

## Challenges, coping mechanisms, and implementation level of Disaster Risk Reduction Management

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### Abstract

The Department of Education coordinates with all schools in the country, guided by a manual covering prevention and mitigation, preparedness, response, recovery, and rehabilitation. Schools must establish a School Disaster Risk Reduction and Management (SDRRM) Committee in accordance with DepEd Order 37, s. 2015, with designated coordinators tasked to lead DRRM efforts. Thus, using a sequential exploratory design, this study aimed to determine the challenges encountered, coping mechanisms, and the level of implementation of Disaster Risk Reduction Management Program in Rizal, Occidental Mindoro. The qualitative phase revealed that technical knowledge, physical resources, community involvement, and financial resources are the themes in the challenges. In contrast, resource management, community engagement, and resilience-building are the themes of coping mechanisms. These themes underscored the barriers teachers face and the strategies they employ. The four components of DRRM, such as prevention and mitigation, preparedness, response, and recovery and rehabilitation, were adapted to determine their level of implementation. The results showed that challenges significantly influenced coping mechanisms, and both emerged as significant predictors across all DRRM stages, demonstrating that adversity fosters strong coping strategies that enhance disaster management outcomes. Protection motivation theory emphasizes how teachers assess threats and their perceived ability to take protective actions, ultimately influencing their disaster preparedness behaviors. This explains teachers' motivation to protect themselves based on their cognitive appraisal of threats. Recognizing that there are still challenges to be addressed, this study recommends to the Department of Education-MIMAROPA Region the integration of DRRM modules into teachers' professional development programs, incorporating hands-on simulations to build teachers' confidence and expertise.

**Keywords:** challenges, coping mechanisms, Disaster Risk Reduction Management implementation, prevention and mitigation, preparedness, response, and recovery and rehabilitation

## **Challenges, coping mechanisms, and implementation level of Disaster Risk Reduction Management**

### **1. Introduction**

Disasters occur without warning, so immediate life-saving actions are necessary. Unpredictable hazards can severely disrupt communities, making preparedness essential to avoid catastrophic outcomes. The United Nations Development Program (UNDP) Philippines reported that the Philippines remains the most disaster-prone country in the world for the fourth consecutive year, according to the World Risk Index Report 2025. The country's location along the Eurasian and Pacific Plates, the Pacific Ring of Fire, and the Pacific Typhoon Belt causes frequent earthquakes and tropical cyclones. PAGASA notes an average of 20 tropical cyclones enter the Philippine Area of Responsibility yearly, with five being highly destructive.

Natural disasters like typhoons, floods, landslides, and volcanic eruptions have caused tremendous loss, exemplified by Typhoon Yolanda in 2013, which affected over 16 million people and caused thousands of deaths (NDRRMC). The Philippines also experiences artificial disasters like fires, accidents, and terrorism that threaten vulnerable sectors, including schools. An example is the fire caused by a faulty electrical connection that destroyed four classrooms in Maguindanao. Further, a school in North Cotabato was attacked by armed men, taking several students as hostages. These adversely affect stakeholders' well-being, as noted by Lavilles & Hordista (2024).

To address these risks, the Department of Education systematically coordinated with all public schools, guided by a manual covering prevention and mitigation, preparedness, response, recovery, and rehabilitation. Schools must establish a School Disaster Risk Reduction and Management (SDRRM) committee in accordance with DepEd Order 37, s. 2015, with designated coordinators tasked to lead DRRM efforts (DepEd Order No. 21, s. 2015). The SDRRM committee is responsible for early warning systems, risk mapping, preparedness planning, safeguarding records, tracking personnel during disasters, damage assessment, and school recovery. DepEd also mandates the integration of DRRM into curricula and the training of school personnel to create safer environments and improve educational outcomes (DepEd Order No. 45, s. 2015). All of these actions of the Department of Education were anchored and mandated by Republic Act No. 10121 (Philippine Disaster Risk Reduction and Management Act of 2010). Although schools have established systems and some are recognized for notable DRRM programs, such as Quirino State University, Rizal Elementary School, and others, many schools remain vulnerable to natural disasters due to a lack of essential resources and funding. This challenge is supported by the study of Malgapo & Dela Cruz (2024), which found that insufficient budgets for disaster risk needs, such as emergency equipment, hinder schools' ability to respond to hazards.

Additionally, communication and coordination difficulties with local government units, stakeholders, and community members further complicate efforts to support DRRM programs and activities. These combined issues limit schools' capacity to provide an effective, coordinated disaster response, putting learners and teachers at risk. In addition, although DepEd conducts trainings and seminars for school DRRM coordinators, there is no assurance that these are re-echoed to teachers through school-based training, leaving teachers uninformed about DRRM programs. Supported by Bacus (2020), which reports that having only a fair knowledge of DRRM means that children in school are not secure when disaster strikes. Additionally, Tabangcura et al. (2023) found that students were largely unaware of the protocols and standards set by local and national DRRM agencies, and Toyado (2022) found that students had a low perception of disaster risks, both of which were linked to preparedness, adaptation, and awareness. This underscores the need to strengthen disaster knowledge and preparedness in schools. To augment, Weichselgartner & Pigeon (2015) recommended rigorous training for all school personnel to acquire basic knowledge of DRRM.

Given the aforementioned challenges and situations, this research was conducted to determine teachers' challenges, coping mechanisms, and strategies in implementing DRRM, as teachers are the primary actors in DRRM implementation in the school context and in its integration into the curriculum. The researcher pursued this study to gather valuable insights and data to improve DRRM implementation and teachers' disaster readiness in the schools in the Rizal District. Additionally, the researcher studied it because the Municipality of Rizal's geographic location and terrain consist of hilly areas, coastal plains, and low-elevation areas, making it susceptible to a variety of natural and artificial disasters, most notably seasonal flooding, tectonic earthquakes, and occasional severe weather events such as tornadoes.

**Statement of the Problem** - This study aimed to identify the challenges and coping mechanisms and to determine the teachers' level of implementation of Disaster Risk Reduction Management (DRRM) in Rizal District. Specifically, it sought to answer the following questions: (1) What are the challenges encountered by the teachers in implementing Disaster Risk Reduction Management (DRRM) in Rizal District? (2) What are the coping mechanisms of the teachers in implementing Disaster Risk Reduction Management (DRRM) in Rizal District? (3) What is the extent of the challenges encountered by the teachers in implementing Disaster Risk Reduction Management (DRRM) in Rizal District in terms of technical knowledge, physical resources, community involvement, and financial resources? (4) What is the extent of the coping mechanisms of the teachers in implementing Disaster Risk Reduction Management (DRRM) in Rizal District in terms of resource management, community engagement, and resilience building? (5) What is the level of implementation of teachers in implementing Disaster Risk Reduction Management (DRRM) in Rizal District in terms of prevention and mitigation, preparedness, response, and recovery and rehabilitation? (6) Is there a significant relationship between the challenges encountered by the teachers and their coping mechanisms in implementing Disaster Risk Reduction Management (DRRM)? (7) Is the level of implementation of Disaster Risk Reduction Management (DRRM) significantly affected by challenges and coping mechanisms? (8) What action plan may be proposed to enhance the coping mechanisms and improve the level of implementation of Disaster Risk Reduction Management (DRRM) among teachers in Rizal District?

