

## Shaking up disaster preparedness in schools: Uncovering the lived experiences among elementary school DRRM coordinators during actual earthquakes

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### Abstract

**Aim:** This study explored the lived experiences of elementary school Disaster Risk Reduction and Management (DRRM) coordinators in Jose Abad Santos regarding school earthquake preparedness and response during actual earthquake events.

**Methodology:** A descriptive phenomenological research design was employed. Ten elementary school DRRM coordinators were purposively selected as participants. Data were gathered through in-depth interviews using validated researcher-developed guides. The Colaizzi method was used for thematic analysis of the narratives.

**Findings:** The findings revealed that DRRM coordinators perceived their roles as centered on coordination and communication, both within the school and with external agencies. Major challenges included limited resources, communication difficulties, time pressure, and managing student panic. Coping strategies involved maintaining composure, relying on prior training and experience, and strengthening collaboration among staff, students, and the community. Experiences from actual earthquakes led to improvements in evacuation systems, safety protocols, resource allocation, and leadership practices.

**Conclusion:** The study concludes that DRRM coordinators play a vital role in strengthening school earthquake preparedness through effective communication, adaptive leadership, collaborative engagement, and continuous improvement of disaster response systems despite existing constraints.

**Keywords:** *disaster preparedness, earthquake response, DRRM coordinators, phenomenological study, school safety, Philippines*

### INTRODUCTION

Despite the increasing frequency and severity of natural and man-made disasters, many schools remain inadequately prepared, putting students and staff at significant risk due to insufficient planning, outdated infrastructure, and a lack of comprehensive emergency training. Although there have been advancements in disaster preparedness, schools still face critical challenges during earthquakes that compromise student safety and severely disrupt the continuity of education.

In the international context, a study conducted in Pakistan by Shah et al. (2020) elucidated that students, teachers, and other staff constantly face risks as they spend most of their time in schools and become easy victims of natural hazards. Moreover, in Indonesia, Muzani et al. (2022) explained that disaster preparedness in schools is hindered by disparities in resources, infrastructure, and governmental support, particularly in low-income and disaster-prone regions. They also added that these challenges result in inconsistent emergency protocols, inadequate training for staff, and a lack of necessary safety measures, putting students and teachers at heightened risk during disasters.

In the Philippine arena, a study conducted by Salita et al. (2021) in Angeles City stipulated that many schools in rural or disaster-prone areas lack the necessary infrastructure to withstand natural disasters such as typhoons, earthquakes, and floods. Further, a study in Zambales City by Viado (2023) stated that teachers and staff often receive insufficient training in disaster response and safety procedures, further compromising students' safety during emergencies. More so, these issues underscore the urgent need for improved policies, stronger community

involvement, and more efficient resource allocation to ensure that schools are adequately prepared for disaster situations.

Despite ongoing efforts to strengthen disaster preparedness in schools, many elementary institutions in earthquake-prone areas continue to face challenges in effectively implementing disaster risk reduction and management (DRRM) measures. Existing research has largely focused on preparedness levels, policy implementation, and training outcomes, but limited attention has been given to the lived experiences of school-based DRRM coordinators during actual earthquake events. These coordinators play a critical leadership role in ensuring student safety, managing emergency responses, and coordinating with internal and external stakeholders. However, there remains insufficient understanding of how they interpret their roles, address real-time challenges, and apply coping strategies in actual disaster situations. This gap in experiential knowledge limits the development of context-responsive training programs, policies, and support systems for school disaster leadership. Therefore, there is a need to investigate the lived experiences of elementary school DRRM coordinators in Jose Abad Santos to better understand their roles, challenges, coping mechanisms, and professional growth in the context of real earthquake events.

## Review of Related Literature and Studies

### *Disaster Preparedness of Schools*

Disaster preparedness in schools is critical for safeguarding students, faculty, and staff during emergencies, as it directly influences the effectiveness of response and the minimization of harm. Studies such as Opabola et al. (2023) underscore that well-organized and systematically implemented disaster preparedness plans can significantly reduce the risk of injury and loss of life during crises. Moreover, disaster preparedness encompasses planning for a wide range of hazards, including natural events like earthquakes and typhoons, as well as human-induced incidents such as fires and acts of violence. While these studies provide valuable insights into structural and procedural aspects of school preparedness, they largely adopt a general or policy-focused perspective, often emphasizing readiness at a procedural level rather than the lived experiences of those responsible for executing these plans. This indicates a gap in understanding how DRRM coordinators experience, interpret, and respond to actual emergencies, particularly earthquakes, highlighting the need for research that captures their firsthand perspectives and decision-making processes in real-time contexts.

### *Mandatory Earthquake Drills in Philippine Schools*

The Department of Education (DepEd) in the Philippines has institutionalized unannounced earthquake and fire drills in all public schools to enhance disaster preparedness among learners. According to Division Memorandum No. 003, s. 2023, these drills are scheduled every first and third week of the month to ensure that students are adequately guided on appropriate actions during and after emergencies. Beyond merely conducting drills, school heads, with support from School Disaster Risk Reduction and Management (SDRRM) Coordinators, are tasked with planning, implementing, and continuously monitoring these activities to maintain safety standards. While these regulations highlight the procedural framework for disaster preparedness, existing literature often emphasizes compliance and frequency of drills rather than the practical realities faced by coordinators responsible for executing them. This underscores a critical gap, although policies mandate preparedness measures, little is known about the lived experiences of SDRRM coordinators during actual earthquake events, including the challenges, decision-making processes, and adaptive strategies they employ in real-time crisis situations.

