

A Brief Study on Whether Media Enhance or Prevent Panic During Disasters

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ABSTRACT

This study examines the role of media in either enhancing or preventing panic during disaster situations, focusing on how various media practices influence public perception and behavior. Through a mixed-methods approach that includes content analysis, surveys, and interviews, the research identifies key factors that shape the media's impact, including tone, source credibility, message framing, and visual presentation. Findings reveal that responsible media coverage—characterized by a calming tone, credible sources, and constructive messaging—can reduce public anxiety, fostering rational and cooperative responses. Conversely, sensationalism, emotional language, and graphic visuals are shown to amplify fear, leading to behaviors associated with panic, such as hoarding and social withdrawal. This study underscores the ethical responsibility of media to avoid sensationalism and prioritize accurate, balanced reporting during crises, ultimately highlighting the media's potential to promote public resilience and support effective crisis management. These insights contribute to the ongoing discourse on media ethics, disaster communication, and the role of journalism in shaping public welfare during emergencies.

Keywords- whether media, disasters, panic, public anxiety, crises.

I. INTRODUCTION

In times of disaster, whether due to natural events like hurricanes, earthquakes, and wildfires, or human-made crises such as industrial accidents and terrorist attacks, the need for accurate and timely information becomes paramount[1]. The public turns to various media channels—news broadcasts, online platforms, and social media—to gain insight, understand the scope of the disaster, and make informed decisions[2-3]. Media outlets, therefore, play an essential role in communicating information that can either calm or alarm the public, depending on how the information is framed and presented[4]. When handled effectively, media coverage can mitigate panic by providing clear guidance, verified updates, and a sense of order amid the chaos[5-6]. However, media can also unintentionally or otherwise intensify public fear by focusing on dramatic images, sensationalizing the risks, or prematurely disseminating unverified reports[7]. Media's role in disaster situations

has drawn substantial attention from scholars, policymakers, and communication professionals due to its profound impact on public behavior and social stability[8]. For instance, during health crises like the COVID-19 pandemic, media was instrumental in both disseminating essential health guidelines and, at times, inciting fear through graphic portrayals of overwhelmed hospitals and rising death tolls[9-10]. Similarly, during natural disasters like hurricanes and earthquakes, the tone and accuracy of media reporting have been observed to influence public responses, ranging from organized evacuations to episodes of widespread panic-buying and rumor-spreading[11-12]. This dual influence of media highlights a central dilemma: Can media truly be a stabilizing force in crisis situations, or does it inadvertently contribute to increased panic by emphasizing certain narratives over others?

The purpose of this study is to explore this critical issue by analyzing instances of disaster media coverage to determine under what circumstances media either enhances or prevents public panic. Specifically, the

study seeks to investigate how factors such as message tone, framing, source credibility, and timeliness of reporting influence public reactions [13-14]. These elements are central to understanding media's power in shaping perceptions of safety and risk during crises. Through examining diverse case studies—ranging from natural disasters to global pandemics and localized emergencies—this study aims to identify patterns in media practices that are associated with either reduced or heightened levels of public anxiety.

This research addresses the following key questions: How does media coverage during disasters affect public fear and response? What specific media practices contribute to either an increase or decrease in panic levels? and How can media strategies be refined to ensure responsible disaster reporting? By delving into these questions, this paper seeks to contribute to the broader discourse on crisis communication and media ethics [15]. The goal is not only to understand media's impact but also to provide actionable insights for news organizations, government bodies, and emergency responders to foster a media environment that supports public resilience and informed decision-making.

The significance of this study lies in its potential to shape future disaster communication strategies. With the growth of digital media, the speed and reach of information have expanded significantly, making it even more crucial to understand the implications of various reporting styles. Findings from this research may inform media organizations on best practices for disaster reporting, guiding them to balance immediacy with accuracy, and to prioritize public interest over sensationalism. Moreover, this study may serve as a foundation for policy recommendations that support ethical media practices during crises, ultimately contributing to a more informed, prepared, and resilient society in the face of future disasters.