**Significance of the Study** - The findings of this study can provide pertinent information to the different agencies, which can be helpful in the delivery of their service, especially on workdays. The study benefits various sectors: it will increase teachers' motivation and efficacy in implementing DRRM programs, as they know their efforts contribute to safer schools, better student protection, and educational continuity during disasters. The pupils, they will be equipped with life-saving knowledge and practical skills to respond effectively during emergencies, helping to save lives and reduce the impact of disasters on them and their communities. The study helps administrators identify gaps and barriers in DRRM implementation, enabling them to adopt evidence-based strategies for improved disaster risk management, ensuring safe learning environments and continuity of education during disasters. The Department of Education Division of Occidental Mindoro officials will be informed of valuable insights into the extent of DRRM implementation in schools, highlighting areas of strength such as prevention, mitigation, and preparedness, as well as challenges, including inadequate budgets and insufficient training for teachers and coordinators. The study helps LGUs (Municipality of Rizal, Occidental Mindoro) identify gaps and areas for improvement in their disaster management plans, guiding them to allocate budgets better, strengthen community awareness, and improve communication protocols with schools. To the Municipal Disaster Risk Reduction Office (MDRRMO) of Rizal, this study serves as a basis for identifying and addressing gaps by proposing a suitable program to strengthen the DRRM program, as well as for provincial authorities. The study helps them identify areas for improvement in DRRM implementation at the school and develop programs to support teachers. For the community, this study helps familiarize them with the DRRM-related activities initiated by the school and highlights their critical role in DRRM implementation. The study encourages parents to actively participate in school-based DRRM committees and awareness activities, which support creating a safer school environment and a culture of preparedness in the wider community. For Future researchers, this study will serve as a reference to enhance DRRM in schools by highlighting teachers' challenges, their coping mechanisms to address them, and the status of DRRM implementation in schools. This study informs them about the teacher's best

practices in DRRM Implementation that contribute to safer, more disaster-resilient educational environments.

**Scope and Delimitation of the Study** - Understanding and managing risks within the education environment is a key part of a teacher's responsibilities. It is necessary to know how to protect oneself and become more resilient in all eventualities. This study focused on the challenges and coping mechanisms of teachers. It assessed their level of implementation of Disaster Risk Reduction and Management in Rizal District, Division of Occidental Mindoro, within the School Year 2025-2026. Although the study was conducted during the said school year, some respondents' answers were not limited to that year. Their stories, told in the field of implementing DRRM in schools, were based on their experiences. The respondents were 141 teachers from 19 elementary schools in the Rizal District, randomly selected using the Raosoft calculator. A questionnaire and a one-on-one interview were used to obtain the respondents' perceptions and answers pertaining to the study. The result of this study is limited to elementary schools in the Rizal District, and the findings may not be directly applicable to schools in other areas. Since teachers' challenges and their coping mechanisms in challenges they encountered in implementing the four components of DRRM (prevention and mitigation, preparedness, response, and recovery and rehabilitation) may vary depending on location, environment, and available resources, the results of this study might not fully represent the situation in schools outside the Rizal District. Moreover, the study's limitations, such as limited time, funding, and access, can restrict the amount of data the researcher can gather and analyze. Unexpected events, such as natural disasters, during the study might also affect how teachers respond and influence the overall findings.

## 2. Methodology

**Research Design** - The method used is a mixed qualitative and quantitative analysis. The design used an exploratory sequential research design. The qualitative analysis was conducted first, followed by the quantitative analysis (Creswell et al. 2017). The teachers' challenges in implementing Disaster Risk Reduction Management (DRRM) activities in schools, along with their coping mechanisms, were first identified in the qualitative phase. The extent of the challenges, coping mechanisms, and the level of implementation of Disaster Risk Reduction Management (DRRM) among teachers were examined using a validated and reliable survey questionnaire. The correlational approach was employed to examine the relationships between teachers' challenges and coping mechanisms, and between teachers' challenges and the level of implementation in Disaster Risk Reduction Management (DRRM).

**Respondents of the Study** - For the qualitative component, 20 randomly selected teacher-participants from six selected schools in Calintaan District were interviewed. For the quantitative part, this study was conducted across 19 public elementary schools in the Rizal District, with a total of 141 teacher respondents. Proportional stratified random sampling was used to ensure that each school had teacher-respondents proportionate to its total population of 220 teachers across the 19 schools in Rizal District, excluding 3 schools where the researcher conducted a reliability test. The sample size was computed using a 5% margin of error and a 95% confidence level with Raosoft's sample size calculator.

**Research Instrument** - To determine the final theme regarding the extent of challenges encountered by the teachers in implementing DRRM, along with their coping mechanisms, an approved interview guide was used and administered to the 20 teacher-participants. Their responses were thematized using thematic analysis. The variables for the challenges are technical knowledge, physical resources, community involvement, and financial resources, while the variables for the coping mechanisms are resource management, community engagement, and resilience building. For the quantitative phase, a researcher-made questionnaire was used to collect the data. The teacher-respondents were asked to rate using a five-point Likert scale: (5-Completely observed; 4-Highly observed; 3-Moderately observed; 2-Slightly observed; 1-Not observed). In addition, the first part of the questionnaire addresses the challenges teachers encounter, and the second part addresses their coping mechanisms. Then, the last part assesses the level of DRRM implementation across four thematic areas: prevention and mitigation, preparedness, response, and recovery and rehabilitation.

The researcher-made instrument was reviewed and validated by 5 experts; two experts came from the graduate school faculty members of Divine Word College of San Jose, one Public Schools District Supervisor, one DRRM coordinator in the Department of Education, and one Municipal Disaster Risk Reduction Focal person, who is an expert in this field, for the evaluation. Their comments and suggestions were considered in the final draft of the questionnaire.

After considering and incorporating the comments and suggestions on the final draft of the questionnaire, the researcher sought permission from the public schools' district supervisor and the heads of the target schools in the Rizal District to conduct a reliability test. The survey questionnaire, consisting of 66 items, underwent a reliability test with 30 respondents, who were asked to complete it once; these respondents were excluded from the final administration. Of these items, six (6) indicators, each under 11 sub-components, were tested. The questionnaire pertains to the teachers' challenges, coping mechanisms, and implementation of Disaster Risk Reduction Management in Rizal, Occidental Mindoro. The inter-item consistency of the instrument was verified using the split-half method, since it was administered only once, and, to ensure the validity of the result, the Spearman-Brown formula based on equal lengths was applied. The following coefficients were yielded and are shown in the table below.

**Table 1**  
*Result of Reliability Analysis*

Items	Number of Items	Reliability Coefficients*	Analysis
I. Challenges (6 items each)			
A. Technical Support	6	0.950	Very High Reliability
B. Physical Resources	6	0.894	High Reliability
C. Community Involvement	6	0.877	High Reliability
D. Financial Resources	6	0.865	High Reliability
II. Coping Mechanisms (6 items each)			
A. Resource Management	6	0.959	Very High Reliability
B. Community Engagement	6	0.881	High Reliability
C. Resilience Building	6	0.873	High Reliability
III. Level of Implementation (6 items each)			
A. Prevention and Mitigation	6	0.960	Very High Reliability
B. Preparedness	6	0.875	High Reliability
C. Response	6	0.926	Very High Reliability
D. Recovery and Rehabilitation	6	0.935	Very High Reliability

\*Based on equal length

The analysis yielded a generally high reliability with coefficients ranging from 0.865 to 0.960, indicating a very high degree of consistency between the two halves of the test. This suggests that the scale is highly stable and the items within the instrument reliably measure the intended constructs. The result confirms the instrument's reliability for general use.

