

Preparedness on Disaster Risk Reduction Management Measures, Competence and Challenges Faced by Schools

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Abstract: This explanatory mixed-method research examines the preparedness, competence, and challenges of sixteen (16) school DRRM coordinators in Salcedo 1 district, Schools Division of Eastern Samar, in response to their task in implementing school DRRM measures. The data gathering techniques, namely, the use of the adopted questionnaire and focus group discussion, further explored their preparedness and competence, the challenges they experienced, their corresponding coping mechanisms, and the institutional mechanisms that support the implementation of DRRM in the said district. Significant results of the study revealed that the DRRM coordinators are somewhat prepared for the community risk assessment, communication system, and capacity building. Moreover, the competence level of school DRRM coordinators showed and was interpreted as “Highly competent.” Determining the association between preparedness level on DRRM measures and the competence of School DRRM coordinators resulted in a significant relationship between community risk assessment, communication system, and capacity-building the competence of school DRRM coordinators. Recommendations include sustaining the preparedness of coordinators, developing tactical response and command leadership skills, training in community risk assessment, substantial allocation of funds for DRRM, prioritization of DRRM activities, and integrating DRRM into School Improvement Plans (SIP) and embedding these activities within the school curriculum.

Keywords: Natural Disasters; Minimizing Damages; Department of Education; DRRM and Preparedness; Salcedo 1 District; Disaster Risks; Reduction Management; Effective Measures; Development Policies.

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1. Introduction

In recent years, the Philippines has experienced an increasing frequency of natural disasters, including typhoons, earthquakes, and floods, significantly impacting communities. Given the country's geographical position along the Pacific Ring of Fire and within the Pacific typhoon belt, preparing for and effectively managing disaster risks is crucial to safeguarding lives and

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minimizing damages. The education sector, in particular, plays a pivotal role in disaster preparedness, as schools serve as educational institutions and often as evacuation centres and community hubs during emergencies [11]. This dual role requires school-based Disaster Risk Reduction and Management (DRRM) coordinators to be highly competent and well-prepared to respond effectively in times of crisis.

The Department of Education has requested that school administrators implement disaster contingency plans at their respective institutions. Disasters can have a greater impact on schools, instructors, and students if they are not prepared. Disaster risk reduction and management focusses on organising people to preserve lives and prevent disruptions in education provision, in addition to preventing property damage. Teachers, students, parents, and communities are all urged to actively participate in disaster preparedness as a means of increasing their knowledge of the importance of risk reduction. To keep the entire school safe and lessen the impact of emergencies and other hazardous situations, administrators, instructors, staff, parents, and students can collaborate [17]. The level of difficulty that schools faced while implementing the School Disaster Risk Reduction Management Office (SDRRMO) program was emphasised in Riñon's study [15]. It must maintain its disaster readiness, response, rehabilitation, and recovery efforts as outlined in the SDRRMO program.

This research titled, “Preparedness on Disaster Risk Reduction and Management (DRRM) Measures, Competence and Challenges Faced by School DRRM Coordinators in Salcedo I District in the Division of Eastern Samar,” aims to assess the current level of preparedness, competencies and challenges of DRRM coordinators in the said district. DRRM coordinators are responsible for implementing preventive measures, conducting preparedness drills, and coordinating disaster response initiatives [21]. Their ability to perform these tasks competently and confidently is critical in reducing the risks faced by students, faculty, and the community during disasters. The study seeks to identify the strengths and areas for improvement among school DRRM coordinators. Understanding these factors will enable school heads, local government units, community, and other stakeholders to develop interventions that enhance the skills and preparedness of DRRM coordinators, elevate their competence, and cope with challenges that emanate in delivering effective measures to counter calamities. By doing so, this paper contributes to a safer school environment. It strengthens the community's overall resilience in facing disasters, aligning with local and national disaster risk reduction policies and objectives.

1.1. Research Questions

Schools serve not only as safe structures but also as vital social institutions in community resilience efforts. Thus, preparation, competence, and coping mechanisms for the challenges faced by DRRM coordinators were significant elements in the success of DRRM implementation. This paper determined preparedness on DRRM measures, competence, and challenges of school DRRM coordinators in the first district in Salcedo in the Schools Division Office (SDO) of Eastern Samar. Specifically, it sought answers to the following questions:

- What is the level of preparedness of school DRRM coordinators on disaster risk reduction and management in terms of:
 - Community risk assessment
 - Communication system and
 - Capacity building?
- What is the competence level of school DRRM coordinators in the Salcedo I district?
- Is there a significant relationship between the preparedness level of DRRM measures and the competence of school DRRM coordinators?
- What are the challenges in the district's implementation of DRRM measures?
- How do the school DRRM coordinators cope with these challenges?

2. Literature Review

The Philippines is one of the countries most affected by natural disasters due to its geographic location within the Pacific Ring of Fire and its exposure to tropical storms and other extreme weather patterns. Natural disasters such as typhoons, volcanic eruptions, and earthquakes significantly impact the country year-round, creating widespread physical and economic damage. To mitigate these risks, the Philippines adopted the Hyogo Framework for Action (HFA), which prioritizes integrating disaster preparedness, prevention, and mitigation measures into sustainable development policies, plans, and programs. This initiative emphasized reducing vulnerabilities through comprehensive disaster risk reduction (DRR) measures, which include identifying, assessing, and managing risks as part of a systematic approach to lowering the vulnerability of communities to natural hazards [10]. Disaster preparedness and awareness among Filipino citizens play a crucial role in minimizing casualties and damages caused by such disasters.

