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**BARANGAY-LEVEL COMMUNICATION STRATEGIES AND THEIR ROLE  
IN SHAPING HOUSEHOLD DISASTER PREPAREDNESS  
IN QUEZON CITY, PHILIPPINES**

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18 May 2026

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### **BARANGAY-LEVEL COMMUNICATION STRATEGIES AND THEIR ROLE IN SHAPING HOUSEHOLD DISASTER PREPAREDNESS IN QUEZON CITY, PHILIPPINES**

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## Acceptance Page

This paper prepared by **JOHN MARLON NON** with the title: “**BARANGAY-LEVEL COMMUNICATION STRATEGIES AND THEIR ROLE IN SHAPING HOUSEHOLD DISASTER PREPAREDNESS IN QUEZON CITY, PHILIPPINES**” is hereby accepted by the Faculty of Information and Communication Studies, U.P. Open University, in partial fulfillment of the requirements for the degree, Master of Development Communication.

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## Biographical Sketch

John Marlon Non is currently pursuing a Master of Development Communication (MDC) at the University of the Philippines Open University (UPOU). He earned his Bachelor's degree in Mass Communication from New Era University in 2016. He has extensive professional experience in government communication, having served as an Information Officer II at the Department of Social Welfare and Development (DSWD) Field Office NCR from 2021 to 2024. In this role, he was actively involved in public information dissemination, media relations, and the implementation of the agency's annual communication plans, particularly in conveying social protection programs and community-oriented initiatives.

In November 2024, he joined the Anti-Red Tape Authority (ARTA) as an Information Officer III under the Information and Public Relations Division. In his current position, he develops and implements strategic communication and advocacy initiatives that promote transparency, efficiency, and citizen engagement in public service delivery.

John Marlon's academic and research interests center on development communication, disaster risk reduction and management (DRRM), community-based communication strategies, public relations, and social media engagement. His thesis, titled *"Barangay-Level Communication Strategies and their Role in Shaping Household Disaster Preparedness in Quezon City, Philippines,"* examines how various communication approaches influence the awareness and preparedness of households in a disaster-prone urban community. Through this study, he aims to generate evidence-based insights that can support local government units and development institutions in strengthening communication interventions for disaster preparedness and community resilience.

## **Acknowledgement**

This thesis proposal, entitled "Barangay-Level Communication Strategies and their Role in Shaping Household Disaster Preparedness in Quezon City, Philippines" marks a significant milestone in my academic journey. It stands as a product of not just my individual effort, but also of the unwavering support, encouragement, and guidance extended to me by many individuals and institutions whom I wish to acknowledge with heartfelt gratitude.

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community leaders who will participate in the study and share valuable perspectives that will greatly enrich the findings.

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I would also like to acknowledge the institutional experiences that shaped my professional lens. My time as an Information Officer II at the Department of Social Welfare and Development (DSWD) Field Office NCR and my current role as Information Officer III at the Anti-Red Tape Authority (ARTA) have instilled in me a deep understanding of strategic communication, public service, and stakeholder engagement. These experiences have inspired and informed the research questions and objectives of this study.

To my friends and fellow MDC learners, your encouragement, camaraderie, and shared commitment to learning have made this journey more fulfilling. The knowledge exchanges and collaboration throughout our academic pursuit have been both enriching and empowering.

To my family—thank you for your unwavering love, prayers, and support. Your belief in my abilities and your patience during moments of doubt have been my greatest motivation. This accomplishment is as much yours as it is mine.

Above all, I offer my deepest thanks to God Almighty, for the strength, wisdom, and perseverance that guided me through every stage of this endeavor.

This thesis is a humble contribution to the ongoing discourse on disaster risk reduction and development communication, and I dedicate it to all communities striving to build a more resilient and informed future.

## Dedication

This thesis is respectfully dedicated to the individuals and institutions whose support, inspiration, and dedication have significantly contributed to the successful completion of this academic endeavor.

To my family, whose steadfast encouragement, patience, and unconditional support have provided me with the strength to pursue this academic journey—thank you. Your unwavering belief in my potential has been instrumental in overcoming the many challenges encountered throughout this process.

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With sincere appreciation, I dedicate this thesis to all who are committed to building safer, more informed, and resilient communities.

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## **Abstract**

This study examines the role of communication strategies in shaping household disaster preparedness through a case study of a selected highly urbanized and disaster-prone barangay in Quezon City, Philippines. Grounded on the Risk Perception and Communication Model (RPCM), the study involving 15 participants analyzed qualitatively how socio-demographic, environmental, and contextual factors influence household preparedness; how disaster-related messages are communicated; and how different communication strategies contributed to households' disaster awareness, knowledge, skills, and preparedness actions.

Findings reveal that household preparedness is significantly influenced by economic capacity, household composition, prior disaster experiences, and access to communication resources. Communication strategies function in complementary roles: barangay-based and interpersonal channels provide localized and trusted information, while social media and mobile communication enable rapid and wide dissemination. However, effectiveness varies due to disparities in access, timeliness of response, and socio-economic constraints. Preparedness is further reinforced by community support systems, local leadership, and repeated exposure to hazards such as flooding and typhoons.

The study concludes that disaster communication must be context-specific, inclusive, and multi-channel. It highlights the need for an integrated communication framework that combines digital platforms, interpersonal engagement, and community-based approaches to ensure that information is accessible, credible, and actionable. The findings provide practical implications for local government units and disaster risk reduction practitioners in designing responsive communication strategies that strengthen household preparedness and community resilience in urban settings.

# CHAPTER I

## INTRODUCTION

### **Background of the Study**

Communication is widely recognized as a cornerstone of disaster preparedness. A functional review by Houston et al. (2015) proposes that different communication tools perform different tasks along the “awareness-to-action” chain: sirens activate immediate attention, mobile alerts push location-specific instructions, printed IEC materials build procedural knowledge, and face-to-face drills translate information into practical skills. However, the actual performance of these roles is highly uneven across communities, depending on literacy, language, income, and technology access.

A study that analyzes the role of communication in household disaster preparedness is important, especially for countries like the Philippines that have higher risks to natural hazards. The Philippines ranks among the world’s highest-risk countries for natural hazards because it straddles both the Pacific “Ring of Fire” and the West Pacific typhoon corridor. Every year, an average of 20 tropical cyclones enters the Philippine Area of Responsibility, while at least five make damaging landfall, compounding the country’s regular exposure to earthquakes, volcanic eruptions, and flood events (UNDRR, 2019). Such physical threats intersect with widespread poverty and rapid urbanization, producing levels of disaster risk that the United Nations Office for Disaster Risk Reduction calls “systemic,” meaning they are embedded in everyday social and economic activity.

Metro Manila, home to more than 13 million people, illustrates these overlapping pressures. In Quezon City, the region’s largest local government, flooding along the Tullahan and San Mateo river systems, liquefaction zones near the West Valley Fault,

and dense informal settlements combine to produce very high-risk scores in the city's latest Disaster Risk Reduction and Management Plan (QCDRRMP 2021–2027). The studied barangay, one of the most populous barangays in Quezon City, is flagged in that plan for “very high” flood exposure and chronic social vulnerability due to its mixed migrant population, informal housing clusters, and limited basic services.

Past disasters reveal the human cost of these conditions. Typhoon Ondoy (Ketsana) in September 2009 delivered a month's worth of rain in six hours, flooding 80 percent of Metro Manila, displacing 730,000 families, and causing damage and losses estimated at US \$4.38 billion (GFDRR 2010). Post-disaster reviews found that many fatalities occurred because residents either underestimated the hazard or received evacuation orders too late; local warning systems were overwhelmed, and messages did not reach the most at-risk households.

Similarly, the 1991 Mount Pinatubo eruption showed that even when scientific forecasts are accurate, evacuation compliance hinges on whether warnings are understood and trusted by diverse audiences.

Disaster preparedness messages must therefore be communicated early and with clarity to mitigate the impacts of hazards. However, the role and effectiveness of these messages vary depending on how they are delivered and interpreted across households, given the contextual diversity within the study area. Communication strategies and tools shape how households understand and act on it. For instance, reliance on digital alerts may lead to uneven household responses due to the persistent digital divide. Evidence from the Asian Development Bank indicates that a significant proportion of the urban poor in Metro Manila lack regular internet access, with many households sharing a single mobile phone or depending on prepaid data.

These constraints limit the timely receipt and use of real-time digital alerts, thereby influencing how disaster preparedness messages are received, interpreted, and acted upon.

Likewise, literacy levels and language diversity further shape how disaster messages are understood across households. Migrants from non-Tagalog-speaking provinces may face challenges in engaging with standard Filipino IEC materials, while older residents often prefer oral briefings delivered at the barangay hall. These variations highlight that communication strategies do not function uniformly across communities; a message that is effective in one neighborhood may be less meaningful or accessible just a few blocks away. This underscores the need to examine how it is interpreted and for whom it works within diverse household contexts.

International practice now stresses community engagement and accountability (CEA) as a pathway to context-sensitive communication. The International Federation of Red Cross and Red Crescent Societies notes that participatory approaches where residents help co-design warnings, choose channels, and feedback on clarity produce higher trust and faster protective action than purely top-down broadcasts (IFRC CEA Toolkit, 2023).

Yet even within CEA literature, empirical studies still tend to evaluate overall “effectiveness” (e.g., message reach or recall rates) rather than disaggregate the role each communication element plays in moving households from risk perception to concrete preparedness behaviors.

This observation forms a critical research gap in existing literature. Most Philippine and international studies benchmark early-warning systems or social-media campaigns against generic performance metrics such as speed, coverage, and

accuracy without mapping the specific functions they fulfil within the household disaster preparedness pathway. Most existing literature focuses on the effectiveness of communication in broad terms such as message reach or recall but rarely explores what function each strategy serves in the preparedness process. This role-based perspective is critical for developing context-appropriate disaster communication frameworks (Houston et al., 2015; Kelman & Glantz, 2015).

In addition, existing research is mostly focused on rural or national contexts, often overlooking the complex and dynamic realities of informal urban settlements. Only a limited number of studies have examined how these contextual conditions shape the role and reception of disaster communication strategies in such settings. This gap is also evident in the case of the studied barangay, which is characterized by overcrowding, mixed-income households, migratory populations, and uneven access to technology—conditions that demand differentiated and culturally responsive communication approaches (Marcelo et al., 2019; United Nations Office for Disaster Risk Reduction, 2019).

Moreover, disaster communication strategies are often implemented through top-down approaches, which neglect community engagement and local cultural practices. Consequently, the potential of community-led and participatory communication methods that could strengthen preparedness behaviors of the households remains underexplored (Comfort & Kapucu, 2006; International Federation of Red Cross and Red Crescent Societies, 2017). Analyzing how community involvement can shape the role of communication strategies, such as enhancing trust, enabling context-specific messaging, and reinforcing collective action, is important if communication outcomes for disaster preparedness is to be improved.

The use of digital tools in early warning systems has significantly increased in recent years. However, only few studies were focused on how these platforms function within low-income urban areas where digital literacy, device access, and internet connectivity are uneven (Polido et al., 2020; ADB, 2009). This limits our understanding of the real contribution or role of digital strategies in promoting preparedness among digitally marginalized groups.

Lastly, few studies have sought to integrate the various roles of communication strategies into a comprehensive, localized disaster communication framework. Without such integration, disaster communication efforts risk becoming fragmented, duplicative, or misaligned with the needs of at-risk households.

In response to these gaps, this study aims to analyze the specific roles that communication strategies play in shaping disaster preparedness among households in the study site. It explored how these roles vary based on household characteristics and community context and ultimately proposed a role-based disaster communication framework that can inform preparedness planning in similar urban settings.

Planners in high-risk and culturally diverse barangays lack evidence on which tool is best suited to raise risk awareness, which in turn, can build detailed knowledge, cultivate hands-on skills, and motivate action amid resource constraints. Addressing this gap necessitates an analysis of the role differentiation of communication strategies, hence the study. The analysis is expected to shift local disaster planning from a “one-size-fits-all” template toward a more evidence-based and role-oriented framework that matches the right message and medium to the right audience segment (Bartolucci et al., 2023). This approach is essential especially when information needs to be converted into life-saving preparedness at the household level.

## **Positionality Statement**

The researcher is a communication professional with formal training in Mass Communication and ongoing graduate studies in Development Communication. With several years of experience in public service, particularly in government communication and public information work, the researcher has been actively involved in crafting and disseminating messages intended to influence public behavior and awareness. This professional background provides a strong foundation in understanding how communication strategies are designed, implemented, and evaluated, particularly in relation to public policy and community engagement.

In the context of this study, the researcher occupies a position that can be described as both an insider and outsider. As a resident of Quezon City and a practitioner in government communication, the researcher shares a socio-cultural and geographic proximity with the participants particularly in Quezon City. This insider perspective allows for a nuanced understanding of local contexts, communication channels, and the lived realities of urban communities exposed to disaster risks. At the same time, the researcher remains an outsider to the specific households being studied and is not directly involved in barangay-level disaster preparedness initiatives. This distance helps maintain a level of objectivity in data collection and analysis.

However, the researcher acknowledges potential biases that may influence the study. Given his professional background, there may be a tendency to view communication strategies as inherently effective or central to behavioral change, possibly overlooking structural, economic, or environmental factors that also shape disaster preparedness. Additionally, familiarity with government communication systems may lead to assumptions about the accessibility or clarity of official messages, which may not

reflect the actual experiences of community members. To mitigate these biases, the researcher commits to reflexivity throughout the research process, triangulation of data sources, and prioritizing participants' perspectives to ensure that findings accurately represent the realities of the community.

Ultimately, this positionality enables the researcher to approach the study with both contextual sensitivity and critical awareness, balancing professional insight with methodological rigor.

### **Statement of the Problem**

This study aims to analyze the role of communication strategies in shaping disaster preparedness among households in Barangay Commonwealth, Quezon City.

Specifically, it seeks to address the following questions:

1. How do households' socio-demographic, cultural, environmental, and contextual conditions, influence their interpretation and response to disaster preparedness messages?
2. How are disaster preparedness messages communicated to households in Barangay Commonwealth, and how do these communication strategies influence household awareness, knowledge, skills, and preparedness actions?
3. How do the roles of different communication strategies and the contextual factors affecting them contribute to the development of a context-specific disaster communication framework for enhancing household disaster preparedness in Barangay Commonwealth?

## **Scope and Delimitation**

This study focused on examining barangay-level communication strategies and their role in shaping household disaster preparedness in Quezon City, Philippines. It analyzed the communication strategies implemented by different stakeholders, including local government units, non-governmental organizations, community leaders, and households. The investigation centered on how these strategies disseminated disaster preparedness information, increased awareness, and influenced household preparedness behaviors. Attention was given to socio-demographic characteristics such as gender, age, educational attainment, income level, disability status, and access to communication technologies.

The study also explored the barriers and challenges associated with disaster communication. Both traditional and technology-based communication methods were examined, including community meetings, workshops, social media platforms, SMS alerts, and printed information materials. Through this examination, the research aimed to determine how these communication approaches contributed to improving awareness, preparedness knowledge, and disaster response behaviors among households. Furthermore, the study sought to generate context-specific recommendations that might enhance disaster preparedness and community resilience through improved communication frameworks.

The research specifically investigated the roles performed by various communication strategies in influencing household disaster preparedness in Barangay Commonwealth. These strategies included early warning systems, information, education, and communication (IEC) materials, social media advisories, community meetings, and disaster preparedness drills. The study analyzed how these strategies

contributed to raising awareness, increasing disaster-related knowledge, developing preparedness skills, and motivating households to undertake proactive preparedness actions.

The geographic scope of the study was limited to Barangay Commonwealth, a densely populated and disaster-prone barangay in Quezon City. The respondents of the study consisted of heads of households or adult household members aged eighteen years and above who could represent the household's experiences and perceptions regarding disaster communication and preparedness. Key variables examined in the research included the socio-demographic profile of respondents, their level of exposure to different communication strategies, their level of disaster preparedness, and their perceptions regarding the roles of communication interventions.

Despite its objectives, several limitations had to be acknowledged. First, the findings of the study were specific to Barangay Commonwealth and therefore might not be fully generalizable to other barangays or communities with different socio-economic, geographic, or cultural contexts. Second, the research relied on self-reported data obtained through surveys and interviews, which might be subject to recall bias, social desirability bias, or inaccuracies in respondents' reporting. Third, the study focused only on selected communication strategies that were relevant and accessible within the study area; consequently, other communication strategies utilized in different contexts might not be included in the analysis.

Additionally, the study primarily emphasized household-level experiences and perceptions regarding disaster communication. Perspectives from institutional actors such as government officials, barangay leaders, or communication officers were not the central focus of the analysis unless used as supplementary sources of information.

Finally, time constraints associated with academic requirements limited the duration of data collection and analysis, which might affect the ability to capture long-term changes in communication practices and preparedness behavior. Despite these limitations, the study aimed to generate meaningful insights that might contribute to the development of a community-based disaster communication framework tailored to the realities and needs of households in Barangay Commonwealth. Such a framework might assist policymakers, disaster risk reduction practitioners, and community leaders in designing more effective communication strategies to strengthen household disaster preparedness and community resilience.

### **Significance of Study**

This study is significant in understanding how various communication strategies contribute to strengthening household disaster preparedness, particularly in urban poor communities such as Barangay Commonwealth. Unlike previous studies that focus solely on the effectiveness of communication, this research explores the specific roles that different strategies such as early warning systems, printed IEC materials, social media messages, and community drills play in raising awareness, increasing knowledge, developing preparedness skills, and motivating action among households (Houston et al., 2015; IFRC, 2017; Kelman & Glantz, 2015).

The findings of this study will benefit the following:

- **Local Government Units (LGUs)** – The insights from this research can help LGU officials design more targeted and context-sensitive communication plans that maximize the impact of each strategy depending on its role, thereby improving the community’s overall disaster resilience (UNDRR, 2019).

- **Disaster Risk Reduction and Management Offices (DRRMOs)** – The study will offer evidence-based recommendations for tailoring disaster communication strategies to the needs, behaviors, and constraints of households, especially in high-risk, densely populated communities (Marcelo et al., 2019).
- **National Government Agencies (NGAs)** – Agencies such as the National Disaster Risk Reduction and Management Council (NDRRMC), the Department of the Interior and Local Government (DILG), and the Office of Civil Defense (OCD) can use the findings to inform national frameworks and training modules that emphasize the role-based use of communication tools (Comfort & Kapucu, 2006; Polido et al., 2020).
- **Development Communicators and Practitioners** – This study provides a model for applying communication theories in real-life disaster contexts, offering a foundation for more strategic, participatory, and impact-driven communication interventions (Houston et al., 2015).
- **Academia and Future Researchers** – Scholars in development communication, disaster risk management, and social behavior can build on the role-based approach introduced in this study to further examine how specific communication strategies influence disaster preparedness outcomes in different contexts (Lopez-Carlos, 2015).
- **Households in Barangay Commonwealth** – Ultimately, the study aims to empower residents by identifying communication practices that resonate with their lived experiences, help them prepare more effectively, and reduce their vulnerability to disaster impacts (ADB, 2009; UNDRR, 2019).

By developing a disaster communication framework rooted in the community's context, this study bridges the gap between information delivery and actual preparedness behavior helping ensure that communication strategies are not just heard, but acted upon (Kelman & Glantz, 2015; IFRC, 2017).

## **CHAPTER II**

### **REVIEW OF RELATED LITERATURE**

In this chapter, the researcher delves into a comprehensive exploration of existing research and literature pertinent to the study. The researcher navigates through related articles that shed light on the subject, establishes the theoretical framework that underpins the research. Disasters, both natural and human-induced, pose significant threats to households worldwide, particularly in the communities. Understanding communication strategies and preparedness to disasters is crucial in mitigating risks and enhancing adaptive capacities.

#### **I. Households' Preparedness for Disasters**

Globally, household disaster preparedness has received increasing attention in both academic and policy circles, particularly in the face of intensifying natural hazards such as typhoons, earthquakes, and floods. Studies have demonstrated that the level of household preparedness is shaped by multiple factors, including communication strategies, socio-economic status, psychological readiness, and the quality of governance.

Paton (2003) argued that beyond simply disseminating information, effective disaster preparedness must address individuals' belief systems, particularly their sense of self-efficacy and perceived control over outcomes. His social-cognitive model suggested that preparedness is best understood as a behavioral outcome of internal psychological processes triggered by trusted external cues.

In the United States, Eisenman et al. (2009) observed that many households lacked sufficient disaster plans and emergency supplies, with disparities often linked to

income, education, and language barriers. Interestingly, the study emphasized that people who had higher trust in public authorities and communication systems were significantly more likely to engage in preparedness behaviors.

A study in the United Kingdom by Burningham, Fielding, and Thrush (2008) revealed that “normalcy bias” the cognitive assumption that disasters are unlikely to occur personally often prevented households from acting on risk communication messages. Despite living in high-risk areas, many residents failed to implement preparedness actions simply because they believed disasters would not affect them directly.

In Japan, Haynes et al. (2008) highlighted how participatory approaches such as local evacuation drills, hazard mapping, and public seminars led by neighborhood associations improved household preparedness. The success of these community-based programs was attributed to their cultural relevance and the inclusion of local voices in planning and communication.

Communication strategies play a crucial role in disaster preparedness, and several frameworks have been developed to guide effective risk communication. Mileti and Sorensen (1990) introduced the "Warning Process Model," which emphasized the importance of delivering messages that are clear, consistent, timely, and credible. The model proposed that people are more likely to heed warnings when they come from trustworthy sources and include actionable steps.

Lindell and Perry (2012) built on this model by suggesting that repeated, localized messages that resonate with community norms are more effective than one-size-fits-all approaches. They also found that people tend to rely more on familiar sources, such as community leaders or local media, rather than national authorities, especially during the early stages of an emergency.

In recent years, digital communication tools have played a growing role in preparedness. Houston et al. (2015) documented how social media platforms such as Twitter and Facebook became essential tools during Hurricane Sandy in the U.S., for enabling peer-to-peer support and updates. However, they cautioned that reliance on digital tools might marginalize vulnerable groups without internet access or technological literacy.

Moving to the Southeast Asian region, studies have shown that informal communication and social networks often outperform formal alerts in disaster-prone communities. For instance, Nugraha and Lassa (2018) studied flood-prone areas in Jakarta and found that community members relied more on word-of-mouth and neighborhood networks than on government-issued alerts. Local leaders and volunteer groups known as Posko Bencana were instrumental in early warnings and coordinated evacuations.

In Vietnam, Nguyen et al. (2020) emphasized the role of social capital in promoting household preparedness. Their study revealed that members of local civic groups and religious organizations were more likely to be informed and prepared, suggesting that interpersonal communication is a key conduit for risk awareness.

In the Philippines, a country regularly exposed to typhoons, floods, and earthquakes, several local studies have examined household disaster preparedness. Valenzuela (2014) studied urban residents in Metro Manila and found that although most were aware of the risks, only a small percentage had actually created disaster plans or emergency kits. Key barriers included economic hardship and a lack of urgency despite repeated warnings.