**Data Gathering Procedure** - A letter of request to conduct this study was forwarded to the office of the Schools Division Superintendent and Public Schools District Supervisor. Upon approval, the qualitative phase began with obtaining permission from the heads of six public elementary schools in Calintaan District, followed by thematic interviews with their teachers. During the quantitative phase, permission from the school heads of 21 public elementary schools and 1 Integrated School in the Rizal District was sought prior to data collection. The questionnaire was administered face-to-face at the nearest schools. In contrast, for schools that required long travel, the school heads were asked to help distribute and collect the validated questionnaire. Data gathering was not as easy as it was. It was affected by time constraints and the respondents' distance from the school. That is why the researcher consumed more days. For instance, the thematic interview took a day, the reliability test took 3 days, and the final test took 2 weeks from distribution to instrument collection. After all the data were gathered, they were tabulated, analyzed, and interpreted.

**Statistical Treatment of the Data** - Thematic analysis was used to identify teachers' challenges and coping mechanisms. The weighted mean was used for the challenges, coping mechanisms, and the teacher's DRRM

implementation level. WarpPLS version 7.0 was used to assess whether there is a significant relationship between the challenges teachers encounter and their coping mechanisms. The Partial Least Squares Structural Equation Modeling (PLS-SEM) method was used to analyze whether the level of implementation in Disaster Risk Reduction Management (DRRM) is significantly affected by challenges and coping mechanisms.

**Ethical Considerations** - The researcher adhered to ethical protocols to ensure the integrity of the study. Before data collection, informed consent was obtained from all participants, ensuring they were fully aware of the study’s purpose, procedures, and their rights. Participants' confidentiality was strictly maintained throughout the research process, and they were informed of their right to withdraw from the study. Furthermore, the researcher obtained formal authorization from the Schools Division Superintendent to conduct the study. Permission was also sought from the Public Schools District Supervisor of Rizal District and from the school heads of the selected schools to distribute the survey questionnaires to their teachers. These measures ensured compliance with ethical standards, respected participants, and fostered trust and cooperation among all people involved in this research.

### 3. Results and Discussions

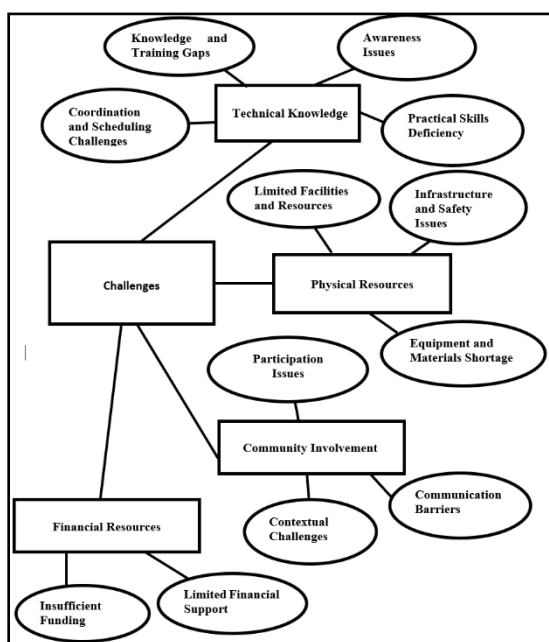


Figure 1. Initial Thematic Map of Challenges Encountered in Implementing DRRM

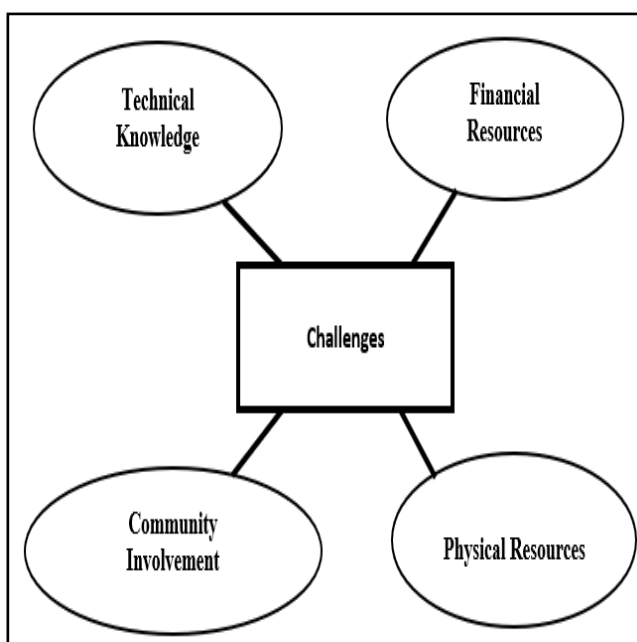


Figure 2. Final Thematic Map of Challenges Encountered in Implementing DRRM

Figure 1 presents the initial thematic map of the challenges teachers encounter in implementing DRRM. It was consolidated based on the participants' responses in the interview question, “Can you describe the challenges you experience in carrying out Disaster Risk Reduction Management (DRRM) activities in your school? Figure 3 shows that teachers experience challenges related to training gaps, practical skill deficiencies, awareness issues, coordination, and scheduling, which are particularly linked to technical knowledge. On the other hand, limited facilities/resources, infrastructure safety issues, and equipment and material shortages all pertain to physical resources. The teachers also experienced participation issues, contextual challenges, and communication barriers that are related to community involvement. Also, financial resources were a challenge due to insufficient support. As noted by Dollentas & Gamba (2025), these challenges may have contributed to the low scores related to DRRM implementation. In addition, Figure 2 shows the final thematic map of their answers and the survey results. Technical knowledge, financial resources, community involvement, and physical resources were the challenges they experienced in implementing DRRM. These challenges were mentioned in the study by Dollentas & Gamba (2025), which identified factors that may have contributed to the low scores, such as a lack of initial training and resources, unexpected role assignments, and uncertainty and concern about responsibility.

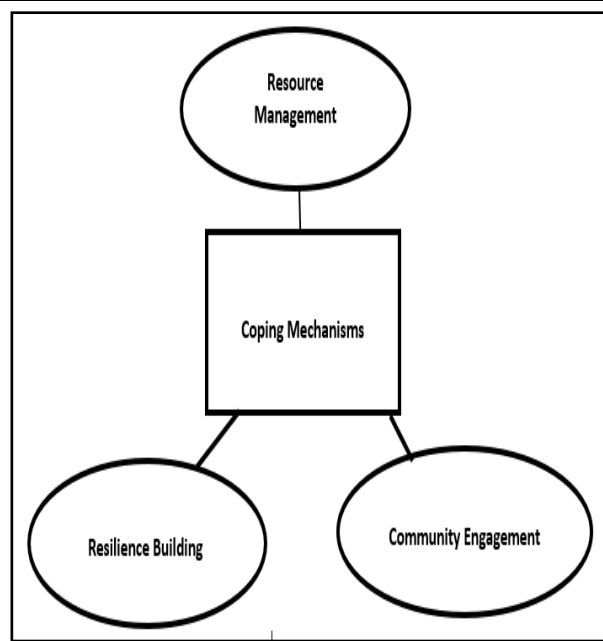
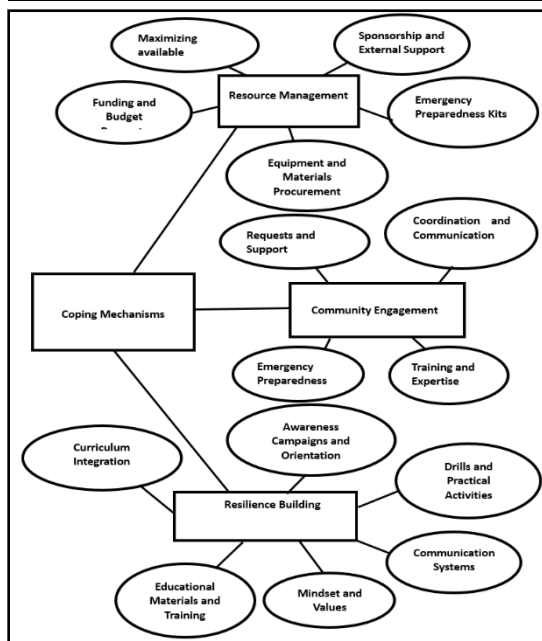


