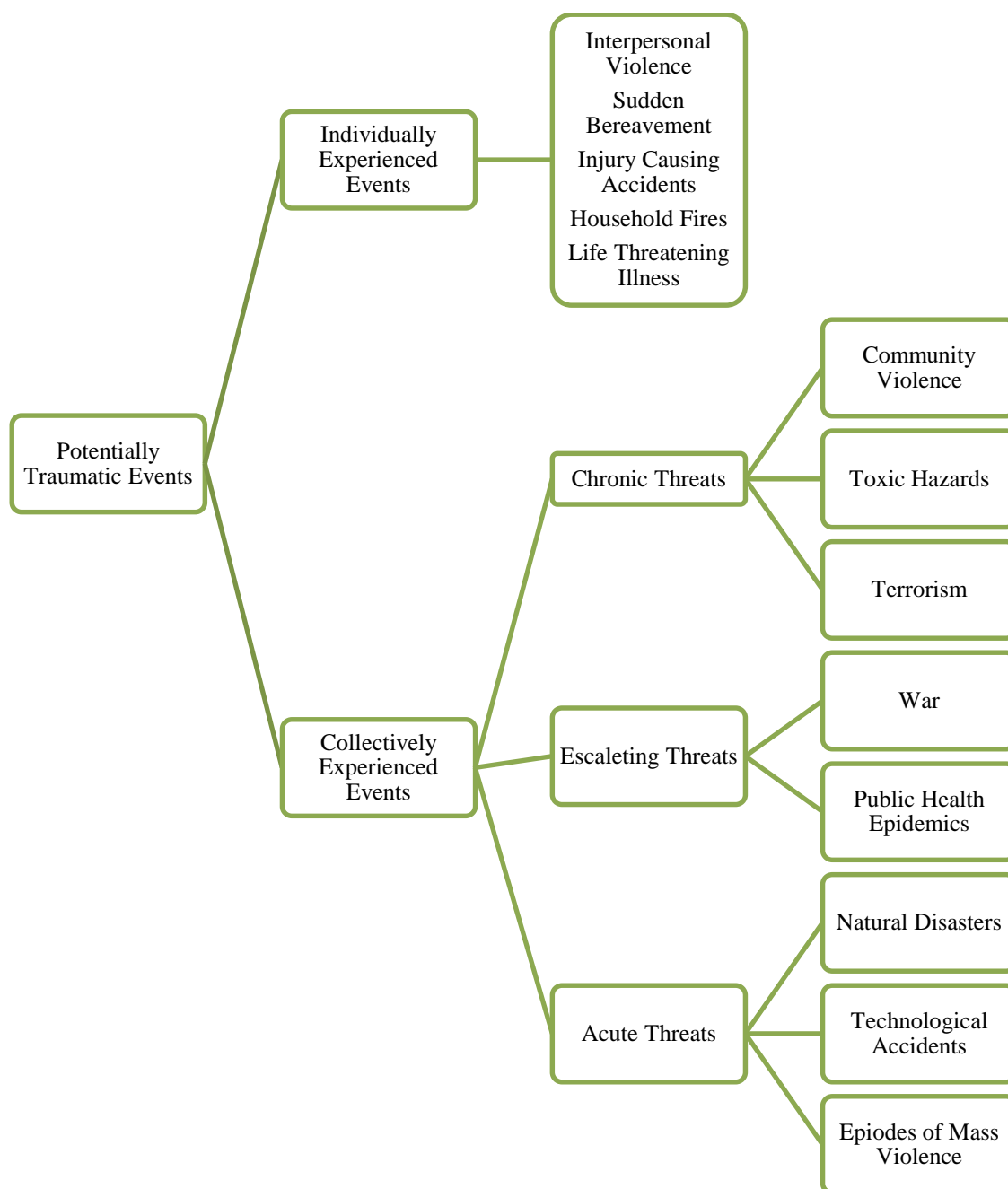
Figure 1.

Classification of Potentially Traumatic Events

Source: McFarlane & Norris, 2006: 5.

Disaster is often referred to as some type of traumatic event. However, it should be underlined that disaster and trauma are not synonymous. As seen in Figure 1, disaster is positioned as a subcategory of trauma. According to the definition of the American Psychiatric Association (1994: 427-428), there are some markers of traumatic events. These are:

• An event or series of events that the individual and his/her environment experience, witness or face in a way that causes death, fatal damage or disrupts the physical and spiritual integrity.

• Observation of the individual's reactions to trauma showing fear, horror and helplessness.

When viewed in this context, disasters are events with acute onset and time limitation (McFarlane & Norris, 2006: 7). On the other hand, disaster also differs from the concept of crisis. The points where disaster and crisis differ can be explained with the following items:

• Disaster and crisis are separate concepts, whereas crisis is used in a more inclusive sense.

• There are points where disaster and crisis are similar. These can be expressed as process stages. These stages are pre-event, incident and repair stages.

• Disasters can be defined in many different ways. But natural and human-made disasters cover them all (Shaluf et al.,2003: 31).