A recent study by Mas et al. (2022) assessed the disaster preparedness of urban poor households in Quezon City and concluded that although public campaigns exist, many households remained unprepared. The study cited mistrust in public institutions and insufficient community engagement as critical limitations. Respondents often expressed that messages were too generic and not tailored to their local context.

Ocampo and Cadiz (2021) conducted research in Barangay Bagong Silangan, which shares socio-economic and geographic similarities with Barangay Commonwealth. Their findings emphasized that community-based disaster risk reduction (CBDRR) programs especially those involving regular drills and participatory planning substantially improved preparedness. However, the effectiveness of such programs depended heavily on the clarity and accessibility of the communication strategies used, especially in multilingual and low-literacy settings.

Baconguis et al. (2012) conducted a study in Luzon showing that face-to-face communication from barangay officials was often more effective than mass media in mobilizing households to prepare. Residents responded better when the information came from familiar and trusted sources who were perceived to have first-hand knowledge of local risks.

At the policy level, the Philippine government, through the Office of Civil Defense and the NDRRMC, has developed a range of educational materials and preparedness campaigns. However, actual implementation varies significantly across barangays, with limited resources, inconsistent training, and low participation rates continuing to hamper effectiveness.

Barangay Commonwealth, which is densely populated and prone to flooding and landslides, faces many of the barriers identified in both international and local

literature. These include economic vulnerability, informal housing, limited access to official information channels, and low levels of trust in authorities. Therefore, disaster preparedness initiatives in this area must prioritize culturally relevant, community-based communication strategies that empower local leaders and harness existing social networks.

## **II. Communication as a Factor for Disaster Preparedness**

Communication plays a central role in shaping the effectiveness of disaster preparedness across the globe. The ability of a society to prepare for, respond to, and recover from disasters is deeply influenced by how risks are communicated, how messages are received and understood by the public, and how individuals act based on those communications. Communication does not merely involve broadcasting warnings but includes processes of awareness-building, education, participatory engagement, and long-term behavioral influence.

Globally, one of the foundational theories in disaster communication is the Protective Action Decision Model (PADM) by Lindell and Perry (2012), which explains how people decide whether or not to take protective actions based on warnings. Their study emphasized that communication messages must be consistent, timely, accurate, and credible for them to be effective. The model suggests that the public's behavioral response is influenced by the credibility of the source and the level of trust the receiver places in it.

Paton (2003) further deepened this perspective by introducing a social-cognitive model of preparedness, which identified communication as a mediator between institutional messages and individual or household behavior. He found that community

engagement, two-way communication, and culturally grounded messaging foster stronger behavioral intention to prepare for disasters. According to Paton, communication is effective when it promotes reflection, internalization, and community-level discussion especially in contexts where top-down approaches have failed.

In a comparative study across the U.S., Japan, and New Zealand, Becker et al. (2017) demonstrated that communication strategies involving multiple channels television, radio, social media, community meetings, and interpersonal sources were more successful in increasing disaster readiness. The study concluded that diverse communication methods improved message penetration and ensured that even vulnerable populations such as the elderly or those with limited mobility were reached.

Studies during recent climate-related disasters have reaffirmed the role of trust and inclusivity in disaster communication. For instance, a study by Sutton et al. (2014) during Hurricane Sandy showed that social media served as a vital platform for decentralized communication. The research emphasized that households were more likely to prepare when they received reinforcement of warnings from both formal authorities and informal social networks. The emergence of social media as a key disaster communication channel has changed the dynamics of information flow, enabling real-time interaction but also posing challenges in misinformation and unequal access.

In Indonesia, Nugraha and Lassa (2018) observed that households in urban flood-prone zones responded better to local informal communication such as neighborhood alerts and word-of-mouth messaging than to formal announcements from government bodies. Their findings highlighted the significance of localized and socially embedded

communication pathways, particularly in resource-constrained settings. This echoed previous insights from Wisner et al. (2004), who stressed that top-down risk communication fails when it is not adapted to the local cultural and linguistic context.

From a Southeast Asian regional standpoint, community-based disaster risk reduction (CBDRR) has emphasized participatory communication. Nguyen et al. (2020) in Vietnam found that interpersonal communication within civic and community groups proved more influential than mass media in motivating households to take action. Risk communication in the Vietnamese context was more effective when delivered through existing community structures and when it encouraged discussion rather than merely disseminating facts.

In India, Sharma and Patt (2012) investigated how communication affected cyclone preparedness in Odisha. Their research emphasized that effective risk communication was grounded in sustained awareness campaigns, consistent use of vernacular language, and the inclusion of visual aids and community radio. Moreover, preparedness behavior increased when disaster messages were reinforced through school-based programs and household-level interventions led by NGOs.

Locally, in the Philippine context, communication is not just a conduit for disaster information but a lifeline in highly vulnerable, disaster-prone communities. Studies have shown that despite government efforts, gaps in risk communication still hinder preparedness, especially in low-income and informal settlements. According to Bacongus et al. (2012), communication effectiveness in rural and urban poor communities was strongly influenced by interpersonal relationships and the perceived trustworthiness of barangay officials. Households were more likely to respond to

disaster preparedness information when it came directly from individuals they knew and trusted.

Mas et al. (2022) conducted a study in Quezon City and found that urban poor households demonstrated lower levels of preparedness not due to lack of awareness, but due to ineffective communication. Participants indicated that warnings and information disseminated through megaphones, posters, or barangay leaflets were often too technical or generic to be useful. Many respondents stated they would have responded better to personalized guidance or house-to-house outreach.

In a related study, Ocampo and Cadiz (2021) assessed how communication strategies under the Community-Based Disaster Risk Reduction Management (CBDRRM) model impacted household preparedness in Barangay Bagong Silangan. They observed that interactive communication channels such as workshops, role-playing drills, and community discussions had a greater impact on changing behavior than one-way messaging. When residents were engaged as co-creators of information rather than passive recipients, preparedness behavior notably improved.

Further emphasizing the value of participation, Gaillard et al. (2009) conducted ethnographic work in Albay and found that participatory communication especially those involving faith-based and indigenous leaders enhanced community trust and response time during disasters. When communication is woven into the cultural fabric of the community, preparedness becomes more sustainable and holistic.

National agencies like the NDRRMC and the Office of Civil Defense have produced a range of disaster manuals and communication campaigns under the "Listo" and "Bida ang Handa" initiatives. However, research by Valenzuela (2014) showed that communication content is often "command-based" and does not adequately consider

community-specific needs or feedback. The result is that households might hear the message but not act upon it due to lack of clarity or personal relevance.

Studies from barangays in Manila, Cebu, and Northern Mindanao by David et al. (2017) echoed similar findings. Households responded better to communication strategies that used local dialects, included visual instructions (e.g., evacuation maps), and were delivered by familiar people like barangay tanods or teachers. The success of disaster communication, therefore, is highly contingent on local adaptation, audience segmentation, and participatory delivery mechanisms.

In sum, communication is a powerful determinant of household disaster preparedness. When it is participatory, culturally sensitive, locally contextualized, and delivered through trusted interpersonal channels, it increases preparedness behavior significantly. Conversely, when communication is top-down, inconsistent, or linguistically inaccessible, it can result in confusion, distrust, or complete disengagement. For areas such as Barangay Commonwealth in Quezon City where socioeconomic and spatial vulnerabilities exist communication strategies must go beyond information dissemination. They must be rooted in community engagement, reinforced through interpersonal trust, and structured to empower people to prepare, act, and adapt.

### **III. Communication Strategies in Disaster Preparedness**

Effective communication strategies are a cornerstone of disaster preparedness, facilitating timely decision-making, behavioral change, and community coordination. Across global and local contexts, communication has evolved from one-way warnings to complex, multi-platform strategies designed to engage populations before, during,

and after emergencies. In the face of climate change, urban density, and recurring natural hazards, understanding how communication affects disaster preparedness has become increasingly essential.

Internationally, a large body of research emphasizes the importance of communication strategies that are culturally resonant and behaviorally motivating. According to Lindell and Perry (2012), successful disaster preparedness communication must consider the medium, message clarity, timing, and perceived credibility of the information source. Their Protective Action Decision Model argues that individuals take action based on how they interpret warnings, their trust in the source, and the message's clarity and consistency. Therefore, strategies that reinforce messages across various channels tend to be more successful in prompting household-level preparedness.

Paton (2003) supported this view by underscoring the value of community involvement and dialogic communication in disaster preparedness campaigns. His study concluded that communication is most effective when it is not merely unidirectional but participatory, allowing individuals to ask questions, internalize information, and apply it to their specific context. Paton's findings were further echoed in Japan's community-based disaster education programs, where localized messaging and frequent public drills led to higher preparedness levels compared to national top-down information campaigns.

Research by Becker et al. (2017) across earthquake-prone areas in New Zealand found that communication strategies integrating storytelling, scenario-based messages, and community champions significantly increased public engagement. Their research emphasized that preparedness messages must connect with people's lived realities to be impactful. Similarly, in the United States, Sutton et al. (2014)

examined the use of social media during Hurricane Sandy and identified Twitter, Facebook, and SMS alerts as effective tools for real-time information dissemination, particularly when they were complemented by traditional media and trusted community figures.

Another key factor in communication strategies is the mode of delivery. Sharma and Patt (2012) evaluated various communication methods used during cyclones in India and found that multimodal strategies those combining radio broadcasts, community meetings, pamphlets, and school-based activities had greater success in reaching diverse populations, especially those in low-literacy or marginalized communities. Their study showed that verbal communication from local leaders or teachers often prompted more preparation behavior than technical bulletins from distant authorities.

In Southeast Asia, where natural disasters are recurrent and varied, communication strategies have increasingly focused on community-based disaster risk reduction (CBDRR). Nguyen et al. (2020) in Vietnam demonstrated that preparedness increases when communication is embedded in existing social networks such as religious groups, neighborhood councils, and women's organizations. These interpersonal channels were particularly effective in reinforcing messages from mass media and building trust in public warnings.

In the Indonesian context, Nugraha and Lassa (2018) observed that urban communities often relied on informal communication, such as neighborhood watch groups and peer alerts, more than formal government channels. Their findings highlight the need for redundancy in communication strategies, where formal, informal, digital, and face-to-face systems work together to ensure broad message penetration.

They also emphasized the importance of building communication trust through transparency and inclusion in planning processes.

The role of local media and grassroots engagement also emerged as a common theme in Gaillard and Cadag's (2009) comparative study in the Philippines and Indonesia. Their research found that indigenous knowledge and oral traditions were often overlooked in formal strategies, despite their effectiveness in preparing and warning communities. Integrating these traditional systems into modern disaster communication frameworks was shown to enhance resilience and community cohesion.

In the Philippine setting, communication strategies have evolved alongside national policies and community-based frameworks. The National Disaster Risk Reduction and Management Council (NDRRMC) and the Office of Civil Defense have created multimedia campaigns under programs such as "Listo," "Bida ang Handa," and localized disaster preparedness manuals. However, empirical studies suggest mixed effectiveness. According to David et al. (2017), while campaigns are widespread, their impact depends heavily on localization, message clarity, and reinforcement through barangay-level efforts. Their study, which spanned Metro Manila and other high-risk areas, found that households responded better to messages when they were delivered in local dialects, accompanied by visual materials, and reinforced by personal interactions.

Mas et al. (2022) focused on urban poor communities in Quezon City and revealed that communication strategies that relied solely on printed materials or megaphone announcements were often inadequate. Residents expressed a need for more interactive forms of communication, such as community meetings, school programs,

and house-to-house information drives. Trust was a critical factor; messages delivered by familiar barangay officials, local health workers, or volunteers were received more positively than those from anonymous government sources.

In a related study, Ocampo and Cadiz (2021) examined the outcomes of CBDRR activities in Barangay Bagong Silangan, a community similar in context to Barangay Commonwealth. They found that preparedness increased significantly when communication strategies were participatory, culturally aligned, and allowed feedback from the community. Their findings reinforced the importance of bottom-up communication and inclusive planning, especially in urban informal settlements.

Meanwhile, Valenzuela (2014) conducted research in various barangays in Metro Manila and noted that mass media campaigns without accompanying community-level engagement often failed to stimulate preparedness behaviors. His study suggested that communication strategies must be designed to overcome socioeconomic and technological barriers, particularly by leveraging social networks and barangay assemblies. He emphasized that simply providing information is insufficient; messages must resonate, be repeated, and be tied to community activities like drills and preparedness training.

The importance of schools, churches, and civic organizations as communication platforms was documented by Bacongus et al. (2012) in their study of disaster preparedness in Luzon. These institutions often served as trusted intermediaries, translating technical information into practical guidance and fostering a culture of preparedness. Moreover, the study stressed that visual aids, dramatizations, and real-life stories were more effective than text-heavy brochures in capturing attention and prompting action.

Finally, the integration of communication technologies into disaster preparedness has expanded in recent years, yet challenges remain in terms of access, digital literacy, and message saturation. According to the Department of Science and Technology (DOST), efforts such as Project NOAH and GeoRiskPH aim to provide real-time data through mobile apps and SMS alerts. While technologically advanced, these platforms must be complemented with community-level communication to ensure inclusivity, especially in areas with limited internet connectivity.

Overall, the literature suggests that communication strategies are most effective when they are multilayered, participatory, and culturally adaptive. Successful campaigns are those that combine traditional knowledge with scientific information, mass media with interpersonal dialogue, and top-down planning with grassroots feedback. In a community like Barangay Commonwealth, where social diversity, informal settlements, and economic vulnerability are prominent, disaster communication strategies must be community-specific, grounded in everyday realities, and driven by trust and local leadership.

## **1. Types of Communication Strategies**

Various communication strategies have been documented and applied in disaster preparedness contexts utilized by all organizations locally and internationally.

- **Risk Communication:** This approach emphasizes proactive information sharing about potential threats, vulnerabilities, and preventive measures, enhancing public understanding of potential risks and facilitating behavioral change (Reynolds & Seeger, 2005).

- **Crisis Communication:** Primarily activated during and immediately after a disaster event, it involves rapidly disseminating critical updates, safety instructions, and emergency directives to affected populations to maintain order, minimize confusion, and promote effective response actions (Coombs, 2014).
- **Participatory Communication:** This strategy engages local communities actively in disaster preparedness planning and response activities, fostering two-way interactions that reflect local needs, knowledge, and cultural contexts (Servaes & Malikhao, 2010).
- **Mass Media and Digital Communication:** Leveraging traditional mass media (radio, television, newspapers) and modern digital platforms (social media, websites, mobile alerts) facilitates wide and rapid information dissemination, crucial during widespread disasters (Alexander, 2014; Veil et al., 2011).

## **2. Characteristics of Effective Communication Strategies**

Effective communication strategies in disaster preparedness consistently display key characteristics:

- **Clarity and Understandability:** Messages must be simple, direct, and jargon-free to ensure comprehension across diverse demographics, including marginalized or vulnerable groups (Covello, 2003).
- **Consistency and Reliability:** Regular, coherent, and dependable information from credible sources builds trust and encourages compliance with recommended preparedness and response actions (Seeger, 2006).

- **Promptness and Timeliness:** Timely delivery of critical messages reduces uncertainty and panic, enabling communities to take swift, informed actions (Wray et al., 2008).
- **Targeted and Culturally Appropriate:** Communication should be tailored to specific audience segments, considering demographic variables such as age, gender, education, and cultural norms, to maximize impact and engagement (Mileti & Peek, 2000).
- **Multi-channel Delivery:** Employing various communication platforms simultaneously ensures broader reach, mitigates the risk of information gaps, and addresses diverse communication preferences among different groups (Steelman & McCaffrey, 2013).

### **3. Factors Affecting Communication Effectiveness**

Several contextual factors significantly influence the effectiveness of communication strategies in disaster scenarios these includes the following:

- **Cultural and Social Context:** Cultural perceptions and social structures significantly shape the reception, interpretation, and actionability of communicated messages (Eisenman et al., 2009).
- **Literacy and Language Proficiency:** Communication strategies must accommodate diverse literacy levels and language proficiency to ensure equitable access to critical information (Eisenman et al., 2009).

- **Trust in Information Sources:** Public trust and perceived credibility of authorities directly affect adherence to preparedness instructions, making credibility a critical component of communication effectiveness (Paton, 2008).
- **Communication Infrastructure:** The availability and reliability of communication infrastructure, including networks, internet access, and technology platforms, significantly affect the successful dissemination and reception of disaster information (Comfort et al., 2004).

#### **4. Case Studies and Lessons Learned**

Documented experiences from past disasters offer valuable insights into the implementation and effectiveness of communication strategies:

- **Hurricane Katrina (USA, 2005):** Communication breakdown significantly exacerbated disaster impacts. Poorly coordinated messaging and insufficient use of diverse communication channels resulted in widespread confusion and delayed evacuation efforts. Key lessons include the necessity of robust pre-disaster communication planning and systematic coordination among various agencies (Garnett & Kouzmin, 2007).
- **Great East Japan Earthquake (Japan, 2011):** Effective use of advanced technological tools, such as early-warning systems via mobile technologies, SMS, and social media, significantly improved evacuation procedures and reduced fatalities. The event highlighted the effectiveness of integrated technological communication platforms in enhancing public responsiveness (Murayama et al., 2013).

- Typhoon Haiyan (Philippines, 2013): The employment of community-based and participatory communication methods demonstrated high effectiveness. Local engagement through culturally adapted messages and grassroots dissemination channels proved crucial in facilitating timely evacuations and community response. This emphasizes the critical importance of involving local communities in planning and execution processes (Ching, 2015).

#### **IV. Research Around the Philippines – Communication Strategies in Disaster Preparedness**

Disaster preparedness has become an integral area of concern in the Philippines due to its geographic vulnerability to natural calamities such as typhoons, floods, earthquakes, and volcanic eruptions. Across various provinces, cities, and barangays, Filipino researchers have investigated how communication strategies can significantly influence household-level disaster readiness. These studies offer a mosaic of localized approaches, cultural dynamics, and lessons that are highly relevant to urban settings like Barangay Commonwealth, Quezon City.

In Luzon, Mas, Garcia, and Lorenzo (2022) explored urban poor communities in Quezon City, revealing that disaster preparedness among households was strongly influenced by the nature of communication employed. While formal methods such as flyers and megaphone announcements were prevalent, the study highlighted that interpersonal and culturally tailored communication from barangay officials was far more effective. Residents expressed greater responsiveness to strategies that involved interactive formats such as house-to-house orientations and small group meetings, compared to mass-distributed materials with technical jargon.

In nearby Barangay Bagong Silangan, Ocampo and Cadiz (2021) analyzed the community-based disaster risk reduction management (CBDRRM) communication approach. They found that households who participated in barangay-initiated drills and public forums were significantly more prepared than those who only received warnings through mass media. The participatory nature of these forums allowed households to raise questions, internalize localized risk knowledge, and engage in dialogue, thus promoting behavioral change. This supports the growing evidence that two-way communication strategies are more impactful than top-down messages in urban settings.

A broader study by David, Tablazon, and Dela Cruz (2017), conducted across Metro Manila, emphasized that radio remains a reliable communication medium for disaster preparedness. Their research revealed that lower-income households often rely on AM radio and community-based radio stations to receive early warnings, especially in areas where access to digital media is inconsistent. The study also found that the integration of disaster information into religious gatherings, school activities, and neighborhood councils enhanced comprehension and local relevance of the messages.

Moving to Central Luzon, Valenzuela (2014) studied households in flood-prone barangays in Bulacan and Pampanga. He discovered that households' preparedness was influenced by the consistency and credibility of the sources. Participants were more likely to respond to disaster messages when they were repeated and delivered by trusted local figures such as barangay captains or school principals. He emphasized the importance of aligning communication timing with local realities for

instance, sending flood warnings at night when families are together improves recall and reaction.

In the Bicol Region, which experiences frequent typhoons, Gaillard et al. (2008) examined the role of faith-based organizations and local media in Albay's disaster preparedness efforts. They found that these groups provided more culturally grounded and context-sensitive messages than government agencies. Church leaders, for example, played a key role in interpreting disaster risks in moral and spiritual terms that resonated with local communities. The study argued for the inclusion of traditional and faith-based actors in government communication frameworks.

In the Visayas, particularly in Leyte after Typhoon Haiyan, Ching (2015) explored the effectiveness of participatory communication during disaster recovery and preparedness rebuilding. The research showed that communities that engaged in local decision-making processes and community-led warning systems had higher resilience and faster recovery times. Communication strategies that emphasized mutual learning, local knowledge integration, and face-to-face dialogue empowered households to prepare collectively rather than individually.

In Negros Occidental, Reyes and Santiago (2016) studied communication barriers in coastal barangays prone to storm surges. Their findings revealed that while SMS-based early warning systems were operational, language and digital literacy issues hindered their full effectiveness. Residents preferred visual cues (e.g., colored flags) and verbal warnings issued by barangay officials. The researchers emphasized that communication strategies must match the literacy levels, cultural norms, and technological capacities of target communities.

In Mindanao, Tuazon and Manlutac (2018) investigated how marginalized groups in Cagayan de Oro and Iligan receive disaster information. They found that indigenous communities and informal settlers were often excluded from mainstream communication channels. The researchers recommended multi-channel approaches that include interpersonal outreach, community radio, and storytelling to ensure inclusivity. The study also underlined the importance of trust and relational dynamics between government officials and vulnerable households.

Further south, in Davao Oriental, Ramirez and Aguilar (2019) examined the implementation of geo-hazard communication tools provided by the Mines and Geosciences Bureau. While maps and hazard advisories were distributed to barangays, households rarely acted on them unless a barangay assembly or school-based orientation contextualized the data. Their findings suggested that technical information must be interpreted and localized through interpersonal channels to be effective.

Across many of these studies, a recurring theme is the integration of local knowledge and participatory planning. This was reinforced by Perez and Delos Reyes (2020), who conducted research in Palawan. They noted that community-based communication strategies especially those involving fishermen, teachers, and youth groups were instrumental in disseminating disaster information. Their success was largely due to the use of local dialects, contextual storytelling, and collective action mechanisms.

Collectively, these studies underscore several critical insights. First, communication strategies are most effective when they are two-way, localized, and culturally embedded. Second, the credibility of the messenger is as important as the content of

the message itself. Third, communication must adapt to varying technological access, literacy levels, and social dynamics across regions. For urban barangays such as Commonwealth in Quezon City where populations are heterogeneous and densely settled these findings strongly support the use of hybrid communication strategies that combine formal tools (e.g., SMS alerts, printed bulletins) with grassroots mechanisms (e.g., door-to-door campaigns, community theater, barangay assemblies).

## **V. Research Gaps and Implications for the Study (Philippine Context)**

Despite the growing body of local research on disaster preparedness and communication strategies in the Philippines, significant gaps remain in understanding how communication efforts translate into actual household preparedness. These research deficiencies highlight the need for more targeted, empirical, and context-specific studies especially in highly urbanized and socially stratified areas like Barangay Commonwealth, Quezon City.