### *Outcomes of Disasters in Schools*

The impact of disasters, particularly earthquakes, on schools can be profound, affecting both physical infrastructure and the psychological well-being of students, teachers, and staff (Bachri et al., 2021). According to Seddighi et al. (2021), earthquakes often cause significant structural damage to school buildings, resulting in the destruction of classrooms, loss of educational resources, and interruption of regular school activities. Such damage frequently displaces students and staff, forcing them to relocate to temporary facilities or suspend classes altogether, which can lead to prolonged educational disruption. Beyond the immediate physical consequences, these interruptions may have long-term effects on students' academic performance and emotional resilience, particularly in communities where recovery is slow or resources are limited. While these studies underscore the severity of earthquake impacts, they primarily document outcomes at a macro or structural level, leaving little understanding of how DRRM coordinators experience, respond to, and manage these disruptions in real time.

### ***Importance of Earthquake Preparedness in Schools***

Schools, being densely populated with children, are among the most vulnerable institutions during earthquakes. According to Epe (2023), earthquake preparedness is essential in minimizing casualties and injuries in school settings. Further, schools not only serve as learning spaces but also act as community shelters during emergencies. Therefore, implementing comprehensive preparedness measures including drills, evacuation plans, and early warning systems is critical to ensuring both student and community safety.

### ***Drills and Simulation Exercises as Preparedness Tools***

Regular earthquake drills are a proven method to build preparedness. According to Manalang et al. (2020), mandatory unannounced earthquake drills help students internalize correct responses like "Duck, Cover, and Hold." Further, participating in realistic simulations also trains teachers and staff in coordination, crowd management, and emergency communication, all of which are crucial in mitigating chaos and confusion during actual earthquakes.

In the Philippines, the Department of Education (DepEd) institutionalized mandatory earthquake drills through DepEd Order No. 53, s. 2022, requiring all public schools to conduct unannounced drills twice a month. This policy aims to create a culture of preparedness by ensuring that emergency procedures become second nature to learners and staff. Thus, repeated exposure to realistic simulations significantly improves behavioral responses in emergencies, especially among younger students who are less likely to recall emergency protocols without practice. They also added that the drills are often conducted in partnership with local government units and emergency responders, further strengthening school-community collaboration.

### ***Coping Mechanisms of Schools during Disasters***

Effective school disaster preparedness involves proactive planning, the systematic establishment of safety protocols, and ongoing training of internal stakeholders. As Davis et al. (2019) emphasize, a central component of preparedness is the development of coping mechanisms that enable schools to respond efficiently and effectively during and after emergencies. Similarly, Cels et al. (2023) argue that schools with well-defined disaster plans and adaptive coping strategies are better positioned to mitigate both physical and emotional harm. These findings suggest that preparedness is not limited to immediate safety measures but also encompasses the psychological and emotional well-being of students, staff, and coordinators involved in disaster response. However, while existing studies document the presence of plans and strategies, they often adopt a procedural or policy-focused lens, leaving limited understanding of how these mechanisms are experienced and operationalized in real-time emergencies. This highlights a research gap in capturing the lived experiences of DRRM coordinators during actual earthquake events, including the challenges they face, the decisions they make under pressure, and the coping strategies they employ.

### ***Synthesis***

The reviewed literature highlights that disaster preparedness and its associated coping mechanisms are fundamental for safeguarding the safety, well-being, and resilience of schools during and after emergencies. Studies indicate that while significant progress has been made in establishing evacuation plans, safety protocols, and psychological support programs, schools continue to encounter persistent barriers such as limited resources, inadequate infrastructure, and weak coordination with local emergency services. These challenges suggest that effective disaster reduction requires a multi-dimensional approach, encompassing not only physical improvements and staff training but also stronger communication and collaboration between schools and local authorities. However, much of this research focuses on policy implementation, procedural compliance, or preparedness metrics, leaving a critical gap in understanding the experiences and perspectives of those responsible for operationalizing these measures, particularly DRRM coordinators during real earthquake events. This gap underscores the need for a phenomenological investigation to explore the practical, emotional, and decision-making realities faced by coordinators in actual crisis situations, thereby providing deeper insights into school-level disaster leadership and adaptive management practices.

### ***Theoretical Framework***

This study is anchored in Rogers' (1975) Protection Motivation Theory (PMT), which explains how individuals are motivated to protect themselves from perceived threats. More so, PMT posits that individuals first appraise a potential threat by evaluating its severity and probability, and then assess their ability to cope with or mitigate the threat through protective actions. When a person perceives a threat as serious and believes they have the capacity to

respond effectively, they are more likely to engage in proactive protective behaviors. Further, this theory integrates both cognitive and emotional responses, emphasizing how perceived vulnerability, fear, and efficacy influence decision-making and risk-reduction behaviors. In the context of this study, PMT provides a conceptual lens for understanding the decision-making processes of DRRM coordinators during earthquakes. It guided the formulation of research questions by focusing on how coordinators perceive earthquake threats, assess school vulnerabilities, and choose specific preparedness and response strategies. During data collection, interview questions were designed to probe coordinators' threat appraisal, coping appraisal, and motivational factors, capturing both rational and emotional dimensions of their decisions. For data analysis, PMT framed the interpretation of coordinators' lived experiences, allowing the researcher to examine how perceptions of risk and self-efficacy influenced their protective actions, adaptive strategies, and leadership choices in real-time disaster scenarios. Through linking cognitive and emotional processes to concrete disaster management behaviors, PMT provides a robust framework for understanding how school-level leaders operationalize preparedness and respond to crises.