In this context, it is important to differentiate disaster types. In Figure 2 below, disaster is divided into natural and human-caused.
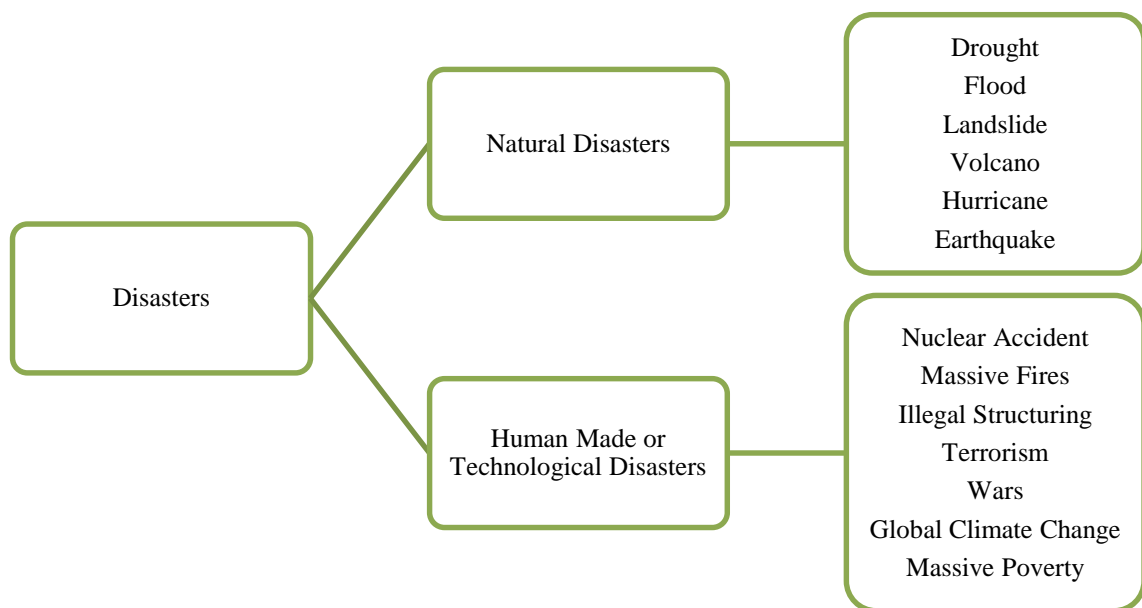

Figure 2.

Types of Disasters

Source: Adapted from Işık et al. 2012: 85.

Natural disasters can be listed as drought, flood, landslide, volcano, hurricane, earthquake and so on. Human made or technological disasters can be listed as nuclear accident, massive fires, illegal structuring, terrorism, wars, global climate change, massive poverty and etc.

The nature of disasters is affected by the social, cultural, geological, economic, natural and human factors of the region. In addition, how disasters are dealt with can be controlled through many factors. One of these factors is disaster communication.

3. Disaster Communication

Communication is a tool that we encounter everywhere and is always needed. Just as a humanity without communication is unthinkable, it is accepted that lack or inadequacy of communication can reduce the quality of life. The fact that communication is incomplete, carried out through the wrong tools, or is ineffective indicates that communication has failed.

Table 1.

Principles of Successful Communication Strategy in Crisis

1.	Focusing on Needs
2.	Making a Commitment to Effective Communication
3.	Making Communication an Integral Part of All Planning An Operations
4.	Being Transparent in Communication
5.	Ensuring that Given Information is Accurate
6.	Releasing Information In a Timely Manner
7.	Making Oneself Available and Accessable
8.	Creating an Emotional Connection
9.	Building a Partnership with Media

Source: Haddow & Haddow, 2014: 45-65.

Table 1 shares the successful communication strategy steps in times of crisis developed by Haddow & Haddow. Accordingly, the importance of communication in times of crisis is emphasized. Crisis communication is vital, as in all communication strategies.

In crisis situations, it is necessary to focus primarily on needs to develop a successful communication strategy. Understanding the needs of the victims or, to put it in communication jargon, the needs of the target audience is possible and effective with communication efforts. At this point, interacting with the people of the region affected by the crisis or disaster and determining their needs and focusing on them is important in terms of correct use of resources, obtaining effective results and meeting the needs of the target audience.

The second stage of a successful communication strategy is the effort to establish effective communication. Effective communication brings interpersonal understanding. Interpersonal empathy and understanding are the basic outcomes of effective communication.

The third step of an effective communication strategy is to make communication a fundamental part of all decision-making processes. Placing communication in a central position in decision-making processes makes decision processes controlled and can eliminate the margin of error that may be encountered in strategic planning.

The fourth step in creating an effective communication strategy is to be transparent in communication. In situations of crisis, risk and disaster, it is important to ensure that communication is as accurate, direct, objective and open as possible. In these moments when information of all kinds can be beneficial, transparency is vital.

The fifth stage is the accuracy of the information given. Crisis and risk communication is based on accuracy and openness. In fact, it should be said that the main importance and benefit of crisis and risk communication is to convey information as accurately, quickly and effectively as possible. If this basic mission in crisis and risk communication is not achieved, it is inevitable that the crisis will grow and become more complex in different dimensions.

In the sixth stage, the temporality dimension of strategic communication is emphasized. Strategically effective communication must be timely. Because in times of crisis, every minute can be of vital importance.

The seventh of the strategic communication principles is expressed as being accessible at all times. Being accessible at all times is a necessity, especially for opinion leaders, managers and experts. For effective crisis communication, accessibility is essential.

The eighth stage is establishing an emotional bond. In times of crisis and disaster, emotional intensity can be seen among all stakeholders. At this point, opinion leaders are expected to have high levels of emotional intelligence, emotional control and emotional awareness.

The final stage of a successful communication strategy is expressed as establishing partnerships with the media. The right partnerships established with the media in crisis, risk and disaster communication can ensure accurate, fast and reliable information flow.

In this context, communication is related to education. Communication is a set of knowledge-skills and competencies and is also a field of literacy. Communication can be learned and improved. Communication literacy is expressed as the ability to understand and apply concepts that mediate effective communication with others (Ghasemi & Rasekh, 2020: 19). Myers and Myers (1985) underlined that it would be appropriate to consider communication as a field of application and showed that communication is an expertise and competence by stating that it can be defined depending on what we do with it.

When the generally accepted perspective on disaster communication in society is examined, it is noted that this concept is used only to express communication activities carried out during disaster periods. According to this perspective, communication strategies and disaster-focused communication activities are within the scope of disaster communication. It can be said that this approach offers a perspective that covers only one stage of disaster communication and addresses the concept at a very shallow level (Boztepe Taşkıran, 2023: 359).