Schools, in particular, serve as critical assets in disaster preparedness and response. With their accessible facilities and staff, schools can aid significantly in immediate and long-term recovery efforts during a crisis. They provide physical infrastructure for response and relief efforts and serve as community hubs for communication, supply distribution, and support. Additionally, schools offer a space for psychological and emotional care, addressing the social needs of students and families who may be affected by disasters. This dual role of schools was underscored in the 2017 Comprehensive School Safety Framework, which emphasized the importance of schools as safe physical spaces and vital community centres capable of extending social support during disaster events.

Given the high exposure of school communities to disaster risks, initiatives to make schools safer have become essential, especially for protecting students from hazards such as earthquakes. Studies indicate that schools can serve as entry points for disaster risk education, equipping children and their communities with knowledge of preparedness and mitigation strategies. Dayagbil et al. [3] discussed the role of schools as effective venues for capacity-building programs aimed at teaching earthquake safety and preparedness, which significantly contributes to creating a culture of resilience in vulnerable communities. Dimalanta and Salcedo [4] highlighted that education fosters skills like abstract reasoning and anticipation, which enhance an individual's likelihood of taking preventive actions rather than reacting only after encountering risks. Moreover, schools reflect the values and needs of the society in which they exist, underscoring the necessity of creating secure environments that support learning. Arabaci and Özkan [1] argued that the security of the wider community is fundamental to creating a safe school environment, as schools are social institutions shaped by societal conditions. This perspective is echoed by O'Reilly and Verdugo [14], who stated that addressing community security is a prerequisite for establishing schools as safe places, thereby fostering environments conducive to effective learning.

Although limited, emerging studies on school disaster readiness are increasing in response to the frequent calamities experienced in the Philippines. Salita et al. [18] explored teachers' perspectives on school disaster preparedness, finding that while teachers engage in preparedness activities like emergency response planning, disaster drills, and curriculum integration of DRR concepts, they face challenges due to limited resources, inadequate training, and insufficient coordination with local agencies. This study emphasizes the necessity of continuous support and capacity-building efforts for teachers to enhance school disaster preparedness. Similarly, Hoffmann and Muttarak [6] examined the role of teachers in two Philippine schools, highlighting teachers' responsibilities in disaster response and recovery, including providing psychosocial support and leadership. This study underscores the importance of recognizing and strengthening the contributions of teachers in disaster preparedness and management. Kikuta et al. [8] further compared the resilience of two schools in the Philippines, focusing on teachers' roles in ensuring preparedness through disaster drills, emergency planning, and collaboration with local disaster management agencies. The study called for continuous training, enhanced infrastructure, and strengthened partnerships between schools and local agencies to bolster school resilience. Internationally, studies by the Prudence Foundation in 2017 and the Center for Disaster Preparedness Foundation Inc. in 2019 highlight similar initiatives in disaster preparedness, with "Save the Children" and the Prudence Foundation implementing the Safe Schools projects to train teachers and students in preparedness and recovery, emphasizing proactive disaster readiness.

Further research by Rocha et al. [16] in the Philippines revealed that teachers who experienced various disasters reported feeling unprepared, citing a lack of training and resources as barriers. The study recommended developing DRR programs tailored to teachers' needs and integrated into the curriculum to ensure students' access to disaster-related knowledge and resources. This approach aligns with Choi and Oh's [2] findings in South Korea, where teachers' readiness and knowledge about disaster management influenced their ability to respond effectively. The study recommended more comprehensive disaster education programs in schools, enhancing teachers' knowledge and skills, as teachers' perceptions of these measures influence their engagement in preventive activities. Teachers in the Philippines encounter unique challenges in obtaining resources and support during and after calamities. Grefalda et al. [5] found that teachers often lack effective communication channels, emergency supplies, and mental health resources. This underscores the importance of addressing physical and psychological well-being needs in disaster scenarios. Mutch and Latai [12] noted the visible toll that disasters inflict on communities, emphasizing schools' role as support centres in post-disaster recovery, addressing affected individuals, and fostering community resilience.

Studies by Shah et al. [20] and his colleagues emphasize teachers' pivotal roles in ensuring student safety during calamities. They noted that teachers responsible for their students' immediate safety must possess essential skills like evacuation procedures, first aid, and emotional support. Identifying gaps in teachers' disaster preparedness allows for targeted recommendations for training programs that enhance their knowledge and skills. Recent studies on DRRM competency among students, such as those by Olores et al. [13], show that high school students' DRRM skills require improvement, especially in applying DRRM concepts. The study calls for curriculum enhancements and specialized teacher training to address competency gaps. Santos [19] also emphasized that raising DRR awareness, properly training teachers, and providing adequate resources are crucial to improving DRR education in the Philippines. In the Philippines, Ronquillo [17] found that senior high school teachers play an essential role in familiarizing students with standard procedures for fire and earthquake drills and consistently encourage preparedness among school personnel and students alike. This highlights the importance of systematic preparedness

efforts in schools, where teachers' involvement and the provision of relevant training directly contribute to the safety and resilience of school communities.

