

The Level of the Disaster Risk Reduction and Management (DRRM) Preparedness of Elementary Schools in Southeast Butuan District

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ABSTRACT

This study assessed the Disaster Risk Reduction and Management (DRRM) preparedness of elementary schools in Southeast Butuan District, focusing on practices, manifestations, and challenges faced by DRRM coordinators. Anchored on Emergency Management Theory, employing a descriptive-correlational research design, the study reveals a commendable commitment to preparedness efforts, reflecting a proactive stance towards disaster management and fostering resilience within the school community. The challenges confronting the coordinators, like insufficient training and education on DRRM concepts, limited awareness and understanding of DRRM principles, constrained budget and resources for preparedness activities, difficulties in procuring and maintaining necessary equipment and supplies, and obstacles in conducting regular drills and simulations, highlight the areas for improvement. Correlation analysis shows a significant relationship between DRRM practices and preparedness levels, emphasizing proactive engagement. The "Building Resilient Schools" program offers a structured approach to address these challenges. Recommendations highlight the importance of enhancing disaster resilience to create a safer and more resilient learning environment in the Southeast Butuan District.

KEYWORDS

DRRM preparedness; level of manifestation; resilient school; school disaster risk reduction management

INTRODUCTION

The Philippines came in third among all the nations with the highest risks globally, per the World Risk Report 2018 (World Economic Forum, 2018). This may be mainly because of the location and geographical context, as there is a high risk of coastal hazards such as storm surges, typhoons, and increasing sea levels. Additionally, because the islands are situated in the "Ring of Fire" between the Pacific and Eurasian tectonic plates, there is a significant risk to public safety from volcanoes and earthquakes. The risk of natural hazards is further increased by flooding, landslides, droughts, and tsunamis (CFE-DM, 2018). Hydro-meteorological phenomena, such as floods and typhoons, were responsible for more than 80% of the nation's natural disasters over the previous 50 years (Jha, 2018).

In this context, the best method for creating a society that is secure and disaster-resistant is education. Through knowledge, creativity, and teaching, schools are a crucial resource in lowering the risk of disasters. The teachers and learners are essential in establishing a culture of prevention and readiness because they can impart knowledge and skills to the

family and society. To make the world a safer place to live in and to create a sustainable, developed society, teachers and learners should actively participate in school disaster prevention programs. School disaster management involves the familiar cycle of steps in all project management.

The Department of Education had urged local school administrations to put emergency preparedness procedures into action. Disaster consequences on the school, the teachers, and especially the learners can be lessened by preparation. Furthermore, catastrophe chance diminishment and administration include not as it were anticipating harm to property but too organizing individuals to protect lives and keep from interferometer with the conveyance of instruction. Instructors, learners, guardians, and individuals of their communities are all encouraged to effectively take an interest in calamity readiness since this is a powerful approach to increase their understanding of risk reduction (Ronquillo, 2020).

Hazards and disasters are unavoidable situations that can be especially difficult for those impacted, including pupils and teachers in educational institutions. These incidents are frequently caused by natural disasters or human activity, putting populations in peril and sometimes resulting in human and material damage. These unavoidable events cause social disruption and may compromise crucial operations in part or all of the impacted areas. The detrimental effects of disasters are currently causing schools to face several challenges.

Thus, there is a growing demand to strengthen the Disaster Risk Reduction and Management policy in all the schools in the Philippines. Examples of such policy documents are Republic Act 10121 or the Act to Strengthen the Philippine Disaster Discussion and Management Systems provides for the framework for reducing national disaster risks and reducing disaster risks, and institutionalizing national disaster risks and management plans. For other purposes, DEPED ORDER NO. 21, s. It is also known as the 2015 disaster risk reduction and coordination and information management protocol. 37, s. Comprehensive Disaster Risk Reduction and Management (DRRM), Deped Order No. 2015 or Basic Formation Framework. 044, s. Establishment of management teams for disaster risk reduction in 2018 or central offices, DEPED ORDER NO. 33, s. 2021 School-based Disaster Prevention and Reaction Measures, Tropical Cyclones, Floods, Other Weather-Related Disasters and Disasters, and Depeped Order No. 044, s. Guidelines for providing educational programs and services to learners with disabilities in 2021 or K-12 basic training programs. These guidelines aim to promote resilience structures in offices and schools, ensuring that high-quality education is continuously provided and prioritized in the event of a disaster or emergency.

Butuan City, Philippines, is a low-lying city that has drawn attention all over the nation because of its propensity for frequent natural disasters that cause fatalities and property damage. Butuan City's elementary public schools are not exempt from this harm (Cubillas, 2018). In particular, flooding and earthquakes are two disruptive forces of nature that the Southeast Butuan District has personally experienced.

However, the effective execution of these policies relies on the distribution of ample resources, which encompass appropriate funding, teacher education, and the supply of DRRM equipment and related support services. All involved parties must collaborate to guarantee the safety and well-being of school children and educators within the school premises.