### Statement of the Problem

Despite ongoing efforts to strengthen disaster preparedness in schools, many elementary institutions in earthquake-prone areas continue to face challenges in effectively implementing disaster risk reduction and management (DRRM) measures. Existing research has largely focused on preparedness levels, policy implementation, and training outcomes, but limited attention has been given to the lived experiences of school-based DRRM coordinators during actual earthquake events. These coordinators play a critical leadership role in ensuring student safety, managing emergency responses, and coordinating with internal and external stakeholders. However, there remains insufficient understanding of how they interpret their roles, address real-time challenges, and apply coping strategies in actual disaster situations. This gap in experiential knowledge limits the development of context-responsive training programs, policies, and support systems for school disaster leadership. Therefore, there is a need to investigate the lived experiences of elementary school DRRM coordinators in Jose Abad Santos to better understand their roles, challenges, coping mechanisms, and professional growth in the context of real earthquake events.

### Research Objectives

To explore the lived experiences of elementary school Disaster Risk Reduction and Management (DRRM) coordinators in Jose Abad Santos regarding school earthquake preparedness and response during actual earthquake events.

### Specific Objectives

1. To describe the roles and responses of elementary school DRRM coordinators during school earthquake events.
2. To examine the challenges experienced by elementary school DRRM coordinators in managing school safety during real-time earthquake situations.
3. To identify the coping strategies employed by elementary school DRRM coordinators to address challenges encountered during earthquake emergencies.
4. To determine how actual earthquake experiences shaped the personal and professional perspectives of elementary school DRRM coordinators on disaster preparedness and response.

### Research Questions

1. How do elementary school DRRM coordinators describe their roles and responses during school earthquake events?
2. What challenges do elementary school DRRM coordinators experience in managing school safety during real-time earthquake situations?
3. What coping strategies do elementary school DRRM coordinators apply to address the challenges encountered during real-time earthquake situations?
4. In what ways have actual earthquake experiences shaped the personal and professional perspectives of elementary school DRRM coordinators on disaster preparedness and response?



## METHODS

### Research Design

This study employed a descriptive-phenomenological approach to explore and understand the lived experiences of elementary school DRRM coordinators in the JAS 1 district. Moreover, descriptive phenomenology focuses on capturing and describing experiences exactly as they are perceived by individuals, without imposing pre-existing interpretations or theoretical assumptions. This approach is appropriate for examining the experiences of DRRM coordinators, as it allows the research to uncover their firsthand perceptions, challenges, and decision-making processes during actual earthquake events. Further, data were collected through in-depth interviews, ensuring that participants' narratives were fully explored, documented, and allowed to emerge naturally. Through emphasizing the authentic experiences of coordinators, descriptive phenomenology provided a framework to identify key themes and insights into how they perceive risk, respond to emergencies, and implement protective measures in real-time disaster situations, thereby aligning the methodology with the study's focus on lived experience.

### Participants and Sampling Procedure

The participants in this study consisted of 10 elementary school DRRM coordinators from the JAS 1 district, purposively selected to provide rich, relevant insights into school disaster management. These coordinators were chosen based on their extensive experience, having served in the Department of Education for at least three years, and their active engagement in professional development through symposiums and seminars on disaster risk reduction and management. The sample size of 10 was deemed appropriate for a phenomenological study, as it allowed for an in-depth exploration of each coordinator's lived experiences while ensuring data saturation, where recurring themes and patterns could be meaningfully identified. This purposeful selection ensured that participants possessed both the practical experience and specialized knowledge necessary to provide detailed accounts of challenges, decision-making, and coping strategies during earthquake events, aligning with the study's focus on capturing authentic, operational, and emotional perspectives of DRRM coordinators.

Purposive sampling was employed to deliberately select participants who could provide rich and relevant insights into the phenomenon under study. Participants have actively led or facilitated earthquake drills and simulation exercises within the past 12 months. Also, inclusion requires the participant to have been directly involved in drafting or implementing their school's DRRM plan, specifically for earthquake response. Further, volunteer teachers and contractual teachers were not allowed to be part of the study.

### Instruments

The primary instruments for data collection were researcher-developed interview guides, specifically designed for in-depth interviews (IDIs) to capture the lived experiences of elementary school DRRM coordinators. The interview guide consists open-ended questions wherein within each section were crafted to elicit detailed narratives, allowing participants to share their experiences in their own words.

To ensure the validity and relevance of the instrument, the guide was reviewed by three experts, specialists in education and qualitative research, who assessed the questions for content accuracy, clarity, and alignment with the research objectives. Recommendations from the validators were incorporated to refine the guide, enhancing its clarity, focus, and effectiveness prior to data collection.

### Data Collection

Following data collection, the study employed Colaizzi's phenomenological method to conduct a rigorous and systematic analysis of the DRRM coordinators' lived experiences during earthquake events. All in-depth interviews (IDIs), conducted in the participants' respective schools, were transcribed verbatim, with transcripts carefully verified against audio recordings and field notes to ensure accuracy. Significant statements specifically related to the coordinators' experiences, challenges, and decision-making during disaster preparedness and response were extracted from the transcripts. From these statements, meanings were formulated to capture the essence of the coordinators' perceptions, actions, and coping strategies. These meanings were then organized into clusters of themes that reflected common patterns and variations across participants' responses. An exhaustive description of the phenomenon was subsequently developed, integrating all emergent themes into a cohesive narrative that illustrated the coordinators' experiences, strategies, and leadership in real-time disaster management. Finally, member checking was conducted by returning the findings to the participants, ensuring that interpretations accurately represented their intended meanings and the realities of their roles as DRRM coordinators.