In conclusion, research highlights the indispensable role of schools and teachers in disaster preparedness, response, and recovery. Teachers' involvement in disaster education, training, and planning ensures that students and staff are prepared for and capable of responding to crises. Continuous support, enhanced training, and resource availability are essential for fostering a culture of resilience within schools, ultimately strengthening the broader community's capacity to withstand and recover from disasters. This comprehensive review of related literature provides a foundation for examining the competence of disaster preparedness measures and the challenges among DRRM coordinators in Philippine schools, particularly in the Salcedo I District.

3. Research Methodology

This basic research employed a complete or total enumeration technique to determine the exact respondents/participants of the study. This approach involves analyzing every possible scenario within the defined boundaries, ensuring a comprehensive understanding of the system under study. This means that all sixteen (16) DRRM coordinators, both in elementary and secondary, were given a questionnaire that paved the way in determining the preparedness and competence of DRRM measures. However, in FGD, the study required nine (9) participants to provide insights on the perceived challenges and their coping mechanisms toward DRRM implementation.

3.1. Participants

The casual partners for this mixed method study are all 16 school DRRM coordinators. They were appointed by the District in Charge in consonance with Republic Act No. 10121, re: Philippine Disaster Risk Reduction and Management Act of 2010, and DepEd Order No. 21, s. 2015 re: Disaster Risk Reduction and Management Coordination and Information Management Protocol. They are directed to form/reconstitute their School Disaster Risk Reduction and Management (SDRRM) Committee to spearhead the conduct of Disaster Risk Reduction/Climate Change Adaptation (DRR/CCA)-related programs/projects/activities in their respective schools.

3.2. Instruments of the Study

For the quantitative part, this paper utilized an adopted questionnaire adapted from Ronquillo [17] to obtain results from research question 1 and the study of Jauro and Talaman [7] to get answers to research question 2. Moreover, for the qualitative part, this paper utilized focus group discussion or FGD to answer research questions 3 & 4.

3.3. Procedure

This study commenced by seeking approval from the District in Charge (DIC) to conduct the study for both elementary and secondary school DRRM coordinators. After receiving authorization, permission was sought from the school heads of the participating respondents/participants. After the school heads granted their permission, the researchers sent the online Google form containing the survey questionnaire to the respondents/participants. They explained the purpose of the study, emphasizing confidentiality and voluntary participation. Completed questionnaires were then downloaded for secure storage and subsequent data analysis. After the quantitative approach, the researchers initiated FGD, in which 9 participants were invited to realize the challenges and coping mechanisms of school DRRM coordinators. Their responses were subjected to thematic analysis (qualitative approach).

3.4. Ethical Considerations

To avoid violating the group of respondents/participants, the researchers ensured that the respondents' data were secured and shall remain confidential. The study's respondents were given informed consent before participating to be fully informed about the purpose of the research, the procedures involved, potential risks and benefits, and their right to withdraw from the study at any time without repercussions.

Moreover, researchers also informed the respondents that participation in the study was voluntary and that they should not be coerced or unduly influenced to participate. The researchers clarified that participation was optional and that declining to participate or withdrawing from the study did not result in any negative consequences. Additionally, the privacy and confidentiality of the respondents were managed carefully during the survey, data analysis, and dissemination of the findings.

4. Results and Discussion

In alignment with the research questions framed in this study, applying the explanatory mixed method (quantitative first followed by qualitative) provided a comprehensive set of results. The results obtained offer valuable insights and address the key inquiries posed, shedding light on the various dimensions explored within the research.

4.1. Level of Preparedness of School DRRM Coordinators on Disaster Risk Reduction and Management

In assessing the effectiveness of disaster preparedness in schools, it is essential to understand the level of readiness among School Disaster Risk Reduction and Management (DRRM) coordinators. This part presents the results related to their preparedness in three critical areas: community risk assessment, communication systems, and capacity building. The following results provide a comprehensive view of their strengths and areas for improvement in safeguarding school communities against potential hazards, especially in Salcedo I District, Division of Eastern Samar.

Table 1: School DRRM Coordinators' Level of Preparedness in Community Risk Assessment

Serial No.	Statement	Mean	Verbal Interpretation	Rank
1.	Details potential hazards and ways to mitigate them	3.13	Somewhat Prepared	5
2.	Encourages teamwork and communication amongst emergency personnel	3.00	Somewhat Prepared	6
3.	Plans and executes community-based initiatives to reduce vulnerability to disasters, including tree planting and cleanup campaigns	3.00	Somewhat Prepared	6
4.	Helps pupils become accustomed to the routine, rules, and expectations of the fire and earthquake drills	3.56	Always Prepared	2
5.	Assists local media in raising awareness about the need to reduce disaster risk	2.94	Somewhat Prepared	9
6.	Sets up and keeps the Barangay Disaster Council in the loop	3.50	Always Prepared	3
7.	Performs risk assessment, vulnerability mapping, and student-led activities	2.88	Somewhat Prepared	10
8.	Make sure there is enough room for an evacuation route and that there is a well-thought-out plan for getting everyone out of the building safely.	3.00	Somewhat Prepared	6
9.	Places safeguards in place on school grounds	3.44	Always Prepared	4
10.	Prompts both students and teachers to always be ready	3.69	Always Prepared	1
	Overall mean	3.21	Somewhat prepared	