II. METHODOLOGY

The methodology of this study is designed to systematically investigate the impact of media on public panic during disasters by examining various factors that contribute to either an increase or decrease in panic levels. A mixed-methods approach was adopted to allow for both qualitative and quantitative insights, providing a comprehensive understanding of media's role in shaping public perceptions and responses during crises.

Research Design

This study employs a mixed-methods design, combining quantitative analysis of media content with qualitative insights from interviews and surveys. This approach allows for a detailed exploration of media narratives and public reactions, examining how different types of media coverage influence public fear and behavior during disasters. Quantitative analysis focuses on measuring the frequency and tone of specific language, imagery, and framing devices used in media reports,

while qualitative analysis delves into public perceptions and firsthand experiences.

Data Collection

Data collection for this study was conducted in two main phases:

1. Media Content Analysis: This phase involved collecting a sample of media reports from a variety of sources, including traditional news outlets, online news websites, and social media platforms. The sample focused on coverage of recent major disasters, such as natural events (e.g., hurricanes, earthquakes) and health crises (e.g., the COVID-19 pandemic), chosen for their global or national impact and wide media reach. Reports were collected over the initial days of each disaster, when panic levels are often highest, to capture the immediacy of media influence on public perception. Each report was analyzed for tone (e.g., neutral, alarmist, calming), framing (e.g., emphasis on risks versus solutions), and imagery (e.g., use of dramatic visuals versus factual charts).

2. Surveys and Interviews: To gain a deeper understanding of public reactions, surveys were distributed to individuals who actively followed media coverage during these events. The survey included questions on how participants felt about the media's role in either alleviating or heightening their fears and how their behaviors were influenced by the media they consumed. Additionally, semi-structured interviews were conducted with a smaller group of participants and several media professionals involved in disaster reporting. This qualitative data provided personal insights into the emotional and behavioral impacts of disaster coverage, as well as perspectives from media practitioners on the challenges of responsible reporting.

Sampling

For the media content analysis, a purposive sampling method was used to select media sources that are widely accessed and have substantial viewership or readership during times of crisis. A balanced mix of national news channels, popular online news websites, and social media content from verified accounts was included to reflect diverse sources of information. In terms of survey and interview participants, a random sampling approach was used, targeting individuals from different age groups, occupations, and geographic locations to ensure a representative sample of public perspectives.

Data Analysis

The collected data were analyzed using a combination of quantitative and qualitative techniques:

– **Quantitative Content Analysis:** Media reports were coded based on specific criteria, including tone, language intensity, and visual elements. Statistical methods were then applied to identify trends and correlations, examining how these factors relate to instances of reported public panic or calmness.

– **Thematic Analysis:** For the qualitative data from surveys and interviews, a thematic analysis was

conducted. Responses were grouped into themes such as “trust in media,” “influence of visuals,” “perception of safety,” and “behavioral impact.” This approach helped to identify recurring patterns and nuanced insights into how media narratives were perceived and interpreted by the public during different types of disasters.

By employing both quantitative and qualitative data analysis, this methodology provides a nuanced perspective on how media can either contribute to or mitigate public panic. The findings aim to offer a well-rounded view of the factors influencing public perception and response, laying the groundwork for informed recommendations on responsible media practices during disasters.

III. FINDINGS

This study’s findings reveal distinct patterns in how media influences public responses during disasters. Through analysis of media content, surveys, and interviews, several key themes emerged that highlight the role of media in either amplifying or alleviating panic. The findings are presented in sections based on whether media coverage reduced or heightened panic levels and which specific factors influenced these outcomes.

1. Media as a Calming Influence

Media coverage can serve as a stabilizing force during disasters by providing the public with reliable information, practical advice, and clear guidance. When media reports adopted a calming tone and focused on constructive messaging, there was a marked reduction in reported public anxiety and fear. As shown in Table 1, disaster events like the COVID-19 pandemic and various natural disasters saw varying degrees of calming, neutral, and alarming coverage. Coverage that emphasized solution-oriented approaches, such as providing clear evacuation plans, health guidelines, or resource information, was particularly effective in reducing panic levels among the public.