Figure 3. Initial Thematic Map of Coping Mechanisms      Figure 4. Final Thematic Map of Coping Mechanisms

Figure 3 shows the initial thematic map of teachers' coping strategies for every challenge encountered in implementing DRRM. Their consolidated responses show that the teachers took action to address the challenges they face, such as managing available resources, requesting funds to purchase DRRM equipment and materials, securing sponsorship and external support, and ensuring the availability of emergency kits. All of these are categorized as resource management. Also, community engagement strategies are among the coping mechanisms teachers use, including requesting support, coordinating and communicating activities, participating in training to gain expertise, and actively coordinating emergency preparedness activities with the concerned parties. Resilience building was also seen in the participants' answers as reflected in the series of activities they took, such as integrating DRRM concepts into the curriculum, having educational materials readily available, doing awareness campaigns and orientations, having regular emergency drills, developing a communication system, and having a positive mindset and values towards situations. Relating it with Protection Motivation Theory & Self-efficacy by Maddux & Rogers (1983) as cited in Fernandez (2019) that the motivations or intentions to protect themselves from harm are enhanced by four critical cognitions or perceptions regarding the severity of the risks which are the perceived severity of a threatening event (challenges) that uses perceived probability of the occurrence or vulnerability where in they use their ability to respond in accordance with the level of danger it may cause. All the mentioned coping mechanism strategies served as interventions to address problems. They highlighted the teacher's willingness to implement DRRM despite numerous challenges. The actions were supported by Balanggoy (2024), who emphasized that difficulties can be effectively addressed through appropriate interventions.

Also, the teacher-participants were asked about the coping mechanisms and strategies they use when they encounter problems during DRRM implementation. This aims to determine teachers' perspectives on how to overcome the challenges they face. The results of the survey are shown in Figure 6. Resource management, resilience building, and community engagement were the final themes of the teachers' coping mechanisms strategy in dealing with the challenges they experience in implementing DRRM. This was anchored in Protection Motivation Theory & Self-efficacy, as proposed by Maddux & Rogers (1983), as cited in Fernandez (2019), which posits that intentions to protect against harm are enhanced by individuals' perceptions of risk severity. This theory emphasizes the teacher's ability to respond in accordance with the level of danger, exposure to an event, and the behavior required to prevent harm or ensure safety, and to perform the appropriate behavior to respond effectively in a specific event.

Table 2 presents the mean extent of challenges encountered by teachers in DRRM implementation across technical knowledge, physical resources, community involvement, and financial resources. Since the questionnaire is framed positively in the context of teachers' observed challenges in implementing DRRM. The data is interpreted as reversed (the higher the mean, the fewer the challenges). Surprisingly, an overall mean of 3.78 indicates that teachers face relatively few challenges in implementing Disaster Risk Reduction and Management (DRRM) programs. Physical resources have the highest mean, at 3.85. This reveals that teachers face challenges due to shortages of facilities, equipment, or infrastructure needed for DRRM activities such as drills and emergency kits. Cabatay & Gonzales (2024) and Dollentas & Gamba (2025) both highlight that significant challenges related to the availability and quality of resources are essential to effective Disaster Risk Reduction and Management (DRRM) in schools. Moreover, the composite mean of 3.83, which indicates a high level of observation and experience of teachers when it comes to community involvement, ranked 2<sup>nd</sup> highest score. The data reveal a high level of community participation and collaboration among school stakeholders. This was supported by Schaefer and Lopez (2023), who emphasized the value of a multidisciplinary, collaborative approach within healthcare teams, in which integrating professionals from various specialties optimizes care by aligning treatment, rehabilitation, and psychosocial support with patients' specific needs. Applying this perspective to DRRM suggests that effective disaster management in schools could similarly benefit from coordinated efforts among diverse stakeholders—including educators, parents, local authorities, and specialists—to improve the overall effectiveness and responsiveness of DRRM programs.

The challenges teachers encountered in implementing DRRM, in terms of technical knowledge, ranked 3<sup>rd</sup>. It reveals a composite mean of 3.79, indicating a high level of teachers' observation and compliance regarding technical support. Surprisingly, it turns out that teachers' technical knowledge challenges became their strengths, as data suggest that teachers are aware of various DRRM activities, have access to DRRM guidelines and information, understand the technical aspects, and feel confident applying DRRM activities during emergencies. This was supported by Cabatay & Gonzales (2024), emphasizing that teacher competence significantly impacts the effective implementation of DRRM. Together, these studies underscore the urgent need to update and improve DRRM materials and resources to strengthen emergency preparedness and ensure a safer learning environment. Among the 6 indicators, financial resources received a mean of 3.66, which is notably high. It suggests a few challenges due to funding constraints for materials or programs. The study of Clarito (2025) emphasizes that financial preparedness enables timely disaster responses, reduces impacts, and facilitates quicker recovery by ensuring resources are readily available and effectively mobilized. Generally, the challenges identified during the qualitative phase turned out to be teachers' strengths.

**Table 2**

*Mean Extent of Challenges Encountered by Teachers in DRRM Implementation in terms of Technical Knowledge, Physical Resources, Community Involvement, and Financial Resources*

Technical Knowledge	Weighted Mean	Interpretation
1. I am familiar with the basic concepts and principles of disaster risk reduction and management.	4.30	Very High
2. I receive adequate training to implement DRRM activities effectively.	3.39	Moderate
3. Updated DRRM guidelines and information are accessible to me when needed.	3.74	High
4. I am aware of the different DRRM activities. ( <i>Coordination and implementation</i> )	3.89	High
5. I feel confident in applying DRRM procedures during emergencies.	3.70	High
6. The technical aspects of DRRM are clearly explained and easy to implement.	3.74	High
<b>Composite Mean</b>	<b>3.79</b>	<b>High</b>
<b>Physical Resources</b>		
1. The school has adequate materials/equipment to support DRRM activities	3.91	High
2. Available disaster preparedness resources (e.g., first aid kits, emergency tools) are well-maintained	4.09	High
3. Adequate school physical resources enable the effective implementation of DRRM activities.	3.93	High

4. I can easily access the DRRM-related materials when needed.	3.82	High
5. The school infrastructure supports the implementation of disaster preparedness drills and exercises.	4.01	High
6. I have available DRRM-related teaching materials in my classroom.	3.33	High
Composite Mean	3.85	High
Community Involvement		
1. The community participates actively in disaster risk reduction programs and activities.	3.80	High
2. Teachers and community members collaborate during DRRM programs.	3.94	High
3. Community involvement significantly enhances the success of DRRM initiatives	3.84	High
4. It is challenging to encourage community participation in DRRM activities.	3.74	High
5. Communication between the stakeholders for DRRM purposes is effective	3.90	High
6. Community demographic location affects the DRRM implementation.	3.78	High
Composite Mean	3.83	High
Financial Resources		
1. Funds allocated for DRRM activities are adequate.	3.89	High
2. Budget constraints limit the implementation of effective DRRM programs	3.73	High
3. DRRM funds are released on time.	3.57	High
4. Financial support from the local government is dependent on DRRM initiatives	3.60	High
5. Limited funding affects the conduct of DRRM training.	3.64	High
6. The teacher can request funding for DRRM materials they need inside the classroom.	3.52	High
Composite Mean	3.66	High
Overall Mean	3.78	High