### Data Analysis

The data were analyzed using Colaizzi's phenomenological method to ensure a systematic and rigorous exploration of the lived experiences of DRRM coordinators during earthquake events. The in-depth interviews, lasting approximately 45 to 60 minutes each, were conducted within the designated data collection period, using a combination of English and the participants' preferred local language to allow clarity and comfort in sharing their experiences. All responses were transcribed verbatim and carefully reviewed to ensure completeness and accuracy. Significant statements directly related to the coordinators' experiences, challenges, decision-making, and coping strategies were identified, and meanings were formulated to capture the essence of their lived experiences. These meanings were then organized into thematic clusters, which were synthesized into a comprehensive description of the phenomenon, illustrating the coordinators' perceptions, actions, and adaptive strategies in real-time disaster management.

### Ethical Considerations

The researchers strictly adhered to established ethical standards to protect participants' rights and uphold the integrity of the study. Prior to data collection, each participant was provided with a detailed informed consent form explaining the study's purpose, procedures, duration, potential risks, and benefits, and consent was voluntarily obtained. Participants were informed that their involvement was entirely voluntary and that they could withdraw from the study or decline to answer any question at any time without penalty. Permission was also secured before conducting and audio-recording the in-depth interviews.

To ensure confidentiality, pseudonyms were assigned, and all personally identifiable information was removed from transcripts and reports. Digital data, including recordings and transcripts, were securely stored in password-protected files accessible only to the researchers, while hard copies were kept in a locked location. Following completion of the study, all data will be permanently deleted or properly disposed of according to institutional guidelines. The study also complied with the Data Privacy Act of 2012 (Republic Act No. 10173), ensuring that all personal information was collected, processed, stored, and disposed of in a lawful, ethical, and responsible manner.

## RESULTS and DISCUSSION

This section presents the data on the lived experiences of elementary school Disaster Risk Reduction and Management (DRRM) coordinators in Jose Abad Santos, focusing on school disaster and earthquake preparedness and their approaches in handling these situations. It highlights the coordinators' perspectives, revealing both the challenges they encounter and the strategies they implement to ensure the safety and resilience of their schools.

### 1. How Elementary School DRRM Coordinators Describe Their Roles and Responses During School Earthquake Events

#### Theme

*Coordination and Communication in Earthquake Response  
Managing Challenges and Maintaining Calm  
Protocols and Systems for Effective Earthquake Response*

#### 1.1 Coordination and Communication in Earthquake Response

One key theme that emerged is the elementary school Disaster Risk Reduction and Management (DRRM) coordinators in Jose Abad Santos professed that they describe their roles and responses during school earthquake events as coordination and communication in earthquake response with the sub-themes: internal coordination with staff and students and external coordination with agencies and community.

**Participant 1:** *“Kung naay linog, isturyahun nako dayun ang mga teachers gamit ang group chat para ma-monitor ang mga bata. Tapos, ako ang nakikipag-coordinate sa Municipal Disaster Risk Reduction and Management Office (MDRRMO) para sa updates ug safety clearance.”*

(During an earthquake, I immediately communicate with teachers through our group chat to

monitor the students. Then, I coordinate with the MDRRMO for updates and safety clearance.)

**Participant 2:** *Ginagamit namin ang whistle signal ug megaphone para ma-coordinate ang evacuation. Ako pud ang naga-update sa MDRRMO kung naa bay naangol.*

(We use whistle signals and a megaphone to coordinate the evacuation. I also update the MDRRMO if anyone is injured.)

**Participant 3:** *I always remind teachers to stay with their students during evacuation. Ako ang naga-coordinate sa barangay officials for additional safety support.*

(I always remind teachers to stay with their students during evacuation. I coordinate with barangay officials for additional safety support.)

The findings suggest that effective external coordination in school disaster management extends beyond internal communication systems and requires sustained collaboration with local government units and emergency response agencies. This underscores that disaster preparedness is not solely an intra-school responsibility but a networked process that depends on inter-agency partnerships to ensure comprehensive safety measures. Consistent with the study of Kawasaki et al. (2020), which emphasizes the mandated role of school DRRM teams in maintaining active linkages with local authorities during emergencies, the present findings affirm that strong coordination mechanisms significantly enhance preparedness and response capacity in public elementary schools. However, while previous studies largely frame coordination as a structural or policy requirement, the current findings deepen this understanding by illustrating how DRRM coordinators operationalize these linkages in real-time earthquake scenarios. The coordinators' proactive efforts to maintain calm, continuously monitor safety conditions, and promptly communicate with disaster management authorities demonstrate that effective coordination is not merely procedural but leadership-driven and situationally adaptive

## 1.2 Managing Challenges and Maintaining Calm

Managing panic among students and staff is a crucial component of effective disaster response in schools. During emergencies, fear and confusion can escalate quickly, compromising safety and hindering orderly evacuation or response procedures. The following are samples of transcription:

**Participant 1:** *Isa sa mga challenge ay ang panic ng mga estudyante. Minsan di sila makafollow sa instruction, kaya ginamit ko ang megaphone para marinig nila clearly ang commands."*

(One of the challenges is the students' panic. Sometimes they cannot follow instructions, so I used a megaphone to make sure they clearly hear the commands.)

**Participant 2:** *Ginagamit namin ang whistle signal ug megaphone para ma-coordinate ang evacuation. Ako pud ang naga-update sa MDRRMO kung naa bay naangol."*

(We use whistle signals and a megaphone to coordinate the evacuation. I also update the MDRRMO if anyone is injured.)

**Participant 3:** *Ang pinakalisod kay kung walay signal ug power outage. Gi-address namo ni pinaagi sa paggamit ug handheld radio ug whistle system."*

(The hardest part is when there's no signal or power outage. We addressed this by using handheld radios and a whistle system.)