Legend: Always Prepared (4) 3.26 – 4.00; Somewhat Prepared (3) 2.51 – 3.25; Slightly Prepared (2) 1.76 – 2.50; Unprepared (1) 1.00 – 1.75

The results in Table 1 reveal distinct areas of strength and potential improvement in the level of preparedness of school DRRM Coordinators in Salcedo I District, specifically in terms of community risk assessment. The highest mean score is observed in the statement "Encourages school personnel and students to be consistently prepared," with a mean of 3.69, interpreted as "Always Prepared". The second highest mean score, "Familiarizes students with standard procedures, the Dos and Don'ts during the fire and earthquake drills," has a mean of 3.56, also interpreted as "Always Prepared.". The statement, "Establishes and maintains coordination with Barangay Disaster Council," ranks third with a mean score of 3.50, also interpreted as "Always Prepared." This indicates that School DRRM Coordinators place a strong emphasis on fostering a culture of preparedness where both staff and students are continuously reminded and encouraged to remain vigilant and ready for potential disasters.

The overall mean score for School DRRM Coordinators' preparedness in community risk assessment is 3.21, verbally interpreted as "Somewhat Prepared." This average indicates a moderate level of preparedness with strong performance in promoting school-wide readiness and student education on disaster protocols. Still, there are some gaps in community collaboration and detailed risk assessment activities. These findings conform with the results of Ronquillo [17], who states that school personnel and students need to be constantly prepared for community risk assessment and the implementation of security and safety measures on the school premises. Addressing these areas would further enhance the effectiveness and resilience of the school's disaster preparedness initiatives.

Table 2: School DRRM Coordinators' Level of Preparedness in Communication System

Serial No.	Statement	Mean	Verbal Interpretation	Rank
1.	Conducts information dissemination	3.44	Always Prepared	2
2.	Establishes linkages with local agencies	3.50	Always Prepared	1
3.	Encourages community participation in disaster risk reduction management initiatives through planning, execution, and evaluation.	3.13	Somewhat Prepared	5
4.	Organizes unit assigned to give warning signs	3.06	Somewhat Prepared	6
5.	Provides communication equipment, tools, and materials	2.50	Slightly Prepared	9
6.	Posts informational signs and sets up a communication section to help get the word out about the school's effort to reduce risks.	2.69	Somewhat Prepared	8
7.	Identifies the persons and agencies to call for assistance and posts a list of emergency telephone numbers	3.19	Somewhat Prepared	4
8.	Specifies what should be done in the event of an emergency by school personnel and educators	3.38	Always Prepared	3
9.	Understands the Incident Command System	2.81	Somewhat Prepared	7
10.	Attends Incident Command System Training/ Orientation	2.38	Slightly Prepared	10
	Overall mean	3.01	Somewhat Prepared	

Legend: Always Prepared (4) 3.26 – 4.00; Somewhat Prepared (3) 2.51 – 3.25; Slightly Prepared (2) 1.76 – 2.50; Unprepared (1) 1.00 – 1.75

The findings in Table 2 provide insights into the level of preparedness of School DRRM Coordinators in Salcedo I District concerning the Communication System in disaster risk reduction and management. The highest mean score, 3.50, interpreted as “Always Prepared,” is attributed to the statement, “Establishes linkages with local agencies.” This was followed by conducting information dissemination and defining the role of teachers and school members in case of emergencies, with the mean scores of 3.44 and 3.38, respectively, interpreted as “Always Prepared.” This indicates a strong level of preparedness in forming partnerships with local agencies, an essential step for effective communication and coordination during emergencies. This linkage enhances the school's access to resources, expert assistance, and information, which are vital for comprehensive disaster risk management. This indicates further that coordinators are proactive in sharing information on disaster preparedness, risk factors, and safety protocols with the school community. These findings support Ronquillo's [17] conclusion that information dissemination is important to disaster preparedness. However, while the overall mean score for the Communication System is 3.01 with a verbal interpretation of “Somewhat Prepared,” this indicates that while School DRRM Coordinators in Salcedo I District show a strong level of preparedness in establishing agency linkages, disseminating information, and defining roles for emergencies, there are notable areas requiring improvement. Specifically, increased access to training, provision of communication tools, and broader dissemination of risk reduction plans could further elevate the school community's disaster preparedness, making communication more effective and response measures more efficient.

Table 3: School DRRM Coordinators' Level of Preparedness in Capacity Building

Serial No.	Statement	Mean	Verbal Interpretation	Rank
1.	Acquires knowledge about survival kits, equipment, and tools	2.63	Somewhat Prepared	6
2.	Manages to use survival kits, tools, and equipment through seminar/workshop	2.56	Somewhat Prepared	7
3.	Provides temporary learning space	2.75	Somewhat Prepared	5
4.	conducts research study on the enhancement of current DRRM programs of the school	1.94	Slightly Prepared	10
5.	Organizes available transportation during emergencies	2.38	Slightly Prepared	9
6.	Plans and regularly reviews school DRRM and Contingency Plans aligned with the local plan	3.00	Somewhat Prepared	3
7.	Integrates risk reduction and management in the curriculum and other informal education	3.13	Somewhat Prepared	1
8.	Coordinates operational activities being undertaken by relevant agencies such as NSED and Fire Drill	3.06	Somewhat Prepared	2
9.	Conducts capability training/ workshops for community members and regular meeting	2.44	Slightly Prepared	8