Scale: 4.20-5.00 Very High; 3.40 -4.19 High; 2.60-3.39 Moderate; 1.80-2.59 Low; 1.00-1.79 Very Low

The data presented in Table 3 reveal the overall mean of 3.97, interpreted as highly observed. It emphasizes that teachers are effectively handling the challenges of implementing Disaster Risk Reduction and Management (DRRM) in schools. Also, it proves that teachers in Rizal District are tough, caring, and capable in turning DRRM challenges into real wins by doing their best through wiser actions. It was supported by Balanggoy (2024), who stated that appropriate interventions can address challenges. The mean of 3.82 is the lowest among the three indicators, interpreted as high observance in resource management. The data show that teachers in Rizal District are smart about using limited funds and supplies to keep programs running despite shortages. This action was initiated by teachers to resolve the challenges, recognizing the fact that the study of Cabatay & Gonzales (2024) stated that the lack of integrated modules and limited disability-inclusive instructional materials, as well as shortages in emergency supplies, communication systems, and response mechanisms, pose serious risks to both learners and teachers during emergencies. Resilience building is the teacher's strongest coping mechanism. A composite mean of 4.21 (Very High) indicates that teachers teach practical skills such as earthquake drills, integrate DRRM concepts into their teaching routines, and help everyone stay strong amid tough times. This is supported by Gong (2020), as cited in Riñon (2023), who stated that DRR teaching in schools is a method of disseminating disaster-mitigation information to each home in the community and developing a knowledge base for future generations. Children can play a key part in the crisis management cycle. This ensures that children can apply specific approaches at any stage of the crisis management process.

**Table 3**

*Mean Extent of Teachers' Coping Mechanisms in DRRM Implementation in terms of Resource Management, Community Engagement, and Resilience Building*

Resource Management	Weighted Mean	Interpretation
1. I am able to manage available resources during disaster preparedness and response	3.83	High
2. I prioritize essential resources when implementing DRRM activities	3.94	High
3. I am able to adapt when physical resources for DRRM are limited.	3.94	High
4. I coordinate well with colleagues to share DRRM materials.	4.12	High
5. I actively seek additional funds to support DRRM activities	3.67	High

6. I can get sponsorship from external stakeholders and use them for the provision of necessary DRRM materials and equipment.	3.43	High
<b>Composite Mean</b>	<b>3.82</b>	<b>High</b>
<b>Community Engagement</b>		
1. I maintain strong communication with community members during DRRM initiatives	3.89	High
2. I encourage the participation of community stakeholders in disaster preparedness	4.01	High
3. I build partnerships with local organizations to support DRRM efforts.	3.68	High
4. I successfully addressed community concerns related to disaster risks and management	3.77	High
5. Community feedback is considered in improving DRRM activities.	3.99	High
6. I participate in DRRM activities initiated by any organizations to acquire training in emergency preparedness.	3.91	High
<b>Composite Mean</b>	<b>3.88</b>	<b>High</b>
<b>Resilience Building</b>		
1. I promote awareness and preparedness for disasters among our students.	4.40	Very High
2. I incorporate DRRM concepts into teaching to build resilience in students.	4.30	Very High
3. I remain calm and focused during disaster situations to lead others effectively.	4.26	Very High
4. I attend training to improve my skills in handling disaster-related situations.	3.64	High
5. I support my colleagues and students emotionally during and after disasters	4.24	Very High
6. I monitor and guide our students in the DRRM drills in the school.	4.43	Very High
<b>Composite Mean</b>	<b>4.21</b>	<b>Very High</b>
<b>Overall Mean</b>	<b>3.97</b>	<b>High</b>

Scale: 4.20-5.00 Very High; 3.40 -4.19 High; 2.60-3.39 Moderate; 1.80-2.59 Low; 1.00-1.79 Very Low

**Table 4**

*Mean Level of Teachers' Implementation of DRRM in terms of Prevention and Mitigation, Preparedness, Response, and Recovery and Rehabilitation*

Prevention and Mitigation	Weighted Mean	Interpretation
1. I post preparedness measures (school signage, health and sanitation protocols, and DRRM information board) in conspicuous places in the school.	3.87	High
2. Risk assessment of school buildings and facilities is conducted regularly.	3.85	High
3. I ensure the availability of updated baseline education data of the school.	3.93	High
4. I Integrate DRRM in classroom discussions.	4.19	High
5. I post relevant and updated emergency hotlines in strategic locations inside my classroom.	3.72	High
6. The school has contingency plans for identified hazards (vis-à-vis earthquake, typhoon, pandemic, flood, armed conflict, landslide, etc.)	4.28	Very High
<b>Composite Mean</b>	<b>3.97</b>	<b>High</b>
<b>Preparedness</b>		
1. I maintain a fully stocked, accessible first aid kit in our classroom.	3.97	High
2. I always support the school DRRM team in the implementation of preparedness and response measures.	4.29	Very High
3. I coordinate regularly with the school DRRM Committee regarding preparedness protocols.	4.07	High
4. I follow and implement pre-identified alternative delivery modes of education.	4.20	Very High
5. I provide lectures and capacity-building activities for learners on Disaster Preparedness.	3.99	High
6. I participate and support the conduct of quarterly multi-hazard drills applicable to the school's identified hazards, such as earthquake, fire, and flood.	4.30	Very High
<b>Composite Mean</b>	<b>4.14</b>	<b>High</b>
<b>Response</b>		
1. I monitor the immediate environmental effects of hazards on our classroom during an event.	4.07	High
2. I prepare my classroom as an evacuation center in school in case it is needed.	4.33	Very High
3. I maintain a real-time communication log with all my pupils during emergencies.	4.27	Very High
4. I submit situational reports to the school DRRM coordinator on the effects of any hazard in my classrooms.	4.06	High

5. I ensure the implementation of DepEd Order No. 43, s. 2012 re: Prescribing Rules on the Cancellation or Suspension of Classes due to calamities	4.42	Very High
6. I maintain close coordination and collaboration with the school DRRM committee on response needs.	4.36	Very High
<b>Composite Mean</b>	<b>4.25</b>	<b>Very High</b>
<b>Recovery and Rehabilitation</b>		
1. I conduct a rapid damage assessment of my classrooms and learning materials within 24-48 hours of a hazard.	4.03	High
2. I inform the parents online about the immediate resumption of classes.	4.41	Very High
3. I monitor recovery and rehabilitation interventions being implemented in the school.	4.28	Very High
4. I maintain close coordination with the School DRRM Committee on rehabilitation within my area of concern.	4.28	Very High
5. I collaborate with organizations in providing services to the victims.	4.11	High
6. I give appropriate professional advice to parents to protect the safety of every pupil.	4.38	Very High
<b>Composite Mean</b>	<b>4.25</b>	<b>Very High</b>
<b>Overall Mean</b>	<b>4.15</b>	<b>High</b>

Scale: 4.20-5.00 Very High; 3.40 -4.19 High; 2.60-3.39 Moderate; 1.80-2.59 Low; 1.00-1.79 Very Low

Table 4 presents the mean level of teachers' implementation of DRRM in Rizal District. It presents a composite mean of 4.15, interpreted as highly implemented. It suggests that teachers generally exhibit a high level of Disaster Risk Reduction and Management (DRRM) implementation across all indicators. They are especially good at response, recovery, and rehabilitation (all 4.25, Very High). The 3.97 mean for prevention & mitigation and 4.14 for preparedness were both interpreted as highly implemented.