The findings indicate that effective disaster response in schools depends not only on established communication protocols but also on contingency planning and the strategic use of alternative communication channels when conventional systems fail. This highlights the critical role of DRRM coordinators as adaptive problem-solvers who must ensure continuous monitoring, coordination, and student safety despite infrastructural damage or technological disruptions. Their ability to shift from standard procedures to improvised yet functional communication strategies demonstrates leadership flexibility under crisis conditions. These results align with Stough et al. (2020), who documented how alternative communication tools, such as radio transmissions, were utilized to disseminate vital information during Typhoon Haiyan in the Philippines. However, while previous studies primarily describe alternative communication as a logistical response to system breakdowns, the present findings extend this perspective by emphasizing the decision-making and situational judgment of DRRM coordinators in activating these alternatives. Thus, the study underscores that communication resilience in schools is not merely technological but leadership-driven, relying heavily on the coordinators' capacity to anticipate failures and implement adaptive strategies in real time.

### 1.3 Protocols and Systems for Effective Earthquake Response

Pre-established protocols and regular disaster drills play a crucial role in strengthening school preparedness and ensuring an organized response during emergencies. Indeed, these practices help familiarize students, teachers, and staff with safety procedures, reduce confusion, and build confidence in executing evacuation and emergency actions. The following are samples of transcription:

**Participant 1:** *“Ang among protocol kay “Duck, Cover, and Hold” gyud dayon. Pag humog linog, diretso mi sa evacuation area ug gina-check ang attendance sa mga estudyante. Effective kaayo siya kay controlled ang movement sa tanan.”*

(Our main protocol is “Duck, Cover, and Hold.” After the shaking stops, we proceed immediately to the evacuation area and check student attendance. It’s very effective because everyone’s movement is organized.)

**Participant 2:** *“Gisunod namo ang earthquake drill procedure nga magline up kada bulan. Human sa linog, magline up ang mga bata ug moadto sa open field. Epektibo kaayo ni kay nakamao na sila unsay buhaton.”*

(We follow the earthquake drill procedure we practice monthly. After the quake, students line up and go to the open field. This is very effective because they already know what to do.)

These findings indicated that the use of clear and standardized signaling systems strengthened the efficiency of school emergency responses by reducing uncertainty and promoting uniform action among students and staff. This supports the study of Manalang et al. (2020), which emphasized that repeated exposure to structured drills enhances coordinated behavioral responses during emergencies. Similarly, Opobola et al. (2023) highlighted that clearly defined procedures and communication systems are essential components of effective school disaster preparedness. Moreover, such low-tech yet highly effective tools contribute to smoother evacuation procedures, especially in situations where noise, panic, or environmental limitations may hinder verbal communication.

## 2. Challenges Of Elementary School DRRM Coordinators in Managing School Safety During Real-Time Earthquake Situations

### Themes

*Resource and Infrastructure Limitations  
 Time Pressure and Student Panic  
 Communication Challenges*

#### 2.1 Resource and Infrastructure Limitations

This theme ensures the safety and well-being of students and staff is a fundamental responsibility of every educational institution. Furthermore, adequate safety equipment and readily available medical supplies play a critical role in preventing accidents, addressing emergencies, and minimizing health risks within school environments. The following are samples of transcription:

**Participant 1:** *“Ang pinakadako nga problema namo kay ang kakulangan sa emergency kits ug medical supplies. Lisod magtabang sa mga bata nga nagkasamad kung wala gyud gamit.”*

(Our biggest problem is the lack of emergency kits and medical supplies. It’s difficult to help injured students when we don’t have proper equipment.)

**Participant 2:** *“Ang among loudspeaker ug alarm system kay guba na. Kung maglinog, maglisod mi og signal sa evacuation kay di madungog sa tanan.”*

(Our loudspeaker and alarm system are already broken. During an earthquake, it’s difficult to signal the evacuation because not everyone can hear it.)

**Participant 3:** *“Gamay ra among first aid kits ug walay stretcher. Kung naay ma-injured, maglisod mi og carry padulong sa safe area.”*

(We only have a few first aid kits and no stretcher. When someone is injured, we struggle to

carry them to the safe area.)

The findings indicate that the shortage of essential emergency equipment such as complete first aid kits and stretchers, substantially weakens a school's capacity to deliver immediate, safe, and effective assistance during accidents or disaster-related injuries. This limitation not only delays first-response actions but also increases the risk of secondary harm, particularly when injuries require prompt stabilization and transport. The results affirm Sakurai et al. (2020), who found that inadequate emergency resources significantly reduce the efficiency of school-based first responders and heighten the vulnerability of affected learners. However, while prior studies primarily frame equipment shortages as a resource or compliance issue, the present findings reveal the operational consequences at the ground level. DRRM coordinators reported being compelled to rely on improvised methods, which, although reflective of resilience and initiative, may compromise safety standards and prolong evacuation processes. This suggests that beyond policy mandates, sustained investment in emergency resources is critical, as the effectiveness of disaster response depends not only on planning and training but also on the availability of essential life-saving tools.

## 2.2 Time Pressure and Student Panic

The behavior of students during emergencies plays a crucial role in determining the overall effectiveness of a school's response efforts. Even with well-established protocols, trained personnel, and adequate safety equipment, the ability of students to follow instructions, remain calm, and act responsibly greatly influences the speed and success of evacuation and emergency procedures. The following are samples of the transcription:

**Participant 1:** *"Ang panic sa mga bata makapahinay sa evacuation process. Mao nga akong priority kay ang paghatag ug klaro nga instruction ug calm voice."*  
(Student panic slows down the evacuation process. That's why my priority is to give clear instructions in a calm voice.)