10.	Ensures all concerned report and follow the flow of activities during and after a disaster by the DRRM Team	2.88	Somewhat Prepared	4
	Overall Mean	2.68	Somewhat Prepared	

Legend: Always Prepared (4) 3.26 – 4.00; Somewhat Prepared (3) 2.51 – 3.25; Slightly Prepared (2) 1.76 – 2.50; Unprepared (1) 1.00 – 1.75

From the recent Table 3, it can be gleaned that integration of risk reduction and management in the curriculum and other formal education followed by coordination of operational activities being undertaken by relevant agencies such as NSED and Fire Drill and Planning and regularly reviewing the school DRRM and Contingency Plan aligned with the local plan. This score reflects a moderate preparedness level in aligning the school's disaster plans with local strategies, an essential step for maintaining consistent response protocols. Regular review of these plans helps identify gaps and update procedures, enhancing the overall effectiveness of the school's disaster response.

The overall mean score for Capacity Building is 2.68, which is interpreted as “Somewhat prepared.” This result indicates that while School DRRM Coordinators demonstrate a moderate level of preparedness in integrating risk reduction into the curriculum, coordinating with agencies, and reviewing disaster plans, significant areas remain for growth. Notably, improvements are needed in research efforts, emergency transportation organization, and community capability training. Addressing these areas can enhance the overall disaster preparedness and resilience of the school community in the Salcedo I District.

4.2. Competence Level of School DRRM Coordinators in Salcedo I District

Table 4: School DRRM Coordinators' Level of Competence

Serial No.	Statement	Mean	Verbal Interpretation	Rank
1.	Managing people and school personnel, rendering duty	3.38	Highly Competent	1
2.	Coordinating with the municipal DRRM Team	3.38	Highly Competent	1
3.	Calculating the full extent of a disaster's losses, damages, and affects in order to establish recovery and rehabilitation priorities	3.06	Competent	6
4.	Providing direction and coordination in the event of an emergency or a prearranged event (like a festival or conference)	3.25	Competent	5
5.	Ensuring the provision of essential teaching and learning resources to ensure the continuity of education	3.38	Highly Competent	1
6.	Reporting damages in our school using the RADaR App	3.38	Highly Competent	1
	Overall Mean	3.30	Highly Competent	

Legend: Highly Competent (4) 3.26 – 4.00; Competent (3) 2.51 – 3.25; Somewhat Competent (2) 1.76 – 2.50; Not Competent (1) 1.00 – 1.75

The results in Table 4 provide insights into the competence level of School DRRM Coordinators in Salcedo I District concerning disaster risk reduction and management. Several statements share the highest mean score of 3.38 with the verbal interpretation “Highly Competent,” reflecting their ability to coordinate with the municipal DRRM team, indicating a strong capacity for collaboration with local authorities, which is crucial for aligning school disaster preparedness efforts with broader community response plans. Additionally, their competence in providing basic needs to maintain educational continuity shows their dedication to minimizing disruptions to learning during disasters.

Furthermore, coordinators' proficiency in using the RADaR App for reporting damages signifies their technological capability to document and assess disaster impacts efficiently, facilitating timely response and recovery processes. These findings support the conclusion of Lourenço and Dickman [9] that DRRM coordinators are rated as knowledgeable and have a positive attitude toward disaster management. The overall mean score of 3.30 is interpreted as “Highly Competent,” indicating that the School DRRM Coordinators are well-equipped with the necessary skills and knowledge to effectively lead disaster preparedness and response efforts.

However, attention to enhancing skills in assessing recovery needs and tactical command leadership could further strengthen the coordinators' preparedness and response capabilities. These findings emphasize the coordinators' solid foundation in DRRM while identifying specific areas for growth to achieve even higher levels of competency in disaster management.

4.3. Significant Relationship between Preparedness Level on DRRM Measures and Competence of School DRRM Coordinators

Table 5: Significant Relationship between Community Risk Assessment and Competence of School DRRM Coordinators

Alpha	Degrees of Freedom	Critical Value	Computed R-Value	Decision	Interpretations
0.05	14	0.4973	0.6636	Reject Ho	Significantly Related

The findings in Table 5 present the relationship between community risk assessment and the competence of School Disaster Risk Reduction and Management (DRRM) Coordinators within the Salcedo I District in the Division of Eastern Samar. Using a significance level (alpha) of 0.05 and degrees of freedom of 14, the critical value for correlation is 0.4973. The computed R-value, however, is 0.6636, which exceeds the critical value, leading to the rejection of the null hypothesis (Ho). This rejection indicates a statistically significant relationship between the community risk assessment and the competence of the school DRRM coordinators.

The positive correlation indicates that as community risk assessment practices improve, there is a corresponding enhancement in the competence of school DRRM coordinators. This implies that school DRRM coordinators with higher competence levels are better equipped to assess community risks accurately and adapt their DRRM strategies accordingly, contributing to improved disaster preparedness. This significant relationship also implies the importance of building DRRM coordinators' skills in evaluating the community's vulnerability and disaster resilience. These competencies may include risk identification, situational analysis, and effective communication of risks to various stakeholders.