To summarize, teachers show a strong dedication to implementing DRRM practices, which guarantee school safety and resilience against hazards, and demonstrate balanced performance. These concepts and practices of disaster risk reduction include the systematic identification and mitigation of the causes of disasters. It also indicates that teachers employed Disaster Risk Reduction strategies to lessen the vulnerability of persons and property, recognizing that DRR impacts many aspects of society, including the government. in the professional and private sectors (Astulil et al., 2021; Murti et al., 2019; Wu et al., 2021).

**Table 5**  
*Beta Coefficient of the Path and p-value for Ho<sub>1</sub>*

Paths	Beta Coefficient ( $\beta$ )	p-value*	Standard Error	Effect Size**	Interpretation
Ho <sub>1</sub> : Challenges Encountered→Coping Mechanisms					
CHALLENGE→COPING	0.759	<0.001	.071	.575	Highly Significant

\*Significant at p<0.05

\*\* Effect size coefficient: 0.02 – small, 0.15 – medium, 0.30 – large

The statistical results for the hypothesized path in the structural model show a path coefficient of 0.759, indicating a strong positive relationship between the variables. This suggests that for every one-unit increase in the challenges teachers encounter, their use of coping mechanisms increases by approximately 0.76 units. In terms of statistical significance, a p-value less than .001 is far below the .05 threshold, indicating a highly significant relationship between the two variables. The effect size of .575 is considered large, confirming that the challenges encountered are a primary and substantial predictor of coping mechanisms within the model. The standard error is low at .071, indicating a stable and reliable estimate of the path coefficient. The first hypothesis, which posits no significant relationship between the challenges encountered by the teachers and their coping mechanisms in implementing Disaster Risk Reduction Management (DRRM), is rejected. The results indicate that the challenges encountered by the teachers significantly influence their coping mechanisms and that the coping mechanisms employed for each challenge were appropriate. These findings were similar to those of Nwoko et al. (2024), who found that challenges at a “moderately challenged” level can be addressed with high coping strategies, such as positive well-being.

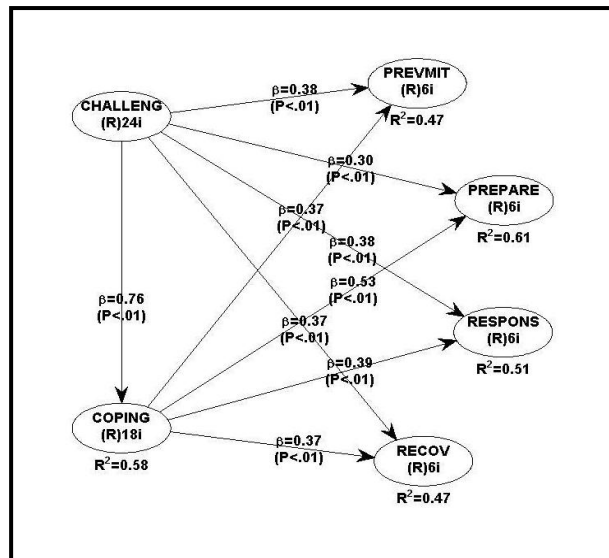


Figure 5. Structural Model of the Relationship Between Challenges Encountered and Coping Mechanisms

The structural model in Figure 5 illustrates the hypothesized relationships between the latent variables, namely, the challenges encountered in implementing DRRM (CHALLENGE), the coping mechanisms in implementing DRRM (COPING), and the level of implementation of DRRM described by prevention and mitigation (PREVMIT), preparedness (PREPARE), response and rehabilitation (RESPONS), and recovery and mitigation (RECOV). Applying the Partial Least Squares Structural Equation Modeling (PLS-SEM) method, the structural model is generated by the statistical software WarpPLS version 7.0. The model also shows path coefficients ( $\beta$ ) ranging from 0.30 to 0.76 and an R2 ranging from 0.47 to 0.61. In terms of explanatory power, the model shows substantial predictive power across all dependent variables. The highest R2 of .61 for preparedness indicates that the model explains 61% of the variance. Meanwhile, prevention and mitigation, and recovery and rehabilitation (R2 = .47) both explain 47% of the variance. The model structure suggests that the coping variable is the mediating variable, influenced by the challenges variable and, in turn, influencing the implementation-level variables.

**Table 6**  
Beta Coefficients of the Paths and p-values for Ho2

Paths	Beta Coefficient ( $\beta$ )	p-value*	Standard Error	Effect Size**	Interpretation
Ho2: Challenges Encountered→Level of DRRM Implementation					
CHALLENGE→PREVMIT	0.377	<0.001	.077	.237	Highly Significant
CHALLENGE→PREPARE	0.295	<0.001	.079	.205	Highly Significant
CHALLENGE→RESPONS	0.375	<0.001	.077	.251	Highly Significant
CHALLENGE→RECOV	0.365	<0.001	.077	.235	Highly Significant
Coping Mechanisms→Level of DRRM Implementation					
COPING→PREVMIT	0.368	<0.001	.077	.231	Highly Significant
COPING→PREPARE	0.535	<0.001	.075	.404	Highly Significant
COPING→RESPONS	0.387	<0.001	.077	.260	Highly Significant
COPING→RECOV	0.368	<0.001	.077	.237	Highly Significant

\*Significant at p<0.05

\*\* Effect size coefficient: 0.02 – small, 0.15 – medium, 0.30 – large

The structural model was analyzed to test whether the level of DRRM implementation is influenced by the extent of challenges encountered and the coping mechanisms employed by the respondents. The results of the Partial Least Squares (PLS) path analysis are presented in Table 6. The second hypothesis examines the influence of both challenges encountered and coping mechanisms on the four areas of Disaster Risk Reduction and Management implementation. The results reveal that both challenges encountered and coping mechanisms are significant predictors of DRRM implementation across all stages. Coping mechanisms exert the strongest influence on preparedness ( $\beta = .535$ , Effect = .404), which is considered a large effect. In terms of the challenges

encountered, surprisingly, these have a positive impact on all four components of DRRM implementation. The Beta coefficients ranging from 0.295 to 0.377 indicate that experiencing difficulties may prompt teachers to become more active and effective in their roles as DRRM implementers. Moreover, this suggests that identifying difficulties leads to a direct increase in efforts to reduce disaster risks.

The connection between challenges and response ( $\beta = .375$ ,  $p < 0.001$ ) indicates that the extent of challenges encountered may dictate the magnitude and urgency of response implementation. When linked to recovery and rehabilitation ( $\beta = .365$ ,  $p < 0.001$ ), challenges encountered may inform and drive the recovery process, ensuring that post-disaster efforts address identified gaps. The lowest beta value ( $\beta = .295$ ,  $p < 0.001$ ) is observed in the connection between challenges and preparedness, with a medium effect size of .205, indicating that as challenges are identified, there is a corresponding increase in proactive preparedness for activities. The findings are supported by the study by Yuspahrudin et al. (2024), which highlights that recognizing workplace challenges drives individuals to adopt proactive strategies, thereby improving performance and efficiency through self-initiated actions. Self-efficacy, as described in Bandura's Social Cognitive Theory, can influence how one responds to disaster risk. The paths from coping mechanisms to DRRM implementation highlight how coping mechanisms enhance disaster management. Coping mechanism registered the highest Beta of 0.535 when linked to the level of preparedness, with an effect size of .404. Both prevention and recovery registered Beta coefficients of 0.368 at  $p < .001$ , yielding medium effect sizes of 0.231 and 0.237. The low standard errors, ranging from .075 to .079, indicate high accuracy in estimating the path coefficient. Using coping mechanism strategies provides the necessary support to implement mitigation and prevention measures effectively. This suggests that having strong coping strategies is one of the best ways to ensure the community is prepared for a disaster and to build resilience, allowing for a smoother transition into the recovery phase. Qualitative studies by Mercado (2024) emphasize community-based strategies such as awareness, capacity building, psychological readiness, and coordination as key to resilience, with effective coping reducing vulnerabilities and enabling recovery. The findings of Clarito (2025) emphasize that effective disaster preparedness involves both physical resources and fostering strong community connections through proactive planning and collaboration.