On the other hand, disaster communication refers to crisis management-oriented communication carried out during disaster periods. Disaster communication is the set of

activities under crisis management. Successful crisis management depends on a successful communication process. Communication in times of crisis should be based on a communication strategy consisting of information prepared in advance and obtained during the crisis, and should aim to deliver information to the target audiences in the fastest and most accurate way (Genç, 2008: 162).

Communication in disaster management refers to an interactive process in which the quality of relationship building is defined within the interaction scheme and knowledge, skills and experiences regarding all kinds of risks that may lead to disaster are shared for the purpose of mitigation. Here we can say that disaster communication is not limited to just information, but communication is about the interaction process between the sender of the message and the receiver of the message. In other words, it is important that the information contained in the message is perceived and used appropriately by the recipient of the message. For this reason, it is important to determine what kind of information is needed by taking into account the needs of the users in a way that will enable them to make the right decisions and to determine in advance which channels will be communicated (Cömert Baechler, 2018: 811).

3.1. Principles of Disaster Communication

In the chaos environment caused by the disaster, the need for information by all actors is at the highest level. Management of the crisis environment also means two-way information management, both the information coming to the administration and the information transferred from the administration to the public and the media. We can list the most important features of this period in terms of information management as follows (Cömert Baechler, 2018: 812-813):

- There is a possibility that the information may not be available at the first moment, in which case the most accurate information should be accessed as soon as possible.
- The information obtained is very numerous, so elimination is necessary. Available information may be contradictory or unclear.
- All information obtained should be recorded, evaluated and interpreted and transmitted to emergency response units.
- Evaluating some types of information may require a multidisciplinary approach.
- In the stress and time pressure environment during the emergency period, the procedures for information management can be effective if used together with tools such as relationships established before the emergency, communication channels, simulation studies, data banks and digital maps developed to help decision-making.
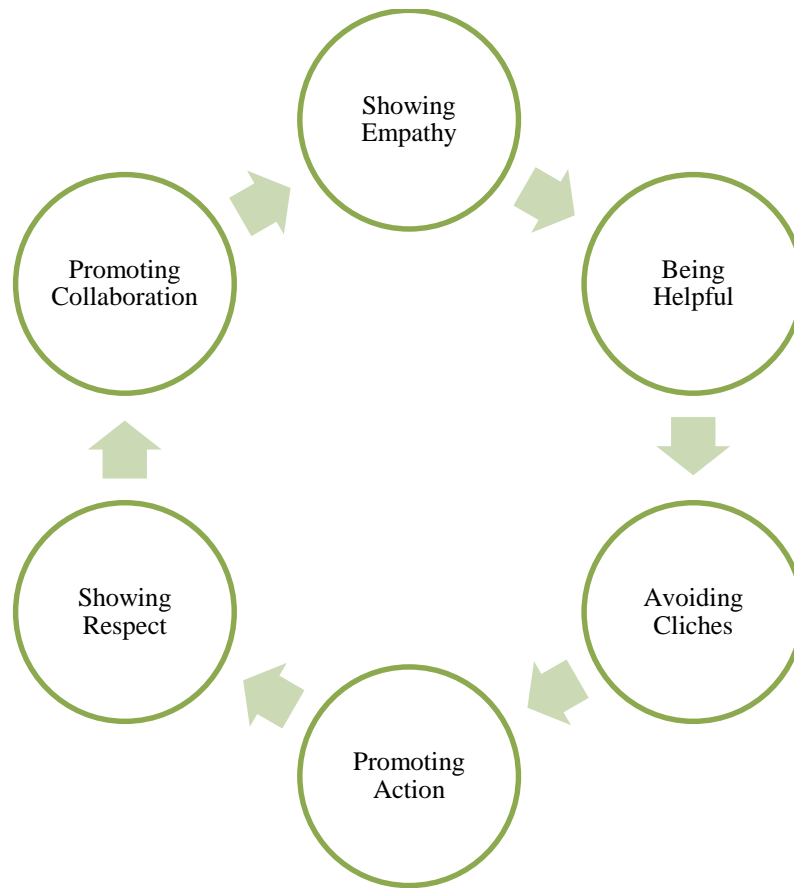
Figure 3.

Steps of Risk Communication

Source: NIMS, 2007.

In crisis and emergency situations, there are some steps of risk communication. These can be listed as follows (NIMS, 2007):

• **Showing empathy:** It is necessary to acknowledge the emotions people may be experiencing (e.g., "This is a stressful time."). It is important to adopt a survival-centered approach and demonstrate empathetic communication.

• **Being helpful:** Provide relevant, up-to-date information using simple, easy-to-understand phrases. It is important to share official, verified information that provides clarity and is consistent with other authorities' messages.

• **Avoiding clichés:** These are expressions that become meaningless the more they are repeated.

• **Promoting action:** It is appropriate to highlight specific points people can do to take responsibility for their situation and stay safe, and keep this information simple to avoid audience confusion.

• **Showing respect:** It is necessary to be respectful of people and their opinions, stay away from emotionally charged words, and use a calm tone even when responding to negative comments.

• **Promoting collaboration:** The importance of teamwork and whole-of-community effort should be emphasized for effective disaster response and recovery. Sharing information and consulting community partners is helpful. It is necessary to encourage stakeholders to respond and engage with each other.

Media also has an important role in disaster communication. A significant part of the emergency news news sources also appear as actors of the disaster management system. Because disaster management covers all individuals and units due to its multi-sectoral, multi-institutional and therefore multi-disciplinary structure. In general, both the primary news source and news actors of the media in emergency situations are:

• Political power and institutions governing the state,

• Local governments,

• Security forces,

• Other media,

• Universities,

• Civil society organizations,

• Professional chambers, unions,

• Earthquake experts,

• International organizations,

• People (disaster victims) (Koç Akgül, 2017: 37).