Table 6: Significant Relationship between Communication System and Competence of School DRRM Coordinators

Alpha	Degrees of Freedom	Critical Value	Computed R-Value	Decision	Interpretations
0.05	14	0.4973	0.7356	Reject Ho	Significantly Related

The data in Table 6 reveal the significant relationship between the communication system and the competence of School Disaster Risk Reduction and Management (DRRM) Coordinators in the Salcedo I District, Division of Eastern Samar. Using an alpha level of 0.05 with 14 degrees of freedom, the critical value for a statistically significant correlation is 0.4973. The computed R-value of 0.7356 surpasses this threshold, rejecting the null hypothesis (Ho). This result suggests that coordinators with advanced competencies are more likely to effectively implement, manage, and utilize communication systems crucial for disaster preparedness and response. Effective communication is a core component of disaster risk reduction, enabling coordinators to relay timely information, coordinate with stakeholders, and respond swiftly to disaster situations.

Table 7: Significant Relationship between Capacity Building and Competence of School DRRM Coordinators

Alpha	Degrees of Freedom	Critical Value	Computed R-Value	Decision	Interpretations
0.05	14	0.4973	0.7057	Reject Ho	Significantly Related

The figures in Table 7 demonstrate a significant relationship between capacity building and the competence of School Disaster Risk Reduction and Management (DRRM) Coordinators in the Salcedo I District, Division of Eastern Samar. With an alpha level set at 0.05 and degrees of freedom at 14, the critical value required to establish statistical significance is 0.4973. The computed R-value, however, is 0.7057, which exceeds the critical value, leading to the rejection of the null hypothesis (Ho). This result indicates a statistically significant and strong positive relationship between capacity building and the competence of school DRRM coordinators.

The positive correlation suggests that as capacity-building initiatives improve, so does the competence of school DRRM coordinators. This significant relationship highlights that training, professional development, and skill enhancement directly contribute to the coordinators' ability to perform their roles effectively. Competence in DRRM requires a diverse set of skills, including risk assessment, crisis communication, emergency response planning, and leadership. Effective capacity building ensures that coordinators are equipped with these skills, fostering improved disaster preparedness and response in school settings.

5. Challenges in the Implementation of DRRM Measures in the District

In pursuing safer and more resilient educational environments, understanding the various challenges associated with Disaster Risk Reduction and Management (DRRM) implementation in schools is essential. This aims to delve into the specific factors impacting DRRM effectiveness within elementary schools, identifying the key obstacles and resource limitations that hinder comprehensive disaster preparedness and response. Drawing from the diverse responses gathered from the Focus Group Discussion with DRRM Coordinators in the Salcedo I District, the following key themes have been identified:

5.1. Significant Structural and Environmental Hazards

The physical environment of a school plays a pivotal role in determining its vulnerability to natural disasters and other emergencies. In schools located in hazard-prone areas, structural and environmental risks significantly threaten the safety of students, teachers, and staff. This theme explores the specific structural weaknesses and environmental hazards that schools face, ranging from precarious hillside locations susceptible to landslides to inadequacies in building construction and safety equipment.

Participant 2: *“For our school, Salcedo Central Elementary School, the challenges that we face, we are not prepared for any disaster. First, most buildings are poorly constructed, and our electrical facilities are unsafe. We are not prepared for fires or typhoons because the buildings are poorly built, and the electrical wiring is not safe for our children and for the building. In other facilities, we have no other warning device. There are so many hazards in our school. In the vicinity of our school, we don’t have any warning signs posted. We have many hazards in our school, and no fire extinguishers are available. Ideally, every school building should have at least one fire extinguisher, but we don’t have that one.”*

Participant 8: *“Yes, for Seguinon Elementary School, one of the most significant challenges we face in implementing DRRM measures and preparing for whatever eventualities in our school is access to water. For example, in the event of a fire, we have nowhere to go because we do not have water; that is one. Another thing is the location of our school, which is somewhat prone to landslides because our school is located on top of the hillside.”*

5.2. Funding and Resource Limitations

Adequate funding and resources are fundamental to successfully implementing any DRRM plan, yet many schools face severe budgetary constraints. Theme 2 examines how limited financial resources affect schools' abilities to secure essential equipment, conduct training, and maintain disaster preparedness initiatives. With competing demands on their budgets, schools often struggle to prioritize DRRM needs, leaving critical gaps in their readiness to handle emergencies. Addressing these financial challenges is crucial to ensure that all necessary DRRM resources are available for effective disaster risk reduction.

Participant 1: *“Funding affects DRRM implementation because we cannot initiate activity without such monetary funds. We cannot lay out or implement plans further without the support of other agencies. You mentioned equipment also. So that’s how critical funding is in implementing plans and projects.”*

Participant 2: *“In our school, they just rely on the coordinator for everything. That’s why I’m so thankful now that our DRRM coordinators are the school heads, but sadly, our school head is not as active as I was. I would go to the fire station and personally contact the fire department. We will have a fire drill today, so what shall I do? The teacher, even in providing snacks for the guest, the coordinator is the one financing it, not the school. I would do that because I’m the DRRM coordinator.”*

Participant 5: *“The impact in Casilion Elementary School is that our plans for disaster risk reduction just remained to be planned because we could not implement due to limited budget, which is being prioritized, and oftentimes the plans for DRRM are being neglected.”. “Because what happened for the school of that budget, most of that budget goes to the content, to the supplies, to the electric bills and so many others.”*