The SEM results provide empirical evidence against the second null hypothesis that the DRRM implementation is not significantly affected by the challenges teachers encounter and their coping mechanisms. In fact, the structural model shows a coherent system in which challenges are seen as a powerful driver of coping mechanisms and explain variance in most of the outcome variables representing DRRM implementation. Based on the results of the two hypothesis tests, no emerging model is required, as all links in the structural model were highly significant. The findings demonstrate that facing challenges triggers strong coping mechanisms, which in turn lead to better outcomes in disaster management across prevention, preparedness, response, and recovery. The findings were anchored on Protection Motivation Theory & Self-efficacy by Maddux & Rogers (1983) as cited by Fernandez (2019), which states that the motivations or intentions to protect themselves from harm are enhanced by their own perceptions regarding the severity of the risks. Furthermore, Baluran (2023) emphasized that Protection motivation arouses, sustains, and directs activities, starting with identifying a natural hazard.

The action plan was developed based on the gathered data and aligns with the Basic Education DRRM framework. It starts with assessing risks through student-led school watching and SELG-guided, School DRRM coordinator-monitored hazard mapping. This is to identify the threats in the school environment. This is followed by planning, which has the following activities, such as integrating the findings and plan into the SIP, covering prevention/mitigation, preparedness, response, and recovery; and establishing a School DRRM Team (SDRRM Team) from existing groups like the School Governing Council, PTA, SELG and guiding them to implement the plan by having a rollout of drills, training, and equipment use, such as emergency kits and basic emergency response team coordination. Then, the monitoring and evaluation were done to document activities, evaluate drills, and report to update the plan annually. Rathore (2023) underscored that trust and communication are fundamental to building strong, collaborative teams. These elements foster openness, transparency, and constructive feedback, which facilitate informed decision-making and problem-solving. To support this, Delicado et al. (2017) and Faustino et al. (2019) emphasized that the decision to activate disaster management

groups and disaster coordination centers is based on several variables, including the perceived impact on the community. They also emphasized that the result should be outlined in the relevant plan. Also, the importance of having an adequately allocated budget, aligned with national guidelines mandating 5% or more of the total MOOE budget, was utilized to procure and provide necessary DRRM materials and equipment.

**Table 7**

*Action Plan to Enhance the Teachers' Coping Mechanisms and Elevate the Level of Implementation of Disaster Risk Reduction Management (DRRM) in Rizal District*

Objective	Targeted Strategies	Key Stakeholders	Time Frame	Financial Resources		Measurable Success Indicator
				Fund	Source	
To reorganize a functional SDRRMC	Selecting personnel who are willing and have skills in DRRM implementation	Teachers/ SH/PTA/SGC	A week after the opening of the school year	N/A	N/A	SDRRMC reorganized
To re-orient teachers, stakeholders, and parents on the DRRM Manual	DRRM Orientation via PTA meetings	SH, Teachers, LGU, SDRRMC members, learners	1 <sup>st</sup> Quarter	2000	MOOE	Orientation successfully conducted
To regularly conduct a comprehensive school risk assessment	Risk Assessment and Hazard Mapping (Student-led activities) were conducted after every occurrence of calamities	SDRRM Coord and SELG	Year Round	N/A	N/A	Consolidated report on identified risks, hazards, and school vulnerable areas
To craft a functional and useful contingency plan, evacuation routes, and communication plan for different disasters	Call meeting for SDRRMC to craft the Plan collaboratively	SDRRMC members	A week after the opening of the school year	2,000	MOOE	Contingency Plan formulated
To enhance teacher capabilities in the DRRM implementation	Conduct School DRRM workshop, capability building, and training twice a year	SH, SDRRM Coord.	2 <sup>nd</sup> and 4 <sup>th</sup> Quarter of SY	5,000	MOOE	Trained all Teachers
To enhance school personnel and learners' awareness in multi-hazard drills	Conduct regular Multi-Hazard Drill (Announced and unannounced)	SH, SDRRM Coord., Teachers, Learners	Quarterly	N/A	N/A	Conducted Multi-Hazard Drill Reports
To purchase quality and usable emergency supplies needed by teachers in their classroom, and have a stockpile of needed materials in case of disasters	Procurement of necessary materials	SH, SDRRM coord., Teachers	1 <sup>st</sup> Quarter of SY	20,000	MOOE	Adequate supplies of DRRM materials provided
To integrate DRRM concepts into the curriculum and have them monitored/observed in the teachers' lesson plans	Incorporated DRRM topics into applicable subject areas	Teachers, SH	Year Round	N/A	N/A	LP with annotation of DRRM integration

### Challenges, coping mechanisms, and implementation level of Disaster Risk Reduction Management

To identify safe places inside and outside school premises.	Involve PTA and SPG officers to identify safe places inside vicinity	PTA/SELG, SH, SDRRM coor.	1 <sup>st</sup> Quarter of SY	N/A	N/A	Identified Safe places inside and outside the school
To inform learners and internal and external stakeholders about the evacuation plan in the event of a disaster.	Posting of the Evacuation Plan within the school premises	SDRRM coor	1 <sup>st</sup> Quarter of SY	2000	MOOE	Posted Evacuation Plan
To actively collaborate with the local DRRM council (Barangay and Municipal) by constantly including them in the Planning and Implementation Phase of school DRRM programs and activities to develop a sense of co-ownership.	Establish a thorough partnership with local authorities	SDRRM Coor. / SH/ Teachers	Year Round	N/A	N/A	Documented partnerships
To have constant monitoring, evaluation, and updating of the SDRRM plan	Conduct an annual review and adjustment based on the feedback gathered	SH, SDRRM coor, Teacher, SELG, PTG, LGU	Year Round	2,000	MOOE	Updated SDRRM plan
To establish a post-disaster recovery plan	Develop a plan for counseling learners and teachers	SDRRM Coor and SH	1 <sup>st</sup> Quarter of SY	N/A	N/A	Developed Plan
To enhance awareness campaign activities	Use school PTA assemblies, poster and social media	SDRRM Coor, SH, and ICT Coor	Year Round	2000	N/A	Posted awareness campaign and materials
To easily report the school's consolidated damage during and after disaster/calamities	Provide a Google link for teachers to immediately consolidate the data for reporting on the Deped Online portal and SMS	SDRRM Coor.	1 <sup>st</sup> Quarter of SY	N/A	N/A	Reported/ submitted reports

#### 4. Conclusions

Based on the summary of findings presented, the following conclusions were drawn: The challenges experienced by teachers in implementing DRRM are: technical knowledge, particularly in training gaps, practical skill deficiency, awareness issues, coordination, and scheduling; physical resources consists of limited facilities/resources, infrastructure safety issues, equipment and material shortage; Financial resources include insufficiency and limited financial support; while for community involvement, these are participation issues, contextual challenges, and communication barriers. Teachers in the Rizal District address DRRM challenges by managing resources, fostering community engagement, and incorporating resilience-building practices into education. These coping mechanisms not only enhance DRRM activities but also develop a culture of accountability in schools. Extent of Challenges Encountered: For technical knowledge. However, teachers in Rizal District attended DRRM training, but it was still inadequate, as per the survey results, to become more effective implementers of the program. However, they have extensive experience in other technical areas.