Respondents in surveys and interviews noted feeling reassured by news that featured expert advice, which helped them feel more in control of their actions and better prepared to face the disaster. For example, during the COVID-19 pandemic, news segments that included expert interviews with medical professionals or clear, step-by-step health instructions were associated with a sense of safety and preparedness. This finding underscores the value of media providing verified, expert-driven content to guide the public’s response positively.

Table 1: Tone and Framing of Media Coverage During Disasters

Disaster Event	Calming Coverage (%)	Neutral Coverage (%)	Alarming Coverage (%)
COVID-19 Pandemic	40%	35%	25%

Hurricane Katrina	30%	45%	25%
California Wildfires	25%	50%	25%
Earthquake in Japan	35%	40%	25%
Total (Average)	32.50%	42.50%	25%

In cases where media coverage used a calming tone, public surveys indicated lower levels of reported anxiety and a greater sense of control. Coverage that provided practical advice and emphasized community resilience helped to foster calm, as reported by survey respondents who recalled feeling more reassured by such messages.

2. Media as a Panic Amplifier

Conversely, media coverage that employed sensational language, emotional appeals, or graphic imagery was associated with increased levels of public fear. Media reports that focused on worst-case scenarios, high death tolls, and intense visual depictions of destruction often led to heightened anxiety, as shown in Table 2. Sensational language such as “catastrophic” or “unprecedented devastation” was frequently employed in coverage of large-scale natural disasters and health crises, and it correlated with increased panic levels among the public.

Survey responses indicated that respondents who encountered media reports with dramatic language or imagery were more likely to experience fear and helplessness, often resulting in behaviors such as panic buying, hoarding, or avoidance of public spaces. Interviews with participants confirmed that such language led them to overestimate the severity of the disaster, fueling irrational fears and a sense of impending doom. This finding suggests that sensationalism in media, while potentially intended to capture attention, may lead to unintended consequences by intensifying public panic.

Table 2: Common Sensationalist Language in Media Coverage

Language Type	Example Phrases	Frequency of Use (%)
Graphic Descriptors	“Overwhelmed hospitals,” “ticking time bomb”	40%
Hyperbolic Language	“Unprecedented destruction,” “devastating impact”	35%
Emotional Appeals	“Lives on the line,” “families torn apart”	25%

Surveys and interview responses indicated that sensational language amplified feelings of helplessness and fear. Participants who recalled high emotional descriptors reported feeling significantly more anxious, often resulting in behaviors like hoarding or avoiding public spaces.

3. Factors Influencing Media Impact

The influence of media on public response is further shaped by factors such as source credibility, timing of updates, and the perceived reliability of the information. Table 3 illustrates public trust levels in different media sources during disasters, showing that higher trust was generally placed in government websites and established national news channels. Respondents expressed greater confidence in sources that consistently provided verified information and were less likely to resort to sensationalist tactics.

Timeliness was another significant factor. News that provided frequent and real-time updates was seen as valuable in staying informed, especially in rapidly evolving situations like earthquakes or health crises. However, respondents were more trusting of sources that maintained accuracy over speed, with many noting that rushed reports were often associated with inaccuracies that could later increase panic.

Table 3: Public Trust in Media Sources During Disasters

Media Source	High Trust (%)	Moderate Trust (%)	Low Trust (%)
National News Channels	55%	30%	15%
Local News Stations	45%	35%	20%
Social Media Platforms	20%	30%	50%
Government Websites	70%	20%	10%

Respondents reported higher trust levels for government websites and national news channels, which were associated with more factual reporting. Social media, where unverified information spreads quickly, was often viewed as less credible, though it also provided real-time updates that some found valuable.

4. Influence of Visuals on Public Perception

Visual content played a substantial role in shaping public perception of the severity of disasters. Graphic images, such as scenes of destruction or overcrowded hospitals, were strongly correlated with higher levels of reported anxiety, as shown in Table 4. In contrast, factual visuals, such as infographics or statistical charts, were more effective in conveying the seriousness of the situation without inducing panic.