**Participant 2:** *"Dali ra kaayo mawala sa focus ang mga bata kung magpanic, ug dili nila ma-follow ang duck, cover, and hold. Kinahanglan gyud ko magdali pero kalmado para di sila maapektuhan."*  
(The students easily lose focus when they panic and fail to follow "duck, cover, and hold." I have to move quickly but calmly so they won't get more anxious.)

The findings suggest that maintaining student composure during emergencies is not merely a behavioral concern but a critical component of effective disaster response. When students panic or become overwhelmed, their capacity to follow established safety procedures declines, potentially delaying evacuation, disrupting coordination, and increasing the likelihood of injury. Thus, emotional regulation among learners directly influences the overall efficiency and safety of school-based emergency operations. These results align with Dipon (2023), who reported that heightened student anxiety and panic significantly undermine the effectiveness of emergency drills and response systems in schools. However, while previous research tends to frame student panic as an outcome of inadequate preparedness, the present findings emphasize the active leadership role of teachers and DRRM coordinators in mitigating such reactions. Specifically, coordinators' ability to provide calm, clear, and consistent instructions serves as a stabilizing force that helps regulate student behavior and sustain order during crises. This underscores that effective disaster management extends beyond procedural compliance to include emotional leadership and real-time behavioral management within the school setting.

## 2.3 Communication Challenges

Effective communication is a cornerstone of successful emergency response in schools. The ability to quickly convey instructions, warnings, and updates to students, staff, and emergency personnel can significantly influence the outcome of critical situations. The following are samples of transcription:

**Participant 1:** *"Lisod kaayo kung maguba ang megaphone o dili madungog ang command. Ang mga bata ug teachers maglibog unsay buhaton sunod."*  
(It's very difficult when the megaphone fails or commands can't be heard. Both students and teachers get confused about what to do next.)

**Participant 2:** *"Ang kulang sa radio communication mao'y usa sa problema namo. Kung wala ang signal, lisod i-*

*coordinate ang updates gikan sa DRRM office.”*

(The lack of radio communication is one of our main problems. When there’s no signal, it’s hard to coordinate updates from the DRRM office.)

**Participant 3:** *“Kung walay klaro nga communication line, ang mga teachers mag-una-una og decision. Usahay magka-doble og command nga makapalisod sa response.”*

(When there’s no clear communication line, teachers tend to make their own decisions.

Sometimes this causes conflicting commands, making the response harder.)

The findings demonstrate that ineffective communication tools and unclear communication protocols substantially weaken the coordination and overall efficiency of school emergency responses. When equipment malfunctions or established channels are absent or poorly understood, confusion emerges among staff and students, increasing the likelihood of inconsistent actions, delayed evacuations, and heightened risk during critical moments. This indicates that communication breakdowns are not merely technical failures but operational vulnerabilities that directly affect safety outcomes. These results are consistent with Sakurai et al. (2020), who argued that inadequate communication equipment in schools often results in mismanagement and delays in implementing safety procedures during emergencies. However, while previous studies primarily emphasize equipment insufficiency as the central issue, the present findings suggest that the problem also lies in the integration of tools, training, and clear protocols. In this study, ineffective communication was linked not only to technological limitations but also to gaps in preparedness and coordination practices. This underscores the need for reliable communication systems complemented by structured training and well-defined procedures to ensure timely, coherent, and coordinated action during disaster situations.

### 3. Coping Strategies

#### Themes

*Maintaining Composure and Focus*

*Training, Experience, and Support Systems*

*Collaborative Involvement of Staff, Students, and Community*

#### 3.1 Maintaining Composure and Focus

The ability of school personnel to maintain personal and emotional control during emergencies is a crucial factor in ensuring an effective and orderly response. Consequently, DRRM coordinators, teachers, and staff are often placed under intense pressure as they guide students, make rapid decisions, and manage unexpected challenges. The participants stated;

**Participant 1:** *“Sa panahon sa linog, ginapaningkamotan nako nga kalma lang ko para makasunod ang uban.*

*Ginaremind ko sa team nga mag-focus sa safety sa mga bata kaysa sa kahadlok.”*

(During earthquakes, I try my best to stay calm so that others will follow. I remind my team to focus on the safety of the children rather than their fear.)

**Participant 2:** *“Ang sekreto nako kay deep breathing ug klaro nga instructions. Kung makita sa mga bata nga composed mi, mas musunod sila ug magpuyo ra.”*

(My secret is deep breathing and giving clear instructions. When the students see that we are composed, they tend to stay calm and follow us.)

**Participant 3:** *“Ako mismo ginakontrol nako akong emotion kay kung magpanic ko, magpanic pud ang uban.*

*Ginapahinumduman nako ang team nga naa ta sa role nga dapat kalmado ug klaro.”*

(I control my emotions because if I panic, others will panic too. I always remind my team that our role requires calmness and clarity.)

The findings indicate that the emotional regulation of DRRM coordinators is a decisive factor in shaping how staff and students respond during emergencies. When coordinators demonstrate composure, confidence, and control, they influence the emotional climate of the school, helping to prevent panic and enabling smoother implementation of safety procedures. This suggests that disaster response effectiveness is not determined solely by plans and protocols, but also by the leader’s capacity to model calm and stability under pressure. These results align with

Toyoda et al. (2021), who found that emotionally stable school leaders cultivate a calmer environment, thereby reducing panic and strengthening collective crisis response. However, while prior studies generally describe emotional stability as a desirable leadership trait, the present findings highlight its practical and immediate impact in real-time earthquake scenarios. Specifically, coordinators' self-regulation functioned as an operational tool that directly influenced adherence to instructions, coordination efficiency, and overall safety outcomes. This underscores that emotional competence is not peripheral but integral to effective school disaster leadership.