Within the framework of disaster communication, use of media is possible with media literacy. In this context, appropriate use of media and communication materials can increase the effectiveness of the disaster management process. The evaluation regarding the correct use of media tools in the disaster communication management process is shared in Table 2.

Table 2.

Criteria for Evaluating Communication Materials

Criteria		Description
Tailored message(s)	Content	Personalized reasoning and feedback for targeted audiences
Accuracy	Content	All information and content is current, accurate, and relevant
Readability	Text	Typeface, font size, type weight, capital and lower case Letters, adequate physical spacing, Justification, text color, text background contrast
	Reader ease	Font size, font color, visual elements

	Comprehension	Material is understandable using clear and familiar writing style, word use is suitable for low-literacy audience, clarity, phrasing in active voice; simplicity, focused and credible organization
Acceptability	Relevance	Realistic, suitable for targeted audience, personal relevance
	Cultural relevance	Content and images are culturally relevant and appropriate to targeted audience
Attractiveness	Aesthetics	General appearance of media
	Visuals/images	Relevant to content/spoken information, relevant to audience, minimize characters, support understanding of message
	Appeal	Visually attractive: colors, layout, logos
Web usability	Navigation	Website organization; use of pointing device, consistency in layout, style and size of icons/buttons; uses pull-down menus sparingly; limits need for scrolling: incorporates backward and forward options
	Hyperlinks	Make links clearly visible; change color of active ("live") hyperlink
Credibility	Authority	Source of site content is clearly visible
	Contact	Visibly provide contact options
	Help	Visibly provide help options
Timing		Identify issue in first 10 sec; use of 30- sec spots to present and repeat complete message; summarizes main point at close

Source: Brown et.al. 2014: 271.

In their study, Brown et al. (2014) created criteria and definitions for the effective evaluation of communication materials. The first of these is messages. When creating messages, personalization for the target audience should come to the fore. In addition, feedback should also be taken into consideration.

The second criteria is the accuracy of the message. In disaster communication, the most important factor regarding message content is the delivery of correct messages. Each information content; must be current, accurate and valid. The third criterion is expressed as the readability of the message. Here, the content of the message, ease of reading and understandability come to the fore. Factors that increase the readability of the message are listed as the format of the text, visual content and facilitating factors regarding the content of the text.

The fourth element is understood as acceptability. The first dimension of this is the validity of the text in an individual sense. Realism and suitability for the target audience are the sub-dimensions of acceptability. The second dimension is that the message is culturally valid. The factor that ensures this is that the message content and visuals are understandable and acceptable in the cultural context.

The fifth criterion is the appeal of the message. In this criterion, aesthetic, visual and appeal subheadings stand out. The aesthetic dimension refers to the general appearance of the media. The image must be attractive with its logo, background and colors.

The sixth criterion is the use of the web. When using the web, the positioning of the website and the appearance and functionality of the hyperlinks come to the fore. The seventh

criterion is the reliability of the message. The credibility of the message is provided by authority, accessibility and support.

Finally, the eighth criterion is timing. In crisis, risk and disaster communication, the use of time in message transmission is important. With all these communicative criteria coming to the fore, it is possible to examine disaster communication through models.

3.2. Disaster Communication Models

To fulfill planning and communication requirements such as disaster management and disaster communication, disaster literacy can be maintained as a prominent concept. Disaster literacy, one of today's valid and necessary types of literacy, is examined as a model in Figure 4.
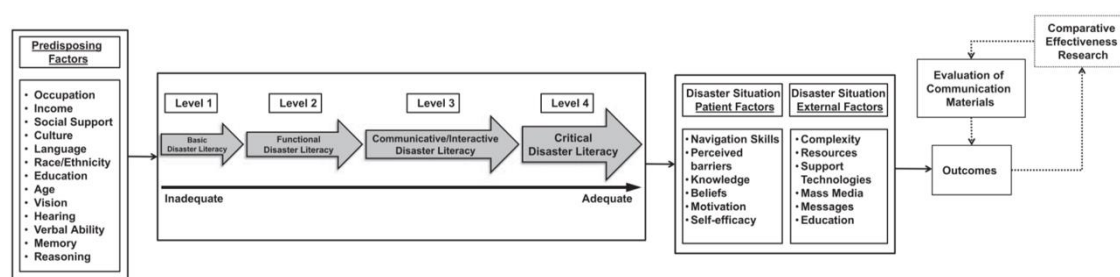

Figure 4.

Disaster Literacy Model

Source: Brown et.al. 2014: 271.

The disaster literacy model developed by Brown et al. (2014) consists of four stages. In the model, first of all, the factors that pave the way for disaster literacy are examined. These are factors that address a person's readiness for literacy. For example, a person's professional expertise has been considered as one of these factors. Next, socio-economic factors such as a person's income level and educational status are highlighted. In addition, it is possible to state that the relationship between literacy and culture is also a distinct group of factors. Concepts such as language, culture and ethnicity come to the fore here. In addition, it seems possible to state that physiological factors are also among the groups examined.

The second stage of the model shows four levels of disaster literacy. It is possible to say that the first of these levels is basic disaster literacy. It seems possible to talk about a general level of knowledge about the disaster here. At the second level, functional disaster literacy is emphasized. This level of literacy, which reaches the level of application and consists of usable information, is oriented to action at the basic level. The third level of literacy is expressed as communicative and interactive disaster literacy. At this level where disaster communication is underlined, it is understood that disaster literacy has an inseparable link with the media, opinion

leaders and information communication systems. In the fourth stage, critical disaster literacy is underlined. For development and transformation, a critical and innovative perspective is needed in all types of literacy, and continuous improvement is sought. The situation is no different in disaster literacy.

In the third stage of the model, factors in the disaster situation are examined. These are examined under two groups. The first is patient factors, the second is external factors. Patient factors are shaped by sub-factors such as navigation skills, knowledge, motivation and effectiveness. External factors, on the other hand, include immediate factors that are external to the individual but aim to support the individual / disaster victims. These are listed as resources, education, mass media and technological tools.