Participant 6: *“In Palanas Elementary School, the significant challenge we face in implementing the DRRM is our Lack of funds and resources in terms of, yes, monetary resources in implementing the DRRM plan. Then, the knowledge of the personnel, including me.”*

Participant 7: *“For Naparaan Elementary School, we take very seriously the financial limitation because no matter what plans we make to train and in terms of assessing the personnel's ability to deal with the different hazards we face, funding is essential. Maybe because we only rely on a fund source, the MOOE, but considering its many uses, we tend to forget to set aside a budget for DRRM. Our main priority is to allocate funds for instruction, like supplies and minor repairs of buildings and other school facilities, so we overlook even essentials like providing fire extinguishers, which are important for each*

building. We cannot allocate a budget due to our limited funds, which hinders the implementation of various DRRM programs and projects.”

5.3. Community and Stakeholder Engagement Challenges

Disaster preparedness and response require collaboration and active participation from all school stakeholders, including teachers, students, parents, and community members. However, lacking engagement, understanding, and DRRM skills within these groups can severely undermine a school’s ability to respond effectively during crises. Theme 3 focuses on the challenges schools face in mobilizing their communities and stakeholders, highlighting the need for improved training, knowledge sharing, and technical support. Enhanced engagement and skills within the school community are essential for fostering a culture of resilience and safety.

Participant 4: *“In our school, we have limited knowledge of what to do and how to act during or respond to emergencies. Limited knowledge- limited knowledge of the people we put on the chart or staff or DRRM staff (School DRRM Organizational Chart).”*

Participant 7: *“Lack of knowledge and skills because each teacher, pupil, and community should be equipped. They should have the necessary skills and knowledge in DRRM, such as first aid. How can the teacher, the child, or the community respond if they do not have these skills? Everyone must have the necessary skills to respond to any disaster.”*

Participant 8: *“Yes, in my case, the challenge is mine. I have no expertise in training like this and that. It’s very hard for us to invite technical people because it entails what was mentioned a while ago entails money. For example, I can contact and engage an expert in the field of DRRM. Can you request the fire department to help us with cleaning or training like this? Do you have that? It’s very hard. We cannot provide what they need.”*

5.4. Time Constraints and Competing Responsibilities

For school heads and teaching staff, managing DRRM tasks amid numerous other responsibilities presents a significant challenge. Theme 4 addresses how time constraints and competing priorities impact the execution of DRRM initiatives, often relegating disaster preparedness to the background in favour of curriculum demands and administrative duties. The pressure to balance DRRM with other essential tasks results in incomplete implementation and limited engagement with disaster preparedness activities.

Participant 3: *“Before I attended, there wasn’t even a chainsaw at the municipality. No, there was nothing; everyone was just talking, and as Sir said, there was a typhoon that was about to come, yet there wasn’t even one chainsaw available, and even the three generators were broken. There is a Lack of materials and equipment.”*

Participant 9: *“DRRM-related functions and activities tend to be neglected, and I believe everyone here can agree with me. These factors affect our performance, including time constraints, and no matter how well it’s planned, it impacts how effectively we can carry out our responsibilities. So, it becomes challenging.”*

“Because, Sir, time and resources become deficiencies, like lacking vitamins.”

“I’m not saying we’re the best, but we have undergone basic life support training for 5 days in Tolosa at Ocean View. Now, the problem is we can’t apply it because, number one, we lack time; that is time constraints. Then, if we have equipment to use, like the board and the wraps, we could do a reecho even within the school, but we don’t have the materials. The right term for this is, we can’t operationalize it.”

6. Coping Mechanism of School DRRM Coordinators on the Challenges Encountered

6.1. Prioritization of DRRM Activities in the Face of Limited Time and Resources

DRRM coordinators highlighted the challenge of prioritizing disaster risk reduction and management (DRRM) activities when time and resources are limited. Several participants shared how they only prioritize DRRM when a disaster is imminent or has already occurred.

Participant 6: *“In our school, to prioritize or to give emphasis on the DRRM activities, we have it in our SIP. We include it in our SIP, then integrate it in teaching, yes, in the integration, especially in Araling Panlipunan, Science, even GMRC or ESP.”*

Participant 8: *“It is the reality that we can only prioritize DRRM matters when the disaster is already here. Before anything happens, we just stay calm and calm down first because nothing has happened yet. For example, when the library in Seguinon burned down, it was a disaster. The people after the fire incident became alert because when the bell was ringing, they went directly there, but now there are people there from elsewhere, although I cannot identify them as neglectful. Is that the right term? For the ones who are neglecting, for example, the planks weren’t being secured even though I instructed them that when we leave the school, all planks should be secured. They were being secured, but something was left open, and when I returned, I figured it out. They were left open, something like that. How did this happen? So that’s what I’ve been noticing.”*

6.2. Seeking Support from Colleagues, School Heads, and the Community

When it comes to addressing DRRM challenges, participants emphasized the importance of collaboration and support from colleagues, administrators, and the broader community.