### 3.2 Training, Experience, and Support Systems

Preparedness in school emergency management is greatly enhanced through consistent training and well-structured drills. These practices equip both teachers and students with the necessary skills, confidence, and familiarity to respond appropriately during real hazards. Sample transcriptions are as follow;

**Participant 1:** *“Nakakatabang gyud ang DRRM seminars ug simulation drills nga gina-conduct sa division. Tungod ana, kabalo mi unsaon pag-handle sa panic ug pag-lead sa evacuation.”*

(DRRM seminars and simulation drills conducted by the division really helped. Because of those, we know how to handle panic and lead evacuations properly.)

**Participant 2:** *“Ang experience sa mga past earthquake drills mao’y nakatabang nga mas ma-ready mi.*

*Nakabalo mi unsaon pag-react ug unsa nga area ang pinakasafe.”*

(Our experience from past earthquake drills helped us become more prepared. We learned how to react and which areas are the safest to go to.)

This finding indicates that sustained training and regular emergency drills do more than enhance teachers' technical competencies—such as administering first aid and implementing evacuation procedures—they also strengthen their confidence, critical thinking, and decision-making under pressure. Schools with strong external partnerships are better positioned to institutionalize routine drills and foster coordinated responses among teachers and students during crises. Both the present findings and prior research underscore the value of repeated practice in cultivating a proactive safety culture within schools. However, while earlier studies primarily highlighted structural support systems, the current results further demonstrate the psychological impact of continuous drills, particularly in enhancing educators' self-efficacy and readiness. Further, repeated and well-supported training initiatives contribute significantly to more efficient crisis management and improved protection of both students and staff.

### 3.3 Collaborative Involvement of Staff, Students, and Community

Active involvement of both staff and students is a crucial component of effective emergency preparedness in schools. When all members of the school community are engaged in drills, training sessions, and safety initiatives, it fosters a culture of shared responsibility, ensures that everyone understands their roles, and enhances the overall efficiency of emergency response efforts. The participants stated;

**Participant 1:** *“Ginapahimo namo ang mga teachers og assigned roles before pa magka-emergency. Ang mga parents ug barangay officials apil pud sa evacuation ug safety monitoring.”*

(We assign roles to teachers ahead of time before any emergency happens. Parents and barangay officials also participate in evacuation and safety monitoring.)

**Participant 2:** *“Ang mga estudyante among ginatudluan daan sa drill para kabalo sila unsay buhaton. Ang mga teachers ug Parent-Teacher Association (PTA) officers tabang sa pagtabang sa mga bata nga nagpanic.”*

(We train students through drills so they know what to do. Teachers and PTA officers help manage students who panic during earthquakes.)

**Participant 3:** *“Ang mga staff among gi-train nga mag-lead og evacuation sa ilang mga klase. Ang barangay DRRM team maghatag og first aid ug assistance kung naay masamdan.”*

(We train the staff to lead their respective classes during evacuation. The barangay DRRM team provides first aid and assistance when someone gets injured.)

The statements suggest that effective emergency response in schools depends largely on the active participation of both staff and students, reinforced by the support of community stakeholders. This underscores that

preparedness is not solely an administrative responsibility but a shared commitment that requires coordinated effort. The present finding aligns with the study of Salita et al. (2021), which found that consistent engagement in drills and collaborative safety initiatives significantly enhances emergency readiness and minimizes panic during real-life incidents. Both the current results and previous research emphasize that regular involvement in safety activities strengthens practical preparedness skills and promotes a culture of collective responsibility. However, while earlier studies primarily focused on measurable improvements in readiness and reduced anxiety, the present findings further highlight the relational dimension of preparedness, particularly the development of trust, cooperation, and shared confidence within the school community. Thus, sustained and inclusive participation fosters a more cohesive and resilient response system, enabling schools to manage crises more effectively.

#### 4. How Actual Earthquake Experiences Shaped the Personal and Professional Perspectives of Elementary School DRRM Coordinators on Disaster Preparedness and Response

##### Themes

*Enhancement of DRRM Strategies and Protocols*  
*Personal Realizations and Lessons Learned*  
*Community Engagement and Collaborative Preparedness*

##### 4.1 Enhancement of DRRM Strategies and Protocols

Operative evacuation systems are essential for comprehensive school emergency preparedness. Thus, regular evaluation and improvement of these systems ensure that evacuation routes, procedures, and safety measures are clearly marked, effectively communicated, and readily accessible, allowing students and staff to respond efficiently and safely during emergencies. Sample transcriptions are as follows;

**Participant 1:** *“Human sa tinuod nga linog, among gi-update ang evacuation routes ug gibutang ug klaro nga signs. Naga-assign pud mi ug more safety marshals per classroom.”*

(After the real earthquake, we updated the evacuation routes and put up clear signs. We also assigned more safety marshals per classroom.)

**Participant 2:** *“Ang mga evacuation routes gi-review ug gi-expand aron walay congestion. Gi-reassign pud ang mga teachers para mas klaro ang supervision sa mga bata.”*

(The evacuation routes were reviewed and expanded to avoid congestion. Teachers were also reassigned to ensure clear supervision of the students.)

**Participant 3:** *“Nagdugang mi og emergency kits ug first aid stations sa mga classrooms. Gihimo pud namo nga mandatory ang quick headcount kada evacuation drill.”*

(We added emergency kits and first aid stations in the classrooms. We also made quick headcounts mandatory during every evacuation drill.)