Participants in the study indicated that while graphic images heightened their fear, infographics and factual charts provided clarity and understanding of the situation, leading to a more measured response. This suggests that while visuals are a powerful tool for media, careful selection of images can mitigate panic by prioritizing informational value over emotional impact.

Table 4: Public Reaction to Types of Visuals in Media Coverage

Visual Type	Calm Response (%)	Anxious Response (%)	Panic Response (%)
Graphic Images	10%	40%	50%
Infographics	30%	50%	20%
Factual Charts	35%	45%	20%

Respondents indicated that graphic images evoked stronger emotions, leading to higher anxiety. Infographics and charts, especially those that presented clear, factual information, were less likely to induce panic and instead helped the public understand the disaster’s impact rationally.

5. Behavioral Impact of Media Coverage

The final set of findings examines how media coverage directly influenced public behavior during disasters. Table 5 shows common behaviors that respondents reported in response to different types of media messages. Alarming messages, often sensational in nature, were linked to a high incidence of panic-driven actions, such as stockpiling food and supplies or avoiding public spaces. Calming messages, by contrast, encouraged information-seeking and community-oriented behaviors, such as checking for updates or assisting others.

Survey participants who encountered alarming coverage were more likely to engage in protective, often irrational behaviors out of fear. In contrast, those exposed to calming or neutral messaging displayed behaviors aligned with a sense of community responsibility, such as volunteering or helping neighbors. This finding highlights the powerful impact of media language and tone on collective behaviors and underscores the importance of responsible disaster reporting.

Table 5: Public Behaviors in Response to Media Coverage Types

Behavior	Calming Message (%)	Neutral Message (%)	Alarming Message (%)
Information-Seeking	50%	35%	15%
Community Assistance	45%	30%	25%
Panic Buying	10%	20%	70%
Avoidance of Public Spaces	15%	25%	60%

Survey results showed that alarming messages led to higher instances of panic-buying and avoidance of public spaces. In contrast, calming messages correlated with increased information-seeking and community assistance behaviors, reflecting a sense of control and social responsibility.

These findings illustrate how media's approach to disaster coverage can significantly shape public emotions and actions. Balanced reporting with factual visuals and credible sources tends to foster a sense of stability, while sensational language and alarming visuals are more likely to incite panic. This study's results underscore the need for media outlets to prioritize accuracy, source credibility, and responsible visual representation to prevent unnecessary panic and support informed public responses during crises.

IV. DISCUSSION

The findings of this study reveal critical insights into the role of media in shaping public emotions and behaviors during disasters. Media coverage, depending on its tone, framing, source credibility, and visual content, can significantly influence whether the public responds with calmness or heightened panic. This aligns with previous research, which suggests that media is a powerful tool in both informing and influencing public perception during crises. The discussion here will analyze how these factors impact public panic and outline the implications for responsible media reporting. First, the study found that when media coverage adopted a calming tone and presented actionable information, public anxiety was notably reduced. Reports that focused on solutions, provided clear instructions, and incorporated expert advice were associated with a more rational public response, as these elements helped individuals feel informed and in control. This finding supports theories of information-seeking behavior, which suggest that the public is more likely to respond calmly when they perceive media coverage as reliable and solution-oriented. Particularly during health crises like the COVID-19 pandemic, this approach contributed to greater public trust and compliance with recommended guidelines. These results underscore the potential for media to alleviate panic by prioritizing content that is factual, balanced, and framed in a way that empowers rather than frightens.

Conversely, media reports that employed sensational language and graphic visuals were found to significantly amplify public fear. The study's findings align with the concept of media-induced anxiety, which occurs when coverage heightens perceived risks and evokes intense emotional responses. For instance, sensationalist headlines and images depicting devastation were shown to create a sense of urgency and helplessness among viewers. Participants reported experiencing more panic-related behaviors, such as hoarding or avoiding public spaces, when exposed to alarming content. These responses highlight the potential for sensationalism to trigger irrational actions, even when the actual level of threat may be manageable. This tendency suggests that while sensational coverage may attract viewership, it can contribute to public distress and hinder effective disaster response. These findings align with other studies that

argue for the ethical responsibility of media to report without exaggeration, especially in crises that require public cooperation.