In the final stage, the effectiveness of the literacy model and its circularity for development are examined. Here, first the outputs of the model are examined, and then comparative effectiveness analysis comes into play. Because literacy is a kind of continuous development cycle, measurement, research and development and analysis are important. Finally, it is also recommended to examine the effectiveness of communication materials.
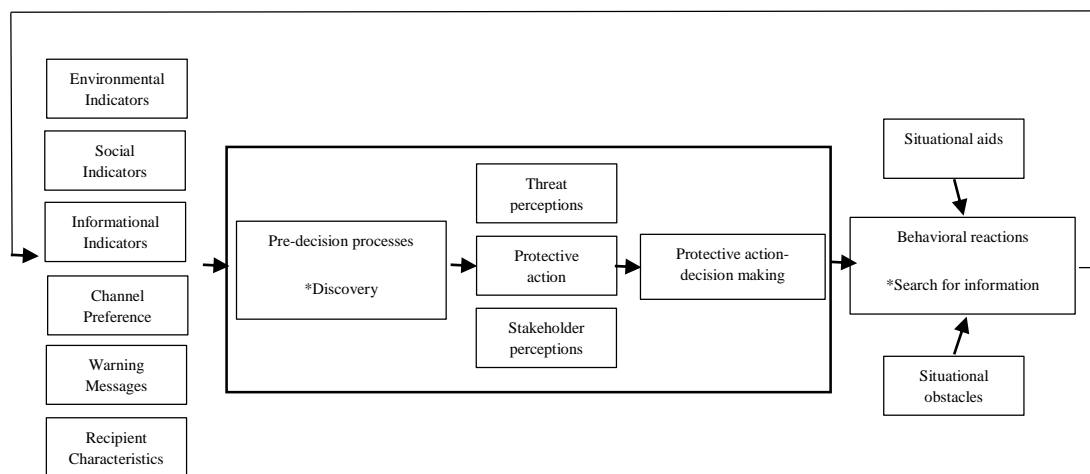

Figure 5.

Protective Action Decision Model Information Flow

Source: Lindell & Perry, 2012: 617.

Figure 5 presents the information flow process of the protective action decision model put forward by Lindell and Perry (2012). This model consists of three dimensions. The first dimension of the model examines indicators in disaster communication. Under this dimension, environmental factors, social indicators, information, channel and warning indicators come to the fore. In addition, recipient characteristics are also exhibited as an important dimension.

In the second dimension and center of the model, decision processes are examined. First of all, pre-decision processes are underlined. These are listed as discovery of the disaster or

extraordinary situation, and subsequent attention and focus processes. Afterwards, perception processes come into play.

At the second point in the center are threat perceptions, protective action and stakeholder perceptions. As can be seen, disaster communication is a process that requires the involvement of many stakeholders. The last action phase at the center of the model is the introduction of protective action decisions.

In the third stage, post-disaster processes such as behavioral reactions, information seeking and protective action, and emotional coping come into play on the axis of situational aids and obstacles. The model also underlines the cyclicality of the processes.

Table 3.

Human Resources Practices and Decision Making According to Examples

Steps	Possible Effects on the Organization and Employees	Strategic HR Management and Applications
1.	Panic within the organization	Creating a planning team
2.	Loss of key personnel and information	Improving employee loyalty through talent management
3.	High turnover rate in the workforce	Training and professional development support
4.	Lack of morale and motivation leading to poor performance	Employee support programs, psychological support, coaching and mentoring activities
5.	Increasing health-related expenses	Policy update activities with insurance companies
6.	Negative reputation and loss of image	Reorganization of Outplacement policy
7.	Loss of leadership and faith	Rumor management
8.	Increased psychological problems and management difficulties during intervention and recovery phases	Mentoring

Source: Yaman, 2020: 924, adapted from National Emergency Management System, 2007.

Above, through Table 3, human resources practices and decision processes are examined through examples. The possible effects of disasters on organizations and the ideal action steps of strategic human resources management are explained in 8 steps. Processes are shaped by crises and what steps should be taken in the face of crises.

In the first step, the possible panic that occurs in the organization during a crisis and disaster is expressed. The strategy to be implemented here is clarified as the formation of a planning team.

In the second step, the inability to reach important and critical personnel and the loss of information flow are addressed. In such a crisis, the responsibility of human resources management and application units is to position talent management correctly and keep organizational commitment at a high level. In this way, access to the needed personnel will be provided even in times of possible crisis.

In the third stage, the ever-changing workforce and the permanence of personnel are addressed. Such a possible situation can create instability. On the other hand, if training and professional development support is received, stability and employee continuity can be ensured and a more continuous working principle can be created in times of crisis.

In the fourth stage, it is discussed that low morale and lack of motivation negatively affect performance. In this type of environment, practices such as employee support programs, motivation and coaching are expected from human resources.

In the fifth stage, the increasing health expenses of employees in times of crisis and disaster are discussed. In this case, it is important to plan free health guarantees, insurances and policies to protect employee health.

In the sixth stage, negative reputation formation and loss of reputation in times of crisis are discussed. In such crisis moments, what is expected from the human resources manager is to develop Reorganization of Outplacement policy strategies and put them into effect in a short time.

In stage 7, loss of leadership and belief is examined. In times of disaster and crisis, organizational trust and reputation can be negatively affected and trust in leadership can be shaken. Rumor management is necessary in such an ecosystem.