Participant 1: *“For us, we have to maintain the good relationship among ourselves within the schools and also with the stakeholders and for the whole community because in times you need to call them, you have an easy response, coordination from the community and also whenever the community has activities, we have to represent or participate to show also that we are in that partnership.”*

Participant 2: *“In my case, since we are in the central, we immediately go to the exact office that can address our problem. In case of an emergency, I have their telephone numbers. I also maintain a close relationship with them, so they rescue us immediately whenever we need help. We directly contact the office concerned.”*

Participant 9: *“I have, to make the committee work, I establish support from them through their commitment. I make them understand that this is what you can do, what you can contribute, based on our demands, and if possible, do it. We ask for their commitment to make it functional for those in need. Because when I was in Iberan, I encountered only one or two kids who were like that, and we reacted based on the situation. Although it was part of our training, we were to respond like this. Our reaction depends on the situation; it is situationally based.”*

6.3. Staying Updated on Best Practices or New Information in DRRM

Participants noted the significant role of technology and communication networks in staying updated on best practices and new information related to DRRM.

Participant 3: *“In addition to that, during our contingency planning in Catbalogan, the instructions from Sir, our division focal person, were very clear on when and how we should suspend classes. It was clearly stated that even with just an orange rainfall or red rainfall alert, we are allowed to suspend. For us as school heads, we can suspend classes as early as an orange or red rainfall alert.”*

Participant 9: *“In my part, Sir, I am very reliant on the beneficial effect of this worldwide web, the internet, because it is really useful. For example, we have this group chat created by Ma’am Myrna, where we are informed about what needs to be submitted related to DRRM. So, you must really be reliant and, of course, be observant of the benefits that the internet can offer us with proper utilization. We truly rely on announcements, rainfall advisories, and multimedia.”*

6.4. Personal Strategies and Adjustments to Adapt to DRRM Challenges

In the face of DRRM challenges, participants shared personal strategies they use to adapt to difficult situations.

Participant 1: *“What’s on my mind is to protect lives. That’s the foremost goal. Never mind the properties, as long as safety comes first.”*

Participant 7: *“Stay calm. As the school head here at our school, whenever there’s a fight among the pupils or if a snake appears, all the teachers run straight to the school head. They don’t realize their school head is just as scared, almost like I’d be the first to panic. But I have to keep myself calm. I tell myself they rely on me, and if I panic, we’ll all lose control. So, I have to stay steady, even if I’m shaking inside. I have to show them that everything is fine, even if it really isn’t.”*

Participant 8: *“I follow by instinct. So, one time, it wasn’t just one time but a couple of times—there was a classroom with a snake in it. The teacher said, ‘Sir, the snake is inside,’ and the pupils came out of the room. Oh no, no more classes? What are you saying, it’s just a snake, we don’t have any more class?’ Sir, I didn’t want to go in. ‘Don’t worry, stay calm—it’s just a snake. Where is it? Call the snake handler from the community and request him to come here.’ The snake was taken care of,*

and it died. To my surprise—or I don't know if it's the term to say—I thought the teacher would give even just a biscuit to the snake handler for getting rid of the snake.' For things like this, there should be a small snack or incentive because the next time you request something, you will be ignored. 'I won't go there because they did not offer a glass of water.'

Participant 9: *“Sir, I answer immediately. On my part, I maintain composure. As much as possible, I stay calm because if I start to panic, they might follow my lead. If they see me, they will be demoralized. It could affect them. Composure is key for me.”*

7. Conclusion

In enhancing disaster preparedness among School DRRM Coordinators in Salcedo I District, specific actions in community risk assessment, communication systems, and capacity building are highlighted. Coordinators shall integrate student-led hazard mapping and risk identification into the curriculum to foster awareness of local vulnerabilities. Additionally, evacuation plans must be refined and routinely updated, with clearly marked routes and designated safe areas, alongside regular drills to ensure familiarity for all students and staff. Developing tactical response and command leadership skills would enable coordinators to lead on-the-ground emergency actions more confidently and precisely. Regular tactical drills and workshops focused on real-time decision-making can improve this capability. These improvements will complement the coordinators' existing high competence in personnel management, municipal collaboration, continuity of education, and damage reporting, thereby boosting their overall effectiveness in disaster risk reduction and management.

Fostering partnerships with local government and community stakeholders would also be valuable, allowing coordinators to access essential data and resources to further refine their risk assessment skills and support a culture of disaster resilience. In addressing the challenges identified in the implementation of Disaster Risk Reduction and Management (DRRM) measures in the Salcedo I District, schools should advocate for a more substantial allocation of funds for DRRM from the School Improvement Plan (SIP) and the Maintenance and Other Operating Expenses (MOOE). Schools should also explore partnerships with local government units, non-governmental organizations, and other stakeholders to secure additional resources for DRRM activities. Furthermore, there is a need to enhance the understanding and commitment of all school personnel toward DRRM, ensuring that it is not solely the responsibility of the DRRM coordinator but a shared concern across the school community. Coping strategies for school DRRM coordinators' challenges include Prioritizing DRRM activities amidst limited time and resources. It is essential to integrate DRRM into School Improvement Plans (SIP) and embed these activities within the school curriculum across various subjects, such as Social Studies (Araling Panlipunan), Science, and Good Manners and Right Conduct (GMRC or ESP). Another one is staying updated on best practices and new information related to DRRM. Schools shall utilize available technology, such as group messaging apps, for timely updates on weather advisories, alerts, and DRRM requirements from the Department of Education (DepEd) and other government agencies.

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