One major gap in existing studies is the lack of localized empirical evidence assessing the effectiveness of communication strategies at the barangay or household level. While national agencies such as the NDRRMC and Office of Civil Defense have invested in multimedia campaigns like BIDA ang Handa and Project LISTO, the implementation and actual uptake of these strategies among grassroots communities have rarely been rigorously studied. As pointed out by David et al. (2017), while Filipinos are generally aware of the risks posed by natural hazards, awareness does not always translate into preparedness action. Their study emphasized that research is often concentrated on national policy frameworks rather than on evaluating how these policies are interpreted, localized, and acted upon by the average Filipino household.

Similarly, Mas, Garcia, and Lorenzo (2022) noted in their study of urban poor communities in Quezon City that while information materials are often distributed by barangay officials, these strategies are not necessarily assessed for effectiveness or clarity. The study emphasized that most communication efforts are still predominantly top-down and do not adequately consider the diversity of information needs across social classes, literacy levels, and cultural groups. This underscores a research gap concerning audience segmentation and message tailoring, which are critical for ensuring inclusivity and relevance.

Another area lacking in local literature is the integration of community participation in communication design and evaluation. For example, Ocampo and Cadiz (2021) discussed participatory disaster risk reduction efforts in Barangay Bagong Silangan. While their findings showed that involving residents in drills and forums enhanced preparedness, they also noted that such practices were not institutionalized or consistently applied across barangays. This inconsistency highlights the need for further research into institutional mechanisms that sustain participatory communication beyond project-based interventions.

Further complicating the issue is the absence of longitudinal studies that evaluate how communication strategies influence preparedness behavior over time. Most existing research captures snapshots typically after a disaster event or during disaster awareness months. According to Valenzuela (2014), this results in incomplete insights, as short-term behavior may not accurately reflect long-term changes in preparedness attitudes and practices. This gap calls for studies that follow communities over extended periods to observe how communication efforts shape or fail to shape household resilience.

Another gap lies in understanding the role of informal communication networks such as families, peer groups, or religious communities in shaping preparedness behavior. Gaillard et al. (2008) pointed out that these informal networks often disseminate information faster and with greater trust than official sources, particularly in rural or low-income communities. However, their role is often excluded from formal disaster communication models or evaluations. This raises critical questions: How do informal channels reinforce or contradict official messages? Do they improve or hinder preparedness?

Moreover, Reyes and Santiago (2016) highlighted that in coastal barangays in Negros Occidental, communication strategies frequently overlook language and digital literacy barriers. While SMS-based warning systems and infographics are widely used, they are not always accessible or understandable to all residents. This suggests that there is insufficient research into how communication equity or lack thereof affects household readiness. Studies that assess how different demographic groups interpret and respond to risk communication remain limited in the Philippine literature.

A specific and concerning research gap is the limited focus on urban informal settlements, where spatial vulnerability and socioeconomic precarity intersect with communication barriers. Barangay Commonwealth is a prime example: a large, densely populated, and diverse barangay where standard communication approaches may not be effective. Tuazon and Manlutac (2018) noted that in Cagayan de Oro and Iligan, informal settlers and indigenous groups were often excluded from mainstream communication channels. They suggested that without active efforts to include these populations, official disaster messaging risks perpetuating exclusion and vulnerability.

Similarly, Ramirez and Aguilar (2019) observed in Davao Oriental that while geo-hazard advisories and risk maps were distributed, few households understood or utilized them. This illustrates a disconnect between scientific communication and community interpretation a gap that the study can help address by exploring how communication materials are actually perceived and used by ordinary citizens.

Additionally, very few studies focus on evaluating the multi-channel delivery systems employed in local communication strategies. While there is wide acknowledgment of the benefits of combining mass media, social media, community radio, and face-to-face campaigns, there is little empirical evidence on which combination is most effective for different population groups. Perez and Delos Reyes (2020) made some progress in this area by documenting localized communication efforts in Palawan, but their study was limited in scope and did not fully explore the comparative effectiveness of different media platforms.

A notable deficiency in local research is the under-utilization of behavioral communication frameworks such as the Health Belief Model or the Protective Action Decision Model (PADM) in analyzing communication outcomes. Most studies rely on descriptive surveys or qualitative interviews without anchoring their findings in theoretical models that could help explain causality and behavior change. This lack of theoretical grounding weakens the ability to generalize or compare findings across contexts.

There is limited documentation on feedback mechanisms in disaster communication. Many communication strategies are unidirectional, and there is little research on how communities are empowered to respond, question, or co-create disaster messages. Baconguis et al. (2012) emphasized that disaster communication must be dialogic to

be effective, yet few barangays have structured systems to collect feedback from residents on communication quality, clarity, or relevance.

Additionally, studies have shown that utilizing modern digital tools significantly enhances disaster preparedness and response capabilities. Chu et al. (2020) found that integrating social media and mobile technologies in disaster communication strategies effectively raised community awareness and facilitated rapid information dissemination. Nevertheless, studies examining digital communication effectiveness within low-income urban communities remain limited, highlighting another crucial research gap (Al-Saggaf & Simmons, 2015).

Moreover, scholars have called for more participatory approaches involving community members in designing and implementing communication strategies (Gaillard & Mercer, 2013; Shaw et al., 2022). Engaging vulnerable populations directly in strategy development significantly enhances perceived relevance and responsiveness, increasing overall preparedness and resilience (Cadag & Gaillard, 2012).

In the Philippine context, particularly within Quezon City, the literature remains sparse concerning empirical evaluations of household-level disaster communication effectiveness. Research by Fernandez et al. (2018) and Alcayna et al. (2016) recognized the potential for targeted strategies to improve local resilience but noted a substantial gap in specific empirical assessments within barangays characterized by rapid urbanization and high poverty rates.

These gaps underscore critical implications for future research, necessitating rigorous evaluations of communication interventions specifically tailored to the unique social, economic, and cultural dynamics of vulnerable households. Addressing these gaps

could substantially inform policies and enhance resilience among urban poor communities in Quezon City and similar urban settings.

## **Synthesis**

The literature on household disaster preparedness consistently shows that preparedness is a complex outcome influenced by various factors such as psychology, socio-economic conditions, communication, governance, etc., rather than just availability of information. The initial theoretical concerns indicate that preparedness activities are influenced by people's internal belief systems, especially self-efficacy, perceived control, and trust in authorities, which in turn means that risk information has to be cognitively and socially assimilated before people are incited to take action. The studies conducted in affluent countries show that there are still gaps in household preparedness which are often related to income, education, language, and the psychological effect of normalcy bias, whereby people tend to underestimate their personal risk even though they are objectively exposed to the risk. One of the main implications of these results is that simply alerting people does not ensure that they will be prepared, especially when risk messages are interpreted as being abstract, improbable, or forced upon them.

Foundational models such as the Protective Action Decision Model establish that preparedness actions depend on the clarity, credibility, consistency, and timeliness of messages, as well as on the trust placed in their sources. Different social-cognitive perspectives portray communication as the most important mediator between institutional intention and household action, while participatory, two-way, and culturally grounded communication. Significantly, it was in these very areas that the preparedness intentions were most strengthened. The collective findings from various

and regional studies indicate that multi-channel and local communication strategies have the advantages of uniform and top-down approaches by uniting different aspects of message dissemination and inclusivity for especially the vulnerable individuals within the community. The climate-related disasters showed how social media and informal networks play an ever-increasing role in endorsing official warnings but, at the same time, also revealing the problems of misinformation and unequal access. The case studies from Southeast Asia and other prone disaster areas indicate that interpersonal and community communication has been the most efficient mode of communication as compared to mass media.

International frameworks state that the most efficient way for a preparedness communication to be spread is when the messages are clear, timely, credible, and supported through various channels, since people will be interpreting and acting on the risk information based on their trust in the source and the relevance they perceive to their lives. Empirical studies have been consistent indicating that participatory and dialogic strategies lead to stronger preparedness outcomes than top-down information campaigns. Communication systems that are multimodal and use the mass media, digital platforms, face-to-face communication, schools, and the like are very effective in reaching different and marginalized populations, especially in low-literacy and resource-poor situations. Evidence from Southeast Asia and the Philippines confirms that communication should be embedded within existing social networks, local knowledge systems, and indigenous practices, thus trust, understanding, and message retention can be improved. Even though technological innovations like mobile alerts, social media, and geospatial platforms have increased the speed and reach of disaster information, researchers still warn that community-level engagement

must be part of the strategy so that nobody is excluded and information does not get piled up.

Studies done in Luzon, the Visayas, and Mindanao came to a similar conclusion regarding preparedness, that is, it is not the amount of information provided that strengthens preparedness but rather localization, participation and the use of trusted community actors in communication. The poor urban communities in Quezon City and Metro Manila provide evidence that personal and interactive approaches are much more effective than impersonal methods, such as flyers and public loudspeakers, because they allow clarification and discussion. Researches conducted in Central Luzon and Bicol provinces point out even more that message credibility, timing, and repetition, especially when messages are delivered by local leaders or religious figures with high reputation, really help in understanding and motivating to take action. The studies carried out in the Visayas and Mindanao manifest the same thing that participatory and inclusive communication are of utmost importance and the communities which are involved in local decision-making, face-to-face communication, and culturally appropriate messaging are more resilient and prepared as a group. Scholars across different communities like coastal, indigenous and informal settlements frequently warn that if there are no literacy, language, and digital access, then being able to use tech-driven tools such as SMS alerts and hazard maps will be of no help unless they are explained through interpersonal communication and community assemblies.

Philippine literature on disaster preparedness and communication reveals substantial gaps that limit understanding of how communication strategies translate into sustained household-level preparedness, particularly in highly urbanized and socially stratified

contexts. While national agencies have invested heavily in broad communication campaigns, existing studies rarely provide localized empirical evaluations of how these initiatives are interpreted, adapted, and acted upon at the barangay or household level. Evidence indicates that high awareness of disaster risk does not consistently lead to preparedness behavior, suggesting deficiencies in message relevance, clarity, and audience segmentation. Moreover, many communication efforts remain predominantly top-down, with limited consideration of varying literacy levels, cultural backgrounds, and socioeconomic conditions, thereby constraining inclusivity and effectiveness. The literature also highlights the inconsistent institutionalization of participatory communication practices; although community involvement has been shown to enhance preparedness, such approaches are often project-based and not sustained over time.

### **Theoretical Lens**

This study utilizes the Risk Perception and Communication Model (RPCM) to investigate how communication strategies influence household disaster preparedness in Barangay Commonwealth, Quezon City. RPCM provides a comprehensive lens that considers the subjective processes by which individuals interpret and respond to such messages. It recognizes that risk is not merely a statistical calculation but a socially constructed phenomenon, shaped by psychological, emotional, and contextual factors (Fischhoff et al., 1978; Slovic, 1987; Lupton, 1999).

At the center of this framework is risk perception, which is understood as the way households make sense of and give meaning to disaster-related information. It shapes how communication is translated into preparedness practices. It serves as the basis for assessing the seriousness of the threat of a disaster once it occurs (Cai et

al., 2023). Individuals assess risks through a combination of cognitive evaluation and emotional response, influenced by their perceived severity, perceived susceptibility, and belief in their capacity to respond effectively known as response efficacy (Slovic, 1987; Sandman, 2003). In communities such as Barangay Commonwealth, where residents face recurring disasters and where levels of institutional trust may vary, these perceptions can significantly shape behavior, potentially encouraging or hindering preparedness.

In this study, communication strategies are examined as a key phenomenon within the case of household disaster preparedness. These include printed IEC materials, radio and television broadcasts, social media campaigns, SMS alerts, and face-to-face interactions such as barangay assemblies and community drills. Rather than being received uniformly, these communication strategies are experienced and interpreted differently across households, depending on their socio-demographic and contextual conditions. Households' age, income, educational background, prior disaster experiences, and perceptions of the credibility of information sources shape how disaster messages are understood, trusted, and acted upon (Covello et al., 1986; Paton, 2007). As a result, the same message may carry different meanings and lead to varied preparedness responses across households situated within different lived realities.

One of the most influential factors in RPCM is source credibility. Risk messages from the local Disaster Risk Reduction and Management Office (LDRRMO), barangay officials, or other institutions will be received based on the level of trust the public places in those sources. If the LDRRMO is seen as transparent, competent, and engaged, messages are more likely to be accepted and acted upon. Conversely, if

prior experiences with government responses were negative or insufficient, residents may ignore even urgent and accurate advisories (Covello et al., 1986).

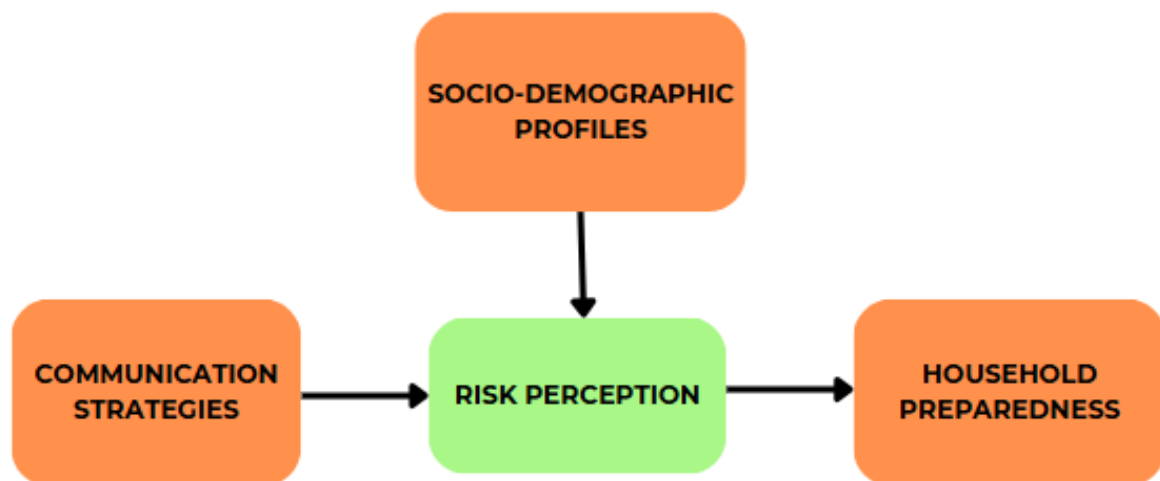
Equally important is message framing. As Sandman (2003) argues, disaster risk communication must go beyond delivering facts. It should also be emotionally resonant and actionable. Messages that are empathetic, empowering, and clearly outlining what residents should do are more likely to result in behavioral change. In Barangay Commonwealth, where some residents may have limited formal education or suffer from information fatigue, overly technical or fear-based messages may fail to generate the intended preparedness response.

The communication channel used is also vital. If the delivery method does not align with the preferred media consumption habits of the target audience such as using print in a predominantly oral culture or relying solely on digital tools in areas with limited connectivity the effectiveness of the message can be compromised (Covello et al., 1986). Moreover, the timing and frequency of communication contribute significantly to preparedness. Risk communication that is consistent, year-round, and seasonal or reactive enhances the community's retention of key preparedness actions (Reynolds & Seeger, 2005).

Lastly, RPCM acknowledges the role of social context and informal communication networks. In poor urban communities like Barangay Commonwealth, interpersonal relationships, word-of-mouth exchanges, and conversations with community leaders can either reinforce or dilute the effectiveness of formal disaster messages. According to Wachinger, et al. (2013), such social interactions may amplify, distort, or even suppress risk-related information, depending on the community's perception of the threat, prior experiences, and existing narratives.

Therefore, even well-designed messages may fail without grassroots-level engagement and contextual understanding. The framework as display in Figure 1 guided the analysis of how LDRRMO's communication strategies filtered through personal, emotional, and cultural lenses influence household preparedness outcomes in Barangay Commonwealth the theory in diagram:

**Figure 1. Risk Perception and Communication Model**



## **CHAPTER III**

### **METHODOLOGY**

This chapter provides detailed descriptions of the research design, research setting, participant selection, data collection techniques, case study approach, ethical considerations, and trustworthiness of the study.

#### **Research Design**

The study employed a case study qualitative research design in analyzing how households across diverse contexts make sense of the disaster preparedness messages in various communication strategies. Qualitative research typically represented in-depth rather than breadth and recognized the individual experiences and perspectives of those who had experienced the phenomenon (Creswell & Poth, 2018). Qualitative research stemmed from attempts to address complex issues or to understand human behavior within a specific lived experience or context. For this study, a qualitative research design was determined appropriate for gathering rich insights about how residents of Barangay Commonwealth experienced and reacted to disaster preparedness communications.

A case study design served as the primary research approach for this study. Case study research involved an in-depth and contextual examination of a bounded system such as a community, organization, or social phenomenon within its real-life setting (Martinsuo & Huemann, 2021). This design was appropriate for disaster communication research because it allowed a comprehensive exploration of how communication strategies operated within the specific socio-demographic, cultural, and environmental context of a community. The case study approach enabled the integration of multiple sources of evidence, including interviews, surveys, and

document analysis, providing a holistic understanding of communication processes and preparedness outcomes in an urban disaster-prone community.

### **Research Participants**

The participants in this study included fifteen (15) individuals from different backgrounds, who resided in Barangay Commonwealth, Quezon City. They were selected to provide a diverse set of personal backgrounds and lived experiences in terms of disaster preparedness and communication in the barangay. Instead of classifying participants by sector or by occupation, this study valued inclusivity and diversity, with residents who shared various insights and experiences (i.e., local disaster communication strategies and adaptations). Hence, these participants were able to provide valuable insight from their own experience, provided that they were involved in local disasters.

Participants were deemed to have “substantial experience” if they had direct experience and responded to two major disaster events through the Barangay Commonwealth community, such as floods or typhoons. It was expected that these experiences informed the participants’ valuable and applicable knowledge to the research. To ensure meaningful participation, the following inclusion criteria were applied: (1) residency in Barangay Commonwealth for a minimum of five years to ensure sufficient familiarity with the community’s disaster risk context; (2) age of 18 years or older at the time of data collection to ensure legal and psychological maturity; (3) direct interaction with disaster preparedness communication from barangay or city authorities; and (4) the ability and willingness to articulate their experiences and perceptions clearly.

## **Locale of the Study**

The research was conducted in Barangay Commonwealth in Quezon City, part of Metro Manila, which was arguably one of the most populous barangays in Metro Manila. To cite, it has a population of 213,229 according to the 2020 census (PSA, 2021). The community was socio-economically diverse, encompassing both middle-income households and a significant proportion of informal settlers. Given this context, there was unequal access to resources and different degrees of vulnerability to disaster at the household level (Quezon City Government, 2021).

Barangay Commonwealth was also at risk of multiple natural hazards, including flooding, which is a persistent problem in the study site given its low-lying terrain, proximity to rivers and streams, and limitations of urban infrastructure such as drainage and material recovery facilities. According to the Quezon City Disaster Risk Reduction and Management Office (QCDRRMO), Barangay Commonwealth was considered a high-risk area for hydrometeorological hazards, e.g., typhoons, heavy monsoon rain, and flash floods (Quezon City Government, 2023). The disaster risks faced by Barangay Commonwealth were made worse by urbanization and high population density and operated to strain the limited emergency response capacity of the barangay.

Historical accounts and local narratives indicate that Barangay Commonwealth has experienced several significant disaster events, including Typhoon Ulysses (internationally known as Vamco) in November 2020. The typhoon brought intense rainfall that led to widespread flooding, damage to homes, and the displacement of many families. Within this context, communication emerged as a salient aspect of the community's disaster experience. Local government units, particularly the Quezon City Disaster Risk Reduction and Management Office (QCDRRMO) and the

barangay's Local Disaster Risk Reduction and Management Office (LDRRMO), employed a range of communication approaches, including mobile alerts, community announcements, social media updates, and door-to-door information dissemination. These efforts formed part of how evacuation processes and relief distribution were organized and experienced by residents. As reflected in local accounts (Quezon City Government, 2021), such communication practices were closely intertwined with how households navigated the unfolding disaster, responded to warnings, and engaged in recovery efforts.

Given its exposure to recurrent hazards, high population density, and the presence of diverse local communication practices, Barangay Commonwealth provides a rich and contextually grounded setting for this study. The research seeks to understand how disaster messages delivered through various communication strategies are experienced, interpreted, and enacted by households in shaping their disaster preparedness practices. By attending to the lived experiences of residents within this complex urban environment, the study situates preparedness not as a fixed outcome but as something that emerges through everyday interactions with information, risk, and local conditions.

### **Data Collection**

This study employed multiple qualitative data collection techniques to develop an in-depth understanding of communication strategies for disaster preparedness in Barangay Commonwealth and how these are experienced and responded to by households. Consistent with Robert Yin's emphasis on using multiple sources of evidence, the study primarily employed semi-structured interviews with selected resident informants, guided by open-ended questions aligned with the research questions. These interviews were designed to capture participants' accounts of how

disaster-related messages are communicated, interpreted, and acted upon within their everyday contexts.

To enhance the rigor of the study, particularly in terms of construct validity and credibility, participatory conversations were conducted as a form of member checking. This process allowed participants to review and clarify the researcher's interpretations, ensuring that the meanings derived from the data accurately reflected their experiences. It also provided opportunities to address potential inaccuracies, elaborate on earlier responses, and surface additional insights that may not have emerged during the initial interviews. This iterative engagement with participants contributed to strengthening the study's chain of evidence and supported a more robust and trustworthy interpretation of the case.

The study also included secondary data through a systematic review of relevant documents, consistent with a case study strategy that draws on multiple sources of evidence. These documents included official disaster communication plans, barangay-level disaster risk reduction and management reports, Information, Education, and Communication (IEC) materials, emergency advisories, and related local policies. Document analysis was undertaken not as a separate line of inquiry, but as a complementary source of evidence that provided contextual depth and enabled triangulation with interview and focus group data.

### **Data Analysis**

All qualitative data from interviews, focus group discussions, and documents were analyzed using a common thematic framework to ensure consistency and facilitate comparison across sources. Initial coding focused on participants' accounts of communication practices, preparedness experiences, and contextual conditions. Through an iterative process of reviewing and refining codes, patterns and categories

were developed that captured how communication strategies are experienced, interpreted, and enacted by households. Attention was also given to variations across socio-demographic conditions, prior disaster experiences, and access to communication channels, as reflected in the different ways households engaged with and responded to disaster-related messages.

Cross-source comparison was conducted to identify convergences and divergences in the data, strengthening the study's chain of evidence and supporting more robust interpretations of the case. This analytic process enabled a deeper understanding of how communication strategies function within the lived realities of households in Barangay Commonwealth.

To support systematic data management and analysis, the study utilized NVivo. The software facilitated the organization of large volumes of qualitative data, the application and refinement of codes, and the identification of thematic patterns across multiple data sources. It also enabled efficient cross-referencing of interview, focus group, and document data, contributing to a more rigorous and transparent analytic process.

### **Ethical Considerations**

The study sought ethical approval from the University of the Philippines Open University Institutional Research Ethics Committee (UPOU IREC). This process ensured that the study was subjected to an institutional research ethics review process and was declared to be ethically acceptable before the implementation of its protocol. Participants were fully informed of their rights and the nature of their involvement in the study prior to their participation in the interview. They were provided with clear information regarding the purpose of the research, identity of the researcher, procedures for data collection, and potential risks and benefits of participation. The

process of obtaining free and informed consent was explained, including their right to decline participation or withdraw at any time without consequence. They were also informed about how the data would be used, stored, and protected, as outlined in the consent form. Written informed consent was obtained prior to participation in the study. The consent form explicitly stated the voluntary nature of participation, the right to withdraw at any stage without negative consequences, and the measures in place to ensure data confidentiality and security. These procedures were designed in accordance with established ethical principles and institutional guidelines on informed consent and research protocol development.