In the 8th step, increasing psychological problems and management difficulties come to the fore during the intervention and recovery phases. At this stage, correct mentoring practices are required and expected from the human resources manager, who is an opinion leader.
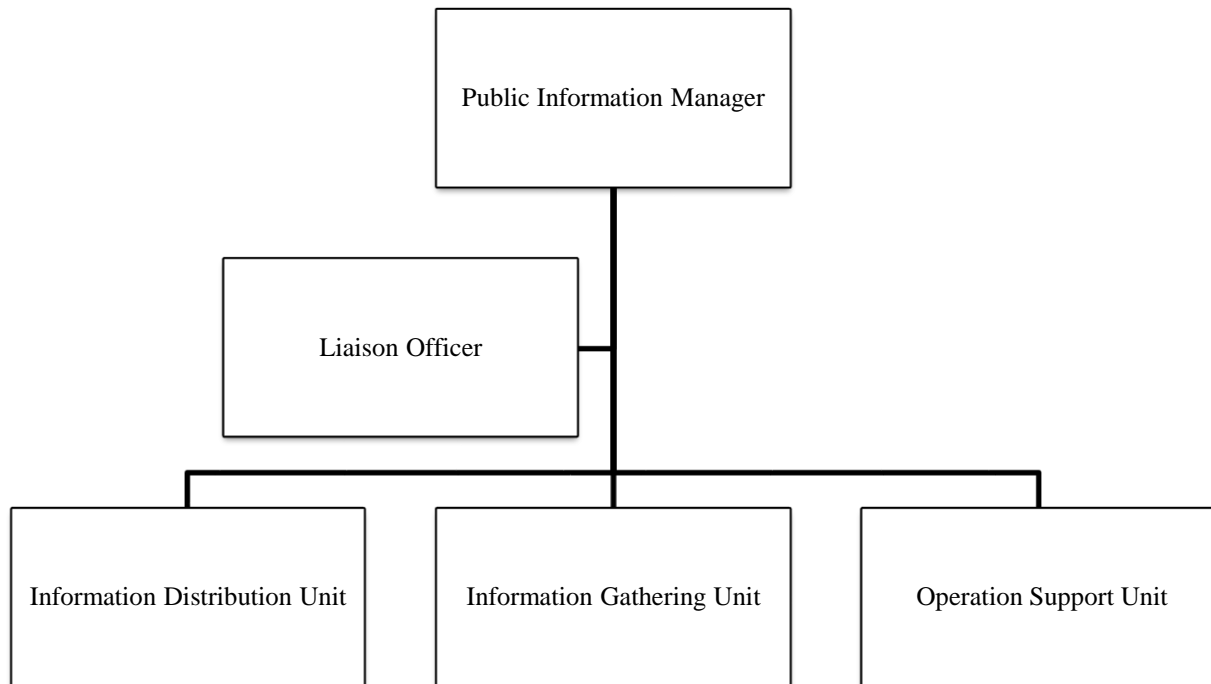
Figure 6.

Information Center Organization Chart

Source: Adapted from National Emergency Management System, 2020 by Yaman, 2020.

In Figure 6, the information center organization chart, which is also a communicative model, is shared. This chart manifests itself with a vertical communication pattern and consists of three communicative steps and a hierarchical structure.

At the top of the model is the public information manager. Here interaction with the liaison officer is occured. Liaison officer stands out as a unit that ensures interaction with subordinates and superiors.

Following this stage, the information distribution unit, information gathering unit and operation support unit take action. In times of disaster, carrying out information distribution processes within hierarchical, controlled and clear task distribution can make disaster communication and information processes more reliable.

Finally, in this section, the disaster communication plan is examined. Disaster communication plan strategies, which express the integration of disaster processes with the communication plan, are shared in Table 4 under the heading of disaster communication plan with 8 steps. These steps are shared in detail below, as items and their explanations.

Table 4.

Disaster Communication Plan in 8 Steps

1.	Predicting Possible Disasters
2.	Creating a Team and Identifying Spokespersons
3.	Creating a Coordinated Action Plan
4.	Creating a Clear Message
5.	Identifying Stakeholders and Tailoring Messaging
6.	Staying updated
7.	Strategizing Social Media Usage
8.	Establishing an Accessible Disaster Communication System

Source: Tulane University, publichealth.tulane.edu, 2023.

o   ***Predicting Possible Disasters***

Though it's challenging to foresee the precise timing and characteristics of a disaster, communicators and disaster officials can compile available environmental and social data pertaining to a community, along with drawing insights from past disasters and their consequences.

To enhance disaster preparedness, governing bodies can carry out risk assessments by utilizing either qualitative or quantitative data to ascertain the potential severity and characteristics of forthcoming disasters.

This typically involves an examination of factors contributing to risk and the prevailing conditions that can influence the aftermath of a disaster. The findings from these assessments should be documented by disaster authorities and subsequently used to formulate communication plans that outline the most probable scenarios.

o   ***Creating a Team and Identifying Spokespersons***

To ensure the effective operation of a disaster communications plan, it is essential to establish clear roles for all involved parties. The team responsible for executing the plan should develop a comprehensive strategy that provides consistent and accurate information. Consequently, it is critical to assemble a group of responders and designate spokespeople for specific aspects of the plan.

These spokespeople should possess a deep understanding of the disaster, demonstrate empathy, be prepared to address any inquiries regarding the disaster, possess decision-making authority, and ideally include at least one expert as part of the communication effort. Depending on the nature of the disaster, this expert could be a scientist, public official, or another authority in the relevant field.

o ***Creating a Coordinated Action Plan***

Officials responsible for disaster communications and management should be prepared to work in cooperation with emergency response teams, local authorities, and other relevant groups. Effective disaster response necessitates the development of a collaborative strategy that considers the input and efforts of all involved parties.

The disaster communication plan plays a crucial role in delineating the roles and duties of each group. Consequently, it is essential that processes and protocols are pre-established before the communication plan becomes publicly available to minimize any potential confusion. This proactive approach can contribute to a unified and organized response in the wake of a disaster, ensuring that the public receives clear information about the response efforts and the responsibilities of each participating entity.

o ***Creating a Clear Message***

In times of crisis, it is imperative that communities receive information that is easily digestible and usable. Trauma and fear can significantly impact an individual's ability to process and respond to the information they encounter, which is why it is vital for authorities to offer clear and instructive guidance.