The statements suggest that the continuous upgrading and proper maintenance of school resources and safety equipment contribute not only to a safer physical environment but also to clearer communication systems, more efficient evacuation procedures, and heightened overall preparedness among both staff and students. Adequate and functional resources serve as the foundation for effective emergency management, ensuring that protocols can be implemented smoothly and without confusion during critical situations. This finding aligns with the study of Labanan (2022), which reported that schools that consistently review and rehearse their evacuation procedures tend to record fewer injuries and demonstrate quicker response times during actual emergencies. Both the present results and prior research emphasize the importance of systematic preparation and resource readiness in minimizing harm. More so, while earlier studies primarily highlighted measurable outcomes such as reduced injuries and faster response, the current findings further underscore the broader institutional impact—particularly how well-maintained resources enhance communication flow and collective confidence.

##### 4.2 Personal Realizations and Lessons Learned

Maintaining emotional control and composure is a critical aspect of effective emergency management in schools. Teachers and staff who remain calm under pressure can make better decisions, provide clear instructions,

and reassure students, thereby minimizing panic and ensuring a more orderly and efficient response during crises. Sample transcriptions are as follows;

**Participant 1:** *“Naka-realize ko nga ang kalma ug pasensya mao gyud ang pinaka-importante. Kung composed ka, mas dali nimo matabangan ang uban ug malikayan ang panic.”*

(I realized that calmness and patience are the most important. When you are composed, it's easier to help others and prevent panic.)

**Participant 2:** *“I learned nga preparation dili lang sa drills, kundi pati sa mindset. Kinahanglan ready mentally ug emotionally para mo-react sa tama nga paagi.”*

(I learned that preparation is not just about drills, but also mindset. You must be mentally and emotionally ready to respond appropriately.)

**Participant 3:** *“Ang lesson nako kay kinahanglan flexible ug alert ka pirmi. Dili tanan predictable sa real situation, so dapat ready ka mag-adjust anytime.”*

(My lesson is that you must be flexible and alert at all times. Not everything is predictable in real situations, so you must be ready to adjust anytime.)

This finding implies that emotional preparedness is equally as vital as physical readiness in effective school emergency management. Moreover, beyond having established protocols and equipment in place, the ability of teachers and staff to regulate their emotions, remain composed, and think clearly under pressure significantly influences the outcome of crisis situations. Emotional stability enables educators to make sound decisions, provide reassurance, and maintain order during high-stress events. These results are consistent with the study of Babicky and Seebauer (2019), which found that training programs emphasizing stress management and emotional regulation enhance teachers' confidence and decision-making abilities during emergencies. Both the present findings and previous research highlight that psychological readiness strengthens overall response effectiveness. However, while earlier studies primarily focused on improvements in individual confidence and cognitive performance, the current findings further emphasize the broader social impact, particularly how calmness, patience, and mental flexibility among educators help reduce student panic, foster trust, and promote collective resilience. Thus, integrating emotional preparedness into emergency training programs enhances not only individual competence but also the safety and stability of the entire school community.

#### 4.3 Community Engagement and Collaborative Preparedness

Successful emergency preparedness in schools relies on the seamless integration of staff and students in planning, drills, and response activities. When both groups are actively involved and coordinated, it ensures that everyone understands their roles, responsibilities, and procedures, fostering a safer and more efficient environment during crises. The participants shared;

**Participant 1:** *“Human sa linog, among gibuhang nga drills dili na lang monthly pero bi-monthly. Ang mga teachers gi-assign og klarong roles during evacuation aron dili maglibog.”*

(After the earthquake, we changed our drills from monthly to bi-monthly. Teachers were assigned clear roles during evacuation to avoid confusion.)

**Participant 2:** *We started conducting role-specific drills for teachers, students, ug staff para mas prepared ang tanan. Gi-revise pud ang mga evacuation signs.*

(We started conducting role-specific drills for teachers, students, and staff so everyone is more prepared. We also revised the evacuation signs.)

**Participant 3:** *I learned nga ang students tan-awon ang teachers kung unsaon nila pag-react. Kung kalma ka, mas dali ma-control ang panic sa classroom.*

(I learned that students watch how teachers react. If you stay calm, it's easier to control panic in the classroom.)

This finding indicates that the integration of both staff and students in emergency planning and drills is fundamental to establishing a coordinated and systematic response framework. Moreover, when all members of the school community clearly understand their roles and responsibilities, the likelihood of confusion is reduced, safety procedures are executed more efficiently, and evacuation processes become more organized. Shared participation

fosters accountability and reinforces a culture of collective preparedness. These results are consistent with the study of Astuti et al. (2021), which emphasized that clearly defined role assignments and regular joint drills enhance collaboration and significantly reduce panic during real emergency situations. Both the present findings and prior research underscore the importance of structured involvement in strengthening response efficiency. However, while earlier studies primarily highlighted improvements in collaboration and reduced anxiety, the current findings further stress the operational benefits. Further, actively involving both staff and students in emergency preparedness not only improves coordination but also contributes to a safer, more resilient school environment.

### Conclusions

The study concluded that elementary school DRRM coordinators in Jose Abad Santos played a vital role in strengthening school earthquake preparedness through effective coordination, adaptive leadership, and collaborative engagement with stakeholders. Despite challenges related to limited resources, communication barriers, and student panic, coordinators demonstrated resilience by applying coping strategies grounded in training, experience, and emotional regulation. Their experiences during actual earthquakes led to improvements in evacuation systems, safety protocols, and leadership practices, contributing to enhanced school disaster preparedness.

### Recommendations

The findings of the study indicate that schools may strengthen disaster preparedness by enhancing structured communication systems and clearly defining DRRM roles among personnel. Schools may also consider continuous training programs that focus not only on technical skills but also on emotional regulation and leadership during emergencies. Strengthening collaboration with local disaster management offices and community stakeholders may further improve coordinated response efforts and resource mobilization during earthquake events.

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