Hence, this study assessed the level of Disaster Risk Reduction and Management (DRRM) preparedness among elementary schools in the Southeast Butuan District to determine the actual DRRM resource management practices and challenges in the schools and to gain insights for a proposed enhancement of the existing program of DRRM

preparedness. The study assessed the Level of Effectiveness of the Disaster Risk Reduction and Management (DRRM) Preparedness of Schools in Southeast Butuan District.

LITERATURE REVIEW

This study is fixed in emergency management theory. The theory of emergency management is a study of how to prepare, prepare, respond and recover from a disaster or emergency (McEntire, 2005).

Catastrophic events will inevitably occur in society and will likely have unrecoverable repercussions unless responsible, urgent, and immediate actions are taken to address the concerns of mitigating, recovering from, and preventing these calamities. It claims that the society will be doomed to be tarnished by unrecoverable emergency events that would threaten its existence unless these measures and the tactics to carry them out are put in place (McEntire, 2005).

According to the theory, in order Plans and procedures should be developed after event prevention, reactive, sensitive procedures that directly address catastrophic disasters and their effects, so as not to compare with extinct animal species, people, or society. Adopting appropriate measures necessitates understanding the nature of the disaster and adhering to the following core principles: mitigation, recovery, preparedness, and response (McEntire, 2005).

This theory draws on various disciplines, understand the causes, effects and solutions for complex and uncertain situations, including sociology, psychology, government, and engineering. Emergency Management protects municipalities by coordinating and integrating all activities carried out to structure, maintain, and improve the ability of endangered or actual disasters, terrorist files or other artificially reduced, prepared, responded, and mitigated. disasters. The main goal of emergency management is to continually protect people, property/resources and the environment from human-induced natural and human development. The order of protection priorities is generally as follows: First, then the properties and resources, and finally the environment.

Emergency management involves the dynamic process of emergency preparation, reduction, reaction and recovery. The purpose of emergency management is to protect public health and security. Therefore, effective emergency managers in all areas of the community are important to prevent the loss of life and valuables. The theory mentioned above helped identify the significant variables in Disaster Risk Reduction and Management (DRRM) preparedness in schools. The DRRM Preparedness training, participation of teachers in DRRM preparedness activities, participation of learners in DRRM preparedness activities, and implementation of the School Contingency Plan were among the factors extracted from the assumptions of the theory presented.

RESEARCH METHODS

Research Design

This study employed a descriptive-correlational research design. It is descriptive because it described the distribution of one or more variables without regard to any causal or other hypothesis. Correlational research is a type of non-experimental research method in which a researcher measures two variables and understands and assesses the statistical relationship between them with no influence from any extraneous variable. The study utilized this research design it will determine the level of Disaster Risk Reduction Management (DRRM) Preparedness in the elementary schools of Southeast Butuan District in terms of DRRM Preparedness training, participation of teachers in DRRM

preparedness activities, participation of learners in DRRM preparedness activities, and implementation of School Contingency Plan. It also determined the level of manifestation of DRRM preparedness in the elementary schools of Southeast Butuan District in terms of installation of DRRM (Information-Education Campaign) IEC materials, learners' awareness of evacuation and safety areas, provision of emergency equipment, access to emergency hotlines, coordination with Local DRRM Council, and organization of School DRRM Team. It also considered the problems encountered in the implementation of DRRM preparedness activities in the schools of Southeast Butuan District.

Furthermore, this study is correlated as it determines the extent to which various related variables are related. In particular, a clear design aims to see whether there is a significant relationship between the willingness to disaster relief management management (DRRM) and the manifestation of DRRM preparation.

Research Locale

The study was conducted in the Southeast-Butuan area, including 12 of the 19 primary schools of Butuan City Bureau. Selected schools include Aupagan Elementary School, Bilay Elementary School, Kabasan Elementary School, Datuero Elementary School, and Datu Santiago b. Ecleo Sr. Memorial Elementary School, Don Gordencio Santos Elementary School, Mahei Integrated School, Maibu Elementary School, Masago Elementary School, Pigdolan Central Elementary School, Salvation Integrated School, Tababaka Integrated School. The Southeast Butuan District office is located in Barangay Pigdaulan, Butuan City. It is situated inside Pigdaulan Central Elementary School.

Population and Respondents of the Study

The population and respondents of study were the elementary teachers and school heads of the 12 elementary schools of Southeast Butuan District. The schools have 116 elementary teachers and 12 school heads a total of 128. The computed sample size using Cochran's Formula was 85 which suggested the appropriate sample size of the study.

The study employed cluster sampling to select the respondents of the study. The sample size was determined using Cochran's Formula, resulting in a sample of 85 respondents from a total of 128 teachers. This numbers includes the school heads. The respondents were randomly selected from the different schools in the Southeast Butuan District, Butuan City.

In the selection process, the researcher first prioritized school heads and school DRRM coordinators. For the remaining respondents, the researcher arranged their names alphabetically by school. Subsequently, a lottery with replacement method was used to finalize the selection of the respondents.