When dealing with communication during crises, adhering to the following best practices is essential:

- **Avoiding Technical Jargon**: Steer clear of complex technical language or terminology that may confuse the general public.

- **Using Familiar and Simple Terms**: Utilize straightforward and common language that is easily understood by everyone.

- **Identifying Trusted Spokespeople**: Choose spokespersons from within the community or recognized figures whom the community trusts and respects.

- **Highlighting "Need to Know" Information**: Focus on disseminating essential information that the public needs to know in a crisis situation.

- **Strategic Use of Visuals**: Employ visuals such as maps and diagrams strategically to enhance comprehension.

- **Providing Timely Updates**: Ensure that updates are delivered promptly to keep the community informed of the latest developments.

- **Authoritative and Empathetic Communication**: Maintain a balance in communication, being both authoritative to instill confidence and empathetic to address the emotional needs of the community.

o   ***Identifying Stakeholders and Tailoring Messaging***

Certainly, crisis communication should be adaptable and tailored to different audiences to be effective. Disaster managers must identify potential stakeholders and craft messages that are suitable for various groups. These potential stakeholders can encompass:

- **Disaster Survivors**: Those directly affected by the crisis who need information on immediate assistance and recovery.

- **News and Media Outlets**: Important for disseminating accurate information to the broader public.

- **Nearby Communities**: Neighboring areas that might be indirectly impacted and need to be informed about the situation.

- **Local Businesses and Companies**: They may require information for business continuity and employee safety.

- **Government Officials**: Coordination with government authorities is crucial for a unified response.

When customizing crisis communications for different audiences, it's important to consider specific demographic factors:

- **Age**: Messages should be relevant and accessible to both children and older adults.

- **Geographic Risks**: Recognize the unique risks associated with different geographic areas, such as flood-prone or wildfire-prone regions.

- **Language**: Ensure that information is available in multiple languages, especially in multicultural communities.

- **Disabilities**: Accommodate the needs of disabled individuals by providing information in accessible formats and considering their unique requirements.

Additionally, disaster management officials should aim for cultural competence in their communications. This means creating messages that respect the cultural diversity and sensitivities of the specific audiences they are trying to reach. Effective crisis communication should be inclusive and considerate of the diverse needs and backgrounds of the community.

o   ***Staying updated***

Effective and timely communication is paramount for disaster management authorities. Regular updates serve to establish credibility and foster trust within the general public, as well as among communication authorities.

Individuals and families have the right to receive timely and accurate information that empowers them to make informed decisions, potentially saving lives during emergencies.

To ensure that the public remains well-informed about the latest developments, disaster and crisis management officials should engage in activities such as holding press conferences through various media outlets, thus delivering updates promptly and comprehensively.

Once the disaster has been mitigated, it is crucial for communication and disaster management officials to conduct a post-disaster evaluation of the communications plan. This evaluation process helps in identifying what methods were effective and what improvements can be made for future disaster communications plans. Authorities should also remain receptive to stakeholder feedback and strive to incorporate this feedback into future plans whenever feasible, ultimately enhancing their overall disaster response efforts.

o ***Strategizing Social Media Usage***

Certainly, social media can be a valuable tool for disaster communication officials. They can use platforms like social media to swiftly disseminate verified information and offer detailed guidance, such as infographics or step-by-step instructions for handling emergencies. This approach leverages the speed and accessibility of these platforms to reach a wide audience effectively.

Furthermore, in the age of digital information, it's essential for disaster management officials to actively combat misinformation on social media. Misinformation tends to propagate rapidly during crises as people frantically search for information. By monitoring social media channels, disaster management leaders can:

• **Learn about People's Needs**: Gain insights into the concerns and needs of the affected population, allowing them to tailor their response accordingly.

• **Counter Misinformation**: Identify and address false or misleading information, thus preventing the spread of inaccurate information.

• **Answer Questions**: Engage with the public, responding to their questions and concerns in real-time.

• **Provide Frequent Updates**: Continuously share accurate and up-to-date information to keep the public informed throughout the crisis.

The active and responsible use of social media can significantly enhance the effectiveness of disaster communication and response efforts.

o ***Establishing an Accessible Disaster Communication System***

Accessible crisis communication is not just advantageous; it's a fundamental necessity to ensure the safety and connectivity of communities. It's a matter of inclusivity and doing what's right.

Within the field of disaster management, graduates often understand the importance of making sustainable communities accessible to everyone. The concept of "accessibility" varies from one person to another. While a significant portion of a community may rely on social media for news and updates, many others may not have access to these platforms. Moreover, accessibility goes beyond just language; it extends to various formats, such as braille or text-to-speech services.

As a result, disaster communication plans should be designed to incorporate a strategic blend of information channels to maximize accessibility. This ensures that communication reaches the widest possible audience and accommodates the diverse needs of the community. Inclusivity is a cornerstone of effective disaster communication and management, promoting safety, resilience, and community cohesion.

3.3. Current Debates in Disaster Communication

In 2023, the world faced a myriad of disaster events that tested the resilience of communities and nations. From natural disasters such as hurricanes, earthquakes, and wildfires to human-made crises, the year posed significant challenges. These events highlighted the critical importance of effective disaster communication, preparedness, and international cooperation to mitigate the impact on affected populations.

In the year 2023, events occurring across different regions, tested the resilience of communities and had a profound impact on the lives of tens of thousands of people. The most catastrophic incident took place near the Syrian border in southern Turkiye on February 6, where a dual earthquake with magnitudes of 7.8 and 7.5 struck, affecting around 14 million people, or 16 percent of Turkiye's population. The aftermath was severe, with confirmed deaths totaling 50,783 in Turkiye and 8,476 in Syria, underscoring the urgent need for robust disaster response and recovery efforts (Al Jazeera, 2023).