Regarding physical resources, teachers in the Rizal District have extensive experience and observations in implementing DRRM. Instead of being challenges, these became their strengths. For community involvement,

teachers in the Rizal District have a high level of observation and experience in implementing DRRM. It manifests a slight challenge in engaging stakeholders, which could hinder collaborative preparedness efforts, and they turned the challenge into a strength. Regarding financial resources, the teachers in the Rizal District show a high level of observation. They experienced slight challenges, such as funding constraints for materials and DRRM-related programs.

In terms of resource management, teachers in the Rizal District are adept at using limited funds and supplies and resourceful in maintaining implemented programs despite shortages. For community engagement, teachers in the Rizal District successfully bring in external and internal stakeholders who actively engage in School DRRM-related activities and programs. Based on the evidence presented, communication is an essential tool for building partnerships, fostering engagement, and achieving success in DRRM activities. For resilience-building, considering the findings, teachers in Rizal District recognize the importance of being ready at all times and of educating children and the community to empower them to become active participants in community crisis management. Teachers in the Rizal District are dedicated to implementing DRRM activities to prevent and reduce disaster and calamity damage. Teachers in the Rizal District are aware of the necessity of implementing the disaster preparedness programs and activities in the schools, and they are prepared at all times. Teachers in the Rizal District fully understand and can implement disaster response activities. Teachers in the Rizal District are knowledgeable, well-versed in the procedures, and perform excellently in Recovery and Rehabilitation activities. The teachers' coping mechanisms and the challenges they encountered are significantly related. As the challenges teachers encountered increased, so did their use of coping mechanisms. The challenges teachers encounter positively impact all four components of DRRM. When teachers experienced difficulties, this encouraged them to become more active and effective in their role as DRRM implementers. Moreover, identifying difficulties leads to a direct increase in efforts to reduce disaster risks. Teachers in Rizal District are prompted to develop strong coping strategies to face challenges, which in turn lead to better outcomes in disaster management across prevention, preparedness, response, and recovery. Implementing the suggested action plan would improve teachers' personal crisis-coping mechanisms, increase their preparedness for disasters, and enhance the overall efficacy of the DRRM program in schools in the Rizal District.

**Recommendations** - In view of the findings and conclusions presented, the following recommendations are proposed to improve teachers' implementation of DRRM in schools. The school head may increase budget allocation in DRRM and prioritize procurement of affordable, durable DRRM kits (e.g., first-aid supplies, evacuation maps); establish school-based DRRM committees that include parents, local barangay officials, and LGUs to co-develop and execute drills, fostering shared ownership. The Department of Education may integrate DRRM modules into teachers' professional development programs, incorporating hands-on simulations to build confidence and expertise of teachers in technical knowledge. To strengthen teachers' DRRM coping mechanisms, the school head may lead by forming the School DRRM Team, appointing coordinators, integrating DRRM into the School Improvement Plan, securing budget, conducting trainings and drills, monitoring hazards, and partnering with local councils. Teachers may attend training, deliver and share best practices in classroom preparedness and child protection through LAC sessions, engage and coordinate with internal and external stakeholders, and promptly report issues to the concerned persons for immediate resolution. Teachers may improve their technical knowledge by attending DRRM-related training and seminars, as well as engaging in peer training with more seasoned educators who share coping mechanisms such as resource management and transforming small obstacles into proactive DRRM. The school head may ensure clear emergency exits, conduct student-led hazard mapping to update school risk assessments, instruct the DRRM coordinator to develop an evacuation plan and identify evacuation zones, and pre-select temporary learning shelters within and outside the school vicinity.

Additionally, allocating funds through the School Improvement Plan for the regular maintenance of school facilities, the procurement of emergency kits, materials, and updated equipment to ensure readiness is recommended. Teachers and school heads may create sincere collaborations that benefit both communities and schools. Community involvement, co-designing initiatives, leveraging local skills, and organizing collaborative events are practical actions the school and community can take. Teachers may actively engage with financial

resources at the school level by advocating for clear DRRM line items in the school budget and by maximizing existing local DRRM funds through coordination with LGUs. They may also help in preparing simple project proposals that justify the use of these funds for school safety. At the same time, teachers may promote transparency and accountability in the use of DRRM-related funds and prioritize low-cost, high-impact activities such as regular drills, evacuation plans, basic first-aid kits, and simple facility enhancements, ensuring that even limited financial resources can contribute meaningfully to a safer school environment. To further strengthen teachers' already high proficiency in resource management, the school head may establish a centralized resource-sharing platform (e.g., a digital inventory app or quarterly manual inventory of materials). This would enable teachers to understand limited funds and supplies better, making operations more efficient, reducing duplication of effort, minimizing waste, and sustaining programs even during prolonged shortages. Teachers and school heads may create sincere collaborations that benefit both communities and schools.

Community involvement, co-designing initiatives, leveraging local skills, and organizing collaborative events are practical actions the school and community can take. Teachers may continue their resilience-building initiatives by implementing DRRM-related programs and activities, such as conducting quarterly disaster drills, integrating disaster preparedness into lessons, running campaigns, coordinating with and engaging the community, and maintaining a positive mindset when dealing with disasters. To effectively implement DRRM prevention and mitigation in the school. The School Head may prioritize community-driven risk assessments for tailored prevention activities; institutionalize DRRM policies through multi-sector partnerships; enhance early-warning drills; implement measures such as hazard mapping, infrastructure retrofits, and educational campaigns; and allocate sufficient contingency funds to provide needed DRRM-related resources and train teachers. Students may actively participate in DRRM drills and teacher-led resilience-building exercises, such as school hazards mapping. The Local Government Unit (MDRRMC and BDRRMC) may promote community-school linkages by launching collaborative programs with schools to better respond to and recover from disasters via shared monitoring tools. The school head may establish a local warning system supported with stockpiled supplies, frequent simulation exercises and drills to test response mechanisms, and community education on hazards.

The evacuation plans should be prioritized to improve DRRM preparedness; increase awareness through workshops and updating school plans every year to guarantee a resilient response and operational readiness. The school may create a clear emergency plan, conduct regular drills, provide adequate emergency tools for tracking and alerting, and establish stakeholder partnerships, all of which can help improve its disaster response capabilities. The school may use national frameworks for planning, roles, and monitoring, such as the Philippine NDRRM Plan. For effective, flexible interventions, the school head makes sure that all stakeholders are involved. Teachers may continue their coping mechanisms and strategies to address the challenges they encountered. School administrators should support teachers' actions to ensure the effective implementation of DRRM initiatives. Teachers may apply the skills and knowledge they have developed through training and seminars to all four components of DRRM. When they experience difficulties, they are motivated to become more active and effective in their role as DRRM implementers. Teachers may enhance their mechanisms and strategies by addressing challenges they perceive as ineffective.

In contrast, effective strategies may continue to be used to achieve better results in managing DRRM school initiatives across prevention, preparedness, response, and recovery. The SDRRM Coordinator may use or adopt the suggested action plan to improve teachers' personal crisis-coping mechanisms, increase their preparedness for disasters, and enhance the overall efficacy of the DRRM program in schools. Future researchers may conduct further studies using variables related to challenges, coping mechanisms, and the level of DRRM implementation identified in this study as notable for use.

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