Research Instrument

The survey questionnaire was composed of three (3) parts. Part I is about the level of Disaster Risk Reduction Management (DRRM) Preparedness in the elementary schools of Southeast Butuan District in terms of DRRM Preparedness training; participation of teachers in DRRM preparedness activities; participation of learners in DRRM preparedness activities; and implementation of School Contingency Plan. Part II contained the level of manifestation of DRRM preparedness in the elementary schools of Southeast Butuan District in terms of installation of DRRM (Information-Education Campaign) IEC materials; learners' awareness of evacuation and safety areas; provision of emergency equipment; access to emergency hotlines; coordination with local DRRM Council; and organization of school DRRM team. Lastly, part III focused on the problems encountered

by the School DRRM Coordinators in the implementation of DRRM preparedness activities in the schools of Southeast Butuan District.

Validity and Reliability of the Instrument

The research instrument was validated by three specialists. Both content and logical validation were used to validate the questionnaire. The researcher submitted the questionnaire to the panel of experts for logical and content evaluation. One (1) Division DRRM coordinator, one (1) Butuan City DRRM Officer, and one (1) Civil Defense Officer III in Office of Civil Defense / RDRRMC.

It was revised after the survey called in to expert comments and suggestions. He was 30 teachers at Florencio R. Bavarian Elementary School. Shibayan Central Elementary School and Mahai merged school teachers and principals who were not in the 85 sample. Data were evaluated and analyzed. The reliability test of the questionnaire demonstrated that all parts achieved a very high index on the Cronbach Alpha scale ranging from .879 to .962. Specifically, Part I, which assessed the level of DRRM preparedness in elementary schools, had very high indices for DRRM training, teacher and learner participation in DRRM activities, and the implementation of the School Contingency Plan. Part II, which evaluated the manifestation of DRRM preparedness, also scored very high indices for the installation of DRRM IEC materials, learners' awareness of evacuation and safety areas, provision of emergency equipment, access to emergency hotlines, coordination with the local DRRM Council, and the organization of the school DRRM team. Lastly, Part III, which focused on the problems encountered by School DRRM Coordinators in implementing DRRM activities, maintained a very high reliability index.

Data Gathering Procedure

The study focused on the level of Disaster Risk Reduction Management (DRRM) Preparedness in the elementary schools of Southeast Butuan District. It utilized the questionnaires described in the preceding section. Prior to the administration of the questionnaires, the researcher sent a letter of request to the school division superintendent of Butuan City Division, district supervisor of Southeast Butuan District, asking permission to conduct the study. She went to the selected elementary schools of Southeast Butuan District and asked permission from the school heads to conduct the study with the teachers from the said district as participants.

The researcher sought the consent of the participants, to be part of the research study. The participants were given a brief and concise orientation on the scope of the study and its nature to understand the researcher's intention and goals. The participants were asked to answer each question honestly.

There were two sorts of surveys, one sort is the printed survey, which was for the members having challenges in utilizing contraptions and with a moderate web association; and the delicate duplicate through google shapes, which is for members who are well-versed within the utilize of innovation and those who have a solid web association. The analyst collected the overview surveys. At last, the information were organized, translated and analyzed utilizing clear and inferential insights.

Statistical Treatment

After collecting the data needed, they were then tabulated and analyzed. The following statistical tools were used for data treatment:

Frequency Counts and Percentages. These were used to determine the number of occurrences of each categorical data.

Weighted Mean. This was used to determine the mean responses of the respondents on the items in the questionnaire.

Pearson Product-Moment Correlation. This were utilized to indicate if there was a significant relationship of the Disaster Risk Reduction Management (DRRM) preparedness on the level of manifestation of DRRM preparedness.

Standard Deviation. These were used to determine the extent of dispersion of the data from the mean.

RESULTS AND DISCUSSION

Table 1. Level of Disaster Risk Reduction Management (DRRM) Preparedness in the Elementary Schools of Southeast Butuan District

| DRRM Preparedness Practices | Overall Weighted Mean | SD | Interpretation |
|---|-----------------------|----------------|----------------|
| ▪ DRRM Preparedness Training | 3.24 | .512 | High |
| ▪ Participation of Teachers in DRRM Preparedness Activities | 3.22 | .463 | High |
| ▪ Participation of Learners in DRRM Preparedness Activities | 3.27 | .510 | High |
| ▪ Implementation of School Contingency Plan | 3.31 | .482 | High |
| Overall Average | 3.26 | 0.49175 | High |

Legend: 1.00-1.49-Strongly Disagree/Very Low; 1.50-2.49-Disagree/Low; 2.50-3.49-Agree/High; 3.50-4.00-Strongly Agree/Very High

Table 1 aggregates the level of Disaster Risk Reduction Management (DRRM) Preparedness in the elementary schools of Southeast Butuan District across four key areas. DRRM Preparedness Training: The elementary schools exhibit a "High" level of preparedness in terms of training, suggesting commendable efforts in implementing training initiatives related to disaster preparedness. Participation of Teachers: The involvement of teachers in DRRM preparedness activities is rated as "High," indicating a robust commitment to engaging educators in various aspects of disaster preparedness. Participation of Learners: The level of participation of learners in DRRM preparedness activities is assessed as "High," reflecting a strong commitment to involving learners in various aspects of disaster preparedness. Implementation of School Contingency Plan: The overall implementation of school contingency plans is rated as "High," signaling a commendable and robust level of DRRM practices in executing and maintaining these plans.