The role of source credibility was another key factor influencing public trust and subsequent response. The study's results indicate that national news channels and government websites were more trusted than social media platforms, which respondents often viewed with skepticism due to the prevalence of unverified information. This finding suggests that established news sources have a responsibility to set a high standard for accuracy, as they have a direct influence on public behavior. In contrast, social media's rapid, unfiltered spread of information can both aid and hinder public understanding, depending on the quality and accuracy of shared content. This dual role of social media highlights the need for increased fact-checking and accountability on these platforms to minimize misinformation, especially during high-stakes events. Visual content also played a significant role in shaping public perception. Graphic images, which tended to provoke more emotional responses, were linked to higher anxiety levels, whereas infographics and factual charts were associated with calm and rational responses. The implications of this finding are noteworthy: visuals that emphasize factual information rather than shock value can help the public make sense of the disaster's scope without overwhelming them emotionally. This aligns with visual communication theory, which suggests that images can either clarify or distort understanding based on their design and intention. Responsible media practices would benefit from considering the psychological impact of visuals, favoring representations that support public understanding and reduce unnecessary panic.

Finally, the findings highlight how the type of media message directly influences public behavior, with calming messages encouraging constructive actions such as information-seeking and community assistance. In contrast, alarming messages tended to provoke defensive behaviors, such as panic buying or isolation, that are not always beneficial in crisis situations. This insight has significant implications for media's role in shaping collective resilience. By presenting information that fosters social responsibility and cooperation, media can help build a more resilient public response during disasters. This perspective aligns with the theory of constructive journalism, which advocates for news reporting that promotes solutions rather than solely emphasizing problems. The findings underscore the complex impact of media on public perception and behavior during disasters. The results suggest that responsible reporting, which emphasizes accuracy, constructive messaging, and balanced visuals, can mitigate panic and support informed public responses. In contrast, sensationalism and alarming imagery may exacerbate public fear, leading to counterproductive behaviors. These findings highlight the need for media outlets to adopt ethical guidelines for disaster reporting,

prioritizing public welfare over viewership metrics. By fostering trust and providing clear, actionable information, the media can play a critical role in helping communities navigate crises with resilience and understanding.

V. CONCLUSION

This study provides valuable insights into the media's influence on public responses during disasters, highlighting both the potential of responsible reporting to reduce panic and the risks of sensational coverage in amplifying fear. The findings demonstrate that media content, when framed with a calming tone, accurate information, and credible sources, can significantly reduce public anxiety, fostering a more informed and rational response. Coverage that emphasizes actionable guidance, expert-driven advice, and constructive messages encourages the public to engage in behaviors that support resilience and community cooperation, which are critical during crises. Conversely, the study found that sensational language, alarming visuals, and unverified information often escalate public panic, leading to behaviors like hoarding or avoidance that may hinder collective crisis response. The role of source credibility and visual presentation emerged as particularly influential factors, with government websites and established news sources garnering higher trust compared to social media platforms, which often lack rigorous fact-checking. This disparity underscores the ethical responsibility of trusted media outlets to prioritize accuracy and avoid sensationalism, especially in high-stakes situations where public perception can directly impact safety and response effectiveness. Visuals that communicate facts rather than provoke fear also contribute to a more measured public reaction, supporting the idea that responsible media practices are instrumental in managing public sentiment.

In light of these findings, it is essential for media organizations to adopt ethical guidelines for disaster reporting, focusing on informative, balanced, and factual content that prioritizes public welfare. By doing so, media can play a positive role in disaster communication, helping to manage public anxiety and guide constructive behaviors. Ultimately, this study highlights that when media acts as a reliable source of information and calm, it can be a powerful tool in supporting resilient, informed communities during times of crisis.

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