All personal identifiers were deleted from transcripts and reports to maintain privacy and confidentiality. All participant data was anonymized and stored on an encrypted digital format only accessible by the researcher. Where findings were presented in a public forum or publication, pseudonyms were used to minimize attempts to identify participants. All participation documentation, such as consent forms and personal identifiers for participation at every stage of observation, was deleted or archived in accordance with data privacy protocols consistent with the Philippine Data Privacy Act and UPOU IREC standards. These steps were undertaken to address the potential risk of breaches of confidentiality.

Aside from developing a mitigating measure for the minimal psychological risk that could result from discussing their disaster experiences, the researcher also conducted the interviews and focus group discussions in a more sensitive and respectful manner to address any emotional discomfort. Participants were informed that they could opt-out or decline to answer any question if they feel uncomfortable and withdraw from the study at any time, without providing reason or facing any negative consequences. The

researcher ensured that referral information for psychosocial support services was made available to the participants, if the need arises.

To strengthen trustworthiness, the researcher conducted member checking by giving participants the opportunity to review interview transcripts and initial themes, to verify or clarify the researcher's appreciation of their responses. This was beneficial for greater credibility and ethical transparency. Transferability was enhanced by providing detailed contextual information about the study setting, participants, and research process. Confirmability was enhanced through the intentional integration of multiple data sources, including individual interviews, focus group discussions, and document analysis. These sources were examined as a coherent whole, allowing for triangulation across different forms of evidence. This approach enabled the researcher to cross-check interpretations and ensure that the findings were grounded in the data rather than shaped by individual bias.

All qualitative data was examined considering these ethical safeguards. Ethical approval was sought from UPOU IREC in accordance with the Standard Operating Procedures for the institution prior to data collection. Taking these steps maximized the successful ethical completion of this study, and addressed the necessary ethical requirements for informed consent, privacy and confidentiality for participants' information, participant wellbeing, and integrity of research data.

## CHAPTER IV

### FINDINGS AND DISCUSSION

This chapter presents the findings and discussion of the study, focusing on the analysis of qualitative data collected from participants regarding disaster preparedness communication among households in Barangay Commonwealth. The chapter organizes the results according to the study's three statements of the problem and interprets them through thematic analysis. It begins with a document analysis that provides contextual support for the study, followed by the presentation of emerging themes derived from participants' responses. These themes examine the determinants of household disaster preparedness, the communication processes through which preparedness messages are delivered, and the role of communication strategies in strengthening preparedness at the household level. Through systematic coding and thematic interpretation, the chapter highlights how socio-demographic conditions, community structures, environmental hazards, and communication systems interact to influence household awareness, knowledge, skills, and preparedness actions.

#### Document Analysis

The document analysis reviewed several policy documents, operational manuals, contingency plans, and public communication materials related to disaster risk reduction and management in Quezon City and Barangay Commonwealth. The analysis was organized into four major analytical categories: governance, risk assessment, disaster preparedness, and social protection.

*Table 1. Analysis of Documents*

Document Type	Title	Date Published	Author / Issuing Body	Main Focus	Description	Excerpts
City DRRM Plan City DRRM Plan	<i>Quezon City Disaster Risk Reduction and Management Plan 2021–2027</i>	2021	Quezon City Disaster Risk Reduction and Management Council	<b>Risk-Informed Governance</b>	Frames disaster risk reduction as a core governance and development function,	"Planning for the next seven (7) years must therefore be risk-informed to sustain

Document Type	Title	Date Published	Author / Issuing Body	Main Focus	Description	Excerpts
					emphasizing anticipatory, long-term, and evidence-based planning across sectors	change.” (Mayor’s Message)
				<b>Protection of Vulnerable Populations</b>	Highlights disproportionate disaster impacts on vulnerable groups and calls for inclusive, equity-oriented DRRM strategies	“The elderly, people living with disabilities, the poor and daily wage earners bore the brunt of the pandemic.” (p. 7)
Project Brief / Policy Proposal	<i>QCDMP Project Briefs</i>	2021–2022	Quezon City Government / QCRRMO	<b>Risk-Informed Governance</b>	Focuses on institutional reforms and systems improvement to strengthen flood risk and drainage management through data-driven decision-making	“Reassess the institutional arrangement... to improve flood risk and drainage management.”
				<b>Capacity Strengthening</b>	Emphasizes organizational capacity building and technical enhancement of DRRM offices to improve operational effectiveness	“Enhance the capacity of QCRRMO to more efficiently address matters concerning flood risks.”
Barangay DRRM Plan	<i>Barangay Disaster Risk Reduction and Management Plan 2022–2024 (Bagumbayan)</i>	2022	Barangay Bagumbayan BDRRMC	<b>Community-Based DRRM</b>	Grounds disaster planning on localized risk profiling, vulnerability analysis, and community participation	“Natutukoy ang mga posibleng epekto ng disaster sa mga tao, tirahan at kabuhayan.” (Introductory Section)
				<b>Risk and Vulnerability Assessment</b>	Uses demographic, environmental, and livelihood data to identify exposure and capacity gaps at the barangay level	“Resulta ng vulnerability at capacity analysis.” (Section XI)
Barangay Contingency Plan	<i>2022–2024 Contingency Plan for Earthquake – Brgy. Commonwealth</i>	2022	Barangay Commonwealth with PDRF, CDP, PGS	<b>Preparedness and Response Planning</b>	Establishes scenario-based operational planning to ensure coordinated and timely earthquake response	“A scenario-based plan for a specific and projected natural hazard.” (Acknowledgment)
Barangay Contingency Plan	<i>2022–2024 Contingency Plan for Earthquake – Brgy. Commonwealth</i>	2022	Barangay Commonwealth with PDRF, CDP, PGS	<b>Command and Coordination Systems</b>	Details incident command structures, emergency operations centers, and inter-cluster coordination mechanisms	“Establishes arrangements in advance to enable timely, effective and appropriate responses.” (RA 10121 definition)
Barangay Operational Guide	<i>Gabay sa Pamamahala ng Evacuation Center – Brgy. Commonwealth</i>	2022	Barangay Commonwealth	<b>Protection of Vulnerable Populations</b>	Documents evacuation center gaps affecting PWDs, children, and elderly, highlighting accessibility and psychosocial needs	“Ang mga person with disabilities ay limitado ang galaw dahil walang mga rampa.”
				<b>Operational Readiness</b>	Provides practical guidance for improving	“Hindi gaanong natututukan ang saykosoyal na

Document Type	Title	Date Published	Author / Issuing Body	Main Focus	Description	Excerpts
					evacuation center management and service delivery during disasters	kalagayan ng mga bata."
Community Training Manual	<i>Family Preparedness Planning Workshop</i>	April 20, 2018	Philippine Disaster Resilience Foundation (PDRF) – PREPLAB	<b>Household-Level Preparedness</b>	Positions families as the first line of disaster preparedness through planning, risk awareness, and contingency development	"Paglaplano para sa disaster resilience." (p. 3)
		April 20, 2018	Philippine Disaster Resilience Foundation (PDRF) – PREPLAB	<b>Resilience Building</b>	Emphasizes survival, continuity, and recovery within the first 72 hours after a major disaster	"Kung magkaroon ng THE BIG ONE... ikaw ba ay handa?" (p. 11)
Video	<i>2024 Barangay Best Practices – Barangay Commonwealth</i>	October 3, 2024	Quezon City Government (featured on official QC Government media)	<b>Innovative Community Service Delivery</b>	Highlights localized innovation in Barangay Commonwealth, demonstrating how tailored programs can improve responsiveness and service efficiency	"Tipid na sa gas consumption, mas pinabilis pa ang aksyon! Iyan ang serbisyong hatid ng Bike Patrol program."
				<b>Disaster and Public Safety Preparedness</b>	Showcases best practices focused on safety and emergency response readiness through community-based programs like Bike Patrol that augment public safety and disaster response	"Bike Patrol program... mas mapabilis ang pag-respond ng barangay sa malawak na sakop sakaling magkaroon ng sakuna."
Public Information / IEC Poster	Wear a Helmet: Free 50 Motorcycle Helmets and Road Safety Lecture	February 14, 2025	Sangguniang Kabataan – Barangay Commonwealth, in partnership with Automobile Association of the Philippines	Community-Based Safety and Risk Prevention	The document promotes preventive road safety behavior through incentive-based participation and education. It frames helmet use as a shared responsibility between individuals and local governance, reinforcing accident prevention through access (free helmets) and knowledge (road safety lecture).	"WEAR A HELMET"; "FREE 50 MOTORCYCLE HELMETS"; "FREE ROAD SAFETY LECTURE"; "Project initiative of SK Kagawad Kuri Dela Fuente"
Emergency Information / Advisory Poster	List of Evacuation Area – Barangay Commonwealth, District II, Quezon City	November 8, 2025	Barangay Commonwealth Disaster Risk Reduction Committee	Community-Based Safety and Risk Prevention	The document operationalizes disaster preparedness by providing residents with clear, location-specific evacuation options and emergency contact information. It emphasizes readiness, accessibility of safe spaces, and rapid response	"DISASTER RISK REDUCTION COMMITTEE"; "LIST OF EVACUATION AREA"; "Emergency Hotline"; "Barangay Health Emergency Response Team (BHERT)"

Document Type	Title	Date Published	Author / Issuing Body	Main Focus	Description	Excerpts
					coordination at the barangay level.	

**Governance.** Risk-informed governance emerges as a central orientation across the reviewed policy documents, but more importantly, it shapes how disaster-related information is generated, structured, and communicated to communities. The Quezon City Disaster Risk Reduction and Management Plan (2021–2027) positions disaster risk reduction as a core element of governance and development planning, emphasizing that “planning for the next seven (7) years must therefore be risk-informed to sustain change.” This reflects a shift toward anticipatory governance that requires systematic communication of risk information to households and communities.

Similarly, the QCDMP Project Briefs (2021–2022) reinforce this perspective by proposing institutional reforms to improve disaster management systems, including flood risk and drainage management. These reforms imply the need for clear communication channels, coordination mechanisms, and information dissemination strategies across institutions and communities. Overall, governance in Quezon City frames disaster risk reduction as a communication-driven process, where policies, institutional coordination, and evidence-based decisions must be translated into actionable knowledge at the household level (Abunyewah et al., 2018).

**Risk Assessment.** Risk and vulnerability assessment serves as the analytical foundation of disaster planning, but in the context of this study, it also provides the core content of disaster preparedness messages communicated to households. The Barangay Disaster Risk Reduction and Management Plan (2022–2024) highlights the importance of systematic assessment processes, referencing the “*resulta ng vulnerability at capacity analysis*” as the basis for identifying hazards, exposure, and

local capacities. These assessment outputs are critical because they determine what information is communicated, to whom, and with what level of specificity. By identifying which populations, infrastructures, and livelihoods are most at risk, local authorities can tailor preparedness messages to different household contexts, as effective disaster risk communication requires audience segmentation and the development of targeted messages that respond to the specific needs and conditions of diverse groups (Bartolucci et al., 2023). Moreover, the assessment process can help identify gaps in resources and adaptive capacities, identifying priorities for risk reduction strategies and allocating resources more effectively.

**Disaster Preparedness.** Disaster preparedness is strongly emphasized in operational and planning documents that focus on readiness, coordination, and community engagement. The Barangay Commonwealth Contingency Plan for Earthquake (2022–2024) describes preparedness as a scenario-based planning process designed to anticipate potential hazards and organize appropriate response measures. The plan outlines response procedures, resource mobilization strategies, and emergency coordination mechanisms to ensure timely and effective disaster response. Central to this preparedness framework is the establishment of clear command and coordination systems in accordance with Republic Act 10121. The contingency plan defines institutional roles, communication channels, and coordination structures necessary for efficient disaster response. At the community level, preparedness is reinforced through initiatives such as family preparedness workshops, which emphasize the role of households as the first responders during disasters. These programs encourage families to develop preparedness plans and prepare for the critical 72-hour survival period following a major disaster event. Additional preparedness initiatives include public safety campaigns and community-

based risk prevention activities, such as the dissemination of evacuation area lists and road safety programs. These initiatives demonstrate how preparedness is operationalized through clear communication, accessible information, and community-level engagement (WHO, n.d.).

**Social Protection.** Social protection emerges as an important component of disaster risk reduction in the reviewed documents. The Quezon City Disaster Risk Reduction and Management Plan recognizes that disasters disproportionately affect vulnerable populations, including the elderly, people with disabilities, low-income households, and daily wage earners. This acknowledgment reflects the need for inclusive and accessible communication strategies that ensure these groups are not excluded from preparedness efforts.

At the barangay level, documents such as the *Gabay sa Pamamahala ng Evacuation Center* (Barangay Commonwealth) highlight accessibility challenges faced by persons with disabilities, including the absence of appropriate infrastructure such as ramps. These challenges point to a broader issue, i.e., even when preparedness information is available, barriers in physical access, mobility, and communication formats may limit the ability of these vulnerable groups to receive, interpret, and respond to disaster messages effectively. Thus, this underscores the need for evacuation planning and emergency communication systems that are both physically and communicatively accessible, including the use of appropriate channels, formats, and localized messaging. This is important since social protection measures should extend community service initiatives that could improve their safety and emergency response capacity (Berardi et al., 2025). For example, the Barangay Commonwealth Bike Patrol initiative illustrates how innovative service delivery can enhance public safety and disaster responsiveness in densely populated urban communities. By improving

mobility, visibility, and response time, such initiatives strengthen community-level resilience while addressing practical constraints such as traffic congestion and fuel costs.

### Emerging Theme 1: Determinants of Household Disaster Preparedness

Table 2 presents the qualitative coding process used to analyze participants' responses regarding the socio-demographic, cultural, and environmental contexts that influence disaster preparedness practices and communication experiences. In the open coding stage, specific phrases from participant statements were identified and labeled with descriptive codes such as household income, monthly income, elderly member, and basic needs. These codes were then grouped into broader categories through axial coding, including Household, Income, Members, Needs, and Government.

Under cultural and social structures, codes such as roving team leader, street leaders, easy access, and public hospital were grouped into axial categories such as Leaders, Access, Hospital, and Member Special Needs. These categories highlight the role of community leadership, institutional support, and access to services in strengthening preparedness and communication within the community.

*Table 2. The coding process in terms of Socio-demographic, cultural, and environmental contexts that shape disaster preparedness practices and communication experiences*

Theme	Sub-theme	Code	Operational Definition of the Code	Illustrative Quote	Analytical Interpretation
Determinants of Household Disaster Preparedness	Household	household income	Household's financial capacity, available assets, and composition influencing preparedness.	"Yes, household income affects the ability to prepare for disasters."	Household preparedness is shaped by financial capacity, available assets, and family size, with low income and asset loss
		household items		"When there's a calamity, like before, when there was a typhoon, the water rises in	

Theme	Sub-theme	Code	Operational Definition of the Code	Illustrative Quote	Analytical Interpretation
				<i>our area, and we get affected, our household items get damaged.</i>	increasing vulnerability during disasters.
		household members		<i>"Three household members."</i>	
	Income	monthly income	Level and stability of financial resources for preparedness.	<i>"Of course, it's better that you really have a monthly income because that's a big thing, especially compared to those who don't have work and don't receive salary monthly or daily."</i>	Stable and regular income strengthens preparedness by enabling households to allocate resources for disaster-related needs.
		steady income		<i>"And my sibling's education needs are not fully met since there is no steady income."</i>	
	Members	elderly member	Older adults affecting vulnerability and response needs.	<i>"One elderly member."</i>	The presence of elderly members increases vulnerability
	Needs	basic needs	Essential daily and educational requirements that may limit preparedness.	<i>"Having water especially helps us meet our basic needs."</i>	Unmet basic needs limit the ability of households to prioritize disaster preparedness.
		education needs		<i>"And my sibling's education needs are not fully met since there is no steady income."</i>	
	Government	government employee	Links to government access, support, and disaster information.	<i>"As a government employee, that's my main source of income."</i>	Employment or connection with government institutions enhances access to reliable information and resources.
		government office		<i>"From a government office."</i>	
		roving team leader		<i>"Right now, I also work as a roving team leader."</i>	
	Leaders	sometimes street leaders	Community figures aiding	<i>"Sometimes street leaders go</i>	Community leaders are important for

Theme	Sub-theme	Code	Operational Definition of the Code	Illustrative Quote	Analytical Interpretation
			information dissemination.	<i>around our area.</i>	disaster information
	Access	easy access	Availability and consistency of access to services and information.	<i>"For healthcare, my sibling works in a hospital, so we also have easy access."</i>	Consistent to services improves preparedness capacity and response readiness.
		regular access		<i>"Yes, we have regular access to water, electricity, and healthcare."</i>	
	Hospital	government hospital	Access to public healthcare during emergencies.	<i>"I currently work at a government hospital. I am a nursing attendant in a government hospital."</i>	Access to healthcare services strengthens household resilience during emergencies.
		public hospital		<i>"Then for hospitals, there's a public hospital."</i>	
	Member special needs	special needs	Individuals requiring additional care and support.	<i>"So, that affects us because since he has special needs, in case of a disaster we really need to prioritize him because he can't protect himself."</i>	Members requiring special care face higher vulnerability and prioritize these individuals during disasters.
	Disaster	coming disaster	Awareness of hazards and exposure to disaster management systems.	<i>"Since we have access, we're able to prepare right away in case there's a coming disaster."</i>	Trust in official disaster risk institutions influences the acceptance and use of preparedness information.
		disaster risk department		<i>"I do trust them, because the information they post the Commonwealth has a page for that comes from the disaster risk department or from the QC department."</i>	
	Flooding	experienced flooding	Experience and frequency of flood events.	<i>"Experienced flooding, which occurs frequently in the area."</i>	Frequent flooding experiences heighten risk awareness and

Theme	Sub-theme	Code	Operational Definition of the Code	Illustrative Quote	Analytical Interpretation
		mostly flooding		<i>"Mostly flooding when the water rises, it becomes difficult to go out, especially on the roads."</i>	highlight mobility and safety challenges.
	Typhoon	incoming typhoon	Awareness and experience of typhoon risks.	<i>"Especially when there's an announcement of an incoming typhoon, we immediately buy additional supplies."</i>	Strong typhoons reinforce the need for preparedness and influence adaptive community responses.
		recent typhoons		<i>"In the recent typhoons that came, I noticed that after, our barangay made solutions or steps so that the flooding we experienced in past months won't happen again."</i>	
		strong typhoon		<i>"Strong typhoons and flooding."</i>	
	Rain/Season	heavy rain	Seasonal conditions indicating disaster risk levels.	<i>"Last month, there was a strong typhoon, heavy rain."</i>	Seasonal patterns and rainfall intensity serve as indicators of disaster risk and trigger preparedness actions.
		little rain		<i>"Just a little rain and the water is already high."</i>	
		dry season		<i>"I noticed this year, the dry season is longer."</i>	
		rainy season		<i>"Yes, like when there's a typhoon, I immediately do the laundry so we'll have more clothes since it's rainy season."</i>	
	Water / Source / Supply	clean water	Access to essential utilities and emergency resources.	<i>"For clean water, we are under Maynilad."</i>	Access to stable and clean water, electricity, and essential supplies is critical for maintaining
		water source		<i>"For example, when it comes to water, like during a typhoon if the water</i>	

Theme	Sub-theme	Code	Operational Definition of the Code	Illustrative Quote	Analytical Interpretation
				<i>source, like the dam site, gets contaminated, it could become dirty.</i>	preparedness and resilience during disasters.
		electricity supply		<i>"It's good that the water and electricity supply are stable."</i>	
		supplying medicines		<i>"It's better that way because you don't need to give maintenance, like supplying medicines monthly or buying something weekly."</i>	
		additional supplies		<i>"Especially when there's an announcement of an incoming typhoon, we immediately buy additional supplies."</i>	

The emerging theme 1 **Determinants of Household Disaster Preparedness** highlights the various factors that shape how households prepare for disasters and how they experience disaster-related communication. The thematic analysis reveals that preparedness is influenced by a combination of household conditions, community structures, and environmental hazards. Socio-demographic factors such as household income, family composition, and the presence of vulnerable members affect the ability of households to allocate resources for emergency supplies and preparedness activities. Access to essential services such as healthcare, water, electricity, and institutional support further influences readiness, as stable access to these resources strengthens households' capacity to respond to potential disasters. In addition, cultural and social structures, including the presence of community leaders and institutional affiliations, contribute to how preparedness information is communicated and acted

upon within the community. Environmental conditions, particularly recurring hazards such as flooding, typhoons, heavy rainfall, and seasonal changes, also shape households' perceptions of risk and motivate preparedness behaviors. Together, these factors demonstrate that disaster preparedness practices emerge from the interaction of economic capacity, social support systems, infrastructure access, and environmental exposure, highlighting the complex conditions that influence household resilience in Barangay Commonwealth.

The first subtheme focuses on the household as the fundamental unit of preparedness. The code *household income* was identified as a determining factor in readiness. Participant 13 shared, “*Yes, household income affects the ability to prepare for disasters.*” This reflects the strong connection between financial stability and the capacity to acquire resources needed for disaster preparedness. Beyond income, material vulnerabilities were also noted under the code *household items*. Participant 9 explained, “*When there’s a calamity, like before, when there was a typhoon, the water rises in our area, and we get affected, our household items get damaged.*” This highlights the susceptibility of physical possessions to damage, which disrupts recovery efforts. In addition, the code *household members* points to the size and composition of families. Participant 13 mentioned, “*Three household members.*” This simple account underscores that the number of household members influences preparedness needs, as families with more members require additional supplies, planning, and coordination. Collectively, these insights underscore that households are central to preparedness, but their readiness is deeply contingent upon economic stability and material resilience.

The second subtheme, *income*, emphasizes the critical role of financial security in sustaining disaster preparedness. The code *monthly income* reflects its importance in

ensuring preparedness consistency. Participant 10 stated, *“Of course, it’s better that you really have a monthly income because that’s a big thing, especially compared to those who don’t have work and don’t receive salary monthly or daily.”* This highlights the disparity between families with stable sources of income and those dependent on irregular earnings, showing that economic vulnerability limits the ability to plan long-term. Similarly, the code *steady income* reveals how unstable income undermines everyday needs. Participant 2 explained, *“And my sibling’s education needs are not fully met since there is no steady income.”* The inability to secure education reflects how income instability diverts attention from preparedness to daily survival. This subtheme demonstrates that economic resilience is foundational for disaster resilience, as households with secure income streams are better positioned to allocate resources for preparedness and recovery.

The third subtheme, *members*, illustrates how household composition shapes preparedness challenges. The code *elderly member* emerged as a critical factor requiring special consideration. Participant 13 noted, *“One elderly member.”* This indicates that families with elderly dependents face unique vulnerabilities, as older adults may require medical attention, mobility support, or prioritized evacuation. The presence of elderly members highlights the importance of tailoring preparedness communication to accommodate the needs of vulnerable populations within households.