The highest mean is the "Level of Disaster Risk Reduction Management (DRRM) Preparedness in the elementary schools of Southeast Butuan District in terms of Implementation of School Contingency Plan," with an overall weighted mean of 3.31. This practice needs to be sustained and improved. Conversely, the lowest mean is the "Level of Disaster Risk Reduction Management (DRRM) Preparedness in the elementary schools of Southeast Butuan District in terms of Participation of Teachers in DRRM Preparedness Activities," with an overall weighted mean of 3.22. This area requires significant attention. It is crucial to acknowledge the disparity between the highest and lowest mean scores, highlighting the need for targeted interventions to address areas of weakness and ensure uniform preparedness across all aspects of DRRM.

The combined weighted mean across all areas is 3.26, which falls within the "High" range. This suggests that, collectively, the elementary schools in Southeast Butuan District

have prioritized and effectively implemented comprehensive DRRM practices, fostering a culture of preparedness and resilience in the face of potential disasters.

Table 2. Level of Manifestation of DRRM Preparedness in the Elementary Schools of Southeast Butuan District

| DRRM Practices | Overall Weighted Mean | SD | Interpretation |
|---|-----------------------|-------------|----------------|
| ▪ Installation of DRRM (Information-Education Campaign) IEC Materials | 3.09 | .575 | High |
| ▪ Learners' Awareness of Evacuation and Safety Areas | 3.26 | .489 | High |
| ▪ Provision of Emergency Equipment | 2.90 | .676 | High |
| ▪ Access to Emergency Hotlines | 3.06 | .498 | High |
| ▪ Coordination with Local DRRM Council | 3.25 | .477 | High |
| ▪ Organization of School DRRM Team | 3.16 | .531 | High |
| Overall Average | 3.12 | .541 | High |

Legend: 1.00-1.49-Strongly Disagree/Very Low; 1.50-2.49-Disagree/Low; 2.50-3.49-Agree/High; 3.50-4.00-Strongly Agree/Very High

Table 2 reflects the comprehensive evaluation of the level of manifestation of Disaster Risk Reduction Management (DRRM) preparedness in the elementary schools of Southeast Butuan District. Each criterion, assessed through weighted means, contributes to the overall interpretation of the schools' readiness for potential disasters.

Installation of DRRM (Information-Education Campaign) IEC Materials: The elementary schools in Southeast Butuan District demonstrate a commendable level of preparedness in the installation of DRRM IEC materials, with an overall weighted mean of 3.09, categorizing as "High." This suggests a robust commitment to fostering awareness and education within the school community through strategically placed materials, contributing to a culture of preparedness.

Learners' Awareness of Evacuation and Safety Areas: The awareness of learners regarding evacuation and safety areas is notably high, as indicated by a weighted mean of 3.26. This reflects the effectiveness of implemented initiatives, such as educational programs and drills, ensuring that learners are well-informed about appropriate actions during emergencies and familiar with designated safety zones within the school premises.

Provision of Emergency Equipment: Although the provision of emergency equipment receives a high overall weighted mean of 2.90, falling within the "High" range, there is room for improvement. This highlights commendable efforts in supplying necessary tools for disaster response, yet there's a slight indication that further enhancements could be made to ensure learners' comprehensive training in the use and understanding of emergency equipment.

Access to Emergency Hotlines: The level of manifestation in providing access to emergency hotlines is commendably high, with a weighted mean of 3.06. This underscores the commitment of elementary schools to establish effective communication channels, ensuring swift responses during emergency situations.

Coordination with Local DRRM Council: The coordination with the local DRRM council is a notable strength, with an overall weighted mean of 3.25 falling within the "High" range. This indicates effective collaboration between schools and local DRRM initiatives, showcasing a commitment to a cohesive approach for disaster preparedness and response.

Organization of School DRRM Team: The organization of the school's DRRM team is perceived at a commendable level, with an overall weighted mean of 3.16. This suggests that the schools have established and maintained well-structured teams dedicated

to disaster risk reduction and management, ensuring a strong foundation for addressing potential disasters.

The highest mean is the “Level of manifestation of DRRM preparedness in the elementary schools of Southeast Butuan District in terms of learners’ awareness of evacuation and safety areas,” with an overall weighted mean of 3.26. This practice needs to be sustained and improved. Conversely, the lowest mean is the “Level of manifestation of DRRM preparedness in the elementary schools of Southeast Butuan District in terms of Provision of Emergency Equipment,” with an overall average of 2.90, indicating that this area requires significant attention. The cumulative total weighted mean across all dimensions is 3.12, firmly within the "High" range. This overarching interpretation underscores that, collectively, the elementary schools in Southeast Butuan District have prioritized and effectively implemented comprehensive DRRM practices. This signifies a proactive and committed stance towards fostering a culture of preparedness and resilience in the face of potential disasters.