In addition to the seismic events in Turkiye and Syria, other areas faced their own calamities. On September 8, a magnitude 6.8 earthquake hit western Morocco, resulting in at least 2,900 fatalities and 5,500 injuries. Western Afghanistan experienced a sequence of earthquakes, with magnitudes of 6.3 on October 7, another 6.3 on October 11, and a 6.4 on October 15, causing significant casualties and widespread devastation, emphasizing the vulnerability of certain regions to recurring seismic activity. Furthermore, a variety of weather-related challenges added to the year's difficulties. Typhoon Doksuri brought substantial rainfall and flooding to at least 16 cities and provinces in northeastern China on July 29. Meanwhile, Mediterranean Storm Daniel swept across eastern Libya in September, leaving a path of

destruction. Subsequent months witnessed storms causing flooding in various regions, including Mexico, Hong Kong, and Western Europe, underscoring the necessity for global collaboration in disaster preparedness and response strategies (Al Jazeera, 2023).

Amidst these challenges, media played a pivotal role in disaster response and communication. Social media platforms, emergency alert systems, and geospatial technologies facilitated real-time information dissemination and coordination efforts. However, they also underscored the need for comprehensive studies on the integration of digital tools into disaster communication strategies to ensure accuracy, accessibility, and inclusivity.

As researchers delve into the aftermath of the 2023 global disaster events, there is a growing recognition of the importance of interdisciplinary studies. Collaboration between communication scholars, environmental scientists, public health experts, and policymakers becomes essential to develop holistic strategies that address the complex nature of contemporary disasters. These studies can inform future disaster preparedness plans, response efforts, and policies, ultimately contributing to global resilience in the face of evolving challenges.

In this context, the importance and currency of disaster communication is maintained. Academic studies and research point to disaster communication studies in 2023 as well. Disaster communication studies conducted in 2023 have an important place in understanding current discussions and focal points in disaster communication. In this context, it is aimed to mention the studies dated 2023 on disaster communication under this heading.

One of the current topics of discussion in disaster communication is multilingualism and the elimination of communication barriers. In their study, based on the prediction that the communication barrier may be fatal when individuals living in a multilingual environment in a globalizing world face the risk of disaster, Uekusa & Matthewman (2023) suggested measures to prevent the language barrier, which is one of the most cultural barriers, from appearing as a communication barrier in possible disaster situations. The most important of these measures are multilingual disaster schemes. In addition, it has been suggested that there should be an increase in multilingual disaster experts and that language decentralization should be considered as a specialization rather than dominant languages.

Another current issue is the demand for post-crisis destinations in disaster areas. This current interdisciplinary topic, which bridges tourism and brand communication with post-disaster communication, aims to support the strengthening of disaster areas after a disaster. Focusing on this issue, Huang et.al. (2023), conducted a review on destination marketing

activities in China's Jiuzhaigou Valley after the 2017 earthquake. In the study, scenarios for post-disaster destination demand were prepared and destination intention for the disaster area was examined. According to the findings, it was found that solidarity messages of the disaster area had a positive impact on the target audience's intention to visit. Another important finding of the research is that when solidarity messages are shared by the management of the disaster area, the message effect increases. This is noted as a finding indicating the importance of the opinion leader in the effectiveness of disaster communication.

When the impact of opinion leaders on disaster communication is evaluated, it is necessary to underline the importance of effective communication skills and correct use of mass communication tools and methods, especially by political leaders in disaster management. In this context, it is possible to underline that the effective use of new communication tools by political leaders will contribute to reducing uncertainty in disaster communication. The literature in this field can be strengthened by conducting discourse analysis studies on case studies on effective political leadership, communication diplomacy and digital communication, which are among the current debate areas in disaster communication.

Another recent study is on social media, emojis, and ways to reduce uncertainty in disaster communication. In their study, Son & Negahban (2023) measured the effect of digital communication materials in reducing uncertainty in disaster communication. Accordingly, it is among the findings that the emojis used do not help reduce uncertainty in disaster communication, on the contrary, they increase uncertainty. On the other hand, information sharing is important as an element in reducing uncertainty in disaster communication. Specifically, in the research conducted, information sharing via URL was found to be a criterion in reducing uncertainty in disaster communication.

As one of the practical, effective, multilingual solutions for transferring information and reducing uncertainty, infographics are worth examining and disseminating as one of the current tools that can be used in disaster communication. Infographics can be examined among the methods that can be integrated into disaster communication because they are memorable, eye-catching and easy to understand.

4. Conclusion

Disaster and emergency management has become a multidisciplinary areas whose importance has rapidly increased in recent years. Both the differentiation of disaster types and the unexpected occurrence of their effects have led societies, countries and individuals to take different measures. The subject of disaster and emergency management can be defined as a

complex whole that includes many different subheadings. Communication, one of the main subheadings, has a very important place, but it is a vital issue that must be implemented effectively, accurately and quickly in all areas of disaster and emergency management (Yaman, 2020: 921).

As in every field, communication is an indispensable set of tools and methods in disaster processes. In this context, disaster communication stands out as an area that needs to be examined separately, studies should be carried out and models should be produced.

Within the scope of this study, a literature review on disaster communication was conducted. In the literature study, general criticisms were encountered that the general acceptance and definitions of the concept of disaster and disaster communication strategies have not become widespread. At this point, it was deemed necessary to conduct an examination of disaster communication and introduce it to the literature.

Within the scope of the study, an examination of the concept of disaster was carried out and the types of disasters were explained. Subsequently, the concept of disaster communication is clarified. In the last part of the study, disaster communication strategies were shared.

The limitation of this study is that it is a literature review and is not supported by research. In future studies, it is recommended to conduct quantitative and qualitative research on disaster communication, and it is hoped that the literature of this study will be beneficial. As a result of this study, it is recommended to conduct studies on the following topics in order to eliminate the deficiencies in the literature:

• Disaster literacy,

• Risk communication,

• Digital disaster communication.

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