The fourth subtheme, *needs*, centers on the provision of basic and educational requirements that intersect with preparedness. Under the code *basic needs*, Participant 2 emphasized, *“Having water especially helps us meet our basic needs.”* Access to clean water, food, and shelter becomes even more critical in times of disaster, and the ability to secure these essentials is a prerequisite for survival and

recovery. Similarly, the code *education needs* demonstrates how financial instability disrupts preparedness indirectly. Participant 2 explained, “*And my sibling’s education needs are not fully met since there is no steady income.*” When families struggle to fulfill educational expenses, resources for disaster readiness are deprioritized. This reflects the broader socio-economic trade-offs households must make, where daily needs often take precedence over disaster planning.

The fifth subtheme, *government*, emphasizes the role of state employment and support structures in household preparedness. The code *government employee* highlights income stability derived from public sector jobs. Participant 5 explained, “*As a government employee, that’s my main source of income.*” Stable employment allows for more consistent resource allocation, which directly influences preparedness capacity. Likewise, the code *government office* illustrates the same point, with Participant 4 stating, “*From a government office.*” This underscores that households with ties to government employment enjoy relative stability, which can be a protective factor in ensuring both basic needs and preparedness requirements are met.

The role of community leaders was highlighted as an essential factor in preparedness. Under the code *roving team leader*, Participant 11 shared, “*Right now, I also work as a roving team leader.*” This statement illustrates how designated leadership roles within the community become central in mobilizing and coordinating preparedness efforts. Similarly, the code *sometimes street leaders* reflects additional local-level leadership involvement. Participant 5 stated, “*Sometimes street leaders go around our area.*” This points to the importance of grassroots leadership in bridging official disaster communication with household-level action. Both accounts demonstrate that leadership structures serve as cultural and organizational anchors of preparedness, reinforcing trust, order, and mobilization within communities. The implication is that

disaster preparedness interventions should continue to strengthen barangay and street-level leadership roles, ensuring that leaders are equipped with training and resources to facilitate timely and accurate communication.

Access to essential services emerged as a critical enabling factor for preparedness. Participant 11 noted under the code *easy access*, “*For healthcare, my sibling works in a hospital, so we also have easy access.*” This reflects how familial connections to healthcare institutions improve households’ preparedness capacities by ensuring immediate support when needed. Similarly, the code *regular access* was expressed by Participant 8, who shared, “*Yes, we have regular access to water, electricity, and healthcare.*” This emphasizes that stability in basic utilities and healthcare systems underpins household readiness during crises. These accounts underscore the importance of infrastructural resilience in disaster preparedness. When households enjoy reliable access to health and utility services, their preparedness actions are more consistent and sustainable. The implication is that policies must prioritize uninterrupted access to essential services, as infrastructural deficits can exacerbate vulnerability during disasters.

Institutional support through hospitals represents another structural dimension of preparedness. Under the code *government hospital*, Participant 10 explained, “*I currently work at a government hospital. I am a nursing attendant in a government hospital.*” This highlights how direct employment within healthcare institutions fosters preparedness knowledge and access to medical services. Similarly, the code *public hospital* was identified by Participant 12, who stated, “*Then for hospitals, there’s a public hospital.*” This reflects the availability of institutional support systems that communities rely on in times of crisis. The presence of public health facilities serves as a cultural and structural assurance for families, reducing uncertainties during

disasters. The implication is that strengthening the accessibility, capacity, and reliability of public hospitals is vital to community disaster readiness, as they serve as both preventive and responsive infrastructures during crises.

The subtheme, *member special needs*, emphasizes how vulnerability within households significantly shapes preparedness priorities. Participant 4 shared, “So, that affects us because since he has special needs, in case of a disaster we really need to prioritize him because he can’t protect himself.” This reflects the heightened responsibilities of families with members requiring special attention, which alters both household planning and response strategies. In contrast, Participant 8 responded, “None with special needs.” This demonstrates how household preparedness is influenced by the presence or absence of vulnerable individuals. The findings imply that disaster planning must adopt an inclusive framework that accounts for members with special needs, ensuring that preparedness measures address mobility, medical, and safety requirements. This has significant implications for the design of community-level preparedness programs, which should integrate disability-sensitive planning and provide support tailored to vulnerable populations.

Families recognize both the immediacy of disaster threats and the institutional sources of information that guide their preparation. Participant 5 explained under the code *coming disaster*, “Since we have access, we’re able to prepare right away in case there’s a coming disaster.” This highlights how timely awareness translates directly into proactive action at the household level. Similarly, Participant 4 emphasized reliance on institutional credibility through the code *disaster risk department*: “I do trust them, because the information they post the Commonwealth has a page for that comes from the disaster risk department or from the QC department.” These insights show that access to official channels fosters both trust and action, underscoring the

critical link between environmental alerts and preparedness behaviors. The implication is that disaster communication systems must ensure accurate and timely dissemination, as trust in institutional information directly influences preparedness practices.

Flooding emerged as one of the most frequent environmental challenges, shaping both risk perception and preparedness behaviors. Participant 13 shared, *“Experienced flooding, which occurs frequently in the area,”* while Participant 5 emphasized, *“Mostly flooding when the water rises, it becomes difficult to go out, especially on the roads.”* These narratives reflect how recurring floods alter mobility, disrupt daily life, and amplify vulnerabilities during disasters. The persistence of flooding highlights the need for community-level mitigation strategies, such as drainage improvements and early warning systems. The implication here is that preparedness actions cannot be divorced from structural interventions; environmental risks like flooding require both household readiness and government-led infrastructure support to minimize long-term vulnerabilities.

Typhoons are another dominant environmental context influencing household preparedness. Participant 11 described proactive measures under the code *incoming typhoon*: *“Especially when there’s an announcement of an incoming typhoon, we immediately buy additional supplies.”* Similarly, Participant 10 highlighted institutional responsiveness: *“In the recent typhoons that came, I noticed that after, our barangay made solutions or steps so that the flooding we experienced in past months won’t happen again.”* These accounts reflect a cycle of preparedness shaped by lived experience: households stockpile resources when typhoons are forecasted, while barangays implement structural adjustments post-disaster. The repetition of strong typhoons, as noted by Participant 11 (*“Strong typhoons and flooding”*) and Participant

9 (*“Last month, there was a strong typhoon, heavy rain”*), reinforces the normalized perception of climate-related risks. The implication is that disaster resilience requires a combination of individual preparedness behaviors, such as stockpiling, and systemic improvements that address recurring vulnerabilities.

Shifting weather patterns, including heavy rains and prolonged dry seasons, directly impact preparedness decisions. Participant 9 described, *“Last month, there was a strong typhoon, heavy rain,”* while Participant 4 noted vulnerability even in minor changes: *“Just a little rain and the water is already high.”* These accounts reveal how varying rainfall intensities trigger different levels of risk perception. Participant 12 further highlighted seasonal changes: *“I noticed this year, the dry season is longer,”* and added practical household adjustments during the rainy season: *“Yes, like when there’s a typhoon, I immediately do the laundry so we’ll have more clothes since it’s rainy season.”* These reflections demonstrate that disaster preparedness is seasonally adaptive, with households making anticipatory adjustments to routines. The implication is that climate variability shapes preparedness in subtle but significant ways, requiring disaster communication strategies that account for both extreme events and gradual seasonal changes.

Access to clean water, electricity, and essential supplies was consistently identified as critical for preparedness. Participant 10 shared, *“For clean water, we are under Maynilad,”* while Participant 15 emphasized its health and preparedness value: *“Of course, if you have clean water, electricity, and so on, it strengthens our health, making us more prepared for any disaster that may come to us.”* Participant 6 added, *“Yes, we do have access, and of course this affects our preparation like making sure we have enough clean water ready.”* These accounts demonstrate that water access is both a health necessity and a preparedness measure. At the same time, vulnerabilities

exist, as Participant 3 noted, *“For example, when it comes to water, like during a typhoon if the water source, like the dam site, gets contaminated, it could become dirty.”* Participant 4 highlighted its broader utility: *“Of course, it’s a big thing to have access to those, because in case there’s a disaster for example, fire we need to have a water source to put out the fire.”* The importance of additional supplies and electricity stability was reflected by Participant 11 (*“It’s good that the water and electricity supply are stable”*) and Participant 10 (*“It’s better that way because you don’t need to give maintenance, like supplying medicines monthly or buying something weekly”*). These findings emphasize that resource availability determines the household’s ability to respond effectively during and after disasters. The implication is that sustainable access to water, electricity, and medical supplies must be integrated into preparedness planning to reduce vulnerabilities.

Moreover, the theme Determinants of Household Disaster Preparedness demonstrates that disaster readiness is shaped by a complex interaction of socio-demographic, social, and environmental conditions within households and communities. Preparedness is deeply embedded in the economic and social structures of families, where factors such as income stability, household composition, and access to essential resources significantly influence the ability to prepare for and respond to disasters. Financial constraints, household vulnerabilities, and differing capacities among families determine whether preparedness messages can be translated into practical actions. At the same time, social and institutional structures such as community leadership, access to utilities and healthcare, and the presence of hospitals provide critical support systems that strengthen preparedness and response. Environmental realities, including recurring hazards such as flooding, typhoons, and seasonal weather patterns, further shape household risk perception and preparedness

behavior. These findings indicate that disaster preparedness is not merely a matter of individual awareness or willingness, but a structural and systemic issue influenced by economic conditions, community networks, institutional support, and environmental exposure. Consequently, effective disaster preparedness strategies must extend beyond awareness campaigns to include inclusive policies, strengthened community leadership, reliable access to essential services, improved infrastructure, and climate-sensitive planning that collectively enhance long-term community resilience.

A quantitative study by Delgado et al. (2025) conducted in Barangay Poblacion, Guihulngan City, evaluated how socio-demographic characteristics shape disaster readiness. Analysis of 369 respondents revealed that, unlike age, gender, or education, income was strongly correlated with preparedness levels. The authors highlighted that localized income disparities significantly impacted readiness, urging that targeted financial aid and livelihood support for low-income households be prioritized in local disaster planning. This aligns directly with the subthemes on income, household ability to prepare, and the structural constraints low-income families face. The recommendation for local government interventions echoes the emphasis on government as a key enabler of preparedness. Additionally, Cabiles-Bacalla and Martinez-Alba (2025) examined 200 households across high-risk barangays in Kidapawan City, focusing on preparedness across earthquake, flood, and drought scenarios. Preparedness was notably high for communication planning, evacuation, and documentation. However, economic and logistical constraints impeded preparedness for flooding. Trust in government (CDRRMC), education level, and perceived hazard severity were positively associated with household readiness. The researchers advocated for enhanced community engagement, localized institutional alignment, and improved risk communication via trusted channels. This study

reinforces the subthemes of household, income, needs, and government, particularly emphasizing how financial constraints limit preparedness for specific hazard types and how institutional trust and communication channels mediate preparedness.

Also, Choong et al. (2025) assessed how unequal income levels intersect with exposure and vulnerability to coastal flooding and sea-level rise in the Philippines. The study demonstrated how low-income communities face compounded risks through increased exposure, less resilient housing, and reduced financial coping capacity and how conventional risk models often neglect such disparities. The refined model underscores the need to incorporate well-being risk and socio-economic disparities into disaster risk reduction (DRR) planning. This directly addresses household income, material vulnerability, and structural inequities in risk exposure amplifying the argument that preparedness is constrained by socio-economic and environmental conditions. Ni et al. (2025) categorized psychological drivers that influence household preparedness across cultural contexts. Among key findings: risk perception, perceived response efficacy, self-efficacy, social norms, and community resilience significantly predict preparedness. Notably, social interaction, including trust, social support, and community cohesion, emerged as a critical facilitator. Psychological factors intersect with socio-demographic realities. Households with limited income may experience lower self-efficacy or reduced access to social support, highlighting the importance of preparedness communication that considers both socio-economic and psychological dimensions.

The study by Curato and Calamba (2020) about the Purok system in San Francisco, Camotes Island, provides a robust model of grassroots organizational leadership. This traditional local governance mechanism divides barangays into small zones (puroks), each coordinated by resident leaders responsible for information dissemination,

pooling resources (e.g., emergency funds), and facilitating disaster communication across households and sectors. This model of local leadership was recognized internationally through a UN Sasakawa Award for its effectiveness in resilience building. This mirrors the leader's subtheme, which is the central role of local, trusted coordinators in reinforcing communication, mobilization, and preparedness capacity within community structures. Lopez (2024) explored leadership during disasters (including typhoons, pandemics, earthquakes). Principals demonstrated resilience leadership by promoting bayanihan (communal cooperation), conducting pre-disaster awareness and training, and spearheading adaptive, sustainable post-disaster recovery initiatives. The resulting leadership framework emphasizes proactive coordination and leveraging cultural values for disaster readiness. This study provide insight into institutional leadership, highlighting how authority figures embedded within community institutions (like schools) play vital roles in preparedness outreach, coordination, and fostering a culture of collaboration.

Abenir et al. (2022) assessed community-based leadership in small island communities. Using the Multi-Cluster Disaster Resilience (MCDR) toolkit, governance coherence in local disaster risk reduction (DRR) strategies scored high, suggesting well-integrated leadership structures and institutional linkages supporting resilience. This reinforces the importance of community governance, structured leadership, and institutional coherence in enhancing preparedness resilience. Hipper et al. (2020) analyzed preparedness and communication gaps for families with children or youth with special healthcare needs. Findings revealed a widespread lack of inclusion in current planning, with families often unaware of school disaster arrangements and underserved by communication systems. Recommendations include development of tailored messaging, emergency information forms, one-on-one education, and

inclusive participation in risk reduction planning. This directly addresses the member special needs subtheme, advocating for inclusive, tailored preparedness and communication strategies.

A descriptive quantitative study of 140 households by Guingab et al. (2025) in highly flood-prone barangays in Northern Isabela revealed alarming levels of ill preparedness, despite frequent and severe flooding. Residents lived in lightweight, one-story homes, with limited financial resources impairing resilience. Although evacuation centers existed, many households preferred staying home, further exposing them to flood hazards. The study emphasized the need for livelihood training and actionable risk communication campaigns to bolster preparedness and resilience. This addresses the flooding and disaster subthemes; highlights how environmental conditions (repeated high floods) intersect with socio-economic constraints to suppress household preparedness. Supports the arguments for structural interventions and risk-communications tailored to environmental realities. Using Structural Equation Modeling (SEM) and integrating Protection Motivation Theory (PMT) with the Theory of Planned Behavior (TPB), Kurata et al. (2023) identified latent variables significantly influencing flood preparedness in Filipino flood-prone communities. Key predictors included risk perception, personal experience, media exposure, social norms, perceived behavioral control, and adapted behavior. Adapted behavior emerged as the most impactful variable in motivating flood preparedness and mitigation. This study relates to flooding, seasonal risk, and the role of environmental hazards in shaping preparedness behavior through cognitive and normative mechanisms. Reinforces the emphasis that households' responses are shaped by prior experience and perceived environmental threats.

Kirby-Straker and Straker (2023) examined the responses to Tropical Storm Eta found that individuals who suffered material loss during the storm were substantially more likely to take proactive preparedness actions in the future. Material loss heightened perceived susceptibility and personal relevance, which in turn motivated preparedness behaviors. This shows how lived disaster experience influences environmental risk perception and subsequent preparation. Supports the finding that recurring hazards (typhoons, floods) have cumulative effects on household behaviors and awareness. According to the study of Liu et al. (2025), in rural farming communities with high flood exposure, only 15.2% of households had adequate emergency supplies; housing reinforcements were minimal (8%), despite 93% of respondents having flood experience and high perception of future threats. While some engaged in safeguarding valuables, structural and preparedness gaps were evident. This demonstrates how recurrent floods and livelihood-based environmental hazards lead to partial preparedness in knowledge and asset placement. Parallels the identification of environmental determinants shaping household capacity.

## **Emerging Theme 2: Disaster Communication Processes and Behavioral Outcomes**

Table 3 illustrates the coding process used to analyze how disaster preparedness messages are communicated to households and how these messages influence preparedness actions. Through open coding, participant responses identified specific communication practices such as barangay officials, barangay posts, posting updates, street posts, advance information, and sharing information. These codes were grouped under the axial code (subthemes) Barangay-based communication and Information dissemination. The findings indicate that disaster information in the community is transmitted through multiple channels, including barangay officials,

social media updates, megaphones installed in street posts, and interpersonal communication through neighbors and community leaders.

The table also highlights how communication messages influence household behavior and preparedness actions. Codes such as alternative actions, immediate action, and quick action were grouped under the subtheme Behavioral responses, while the code disaster preparedness was categorized under Preparedness reinforcement. These findings reveal that the effectiveness of disaster communication depends on the timeliness and clarity of the response from local authorities. While some participants noted delays in action or insufficient guidance, others acknowledged the positive impact of quick and organized responses by barangay staff.

*Table 3. The coding process in terms of communication of disaster preparedness messages and their influence on household awareness, knowledge, skills, and preparedness actions*

Theme	Sub-theme	Code	Operational Definition of the Code	Illustrative Quote	Analytical Interpretation
Disaster Communication Processes and Behavioral Outcomes	Barangay-based communication	barangay officials	Formal, community-level communication channels and tools used by local authorities to disseminate disaster-related information.	<i>"Barangay officials arrive late in times of disaster."                      "Yes, I trust the barangay officials because they get information from the NDRRMC and pass it to the barangay about what kind of disaster is coming."</i>	Barangay communication serves as a primary source of disaster information, but its effectiveness is affected by delays in response. While trust in officials and multi-channel dissemination enhance reach, timeliness remains a critical limitation.
		barangay posts		<i>"And even if someone doesn't, their neighbors can still share the information from the barangay posts."</i>	

Theme	Sub-theme	Code	Operational Definition of the Code	Illustrative Quote	Analytical Interpretation
		posting updates		<i>"First of all, they help by posting updates about what we need to do and what's happening in the news."</i>	
		street post		<i>"And we also have megaphones or speakers hanging on every street post in our corner."</i>	
	Information dissemination	advance information	Provision and circulation of early warnings and disaster-related updates through formal and informal channels.	<i>"The barangay also announces, but for advance information, you really see it on social media."</i>	Disaster information is accessed through digital and interpersonal networks, with social media providing faster updates and community figures.
		shares information		<i>"Also, there's a street leader in our area who gathers and shares information."</i>	
	Behavioral responses	alternative actions	Denote the types and timeliness of actions taken by authorities and households in response to disaster information.	<i>"If people are affected, they don't give alternative actions right away."</i>	Preparedness and response behaviors are influenced by the quality of actions from authorities; delays weaken effectiveness, while timely and coordinated responses enhance trust and action.
		immediate action		<i>"But on the barangay's side, sometimes immediate action is lacking."</i>	
		quick action		<i>"Their quick action, the way they manage, and that all the barangay staff on duty are doing well."</i>	
	Preparedness reinforcement	disaster preparedness	Household efforts and resource allocation	<i>"Because first of all, instead of using their income for our</i>	Preparedness is directly constrained by economic

Theme	Sub-theme	Code	Operational Definition of the Code	Illustrative Quote	Analytical Interpretation
			toward preparing for disasters.	<i>food, it also goes to our needs for disaster preparedness.</i> <i>”</i> <i>“If a family has low income, disaster preparedness is also affected because of course, you need a go-bag, groceries, and supplies.”</i>	capacity, with limited income reducing the ability to invest in essential preparedness resources such as emergency kits and supplies.

The emerging theme 2 **disaster communication processes and behavioral outcomes** explains how disaster preparedness messages are transmitted through community communication systems and how these messages shape household awareness and preparedness actions. The findings show that barangay-based communication serves as a primary channel for disseminating disaster information, with barangay officials, barangay posts, megaphones installed on street posts, and announcements acting as formal sources of updates. At the same time, information dissemination also occurs through social media and community networks, including street leaders and neighbors who share and reinforce disaster-related messages within the community. These communication mechanisms ensure that households receive advance information about potential hazards and preparedness instructions. However, participants also noted that the effectiveness of these communication processes depends on the timeliness and clarity of response from local authorities. Delays in providing guidance or alternative actions may reduce the effectiveness of preparedness efforts, while quick and organized responses by barangay staff strengthen community trust and encourage households to follow preparedness

measures. Furthermore, the theme demonstrates that disaster communication influences behavioral responses, reinforcing preparedness actions such as allocating resources for emergency supplies, responding to warnings, and adopting precautionary measures at the household level.

The first subtheme, *Barangay-based communication*, emphasizes the role of local governance and community infrastructures in relaying disaster-related information. The code *barangay officials* reflects both trust and criticism from households. For example, Participant 12 shared, “*The barangay officials are there, reporting to the group leader which parts got flooded, then people near those areas get relocated,*” which demonstrates their essential function in coordinating response and evacuation. Yet, Participant 13 highlighted delays, stating, “*Barangay officials arrive late in times of disaster,*” suggesting that inefficiencies in timeliness may undermine trust. Despite this, confidence in their authority remains, as Participant 8 affirmed, “*Yes, I trust the barangay officials because they get information from the NDRRMC and pass it to the barangay about what kind of disaster is coming.*” These excerpts reveal that barangay officials serve as crucial mediators of official information, but perceptions of responsiveness directly influence community reliance on their messages. Complementing this, the code *barangay posts* illustrates how official announcements extend beyond verbal relay. Participant 2 explained, “*And even if someone doesn’t, their neighbors can still share the information from the barangay posts,*” highlighting the embeddedness of posts in community interactions. Similarly, the code *posting updates* strengthens the notion of barangay transparency, as Participant 2 further noted, “*First of all, they help by posting updates about what we need to do and what’s happening in the news.*” Finally, the code *street post* underscores the infrastructural dimension of communication, where megaphones or speakers are strategically

installed to ensure message reach. As Participant 10 remarked, “*And we also have megaphones or speakers hanging on every street post in our corner,*” households benefit from immediate and widespread auditory communication. Taken together, these accounts underscore the barangay’s enduring role as a trusted and inclusive communication channel, particularly for those without access to digital media.

The second subtheme, *Information dissemination*, illustrates how disaster-related messages are interpreted, validated, and shared within and across households. The code *advance information* reflects how households actively combine sources to ensure early action. Participant 4 explained, “*The barangay also announces, but for advance information, you really see it on social media,*” demonstrating how formal and digital systems operate in tandem. Similarly, the code *shares information* illustrates the significance of informal community leaders in reinforcing preparedness communication. As Participant 5 described, “*Also, there’s a street leader in our area who gathers and shares information,*” demonstrating how grassroots figures ensure that critical information reaches even those who may not be directly connected to official or digital sources. The implication here is that preparedness communication is both hierarchical and communal: information originates from official and digital channels but is ultimately filtered, validated, and operationalized through household and community-level exchanges.