Table 3. Problems Encountered by the DRRM Coordinators in the Implementation of DRRM Preparedness Activities in the Schools of Southeast Butuan District

| Indicators | Wtd Mean | SD | Verbal Description | Interpretation |
|---|-------------|-------------|--------------------|----------------|
| 1. Insufficient training and education on DRRM concepts and practices for School DRRM Coordinators hampers effective disaster risk reduction measures within educational institutions. | 2.88 | .718 | Agree | High |
| 2. Lack of awareness and understanding of DRRM principles among School DRRM Coordinators undermines ability to implement effective disaster preparedness strategies within the community. | 2.67 | .717 | Agree | High |
| 3. Limited budget and resources allocated for DRRM preparedness activities hinder the implementation of comprehensive disaster risk reduction measures, leaving the community vulnerable to the impact of natural disasters. | 3.00 | .694 | Agree | High |
| 4. Challenges in procuring and maintaining necessary DRRM equipment, materials, and supplies can hinder effective disaster preparedness efforts, jeopardizing community safety and resilience. | 3.05 | .633 | Agree | High |
| 5. Challenges in conducting regular drills, simulations, and emergency preparedness activities can lead to gaps in readiness, leaving community vulnerable to unseen disaster and hindering timely response and recovery efforts. | 2.83 | .637 | Agree | High |
| Overall Weighted Mean | 2.89 | .562 | Agree | High |

Legend: 1.00-1.49-Strongly Disagree/Very Low; 1.50-2.49-Disagree/Low; 2.50-3.49-Agree/High; 3.50-4.00-Strongly Agree/Very High

Table 3 provides an insightful overview of the challenges faced by DRRM Coordinators during the implementation of DRRM preparedness activities in the elementary schools of Southeast Butuan District. It offers valuable insights into the various obstacles hindering

the smooth execution of disaster preparedness initiatives, shedding light on areas that require targeted intervention and support. From logistical constraints to resource limitations, these challenges underscore the complexity of effectively implementing DRRM practices within educational settings. Moreover, Table 3 serves as a crucial tool for stakeholders, enabling them to identify key areas for improvement and develop tailored strategies to address the identified issues. By understanding the specific challenges faced by DRRM Coordinators, policymakers, school administrators, and community leaders can work collaboratively to overcome barriers and enhance the overall resilience of schools and communities against potential disasters. Additionally, Table 14 facilitates knowledge-sharing and best practices exchange, fostering a culture of continuous improvement and innovation in disaster preparedness efforts.

The mean distribution of problems encountered by the DRRM coordinators the implementation of DRRM preparedness activities in the schools of Southeast Butuan District. The highest mean, at 3.05, was given to indicator 4: "Challenges in procuring and maintaining necessary DRRM equipment, materials, and supplies can hinder effective disaster preparedness efforts, jeopardizing community safety and resilience." This indicates a significant issue faced by DRRM coordinators in the implementation of preparedness activities. Several factors may contribute to this result. Budget constraints within schools or districts could limit the availability of funds allocated for DRRM equipment and supplies, hindering procurement efforts. Additionally, logistical challenges such as sourcing reliable suppliers or ensuring timely delivery of equipment and materials may impede the acquisition process.

Furthermore, once procured, maintaining DRRM equipment and supplies in good condition requires ongoing investment of resources and effort, which may pose additional challenges. Addressing these issues requires collaborative efforts among school administrators, district officials, and relevant stakeholders to allocate sufficient resources, streamline procurement processes, and implement effective maintenance strategies. By addressing these challenges, DRRM coordinators can better ensure the readiness and effectiveness of preparedness activities within schools, ultimately enhancing disaster resilience in the Southeast Butuan District.

The lowest mean of 2.67, is associated with indicator 2: "Lack of awareness and understanding of DRRM principles among School DRRM Coordinators undermines the ability to implement effective disaster preparedness strategies within the community." It indicates a significant gap in knowledge and understanding of DRRM principles among coordinators in Southeast Butuan District schools. This result may stem from various factors contributing to insufficient awareness and understanding. It is possible that DRRM coordinators may not have received adequate training or professional development opportunities to fully comprehend the principles and best practices of disaster risk reduction and management. Additionally, limited access to educational resources or guidance on DRRM principles could further hinder coordinators' understanding. Furthermore, there may be a lack of emphasis or prioritization of DRRM education within school systems, leading to insufficient awareness among coordinators. Addressing this issue requires targeted interventions such as comprehensive training programs, workshops, and access to educational materials to enhance coordinators' knowledge and understanding of DRRM principles. By investing in the professional development of DRRM coordinators, schools can improve their capacity to effectively implement preparedness activities and enhance overall disaster resilience within the district.

The overall weighted mean of 2.89, falls within the "High" range, indicating a high level of challenges faced by the coordinators. Despite the challenges, the "High" rating

implies that these issues are manageable and may not significantly impede the overall progress of DRRM preparedness activities in the district.

According to Cubillas et al. (2022), while the program participants' awareness of secure learning situations, fiasco chance administration, hazard decrease, and strength instruction is comprehensive, their program compliance is restricted since of a need of financing, a need of accentuation on the program, and the inaccessibility of gear that would have been needed during the flood. The program's efficacy and efficiency depend on the aforementioned limits being provided.

According Manabo et al. (2023) there is a possibility that the institution's RRDP program will not receive enough funding because budgets are realigned for other school priorities and there are limited resources available in addition to funding, such as training materials and training pace. Regarding the human element, the majority of the issues the schools encountered were that they lacked volunteers to start the program's preparations, had insufficient staff to oversee or manage the preparations, and assigned authorities or officials had other obligations.

Table 4. Correlation Analysis Between Disaster Risk Reduction Management (DRRM) Practices on Preparedness and the Level of Manifestation of DRRM Preparedness in Schools

| | | Installation of IEC Materials | Learners' Awareness of Evacuation and Safety Areas | Provision of Emergency Equipment | Access to Emergency Hotlines | Coordination with Local DRRMC | Organization of School DRRM Team |
|---|-------------------------|--------------------------------------|---|---|-------------------------------------|--------------------------------------|---|
| DRRM Preparedness training | Correlation Coefficient | .716** | .695** | .628** | .665** | .682** | .694** |
| | p-value | .000 | .000 | .000 | .000 | .000 | .000 |
| | Decision on Ho | Reject H0 | Reject H0 | Reject H0 | Reject H0 | Reject H0 | Reject H0 |
| | Interpretation | Significant | Significant | Significant | Significant | Significant | Significant |
| Participation of teachers in DRRM preparedness activities | Correlation Coefficient | .524** | .561** | .497** | .611** | .449** | .551** |
| | p-value | .000 | .000 | .000 | .000 | .000 | .000 |
| | Decision on Ho | Reject H0 | Reject H0 | Reject H0 | Reject H0 | Reject H0 | Reject H0 |
| | Interpretation | Significant | Significant | Significant | Significant | Significant | Significant |
| Participation of learners in DRRM preparedness activities | Correlation Coefficient | .696** | .585** | .627** | .621** | .626** | .668** |
| | p-value | .000 | .000 | .000 | .000 | .000 | .000 |
| | Decision on Ho | Reject H0 | Reject H0 | Reject H0 | Reject H0 | Reject H0 | Reject H0 |
| | Interpretation | Significant | Significant | Significant | Significant | Significant | Significant |
| Implementation of School Contingency Plan | Correlation Coefficient | .627** | .646** | .613** | .703** | .795** | .746** |
| | p-value | .000 | .000 | .000 | .000 | .000 | .000 |
| | Decision on Ho | Reject H0 | Reject H0 | Reject H0 | Reject H0 | Reject H0 | Reject H0 |
| | Interpretation | Significant | Significant | Significant | Significant | Significant | Significant |

**significant at $p < .01$

Table 4 presents the significant relationship of the Disaster Risk Reduction Management (DRRM) preparedness on the level of manifestation of DRRM preparedness in the schools of Southeast Butuan District.

This shows the result of the correlation analysis between the DRRM practices on preparedness and the actual level of manifestation of DRRM preparedness among the schools in the Southeast Butuan District. It can be gleaned from the Table above that the analysis yielded p-values of .000 indicating very significant relationship between the schools' practices on preparedness and their actual manifestation of DRRM preparedness. Thus, the null hypothesis is rejected. There is a significant relationship of the Disaster Risk Reduction Management (DRRM) preparedness practices and the level of manifestation of DRRM preparedness.

This finding underscores the strong link between DRRM preparedness practices and their effective implementation in schools. Schools with well-established measures tend to demonstrate higher levels of readiness, reinforcing the importance of continuous planning, training, and resource allocation. By strengthening these initiatives, schools can enhance their capacity to mitigate risks, respond effectively to disasters, and create a safer, more resilient learning environment for students and staff.

It can be recalled that the level of practices on preparedness is generally on the High level and, correspondingly, the level of actual manifestation of DRRM preparedness is also perceived to be on high level. Thus, a school where the teachers and learners actively participate in DRRM preparedness activities have the potential to improve their pool of DRRM preparedness equipment so that these activities can be sustained.

The data indicate that while the disaster risk reduction practices in the schools are commendable, it is important to consider that these schools are situated in diverse geographical locations and face varying degrees of vulnerability to hazards. Among the hazards commonly experienced by all schools in the Southeast Butuan District is the risk of earthquakes. Additionally, fire hazards are also a concern for these schools. However, Mahay Integrated School and Don Gaudencio Santos Elementary School are particularly vulnerable to flooding. On the other hand, Aupagan Elementary School, Cabaasan Elementary School, Datu Ecleo Elementary School, Datu Man-Oloy Tribal Elementary School, Datu Santiago B. Ecleo Sr. Memorial Elementary School, Datu Francisco Elementary School, Maibu Elementary School, and Masago Elementary School are susceptible to landslides.