The subtheme, *behavioral responses*, captures how households interpret and translate disaster preparedness messages into action. The code *alternative actions* reveals limitations in the timeliness of information. As Participant 6 shared, “*If people are affected, they don’t give alternative actions right away.*” This illustrates that while communication systems are established, they are not always responsive enough to guide families in adjusting quickly during unpredictable disaster scenarios. Similarly,

the code *immediate action* highlights the gaps in urgent response, with Participant 6 noting, “*But on the barangay’s side, sometimes immediate action is lacking.*” This statement reflects the community’s perception of inconsistent or delayed responses at the local level, which can leave households vulnerable despite receiving advance information. In contrast, the code *quick action* reveals the capacity of organized response when systems function effectively. Participant 2 remarked, “*Their quick action, the way they manage, and that all the barangay staff on duty are doing well.*” This suggests that timely and visible efforts by local authorities build trust and strengthen households’ willingness to follow directives. Collectively, these responses imply that effective disaster communication must go beyond information dissemination to include operational readiness, so that households can rely on prompt and adaptive actions during emergencies.

The subtheme, *preparedness reinforcement*, emphasizes how disaster preparedness messages influence long-term household behavior. The code *disaster preparedness* highlights the role of financial resources in sustaining readiness. Participant 2 explained, “*Because first of all, instead of using their income for our food, it also goes to our needs for disaster preparedness.*” Similarly, Participant 4 observed, “*If a family has low income, disaster preparedness is also affected because of course, you need a go-bag, groceries, and supplies.*” These accounts demonstrate that preparedness messaging can effectively reinforce desired actions, but structural barriers particularly economic constraints limit the extent to which households can sustain them. This finding aligns with disaster risk reduction literature, which emphasizes that preparedness cannot be achieved through communication alone but must also address socio-economic vulnerabilities.

The emerging theme disaster communication processes and behavioral outcomes imply that disaster communication systems in Barangay Commonwealth must be strengthened through coordinated, timely, and multi-channel communication strategies that integrate both formal governance structures and community-based networks. While barangay officials and local infrastructures such as megaphones and announcements remain essential channels for disseminating disaster information, the effectiveness of these systems depends on the speed, clarity, and responsiveness of local authorities. The results indicate that households rely on a combination of official updates, social media platforms, and interpersonal networks such as street leaders and neighbors to validate and act upon disaster information. Consequently, disaster communication frameworks should institutionalize layered communication systems that combine digital platforms, barangay announcements, and grassroots information sharing to ensure that preparedness messages reach all households. Furthermore, communication strategies must be accompanied by operational readiness and clear guidance to enable households to translate warnings into immediate and appropriate actions. Addressing socio-economic barriers that limit households' ability to sustain preparedness such as limited financial resources for emergency supplies is also necessary. Strengthening community leadership, ensuring prompt response mechanisms, and integrating inclusive support systems will enhance the credibility of disaster communication and improve long-term household preparedness and resilience.

The study of Corpuz and Parrucho (2025) examines how Kidapawan City LGUs use mass media, particularly radio and social media, through a dual-platform strategy to extend reach and immediacy. Media also provide emotional and educational support while enabling participatory engagement on the ground. This aligns with Barangay-

based communication and Digital/Social platforms subthemes, demonstrating how formal and social channels complement one another in disaster preparedness. Also, the study of Siar and Lorenzo (2025) analyzes LGUs in Pasay, Manila, Caloocan, and Navotas during 2020–2021 using the Crisis and Emergency Risk Communication model. Findings highlight reliance on traditional, electronic, and digital channels but also reveal gaps such as a lack of comprehensive plans, weak evaluation systems, and inconsistent use of local languages. This connects with Information dissemination and Digital/Social platforms, particularly in showing how multiple channels operate together but face coordination and clarity challenges.

Moreover, the study by Fullero et al. (2024) identifies television weather forecasts, the Mayor's office, and Barangay LGU officials as critical channels for disaster-related information. This supports Barangay-based communication and Information dissemination themes by emphasizing trusted, multi-channel delivery systems in local governance. Nielo (2024) develops the SANDATA communication plan for higher education institutions using the crisis and emergency communication theory. Communication is structured across phases: pre-crisis, initial event, maintenance, resolution, and evaluation. This illustrates how structured and stage-based communication can be adapted to barangay systems to strengthen preparedness actions.

According to the systematic review of Ryan et al. (2020) of diverse community engagement techniques for hazard preparedness. Face-to-face engagement consistently yields increased preparation activity, while mass media campaigns exhibit varied effectiveness. This highlights how interpersonal communication influences behavioral responses, compared to passive media, validating participants' reliance on trusted community interactions when immediate guidance or reinforcement is needed.

The quantitative study of Gumasing and Sobrevilla (2023) identifies intention to prepare as the strongest predictor of protective behavior, followed by attitudes, perceived severity, self-efficacy, response efficacy, response cost, and subjective norms. This reinforces the concept that messaging must bolster intention, efficacy perception, and normative influence to promote both immediate behaviors and long-term preparedness especially in low-income households where cost is a barrier.

According to the study of Qiu et al. (2023), self-efficacy increases minimal preparedness among vulnerable households, but neither response efficacy nor self-efficacy alone strongly motivates fully adequate preparedness. This highlights limits of communication: even when efficacy beliefs are present, economic and structural barriers can inhibit action paralleling participant observations that financial constraints undermine sustained preparedness. The correlational study of Inocian et al. (2025) linking disaster awareness to resilience and preparedness among senior high school students. This demonstrates that awareness (via communication) influences preparedness behaviors a proxy for long-term reinforcement and behavior change within familial or community contexts.

### **Emerging Theme 3: Household and Community Drivers of Disaster Preparedness Communication**

Table 4 summarizes the emerging theme that explain how disaster preparedness messages are communicated to households and how these messages influence preparedness actions. The coding process identified several codes related to family structure, income status, and household needs, which were grouped into axial categories. The findings show that family composition and financial capacity significantly influence how households interpret and act upon disaster preparedness messages. Statements referring to family member, small family, and whole family

indicate that preparedness is often viewed as a collective household responsibility, requiring coordination among family members. Meanwhile, codes such as family income, low income, and daily needs highlight how economic limitations shape preparedness capacity. Households with limited income often prioritize everyday survival needs over emergency supplies, suggesting that socio-economic conditions directly affect the extent to which preparedness messages can be translated into action.

Under disaster experience, codes such as disaster warnings, incoming disaster information, rising water, and past disaster experiences demonstrate that repeated exposure to hazards increases awareness and shapes risk perception, allowing households to respond more quickly to warnings. Prior disaster experiences serve as learning opportunities that strengthen preparedness practices over time. In addition, community-based mechanisms play a critical role in reinforcing preparedness communication. Codes such as group leader, purok leader, neighbors help, and needed information highlight the importance of local leadership, social support, and accessible information channels in disseminating disaster-related messages. Access to communication resources, particularly digital technologies such as gadgets and internet connectivity, further supports the flow of information within households and communities.

*Table 4. Summary of the emerging themes in terms of disaster preparedness messages are communicated to households and how these messages influence preparedness actions*

<b>Theme</b>	<b>Sub-theme</b>	<b>Code</b>	<b>Operational Definition of the Code</b>	<b>Illustrative Quote</b>	<b>Analytical Interpretation</b>
Household and community drivers of disaster preparedness	Family structure	family member	Household size and composition influencing coordination and shared	<i>“You get used to it, that you need to practice alertness, preparedness, and</i>	Family structure shapes preparedness practices, with smaller or cohesive

Theme	Sub-theme	Code	Operational Definition of the Code	Illustrative Quote	Analytical Interpretation
communication			responsibility in preparedness.	<i>communication for every family member.</i>	families enabling better coordination and shared awareness.
		small family		<i>"First, we're a small family."</i>	
		whole family		<i>"Maybe just whatever we should do so the whole family will be safe."</i>	
	Income status	family income	Level and sufficiency of financial resources within the household.	<i>"But if you can't provide those because you don't have extra money since the family income is just enough for daily expenses then that's a problem."</i>	Limited income constrains preparedness, as households prioritize daily expenses over disaster-related needs and resources.
		low income		<i>"If a family has low income, disaster preparedness is also affected because of course, you need a go-bag, groceries, and supplies."</i>	
		maybe income		<i>"Maybe income."</i>	
	Needs and priorities	daily needs	Essential living expenses that compete with preparedness efforts.	<i>"But when it comes to income, none, because my monthly income is enough to support our daily needs."</i>	Households prioritize immediate daily needs, often limiting their capacity to invest in disaster preparedness.
	Disaster exposure	disaster strikes	Experiences and awareness of hazards and early warning information.	<i>"Since my parent works as a driver, it makes things more difficult because we cannot save money for our safety and needs when a disaster strikes."</i>	Frequent exposure and timely warnings increase awareness, but physical and environmental constraints hinder

Theme	Sub-theme	Code	Operational Definition of the Code	Illustrative Quote	Analytical Interpretation
		disaster warnings		<i>"Gadgets and mobile phones allow more updated access to disaster warnings compared to TV, which is less noticed."</i>	effective response.
		incoming disaster information		<i>"We are able to quickly know about the incoming disaster information."</i>	
		rising water		<i>"But still, because of the rising water in the creek, it's still difficult for them to access since our path is still really hard to enter, especially since we live deep inside."</i>	
		water level		<i>"Like when they give information about the water level rising, or during a typhoon, or fires."</i>	
	Past experiences	experienced floodwaters	Previous encounters with disasters that shape knowledge and behavior.	<i>"Now, since we already experienced floodwaters reaching up to our legs we already know better what to do because of the information the barangay gives us, that we need to act immediately and evacuate from our place."</i>	Past disaster experiences enhance preparedness by improving knowledge and prompting quicker, more informed actions.
		past disaster experiences		<i>"Past disaster experiences have made the</i>	

Theme	Sub-theme	Code	Operational Definition of the Code	Illustrative Quote	Analytical Interpretation
				<i>household more knowledgeable , so they already know what to do when a calamity comes."</i>	
	Local leadership	group leader	Community-level leaders responsible for coordination and information relay.	<i>"The barangay officials are there, reporting to the group leader which parts got flooded, then people near those areas get relocated."</i>	Local leaders facilitate organized communication and response, improving coordination and targeted assistance during disasters.
		purok leader		<i>"In every street or corner, we have what we call a purok leader."</i>	
	Social support	neighbors help	Mutual aid and collective action within the community.	<i>"Community response varies; some neighbors help, while others do not act."</i>	Community support enhances preparedness, though variability in participation affects overall response effectiveness.
		big help		<i>"It's a big help because at least we get a warning ahead of time that there's a typhoon, or something is happening."</i>	
		community preparedness		<i>"Rainfall heavily influences community preparedness and action."</i>	
	Information channels	needed information	Access to timely disaster-related information.	<i>"It's easier for the needed information to reach us."</i>	Timely information improves awareness and enables households to respond more effectively.
	Resources / Items	big thing	Essential tools, assets, and materials used in	<i>"Gadgets and internet are a big thing because they</i>	Access to critical resources, particularly

Theme	Sub-theme	Code	Operational Definition of the Code	Illustrative Quote	Analytical Interpretation
			preparedness and communication	<i>are our main source of information.</i>	digital tools, strengthens information access and preparedness, while physical limitations may hinder readiness activities.
		fixing things		<i>“Also, with senior citizens, it’s sometimes hard to assist them when fixing things while preparing for floods.”</i>	
		important things		<i>“One of the most important things in our life are gadgets like cellphones and computers with internet.”</i>	

The emerging theme 3 **household and community drivers of disaster preparedness communication** highlights how disaster preparedness communication is shaped by the conditions within households and the support systems within the community. The findings indicate that family structure, economic capacity, and household priorities significantly influence how preparedness messages are interpreted and acted upon. Households often view preparedness as a collective responsibility, where family members coordinate actions to ensure safety. However, financial limitations and competing daily needs may restrict the ability of families to fully implement preparedness measures. At the same time, disaster exposure and past experiences with hazards such as flooding and typhoons strengthen households’ risk perception and motivate them to respond more quickly to warnings and preparedness messages. Community structures further reinforce this process, as local leaders, neighbors, and social networks facilitate the sharing and validation of disaster-related information. Access to communication resources such as mobile phones, internet connectivity, and other information channels also supports the timely dissemination of preparedness messages. Overall, the theme demonstrates that disaster preparedness

communication is influenced by the socio-economic conditions of households, the experiences of residents with disasters, and the strength of community-based information networks that collectively shape preparedness awareness and actions.

The first subtheme, *family structure*, reflects how the number and composition of family members influence preparedness practices and decision-making during disasters.

The code *family member* underscores the need for intra-household communication and coordination, as Participant 6 noted, “*You get used to it, that you need to practice alertness, preparedness, and communication for every family member.*” This statement demonstrates that preparedness is not an individual task but a collective responsibility requiring shared vigilance and interaction. The code *small family* highlights another dimension of household structure. As Participant 12 shared, “*First, we’re a small family,*” indicating that having fewer members can simplify coordination and resource allocation during crises. Conversely, the code *whole family* captures the integrative perspective that preparedness is aimed at collective safety. Participant 14 expressed, “*Maybe just whatever we should do so the whole family will be safe.*” This reflects the idea that disaster readiness extends beyond protecting individuals to ensuring that the household acts cohesively. These responses suggest that demographic composition plays a central role in shaping preparedness, as family size, interdependence, and the prioritization of collective well-being affect how households internalize and act on disaster communication.

The second subtheme, *income status*, reveals how financial capacity strongly determines household preparedness. The code *family income* demonstrates the strain of limited resources, with Participant 4 acknowledging, “*But if you can’t provide those because you don’t have extra money since the family income is just enough for daily expenses then that’s a problem.*” This highlights how disaster readiness requires

material resources such as go-bags, emergency supplies, and savings, which are often unattainable for low-income households. Similarly, the code *low income* emphasizes the barriers that financial limitations impose. Participant 4 reiterated, “*If a family has low income, disaster preparedness is also affected because of course, you need a go-bag, groceries, and supplies.*” Here, preparedness is framed as contingent on economic security, revealing that households with limited disposable income are disproportionately vulnerable. The code *maybe income* further underscores the perceived importance of financial standing in preparedness, as Participant 5 and Participant 6 both remarked, “*Maybe income.*” These reflections reveal a consensus among respondents that income is a key determinant of disaster readiness, shaping whether preparedness strategies remain conceptual or are translated into concrete actions. The implication is that socio-economic inequality creates uneven levels of vulnerability, suggesting the need for targeted support and subsidies for financially constrained households to achieve equitable preparedness outcomes.

The third subtheme, *needs and priorities*, captures how everyday survival requirements shape the allocation of household resources and, in turn, influence preparedness behaviors. The code *daily needs* illustrates this tension. Participant 10 explained, “*But when it comes to income, none, because my monthly income is enough to support our daily needs.*” This account reflects how income, even if adequate for daily sustenance, leaves little to no capacity for investing in preparedness measures such as emergency kits, extra supplies, or evacuation resources. The prioritization of immediate needs over disaster preparedness reflects a rational survival strategy but creates long-term vulnerabilities in the face of hazards. This subtheme underscores that preparedness must be understood not as a universal

behavior but as a conditional one, heavily influenced by whether households can balance present necessities with future contingencies.

The subtheme *disaster exposure* captures how households understand and respond to immediate threats through direct encounters with disasters and information sources. The code *disaster strikes* reflects the compounding effect of disasters on household vulnerability when combined with economic limitations. Participant 2 shared, “*Since my parent works as a driver, it makes things more difficult because we cannot save money for our safety and needs when a disaster strikes.*” This statement underscores that disaster exposure intersects with financial insecurity, magnifying household vulnerability. The code *disaster warnings* demonstrates the importance of technology in shaping awareness. Participant 13 stated, “*Gadgets and mobile phones allow more updated access to disaster warnings compared to TV, which is less noticed.*” This indicates that mobile technologies have become central in disaster communication, offering timely alerts and enhancing household responsiveness. Similarly, the code *incoming disaster information* highlights how rapid access to updates influences preparedness, as Participant 11 remarked, “*We are able to quickly know about the incoming disaster information.*” These accounts illustrate how immediate access to disaster-related updates fosters risk perception, enabling households to make quicker decisions. However, exposure also involves physical challenges, as expressed in the codes *rising water* and *water level*. Participant 9 emphasized, “*But still, because of the rising water in the creek, it’s still difficult for them to access since our path is still really hard to enter, especially since we live deep inside.*” He further added, “*Like when they give information about the water level rising, or during a typhoon, or fires.*” These reflections highlight how environmental constraints, such as difficult terrain or proximity to waterways, shape disaster perception and readiness by intensifying the

sense of urgency while limiting accessibility. Collectively, these findings show that disaster exposure is not solely defined by information availability but is also conditioned by socio-economic realities and environmental circumstances that determine how warnings are received and acted upon.

The subtheme *past experiences* illustrates how previous encounters with disasters contribute to enhanced preparedness and resilience. The code *experienced floodwaters* reflects how direct exposure to floods created awareness and informed preparedness strategies. Participant 9 explained, “*Now, since we already experienced floodwaters reaching up to our legs we already know better what to do because of the information the barangay gives us, that we need to act immediately and evacuate from our place.*” This statement shows that lived experience, combined with barangay guidance, reinforced proactive evacuation behaviors, highlighting the interaction between individual memory and institutional messaging. Similarly, the code *past disaster experiences* emphasizes cumulative learning from repeated exposures. Participant 13 noted, “*Past disaster experiences have made the household more knowledgeable, so they already know what to do when a calamity comes.*” This indicates that repeated encounters with hazards foster a form of disaster literacy, where families internalize coping strategies and improve preparedness actions. These reflections suggest that experience itself becomes a vital teacher, reinforcing adaptive behaviors and building resilience over time.

The subtheme *local leadership* captures the significant role of barangay officials and grassroots leaders in mobilizing communities during disasters. The code *group leader* illustrates how hierarchical structures guide immediate responses. As Participant 12 explained, “*The barangay officials are there, reporting to the group leader which parts got flooded, then people near those areas get relocated.*” This statement emphasizes

the value of structured communication and decision-making processes in facilitating relocation and safety measures. Similarly, the code *purok leader* highlights decentralized leadership at the neighborhood level. Participant 10 stated, *“In every street or corner, we have what we call a purok leader.”* This reflects the importance of localized leadership structures that ensure information dissemination and preparedness measures reach households directly. These accounts show that formal and informal leaders act as conduits of information and organizers of community action, reinforcing preparedness by providing both authority and proximity to the people they serve.

The subtheme *social support* reflects the varying ways in which communities contribute to household preparedness. The code *neighbors help* captures this diversity in response, as Participant 13 noted, *“Community response varies; some neighbors help, while others do not act.”* This suggests that while some households benefit from collective action, others may be left unsupported, highlighting the unevenness of social solidarity. The code *big help* emphasizes the importance of early warnings, with Participant 12 affirming, *“It’s a big help because at least we get a warning ahead of time that there’s a typhoon, or something is happening.”* Warnings provided within the community enable households to prepare before the disaster escalates, reflecting how peer-to-peer communication enhances safety. Finally, the code *community preparedness* highlights collective awareness, with Participant 13 stating, *“Rainfall heavily influences community preparedness and action.”* This shows that shared environmental cues, such as heavy rainfall, trigger community-level responses that shape individual actions. Taken together, these reflections illustrate how social capital, trust, and shared vigilance contribute to resilience, although disparities in neighborly support reveal areas where collective preparedness could be strengthened.

The subtheme *information channels* focuses on the mechanisms through which preparedness messages are communicated. The code *needed information* emphasizes accessibility and clarity. Participant 6 explained, “*It’s easier for the needed information to reach us.*” This suggests that households perceive improvements in communication systems that ensure timely and relevant updates. Effective information channels create a sense of security and help households anticipate appropriate actions. The implication is that when messages are accurate, clear, and efficiently delivered, they foster trust and compliance, thereby improving overall preparedness.

The subtheme *resources/items* underscores the significance of material resources in supporting disaster readiness. The code *big thing* emphasizes the role of technology, with Participant 4 stating, “*Gadgets and internet are a big thing because they are our main source of information.*” Access to digital tools connects households to broader networks of knowledge. Similarly, the code *fixing things* reveals challenges in supporting vulnerable groups. As Participant 5 shared, “*Also, with senior citizens, it’s sometimes hard to assist them when fixing things while preparing for floods.*” This highlights how resource management during disasters is about physical capability and intergenerational support. Finally, the code *important things* reflects the centrality of gadgets in preparedness, as Participant 10 emphasized, “*One of the most important things in our life are gadgets like cellphones and computers with internet.*” These accounts demonstrate that resources especially communication technologies function as lifelines during disasters, shaping preparedness and responsiveness across households.

The emerging theme household and community drivers of disaster preparedness communication imply that disaster preparedness communication must be designed with a strong consideration of household realities and community dynamics.

Communication strategies should recognize that families interpret and act upon preparedness messages within the constraints of their economic capacity, household responsibilities, and daily survival needs. Therefore, disaster risk reduction programs should integrate social protection measures, targeted assistance, and accessible preparedness resources to support low-income households that may struggle to secure emergency supplies. Strengthening community-based communication networks such as barangay leaders, purok leaders, and neighborhood support systems can further enhance the dissemination and validation of disaster information. In addition, investing in reliable information channels and accessible communication technologies will help ensure that households receive timely warnings and guidance. Policies and programs that combine inclusive communication systems, community leadership engagement, and support for vulnerable households can improve disaster awareness, reinforce preparedness behaviors, and strengthen long-term community resilience.

Wu et al. (2025) employed path analysis to examine how resilience dimensions affect preparedness and avoidance behaviors at the household level. Findings revealed that living with family members slightly increases preparedness because shared living arrangements allow for resource pooling, communication, and cooperative decision-making. However, the analysis also demonstrated that lower household income significantly increases the likelihood of denial and avoidance behaviors. Families with constrained resources often deprioritize preparedness, either by ignoring risk communication or by relying on short-term coping strategies that do not contribute to long-term readiness. The findings directly reinforce the family structure subtheme, showing that the presence of family members can strengthen coordination and encourage joint preparedness efforts, even if marginally. Moreover, Rao et al. (2023)

investigated how social and structural vulnerabilities affect disaster preparedness outcomes. Results indicated that households with fewer financial resources and weaker integration into social networks consistently demonstrated lower levels of preparedness. Vulnerability was linked to systemic inequities, such as unequal access to early warning systems, disaster information, and relief services. The results provide strong support for the income status and needs and priorities subthemes by illustrating how structural disadvantages limit the ability of low-income households to act on preparedness messages. Financial insecurity prevents families from acquiring necessary supplies, while marginalization reduces access to official channels of information and assistance.

This survey-based study by Bollettino et al. (2020) explored how Filipino households perceive climate change and how this perception influences disaster preparedness behaviors. Results demonstrated that households with higher levels of wealth were more likely to invest in preparedness measures such as emergency kits, reinforced housing, and savings. Additionally, households with stronger risk perception showed greater willingness to adopt preparedness behaviors. Past disaster experiences also shaped preparedness, with families previously affected by typhoons, floods, or earthquakes demonstrating higher readiness levels than those without such experiences. These findings highlight the strong interplay between income status and risk prioritization in shaping preparedness actions. Wealthier households are more likely to allocate resources to readiness activities, reinforcing the needs and priorities subtheme. Conversely, low-income households prioritize daily survival needs, leaving limited capacity to prepare for future disasters, even if they recognize the risks. The study further emphasizes that preparedness is shaped by subjective risk prioritization:

households that perceive climate hazards as pressing are more inclined to act, while others may disregard preparedness if immediate survival pressures dominate.

Dobre et al. (2025) applied the Theory of Planned Behavior (TPB) framework, integrating risk perception as an additional predictor of preparedness behaviors in a highly earthquake-prone environment. Findings revealed that individuals with stronger perceptions of seismic risk demonstrated higher behavioral intentions to prepare and greater likelihood of adopting protective measures such as securing homes, preparing evacuation plans, or purchasing emergency kits. The study supports both the disaster exposure and past experiences subthemes. In hazard-prone environments, repeated exposure and collective memory heighten perception of risk, which serves as a motivational force for preparedness. At the same time, the study reveals that the pathway from perception to action is not universal.

Robinson and Botzen (2025) examined behavioral patterns following disaster events and identified a spike in protective behaviors, such as purchasing insurance, securing homes, or stocking supplies, immediately after experiencing a hazard. However, over time, these proactive behaviors declined as individuals perceived themselves to be relatively safe or believed that preparedness measures already in place were sufficient. The decline demonstrates the psychological phenomenon of risk attenuation, where urgency fades without constant reinforcement of risk perception. This study connects strongly with both immediate exposure and cumulative experience subthemes. Immediate disaster experience serves as a trigger for proactive actions, as observed in households that respond quickly after floods or typhoons. Yet, the fading of preparedness behaviors over time reflects the limits of experiential learning when not reinforced by continuous communication and institutional support.

Also, Oktari et al. (2025) assessed the effectiveness of education-based interventions in disaster-prone coastal areas. Results demonstrated that households with prior disaster experience exhibited significantly higher preparedness levels when such experiences were coupled with targeted educational programs. Education reinforced the lessons of past exposure by providing structured knowledge, practical training, and guidance on evacuation, resource allocation, and risk awareness. Communities without these educational reinforcements, even when exposed to disasters, were less likely to translate experience into consistent preparedness. The findings align with both past experiences and disaster exposure subthemes. Past encounters with disasters such as flooding or typhoons provide households with firsthand lessons on vulnerability and response, but these lessons are strengthened and institutionalized when paired with education. This resonates with participant accounts in the study, where experiences of floodwaters improved household readiness when guided by barangay instructions.

The qualitative analysis by Alejandria et al. (2024) of how barangay-based leaders and community organizations became key intermediaries for aid delivery and mobilization, especially under mobility constraints. Community-based leaders leveraged bayanihan, malasakit, and pagkakaisa values to sustain coordination, information sharing, and service continuity. This exemplifies the local leadership subtheme, demonstrating how grassroots leaders facilitate coordination, resource access, and messaging flow during crises. Similarly, the quantitative study by Khairil (2025) illustrates how technology and Information and Communication Technology (ICT) strengthen awareness, coordination, and rapid response during emergencies. Communities with faster and clearer information access through ICT exhibited higher preparedness. This directly supports the information channels and resources/items

subthemes. Highlights the role of gadgets, digital literacy, and ICT-enabled communication in enhancing real-time disaster awareness and action.

Moreover, Mateo (2024) stated that the survey of 4,608 respondents across the Philippines uncovered strong performance in information preparedness (awareness of disaster warnings), but low levels of social support, such as group membership and familiarity with local DRRM officials. This contextualizes both the information channels and social support subthemes. Underscores the gap between awareness of disaster warnings and active social linkage or leadership engagement in preparedness. Also, Ramachandran (2025) stated that the opinion piece and UNDP initiative describing SHIELD, a framework for promoting digital readiness among barangays and LGUs. It emphasizes mapping digital tools, training local actors, deploying early warning apps, and building trust in technology use. This integrates local leadership, information channels, and resources/items subthemes. Shows how gadgets and digital mechanisms can be strategically institutionalized if matched with trust-building and capacity-building for local leaders.

This qualitative and integrative review by Cuadra and Cotoron (2025) emphasizes the necessity of strengthening local capacity (through media literacy, community training, and trusted communication networks) to counteract the spread of misinformation during disasters. Strategies include conducting simulated drills, partnering with community radio and trusted local leaders, and building awareness of information verification methods. This directly supports the information subtheme, particularly regarding accuracy and trustworthiness. Highlights how capacity-building ecosystems ensure households receive correct information and resilience against misinformation-induced panic. This study by Jayawardene et al. (2021) analyzes how the quality of data and information (timeliness, reliability, completeness) influences critical decision-

making within disaster response. Poor data quality leads to delayed or erroneous decisions. The study underscores the need for robust information systems that support naturalistic, real-world responses during emergencies. This underlines both accessibility and accuracy, such as preparing households depends on its precision and reliability. Faulty data can undermine adaptive preparedness measures.

The study of Wolkin et al. (2020) analyzes the CASPER rapid assessments, which finds that while television remains a dominant information source, social media and word-of-mouth (WoM) can reach otherwise overlooked segments. Hybrid communication models that blend traditional and digital methods ensure broader audience coverage and reinforce message trust through familiar sources. This demonstrates that accessibility is enhanced via multiple channels, and that pairing formal media with trusted peer networks bolsters acceptance of information, thus enhancing preparedness. The systematic review by Muniz-Rodriguez et al. (2020) highlights social media's role in disseminating emergency warnings and identifying needs during disasters. Platforms are used by public health agencies to broadcast alerts and map needs, though their efficacy depends on usage patterns and content clarity. This supports the information subtheme by validating social media as a fast, accessible channel. Emphasizes how timeliness and comprehensiveness of social data can inform effective household response actions.

#### **Emerging Theme 4: Information Accessibility and Accuracy Information and Media-Driven Disaster Preparedness Communication**

Table 5 presents the coding process used to analyze how disaster preparedness messages are communicated to households and how the accessibility and reliability of information influence preparedness actions. Through open coding, participant statements identified concepts such as accessing information, correct information,

giving information, and disaster preparedness information. These were grouped under the axial categories Information and Disaster. The findings indicate that households are more likely to prepare when disaster-related information is easily accessible and accurate. Participants emphasized that reliable information allows them to anticipate hazards and take necessary precautions.

Codes such as social media and media posts were grouped under the axial category Media, demonstrating that households increasingly rely on digital communication channels for disaster-related updates. Participants frequently cited social media platforms, particularly Facebook, as their primary source of information because of their speed, accessibility, and ability to provide real-time updates. Some respondents also noted that combining social media with traditional communication tools such as megaphones can further strengthen message dissemination within the community.

*Table 5. The coding process in terms of disaster preparedness messages are communicated to households and how these messages influence preparedness actions*

Theme	Sub-theme	Code	Operational Definition of the Code	Illustrative Quote	Analytical Interpretation
Information and media-driven disaster preparedness communication	Information	accessing information	The availability, accuracy, and delivery of disaster-related information to households.	<i>“So now there’s no problem in accessing information.”</i>	Accessible and accurate information improves preparedness, with social media emerging as a primary channel for timely updates and reminders.
		correct information		<i>“When we receive correct information, we know we need to prepare.”</i>	
		giving information		<i>“But I notice that most of the time they use social media now for giving information and reminders.”</i>	
	Disaster	disaster preparedness information	The content and frequency of disaster-	<i>“Disaster preparedness information affects the</i>	Regular exposure to disasters reinforces the

Theme	Sub-theme	Code	Operational Definition of the Code	Illustrative Quote	Analytical Interpretation
			related information and recurring hazard exposure.	<i>household by causing shock and occasional panic.</i> <i>"The delivery of disaster preparedness information is crucial; if not informed, the household cannot prepare."</i>	need for continuous preparedness, while timely and clear information directly influences household readiness and response.
		year disasters		<i>"In our area, every year disasters come, so alertness and preparation should always be done."</i>	
	Media	social media	Digital platforms used to disseminate disaster information and updates.	<i>"Actually, really through social media."</i> <i>"Not from the barangay, only social media. Facebook, social media."</i> <i>"So for us, social media is better because the information is quicker to access."</i> <i>"Those ways of delivering news help every family, especially those who don't have gadgets and can't go on social media."</i> <i>"Maybe both social media and megaphones."</i> <i>"Nowadays, through the internet or social media."</i> <i>"Then when we saw on social media, on the barangay's</i>	Social media is the dominant and fastest source of information, enhancing awareness and responsiveness, though combining it with traditional channels ensures broader reach and inclusivity.

Theme	Sub-theme	Code	Operational Definition of the Code	Illustrative Quote	Analytical Interpretation
				<i>post, that something good will be done in our area in Doña Nicasia we were really happy."</i>	
		media posts		<i>"Social media posts from the barangay are really helpful."</i>	

The emerging theme 4 **information and media-driven disaster preparedness communication** highlights the critical role of accessible, accurate, and timely information delivered through media platforms in strengthening household preparedness in Barangay Commonwealth. The findings indicate that households rely heavily on reliable information sources to understand potential hazards and determine appropriate preparedness actions. Participants emphasized that receiving correct and timely information allows families to prepare in advance, while the absence of information prevents them from taking necessary precautions. Social media and internet-based platforms have become primary channels for disseminating disaster-related updates, as they provide faster and more convenient access to warnings and preparedness reminders compared to traditional media. At the same time, barangay social media posts and online updates help reinforce trust and community awareness by providing localized and relevant information. These communication channels enable households to stay informed about recurring hazards and upcoming disasters, strengthening risk awareness and encouraging proactive preparedness behaviors. Overall, the theme demonstrates that an effective disaster communication framework must prioritize both the accuracy of information and the strategic use of media

platforms to ensure that households receive timely updates and are better equipped to respond to potential disasters.

The subtheme *information* captures the household experience of accessing and interpreting disaster communication. The code *accessing information* highlights the ease of obtaining disaster updates in the current context. Participant 9 noted, “*So now there’s no problem in accessing information.*” This reflects the widespread availability of communication channels particularly through digital platforms that ensure households are no longer left unaware during emergencies. The code *correct information* underscores the importance of accuracy, as Participant 3 stated, “*When we receive correct information, we know we need to prepare.*” This demonstrates that information validity directly shapes household decision-making, with accurate communication serving as a trigger for preparedness behaviors such as evacuation, stockpiling supplies, or strengthening homes. Conversely, misinformation could lead to either complacency or inappropriate responses, undermining safety. The code *giving information* emphasizes the evolving role of social media in disaster communication. Participant 6 explained, “*But I notice that most of the time they use social media now for giving information and reminders.*” This reflects how households increasingly rely on digital networks for real-time alerts and community-based updates, which aligns with contemporary trends in disaster communication. The implication is clear: households are empowered to take preventive measures when information is both accessible and accurate, but this empowerment is mediated by the channels through which the information is delivered.

The subtheme *disaster* highlights the emotional and behavioral effects of disaster preparedness information. The code *disaster preparedness information* reveals the dual impact of information delivery, as Participant 13 observed, “*Disaster*

*preparedness information affects the household by causing shock and occasional panic.*” While such information may heighten anxiety, the same participant further emphasized, *“The delivery of disaster preparedness information is crucial; if not informed, the household cannot prepare.”* These accounts demonstrate the delicate balance between the emotional toll of disaster warnings and the necessity of timely communication to enable adequate preparation. The code *year disasters* emphasizes the recurring nature of crises and the importance of habitual preparedness. Participant 6 shared, *“In our area, every year disasters come, so alertness and preparation should always be done.”* This statement underscores how repeated disaster exposure fosters a culture of readiness, where information serves as both a reminder and reinforcement of vigilance. The implication here is that preparedness outcomes are not determined solely by the presence of information, but by how it is communicated whether it fosters panic or cultivates proactive and sustained household preparedness practices.

The subtheme, *media*, captures how households utilize social media and other platforms to receive, process, and act on disaster-related information. The code *social media* reveals that households predominantly rely on digital platforms, particularly Facebook, as their primary source of preparedness information. Participant 12 repeatedly emphasized this reliance, stating, *“Actually, really through social media,”* and clarifying further, *“Not from the barangay, only social media. Facebook, social media.”* This reflects the shift away from traditional or face-to-face dissemination toward online platforms, where speed and reach allow for broader and more immediate access to updates. Similarly, Participant 4 highlighted the accessibility of digital media, explaining, *“So for us, social media is better because the information is quicker to access,”* while also noting inclusivity in stating, *“Those ways of delivering news help every family, especially those who don’t have gadgets and can’t go on*

*social media.*” These perspectives suggest that social media is now deeply embedded in household disaster preparedness, serving as both a timely and community-inclusive tool. However, they also underscore the need to balance digital reliance with other communication methods to ensure equitable access for vulnerable populations without consistent online connectivity.

At the same time, participants acknowledged the integration of multiple sources, with Participant 6 noting, *“Maybe both social media and megaphones,”* suggesting that layering communication strategies increases message penetration across diverse households. The perception of social media as an authoritative and efficient platform for preparedness was reinforced by Participant 5’s statement, *“Nowadays, through the internet or social media,”* which reflects the normalization of digital reliance. Yet, Participant 9’s remark, *“Then when we saw on social media, on the barangay’s post, that something good will be done in our area in Doña Nicasia we were really happy,”* illustrates how social media posts are not merely transactional but also evoke positive community engagement, reinforcing trust in official channels.

The code *media posts* highlights the role of localized updates, with Participant 7 affirming, *“Social media posts from the barangay are really helpful.”* This emphasizes the value of official and community-level postings, which provide households with trusted, context-specific information. Unlike generalized media broadcasts, localized media posts enhance relevance and applicability, directly linking communication strategies to household-level preparedness behavior.

The emerging theme information and media-driven disaster preparedness communication imply that disaster communication frameworks should prioritize the delivery of accurate, timely, and accessible information through both digital and traditional media channels to strengthen household preparedness. As households

increasingly rely on social media and internet-based platforms for disaster updates, local governments and disaster management agencies should enhance their digital communication strategies by providing verified, localized, and easily understandable information through official online platforms. At the same time, communication systems must remain inclusive by integrating traditional channels such as barangay announcements, megaphones, and community networks to reach households with limited internet access. Ensuring the credibility and clarity of information is also critical, as accurate messaging encourages proactive preparedness behaviors while minimizing panic and misinformation. By combining reliable information dissemination with diverse communication platforms, disaster communication systems can improve risk awareness, support timely decision-making, and promote sustained preparedness practices among households in Barangay Commonwealth.

Research conducted by Septian et al. (2024) in a coastal community (Masawah Village, Indonesia) used quantitative methods to assess the combined impact of disaster education and social media usage on preparedness. Results showed that both factors significantly influenced individuals' intention to prepare and actual behaviors. Importantly, intention mediated the relationship, such as social media and education enhanced intention, which in turn drove preparedness actions. This directly supports the media subtheme. Demonstrates that social media functions as a catalyst, when coupled with educational interventions, to convert awareness into concrete preparedness actions. According to the systematic review by Inoferio et al. (2025) of social media use in Philippine disaster risk management, revealing its prevalence in response and recovery stages, especially during typhoons and earthquakes. Best practices include real-time crisis monitoring, standardized emergency messaging, active two-way engagement with the public, and AI-driven misinformation detection.

However, literature remains sparse in preparedness and mitigation phases. This reinforces the media subtheme by highlighting social media's role as a trusted, interactive, and community-inclusive medium. Emphasizes how media posts, particularly local ones, strengthen household vigilance and reinforce preparedness when effectively managed.

He and Hu (2025) developed an AI-driven framework using natural language processing (NLP) and geospatial visualization to analyze user-generated social media content during disasters. The model achieved strong classification accuracy (F1 score of 81.4%) and enabled mapping of emotional trends and crisis hotspots enhancing situational awareness and strategic resource allocation. While more focused on emergency response, this study confirms the broader role of media as a powerful channel that amplifies disaster awareness, reinforces collective vigilance, and can significantly influence household responses through data-informed insights. According to the study by Ramakrishnan et al. (2022), a survey-based study investigating social media usage for disaster management among underserved communities. Findings indicated low usage rates, with usage intention strongly linked to personal effort and inversely related to perceived task difficulty. This highlights digital inclusivity challenges. While social media is a powerful catalyst for preparedness, effectiveness depends on households' capacity to access and use these platforms. Underserved groups may require additional support to benefit from media-driven preparedness cues.

### **Emerging Theme 5: Inclusive and Community-Anchored Disaster Communication Systems**

Table 6 presents the coding process used to analyze how disaster preparedness messages are communicated to households and how these messages influence

preparedness actions through various communication approaches. The codes such as cellphone communication, case someone posts, and house-to-house visits were grouped into axial categories Communication, Posts, and Officer visits. The findings indicate that households rely on a combination of communication channels to receive disaster-related information. Mobile phones are considered one of the most effective tools for delivering immediate updates, while social media platforms and barangay pages allow for rapid information sharing among residents. At the same time, participants emphasized the importance of face-to-face communication through house-to-house visits by barangay safety officers, particularly for households that may not have consistent access to digital technologies.

Moreover, the table highlights the importance of leadership and inclusivity in disaster communication. Codes such as barangay leaders, local leaders, and case disaster were grouped under the axial category Community Leaders, which emphasizes the role of trusted local authorities in guiding preparedness actions. Participants indicated that reminders and support from barangay leaders reinforce community confidence and encourage households to follow preparedness measures. In addition, codes such as evacuation centers, almost everyone, sure everyone, incoming disasters, and upcoming disasters were categorized under Evacuee’s centers, Everyone, and Case disaster.

*Table 6. The coding process in terms of disaster preparedness messages are communicated to households and how these messages influence preparedness actions*

<b>Theme</b>	<b>Sub-theme</b>	<b>Code</b>	<b>Operational Definition of the Code</b>	<b>Illustrative Quote</b>	<b>Analytical Interpretation</b>
Inclusive and community-anchored disaster communication systems	Communication	Cellphone communication	The use of mobile phones as a primary tool for receiving and sharing	<i>“So, cellphone communication is the best.”</i>	Mobile communication is perceived as the most effective and accessible channel for

Theme	Sub-theme	Code	Operational Definition of the Code	Illustrative Quote	Analytical Interpretation
			disaster information.		timely disaster updates.
	Posts	case someone posts	Online posting within shared digital platforms for rapid information dissemination	<i>"Maybe creating a barangay page where all residents are joined, so in case someone posts, everyone gets notified right away."</i>	Centralized online platforms enhance immediate information sharing and ensure wider reach among residents.
	Officer visits	House-to-house visits	Direct, interpersonal communication conducted by local officials or volunteers.	<i>"For me, the best way is if our barangay safety officers do house-to-house visits." "First is volunteers, then budget, then transportation for house-to-house visits."</i>	Face-to-face communication ensures inclusivity, especially for households with limited access to digital platforms, but requires sufficient resources.
	Community Leaders	Barangay leaders	Local authorities responsible for guiding, informing, and supporting communities during disasters.	<i>"Maybe starting with the barangay leaders themselves."</i>	Leadership is significant in reinforcing preparedness through trusted guidance, reminders, and provision of essential resources.
Local leaders		<i>"Following the reminders from our local leaders."</i>			
Case disaster		<i>"They should also include kits, like first aid kits, that will be needed in case disaster comes."</i>			
	Evacuee's centers	Evacuation centers	Designated safe locations for relocation during disasters.	<i>"Because we still have evacuation centers that are hard to access especially if our whole area is flooded, it's really difficult to reach." "I hope we can have better,</i>	Limited accessibility of evacuation centers reduces their effectiveness that shows the need for more accessible and strategically located facilities.

Theme	Sub-theme	Code	Operational Definition of the Code	Illustrative Quote	Analytical Interpretation
	Everyone	almost everyone	The extent of population coverage in communication and resource access.	<i>closer evacuation centers.</i>	Widespread access to gadgets and media supports broad communication reach, but ensuring inclusivity remains essential.
		sure everyone		<i>"Because almost everyone has a gadget." "Almost everyone now has social media." "Yes, for example, making sure everyone has a budget or access to a TV."</i>	
	Case disaster	Incoming disasters	Advance warnings and information about impending hazards.	<i>"For those without gadgets, the government or barangay could provide affordable phones, so every family can at least be aware of incoming disasters."</i>	Early and inclusive dissemination of warnings improves preparedness, particularly when supported by both digital tools and barangay-led announcements.
		upcoming disasters		<i>"Barangay staff could also make announcements about upcoming disasters and important updates."</i>	

The emerging theme 5 **inclusive and community-anchored disaster communication systems** highlights the importance of combining diverse communication channels, trusted local leadership, and inclusive community structures to ensure that disaster preparedness messages effectively reach households in Barangay Commonwealth. The findings indicate that residents rely on multiple communication methods such as cellphone communication, social media posts, barangay pages, and house-to-house visits conducted by barangay safety officers to

receive timely disaster-related information. Community leaders, including barangay officials and local leaders, play a critical role in reinforcing preparedness messages and guiding households in responding to potential disasters. The theme also emphasizes the need for inclusive preparedness systems that ensure all residents receive disaster information, including those without access to digital technologies. Participants highlighted the importance of accessible evacuation centers, community announcements, and the provision of affordable communication tools to ensure that every household is aware of incoming and upcoming disasters. Overall, the theme demonstrates that disaster communication frameworks must be community-centered, integrating multiple communication platforms, trusted leadership, and inclusive preparedness structures to strengthen household awareness, participation, and resilience.

The subtheme *communication* emphasizes the central role of mobile technology in disaster preparedness. Participant 2 affirmed, “*So, cellphone communication is the best,*” highlighting the reliability and immediacy of this medium. This code reflects how mobile phones are perceived as the most practical and efficient tool for relaying urgent information because of their personal accessibility and widespread use. The implication is that barangay disaster communication systems should prioritize mobile-based channels, such as SMS alerts, hotlines, or messaging applications, to ensure households receive timely warnings. However, it also points to the need to consider households with limited access to mobile technology, underscoring that inclusivity requires parallel communication systems.

The subtheme *posts* captures the importance of social media and online platforms as collective information spaces. Participant 5 recommended, “*Maybe creating a barangay page where all residents are joined, so in case someone posts, everyone*

*gets notified right away.*” This code demonstrates the participatory potential of digital platforms where both barangay officials and residents can share and verify updates. The integration of social media into local disaster communication broadens the reach of information, particularly to younger, tech-savvy demographics, while allowing rapid dissemination of updates. The implication is that barangay-level communication should invest in structured online platforms that foster accountability, avoid misinformation, and encourage community engagement. In this way, social media becomes a mechanism for collaborative preparedness.

The subtheme *officer visits* highlights the continuing relevance of face-to-face communication in disaster contexts. Participant 10 expressed, *“For me, the best way is if our barangay safety officers do house-to-house visits,”* and further explained, *“First is volunteers, then budget, then transportation for house-to-house visits.”* These excerpts underscore that while digital channels are valued for efficiency, direct interpersonal communication remains vital for inclusivity, especially for households without consistent access to mobile devices or the internet. House-to-house visits allow safety officers to ensure message comprehension, provide clarifications, and extend personalized support. The implication is that resource allocation for disaster communication should balance investments in digital infrastructure with provisions for human-led, on-the-ground efforts. This dual approach ensures that vulnerable sectors such as the elderly, persons with disabilities, and low-income families are not excluded from disaster preparedness systems.