Chacko et al. (2019) uncovered that crisis readiness measures incorporate creating techniques, collecting supplies, and holding drills and works out. These acts have been changed into checklists, recommendations, and works out that organizations offer to assist individuals plan for calamities in their homes, communities, and workplaces. Response groups advise that these actions be routinely evaluated and assessed. Education is crucial in lowering the population's susceptibility to calamities (Jafari et al., 2020).

This could imply that effective DRRM practices and education are essential for building resilient communities and reducing the impact of disasters. Continued efforts in disaster preparedness

CONCLUSION

Based on the findings of the study, the following conclusions are drawn:

1. There is an establish deficiency in the ongoing provision of support and resources essential for sustaining and amplifying Disaster Risk Reduction and Management (DRRM) practices within elementary schools. By steadfastly upholding a proactive stance towards disaster risk reduction and management, schools within the Southeast

Butuan District persists in safeguarding the well-being of their community members, mitigating the impact of disasters, and fostering a safer learning environment for all stakeholders.

2. The School DRRM Practices, as a whole, is wanting of the desired level of DRRM Preparedness level. This deficit undermines the ability of schools to adequately protect learners, staff, and surrounding communities in times of crisis.
3. DRRM coordinators within schools are confronted with obstacles due to insufficient provisions: lacking crucial elements such as additional training, budgetary allocations, and essential resources.
4. The schools have established a continued emphasis on enhancing DRRM preparedness. The Disaster Risk Reduction Management (DRRM) practices on preparedness are highly associated with the actual level of manifestation of DRRM preparedness among schools in the Southeast Butuan District. In essence, schools with somewhat deficient DRRM practices tend to exhibit lower levels of preparedness, highlighting the importance of proactive measures in mitigating disaster risks within educational settings.
5. The "Building Resilient Schools" program is a proactive and comprehensive approach to enhance disaster risk reduction and management preparedness in schools within the Southeast Butuan District.

Recommendations

In the light of the findings and conclusions of the study, the following are the recommendations:

1. To Teachers.

Based on the findings of the study, it is evident that there are areas where improvements can be made to enhance the disaster resilience of schools within the district. As educators, it is imperative to take proactive measures to address these findings and ensure the safety and well-being of learners and staff during emergencies.

There is a need to review and strengthen existing DRRM policies in collaboration with school administrators. These policies should be comprehensive and aligned with national and regional guidelines to effectively address potential risks. Additionally, it is essential to develop detailed emergency response plans tailored to the specific needs and vulnerabilities of each elementary school within the district. This can be achieved through collaboration with relevant stakeholders, including local authorities and community members.

Regular drills and training sessions should be organized to familiarize both learners and staff with emergency procedures and protocols. These drills should cover various scenarios such as earthquakes, floods, fires, and typhoons. Establishing effective communication channels within the school community is also crucial for disseminating timely information and updates during emergencies. This may involve setting up communication networks, utilizing social media platforms, and maintaining contact lists.

Integrating disaster risk awareness and education into the curriculum is another essential aspect to promote preparedness among learners. By incorporating these topics into classroom learning, learners can develop a better understanding of the importance of preparedness and learn how to respond appropriately during emergencies.

Furthermore, forging partnerships with local government agencies, non-governmental organizations (NGOs), and community groups involved in DRRM efforts

can provide additional resources, expertise, and support for initiatives aimed at enhancing disaster resilience.

Finally, implementing a system for regular monitoring and evaluation of DRRM initiatives is essential to assess their effectiveness and identify areas for improvement. This could involve conducting surveys, collecting feedback, and analyzing response times during drills.

By taking these proactive measures, teachers can contribute significantly to enhancing the disaster resilience of elementary schools in the Southeast Butuan District, ultimately ensuring the safety and well-being of learners and staff during emergencies.

2. To Learners.

It is crucial to take proactive steps in response to the findings. Firstly, ensure you understand the emergency procedures and protocols established by your school, as this knowledge is vital during crisis situations. Actively participate in drills and training sessions to hone your response skills and familiarize yourself with proper safety measures. Stay informed about potential risks and hazards in your area, and maintain emergency supplies both at home and at school. Additionally, advocate for the inclusion of DRRM education in the curriculum and promote awareness among your peers about the importance of preparedness. Engage with local authorities and organizations involved in DRRM efforts, and provide feedback to school administrators to help enhance emergency response plans. By taking these actions, you can contribute to creating a safer and more resilient school environment in the Southeast Butuan District, ensuring the well-being of yourself and your peers during emergencies.

3. To Superintendents and Supervisors.

Overseeing the educational institutions in the Southeast Butuan District, the findings of the study necessitate immediate attention and strategic action. It is imperative to prioritize the enhancement of disaster resilience within the district's elementary schools.