The subtheme *evacuee’s centers* underscores the importance of physical accessibility to designated evacuation sites. Participant 9 expressed this challenge by stating, *“Because we still have evacuation centers that are hard to access especially if our whole area is flooded, it’s really difficult to reach.”* This account reveals a critical gap

in preparedness: even when evacuation centers exist, their location and accessibility can hinder timely and safe evacuation. The same participant further emphasized the need for improvement, *“I hope we can have better, closer evacuation centers.”* This highlights the intersection of disaster communication and infrastructure, where messages to evacuate are only meaningful if the facilities are within safe reach. The implication is that local preparedness frameworks should prioritize the establishment of accessible evacuation sites, ideally located closer to vulnerable households, to reduce risks during severe flooding or other hazards. Without accessible centers, preparedness communication risks becoming ineffective, as the call to evacuate cannot be translated into action.

The subtheme *everyone* reflects concerns about inclusivity in communication systems, particularly in ensuring that all members of the community have access to disaster information. Participant 2 noted, *“Because almost everyone has a gadget”* and *“Almost everyone now has social media.”* These statements suggest that digital platforms have become primary channels for preparedness communication, but they also raise questions about those without access to such technologies. In parallel, Participant 15 added, *“Yes, for example, making sure everyone has a budget or access to a TV.”* This indicates that inclusivity is not guaranteed, as economic constraints can prevent households from accessing the very tools needed to stay informed. The findings imply that while digital platforms are increasingly effective for broad dissemination, there remains a need to adopt complementary strategies to ensure that marginalized groups such as those without gadgets, internet, or televisions are not left behind. This suggests that equitable disaster preparedness requires a blend of modern digital strategies with traditional and accessible channels to ensure full community coverage.

The subtheme *case disasters* highlights the importance of providing timely, direct, and inclusive communication about upcoming hazards. Participant 2 proposed, *“For those without gadgets, the government or barangay could provide affordable phones, so every family can at least be aware of incoming disasters.”* This statement underscores the role of the government and barangay in bridging communication gaps by providing resources that enhance inclusivity. Complementing this, Participant 1 stressed, *“Barangay staff could also make announcements about upcoming disasters and important updates.”* These accounts suggest that effective preparedness communication requires redundancy ensuring information is transmitted across multiple platforms and formats so that even households with limited access to technology remain informed.

The emerging theme inclusive and community-anchored disaster communication systems imply that disaster communication frameworks should adopt a multi-channel, inclusive, and community-centered approach to ensure that preparedness messages reach all households effectively. Local governments and barangay authorities should integrate mobile-based communication, social media platforms, community announcements, and house-to-house visits to create a layered communication system capable of reaching diverse population groups. Strengthening the role of barangay leaders and community volunteers is also essential, as trusted local figures enhance the credibility of disaster information and encourage household compliance with preparedness measures. At the same time, preparedness strategies must address structural barriers such as limited access to communication technologies and inaccessible evacuation centers. Investing in accessible evacuation facilities, affordable communication tools, and community-based outreach programs will help ensure that vulnerable sectors including low-income households, the elderly, and

individuals without digital access are not excluded from disaster preparedness systems. Through combining inclusive communication strategies, trusted local leadership, and supportive infrastructure, disaster communication frameworks can improve household awareness, promote timely preparedness actions, and strengthen overall community resilience.

According to the study of Ferrer et al. (2021), surveys conducted in Cabanatuan City reveal that SMS/text messaging (80%), social media (64%), and websites/pages (77%) are utilized and available communication channels during disasters. Interpersonal methods such as opinion leaders (50%) and house-to-house visits (49%) also remain accessible and preferred by segments of the population. This directly supports the subthemes communication (mobile/SMS), posts (social media), and officer visits (house-to-house strategy). Demonstrates that hybrid, multi-modal communication strategies enhance reach and inclusivity. Also, according to the study of Yoshioka et al. (2021), in coastal municipalities such as Perez, disaster communication integrated megaphones, barangay assemblies, and reminders via TV and radio. Community groups (e.g., “kabalikat civicom”) and broadcast messaging mechanisms supported local early warning dissemination, despite infrastructural constraints like signal instability. This illustrates the effectiveness of posts (megaphones and public assemblies), complemented by broadcast channels like TV and radio where mobile/internet access may be limited. Reinforces the need for diverse platforms within barangay-level communication frameworks.

The research study by Caoleng and Fermin (2024) in Tarlac barangays indicates that early warning systems often involve house-to-house alerts by barangay officials, as well as active Facebook groups and text messages prior to disasters. Some households lacked awareness of these systems, often due to conflicting priorities or

limited access. This combines all three subthemes: communication (SMS), posts (Facebook groups), and officer visits (house-to-house). Demonstrates how multi-channel approaches elevate preparedness while also highlighting accessibility gaps among some households. Additionally, the UP Mindanao study by Mendoza (2022) underscored limitations of the traditional “top-down” model. It suggested that ground-up (bottom-top) communication, combining official messages with community feedback, can strengthen resilience and responsiveness in flood-prone areas. This supports the case for officer visits and localized information flows that prioritize community dialogue. Highlights that multi-directional communication, not just broadcast, enhances engagement and trust.

A systematic literature review by Kako et al. (2020) outlines the standards for evacuation centers, highlighting safety, minimum living standards, care provision, and specific needs of vulnerable groups. Governments and humanitarian agencies are urged to regulate, monitor, and design inclusive shelters. This directly addresses the evacuee’s centers subtheme by emphasizing physical accessibility and adequacy of facilities for all, including marginalized groups. Vera-Ruiz (2020) advocates for constructing or upgrading permanent evacuation centers in high-risk areas, such as governed by standards, hazard assessments, and funded via national disaster funds. This supports evacuee’s centers by recommending infrastructure that is accessible, regulated, and adequately resourced to ensure safe evacuation.

According to Villarente et al. (2025), a State University’s initiative developing inclusive disaster preparedness programs for students with disabilities, focusing on tailored planning and accessibility. This aligns with the everyone subtheme by demonstrating how preparedness can intentionally include vulnerable populations through inclusive design and programming. Also, a qualitative study by Karnay et al. (2023) exploring

how persons with disabilities experienced crisis communication during COVID-19, emphasizing the importance of inclusive access to information across all groups. This offers insight into the everyone subtheme by illustrating how communication strategies must account for accessibility barriers to ensure all community members are informed.

### **Context-Specific Disaster Communication Framework**

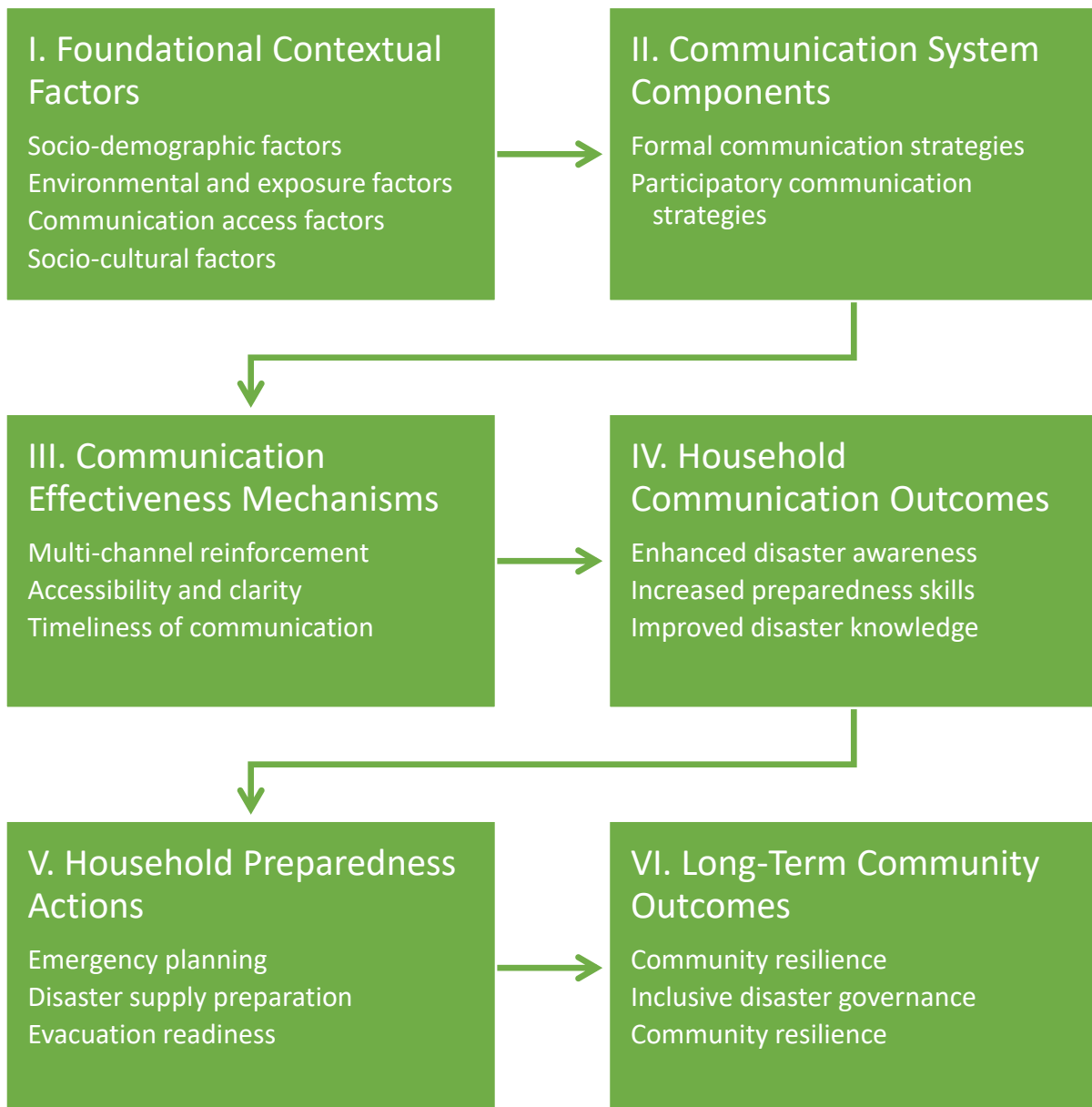
The framework was developed based on the findings of the study which revealed that household disaster preparedness is influenced by the interaction between communication strategies and the socio-demographic, cultural, environmental, and technological conditions of the households. The framework recognizes that disaster communication becomes more effective when messages are delivered through integrated, multi-channel and local communication systems that utilize both formal and informal communication networks. It further emphasizes that trust, accessibility, message relevance, and community participation are important in shaping how households interpret, internalize, and respond to disaster preparedness information. Anchored on the Risk Perception and Communication Model (RPCM), the framework shows the importance of adaptive and context-sensitive communication approaches in strengthening household preparedness and promoting long-term community resilience.

The findings of the study revealed that communication approaches such as barangay assemblies, house-to-house communication, social media platforms, community leaders, and informal neighborhood networks contributed to improved household disaster awareness, preparedness knowledge, adaptive skills, and preparedness actions. The study further showed that households relied on both formal and informal communication systems, while repeated exposure to disaster messages across multiple channels strengthened message accessibility, reinforcement, and

preparedness behavior. In addition, the framework recognizes that the effectiveness of disaster communication is influenced by the trustworthiness and social proximity of communicators. Messages delivered by trusted and familiar individuals such as barangay officials, purok leaders, community health workers, and local volunteers were more likely to be accepted, understood, and acted upon by households. The findings indicated that interpersonal and community-anchored communication increased message credibility, responsiveness, and community engagement.

The framework shown in Figure 2 also posits that household socio-demographic, cultural, environmental, and experiential conditions significantly mediate how disaster preparedness messages are interpreted and translated into action. Factors such as income, educational attainment, household composition, access to communication technologies, prior disaster experiences, cultural beliefs, and environmental vulnerability affected households' capacity to receive, internalize, and respond to disaster communication. Findings further demonstrated that economic limitations and unequal digital access influenced preparedness behaviors and message reception, while prior disaster experiences shaped household risk perception and adaptive responses. Guided by these findings, the framework advances the proposition that an integrated disaster communication system combining formal barangay-led communication, digital platforms, interpersonal communication, and participatory community-based approaches contributes to the development of a context-specific and adaptive disaster preparedness framework. The study revealed that participatory communication strategies enhanced community engagement, reduced information gaps, strengthened support systems, and improved the contextual relevance of disaster messages, thereby reinforcing household preparedness and long-term community resilience.

**Figure 2. Context-Specific Disaster Communication Framework**



The first component of the framework is the Foundational Contextual Factors or the Context Layer, which explains the different household conditions that shape how disaster preparedness messages are received, interpreted, and acted upon. These contextual factors include socio-demographic conditions such as income, educational attainment, household composition, and age structure, which influence the capacity of households to understand and apply disaster preparedness information. Environmental and exposure-related factors such as living in flood-prone areas, housing vulnerability, and previous disaster exposure also affect household risk

perception and preparedness behavior. In addition, communication access factors including access to mobile phones, internet connectivity, and digital literacy determine the accessibility of disaster-related information among households. Socio-cultural factors such as community beliefs, social relationships, participation in community activities, and trust in authorities further influence the acceptance, interpretation, and responsiveness of households toward disaster preparedness communication.

The second component of the framework is the Communication System Components or the Communication Input Layer, which consists of the different formal and informal communication strategies utilized in disseminating disaster preparedness information. Formal communication strategies include barangay assemblies, early warning systems, information, education, and communication (IEC) materials, public announcements, SMS alerts, and social media advisories implemented by barangay officials and institutions. Informal and participatory communication strategies include door-to-door communication, community leaders, peer-to-peer communication, neighborhood networks, family-based information sharing, and community drills and consultations. These communication systems operate simultaneously and complement one another in ensuring that disaster preparedness messages are disseminated across different sectors and household groups within the community.

The third component of the framework is the Communication Effectiveness Mechanisms or the Mediating Layer, which explains the factors that strengthen the effectiveness of disaster communication strategies. The framework posits that communication becomes more effective when messages are repeatedly reinforced across multiple communication channels, localized according to community conditions, culturally appropriate, accessible, and clearly understood by households. The credibility and trustworthiness of communicators also strengthen message

acceptance and responsiveness among residents. Likewise, participatory engagement and the timely dissemination of information contribute to greater community involvement and improved preparedness outcomes.

The fourth component of the framework is the Household Communication Outcomes or the Behavioral and Cognitive Layer. This component explains the immediate outcomes of effective disaster communication among households. Through integrated and context-sensitive communication strategies, households develop enhanced disaster awareness, improved disaster knowledge, increased preparedness skills, stronger preparedness motivation, higher levels of risk perception, and greater adaptive decision-making capacity.

The fifth component of the framework is the Household Preparedness Actions or the Preparedness Output Layer, which refers to the observable preparedness practices demonstrated by households as a result of effective communication. These preparedness actions include emergency planning, evacuation readiness, disaster supply preparation, participation in disaster drills, implementation of risk reduction practices, and faster response during actual disaster events. The framework assumes that when households receive accessible, trusted, and contextually relevant disaster communication, they are more likely to engage in proactive preparedness behaviors that reduce disaster vulnerability.

The final component of the framework is the Long-Term Community Outcomes or the Resilience Layer. The framework contributes to the development of adaptive household preparedness, stronger community resilience, inclusive disaster governance, strengthened trust networks, and sustainable community-based preparedness systems. Through integrated, participatory, and context-specific communication approaches, the framework promotes a more resilient and informed

community capable of responding effectively to disaster risks. The framework also emphasizes that disaster communication should function as a community-centered and adaptive process that strengthens long-term preparedness and resilience in Barangay Commonwealth, Quezon City.

## CHAPTER V

### SUMMARY, CONCLUSION, AND RECOMMENDATION

This chapter presents the summary of findings, conclusions derived from the analysis, and recommendations. The chapter shows the insights of the study's contributions and proposes a framework of recommendations for strengthening disaster communication and resilience at the household level.

#### Summary of Findings

This study examined barangay-level communication strategies and their role in shaping household disaster preparedness, a densely populated and disaster-prone urban community. The research was motivated by the recognition that while disaster risk communication is widely implemented in the Philippines, there remains limited understanding of how different communication strategies function at the household level and how these strategies influence preparedness behaviors in complex urban environments. Guided by the Risk Perception and Communication Model (RPCM), the study investigated how communication messages are received, interpreted, and acted upon by households within their specific socio-demographic, cultural, and environmental contexts. The research adopted a case study approach to provide an in-depth examination of disaster communication practices within Barangay Commonwealth. A mixed-methods approach was utilized, combining quantitative data from structured household surveys with qualitative data from interviews, document analysis, and community-level information sources.

The study analyzed how various communication strategies affect household preparedness. It also examined contextual factors such as age, income, education, disaster experience, access to communication technologies, and trust in information

sources. Through this comprehensive analysis, the research sought to identify the roles that different communication strategies play in influencing disaster awareness, preparedness knowledge, skills development, and motivation to act. The findings of the study were used to develop a context-specific disaster communication framework tailored to the realities of Barangay Commonwealth. The framework emphasizes the importance of multi-channel communication, community-centered engagement, and trusted local leadership in strengthening disaster preparedness at the household level.

Additionally, below are the summary of findings for the specific research questions of the study:

1. The study found that household disaster preparedness practices are strongly influenced by a combination of socio-demographic, cultural, and environmental factors. Socio-demographic characteristics such as age, educational attainment, income level, and access to communication technologies significantly affect how households receive and interpret disaster-related information. Households with greater access to mobile phones, internet connectivity, and educational resources demonstrated higher levels of awareness and preparedness compared to those with limited access. Cultural and social structures within the community also play an important role in shaping communication experiences. Informal information networks, including family members, neighbors, and community leaders, serve as important channels through which disaster-related information is shared and validated. Environmental factors such as the community's exposure to flooding, overcrowded housing conditions, and proximity to hazard-prone areas further influence how households perceive disaster risks. Previous disaster

experiences were also found to shape risk perception, with households that had experienced past disasters demonstrating stronger motivation to prepare.

2. The findings indicate that disaster preparedness messages in Barangay Commonwealth are communicated through a combination of traditional, interpersonal, and digital communication channels. Early warning systems such as megaphone announcements and SMS alerts are commonly used to deliver urgent disaster information. Social media platforms, particularly Facebook, also serve as important channels for disseminating disaster advisories and updates. In addition, barangay assemblies, community meetings, and disaster drills provide opportunities for face-to-face communication and experiential learning. These communication strategies play distinct roles in influencing household preparedness. Early warning systems primarily function to raise awareness of impending hazards, while IEC materials and informational campaigns help increase disaster-related knowledge. Community drills and preparedness workshops contribute to the development of practical response skills and behavioral readiness. Social media advisories reinforce preparedness messages and encourage community engagement with disaster information. The study also found that messages delivered through trusted sources are more likely to influence preparedness actions compared to messages perceived as distant or impersonal.
3. The study found that household disaster preparedness in Barangay Commonwealth is shaped by the interaction between contextual household conditions and the communication strategies utilized within the community. Findings revealed that socio-demographic, environmental, technological, and socio-cultural factors significantly influenced how households received,

interpreted, and acted upon disaster preparedness messages. The study further showed that integrated and multi-channel communication strategies consisting of formal mechanisms such as barangay assemblies, early warning systems, IEC materials, SMS alerts, and social media advisories, together with informal and participatory approaches such as door-to-door communication, community leaders, neighborhood networks, and family-based information sharing, enhanced household awareness, preparedness knowledge, adaptive skills, and preparedness actions. Moreover, the effectiveness of communication was strengthened by message repetition, localization, trustworthiness of communicators, accessibility, cultural appropriateness, participatory engagement, and timely dissemination of information.

## **Conclusion**

Based on the study findings, the researcher concludes the following:

1. Household disaster preparedness and communication experiences in the case study barangay are shaped by interconnected socio-demographic, economic, and environmental factors. Financial capacity, household composition, and access to essential resources significantly influence preparedness. Households with stable income and access to communication tools demonstrate stronger preparedness, while those prioritizing daily needs face constraints. Environmental exposure such as recurring flooding and typhoons, heightens risk perception and reinforces the need for preparedness. Additionally, prior disaster experiences and reliance on interpersonal networks such as family, neighbors, and local leaders are important in shaping how households interpret and act on disaster information.

2. Disaster preparedness messages in the studied barangay are disseminated through a combination of barangay-based, interpersonal, and media-driven communication channels. Barangay officials and community leaders remain significant in delivering localized and trusted information, although delays in response may affect effectiveness. Social media such as mobile-based platforms has emerged as the fastest and most accessible source of real-time updates, while interpersonal channels reinforce message dissemination and understanding. Each communication strategy performs a distinct function: early warnings raise awareness, media and advisories enhance knowledge, and community-based activities and leadership guidance support action. Trust in sources and timeliness of communication are critical in influencing household responsiveness.
3. The Context-Specific Disaster Communication Framework developed in this study demonstrates that disaster preparedness communication is most effective when it is integrated, participatory, adaptive, and grounded in the socio-cultural and environmental realities of households in Barangay Commonwealth. The study concludes that disaster communication should not rely solely on top-down and single-channel approaches, as household preparedness behaviors are influenced by varying contextual factors such as income, educational attainment, digital access, prior disaster experience, trust in authorities, and community relationships. Effective disaster preparedness communication therefore requires the integration of formal barangay-led communication systems with informal and community-based communication networks to ensure that messages are accessible, credible, culturally relevant, and actionable. The framework further highlights that trust, social proximity of

communicators, message localization, and participatory engagement are critical mechanisms that strengthen communication effectiveness and preparedness outcomes.

## **Recommendations**

Based on the study findings, the researcher recommends the following:

1. Future research should extend the study of disaster communication and household preparedness to other urban communities with similar socio-economic and hazard profiles. Comparative studies across different case barangays or cities are recommended to identify context-specific and transferable communication strategies. In addition, longitudinal research is needed to assess how repeated exposure to disaster communication influences sustained preparedness behaviors, particularly in relation to awareness, knowledge retention, and skill development over time.
2. Local government units, Disaster Risk Reduction and Management Offices, and barangay officials should design communication programs that are responsive to the socio-economic realities of the case study barangay. Interventions must prioritize vulnerable groups, including low-income households, elderly members, and individuals with special needs or limited access to information. Targeted strategies such as house-to-house visits, localized messaging, and support for essential resources should be strengthened to address inequalities in preparedness capacity.
3. Disaster preparedness communication should adopt an integrated, multi-channel approach that combines digital, interpersonal, and barangay-based systems. Social media and mobile communication should be maximized for

rapid information dissemination, while traditional methods such as megaphone announcements, community leaders, and house-to-house outreach should ensure inclusivity. Communication messages must be clear, actionable, and timely. IEC materials should be simplified and visually accessible, and regular community drills and assemblies should be institutionalized to reinforce practical skills.

4. DRRMOs should align communication strategies according to their complementary roles within a unified framework. Effective implementation requires coordination across channels, leveraging trusted local leaders, and ensuring that communication efforts translate into actual household preparedness behaviors.

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