- Firstly, collaborate with school administrators to conduct a comprehensive review of existing DRRM policies and protocols. Ensure that these policies are aligned with national standards and encompass a wide range of potential hazards.
- Additionally, provide support and resources for the development and implementation of detailed emergency response plans tailored to each school's unique needs and vulnerabilities. Encourage regular drills and training sessions to familiarize staff and learners with emergency procedures and protocols. Establish effective communication channels to facilitate timely dissemination of information during emergencies.
- Furthermore, foster partnerships with local government agencies, NGOs, and community groups to bolster DRRM efforts and leverage additional resources. Lastly, institute a system for ongoing monitoring and evaluation of DRRM initiatives to assess effectiveness and identify areas for improvement. By taking these proactive measures, Superintendents and Supervisors can ensure the safety and well-being of learners and staff in elementary schools throughout the Southeast Butuan District, ultimately building a more resilient educational community.

4. To School Heads.

Underscore the critical importance of enhancing disaster resilience within your respective institutions. As leaders in schools, it is essential to prioritize DRRM

initiatives to ensure the safety and well-being of learners, staff, and the wider school community.

- Begin by conducting a thorough assessment of your school's current DRRM policies and practices, comparing them against national guidelines and best practices. Identify areas for improvement and work collaboratively with teachers, staff, and relevant stakeholders to develop and implement comprehensive emergency response plans tailored to the specific risks faced by your school. Organize regular drills and training sessions to familiarize everyone with emergency protocols and procedures, ensuring they are prepared to respond effectively in crisis situations. Establish clear communication channels to facilitate rapid dissemination of information and updates during emergencies.
- Additionally, foster partnerships with local authorities, NGOs, and community organizations to enhance resources and support for DRRM efforts.
- Lastly, prioritize ongoing monitoring and evaluation to assess the effectiveness of DRRM initiatives and make necessary adjustments as needed. By taking these proactive steps, School Heads can play a vital role in building a safer and more resilient environment for learning within the Southeast Butuan District.

5. To School DRRM Coordinators.

The crucial role School DRRM Coordinators' play in ensuring the safety and resilience of school community. It's imperative to utilize the study's results as a guide to strengthen DRRM initiatives within your respective schools.

- Firstly, collaborate closely with school administration and staff to review existing DRRM policies and procedures, ensuring they align with national standards and address the specific risks faced by your school. Create comprehensive crisis reaction plans that diagram clear conventions for different calamity scenarios, and guarantee all staff individuals are prepared on their usage. Organize normal drills and reenactments to familiarize learners and staff with crisis strategies and make strides reaction availability.
- Additionally, take proactive steps to raise awareness about disaster risks and preparedness among learners, staff, and parents through education and outreach initiatives. Foster partnerships with local authorities, NGOs, and community organizations to enhance resources and support for DRRM efforts.
- Finally, establish mechanisms for ongoing monitoring and evaluation to assess the effectiveness of DRRM initiatives and identify areas for improvement. By diligently fulfilling your role as School DRRM Coordinators and implementing these recommendations, you can contribute significantly to creating a safer and more resilient learning environment within the Southeast Butuan District.

6. To Community Members.

The active engagement and support are crucial in ensuring the safety and well-being of learners, teachers, and staff within local elementary schools.

- It is recommended that community members familiarize themselves with the DRRM policies and procedures implemented by schools in their area and actively participate in community-wide initiatives aimed at strengthening disaster preparedness. Sharing knowledge and expertise on local hazards and vulnerabilities can inform the development of comprehensive emergency response plans tailored to the specific needs of each school.
- Additionally, supporting efforts to raise awareness about disaster risks and preparedness among fellow community members, particularly families with

children attending elementary schools, is essential. Encouraging participation in emergency drills and training sessions organized by schools ensures everyone is prepared to respond effectively in crisis situations. Collaborating with local authorities, schools, and organizations to pool resources and expertise for DRRM initiatives, such as establishing communication networks or conducting hazard assessments, is also recommended.

- Lastly, advocating for the inclusion of DRRM education in community outreach programs and supporting ongoing monitoring and evaluation efforts to assess the effectiveness of DRRM initiatives can contribute to building a safer and more resilient environment for learning and living in the Southeast Butuan District.

7. To Future Researchers.

It is essential to conduct follow-up studies to assess the long-term effectiveness of DRRM initiatives implemented in response to the findings of the study. Investigating how these initiatives evolve over time and their impact on enhancing disaster resilience within schools can provide valuable insights for future planning and implementation.

- Additionally, future research could focus on exploring innovative approaches and best practices in DRRM that could be adapted and implemented within elementary school settings. This could involve studying successful case studies from other regions or countries and assessing their applicability to the context of the Southeast Butuan District.
- Furthermore, there is a need for research that examines the role of technology in enhancing DRRM preparedness and response in schools, such as the use of mobile applications or online platforms for communication and coordination during emergencies.
- Lastly, future researchers should prioritize engaging stakeholders from diverse backgrounds, including educators, learners, parents, local authorities, and community members, to ensure that research findings are comprehensive, inclusive, and actionable.

By addressing these areas in future research endeavors, researchers can contribute to advancing knowledge and understanding of DRRM in elementary schools and ultimately contribute to building safer and more resilient communities in the Southeast Butuan District and beyond.

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