

# DISASTER RISK REDUCTION IMPLEMENTATION AND EXTENT OF READINESS OF SCHOOL DISASTER RISK REDUCTION MANAGEMENT

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**ABSTRACT :** Schools face constant threats from disasters. To address this, School Disaster Risk Reduction Management (SDRRM) programs are becoming increasingly important. This study investigated how well these programs are implemented in elementary and secondary schools in the District of Motiong. The researcher used surveys to assess current practices and looked at factors like administrative support and training that affect how well these programs work. This study found that schools with strong SDRRM systems were better prepared for disasters. The study highlights the importance of leaders who are committed to SDRRM, having enough resources, and training staff. This research provides valuable information on how to improve disaster preparedness in schools. By understanding what makes SDRRM programs effective, schools can better protect students, staff, and keep education going even during disasters.

**KEYWORDS :** *Disaster preparedness, Disaster response, Disaster risk reduction, School safety, SDRRM (School Disaster Risk Reduction Management)*

## I. INTRODUCTION

The Philippines, due to its unique topography, geology, and location within the Pacific Ring of Fire and typhoon belt, faces a high risk of natural and man-made disasters. The country frequently encounters various disasters, including typhoons, volcanic eruptions, earthquakes, landslides, and floods. This vulnerability was reflected in the United Nations International Strategy for Disaster Reduction's 2012 World Risk Index, ranking the Philippines third out of 173 countries in terms of disaster risk [1].

This vulnerability necessitates robust school safety measures, particularly for frequent occurrences like typhoons and floods. While national policies like the Disaster Risk Reduction and Management Act (RA 10121) [2] promote a proactive approach, effective program implementation remains a challenge. Existing frameworks like the National Disaster Risk Reduction Management Framework (NDRRMF) emphasize prevention, mitigation, preparedness, response, and recovery. However, a gap exists in understanding how these comprehensive national plans translate into practical actions within schools [3].

This research gap is concerning. Studies like Fahad and Wang (2018) [4] highlight that globally, millions of children are impacted by natural disasters, with disruptions to education and long-term psychosocial effects. The Department of Education's (DepEd) DRRM program and the School DRRM Manual exist, but limited research explores program awareness and application within Philippine schools.

Building upon these points, the Department of Education has taken the initiative to encourage local school administrations to implement emergency preparedness procedures. Proactive measures can mitigate the adverse consequences of disasters on schools, teachers, and especially students. Disaster risk reduction and management (DRRM) extend beyond safeguarding property; they involve organizing people to preserve lives and maintain uninterrupted education delivery. Thus, collaborative efforts among school leaders, faculty, staff, parents, and students are instrumental in ensuring schoolwide safety [5].

By investigating the implementation and preparedness of the DepEd DRRM program in Motiong District schools, this study aims to bridge this knowledge gap. Understanding the program's effectiveness can contribute valuable insights for enhancing school safety measures in disaster-prone areas across the Philippines.

## II. RESEARCH QUESTIONS

This study assessed the level of implementation and extent of readiness of the school disaster risk reduction management among elementary and secondary schools in the District of Motiong, Schools Division of Samar for School Year 2022-2023 with the end view of crafting a school-based intervention plan. Specifically, this study sought answer to the following questions:

1. What is the profile of the teacher-respondent in terms of:
  - 1.1 age and sex;
  - 1.2 civil status;
  - 1.3 highest educational attainment;
  - 1.4 gross monthly family income;
  - 1.5 number of years in teaching;
  - 1.6 performance rating based on the latest IPCRF;
  - 1.6 relevant in-service training; and
  - 1.8 attitude toward SDRRM implementation?
2. What is the profile of the school administrator-respondents in terms of:
  - 2.1 age and sex;
  - 2.2 civil status;
  - 2.3 highest educational attainment;
  - 2.4 gross monthly family income;
  - 2.5 number of years as administrator; and
  - 2.6 performance rating based on the latest OPCRF;
  - 2.7 relevant in-service training; and
  - 2.8 attitude toward SDRRM implementation?
3. What is the level of implementation of the SDRRM as perceived by the two groups of respondents along the following areas:
  - 3.1 disaster prevention and mitigation;
  - 3.2 disaster response;
  - 3.3 disaster preparedness; and
  - 3.4 disaster recovery and rehabilitation?
4. Is there a significant difference in the perceptions of the two groups of respondents on the level of implementation of school disaster risk reduction in the afore-cited areas?
5. What is the extent of readiness of the SDRRM as perceived by the two groups of respondents along the following:
  - 5.1 structural safety code;
  - 5.2 non-structural safety code;
  - 5.3 emergency supplies and equipment; and
  - 5.4 servicing and maintenance?
6. Is there a significant relationship between the perceived level of implementation in terms of the identified areas and the following:
  - 6.1 teacher-related variates;
  - 6.2 school administrator-related variates; and
  - 6.3 perceived extent of readiness of SDRRM?
7. What are the problems encountered by the school administrators and teachers in the implementation of school disaster risk reduction?
8. What intervention plan may be crafted based on the findings of this study?

### III. CONCEPTUAL FRAMEWORK

Fig. 1 illustrates the conceptual framework of the study, depicting the flow of the research. At the foundation of the schema are the elementary and secondary teachers and school administrators of the District of Motiong, Schools Division of Samar, during the school year 2022-2023. The upward-pointing arrowhead signifies the upward movement of the schema.

The study employed a descriptive research design to determine the status of school disaster risk reduction implementation and readiness among elementary and secondary schools in the District of Motiong.

The left side of the bigger frame shows the profile description of teacher-respondents and school administrator-respondents in terms of age, sex, civil status, gross monthly family income, highest educational attainment, number of years in teaching/school administrator, performance rating based on the latest IPCRF/OPCRF, relevant in-service trainings attended, and attitude toward SDRRM.

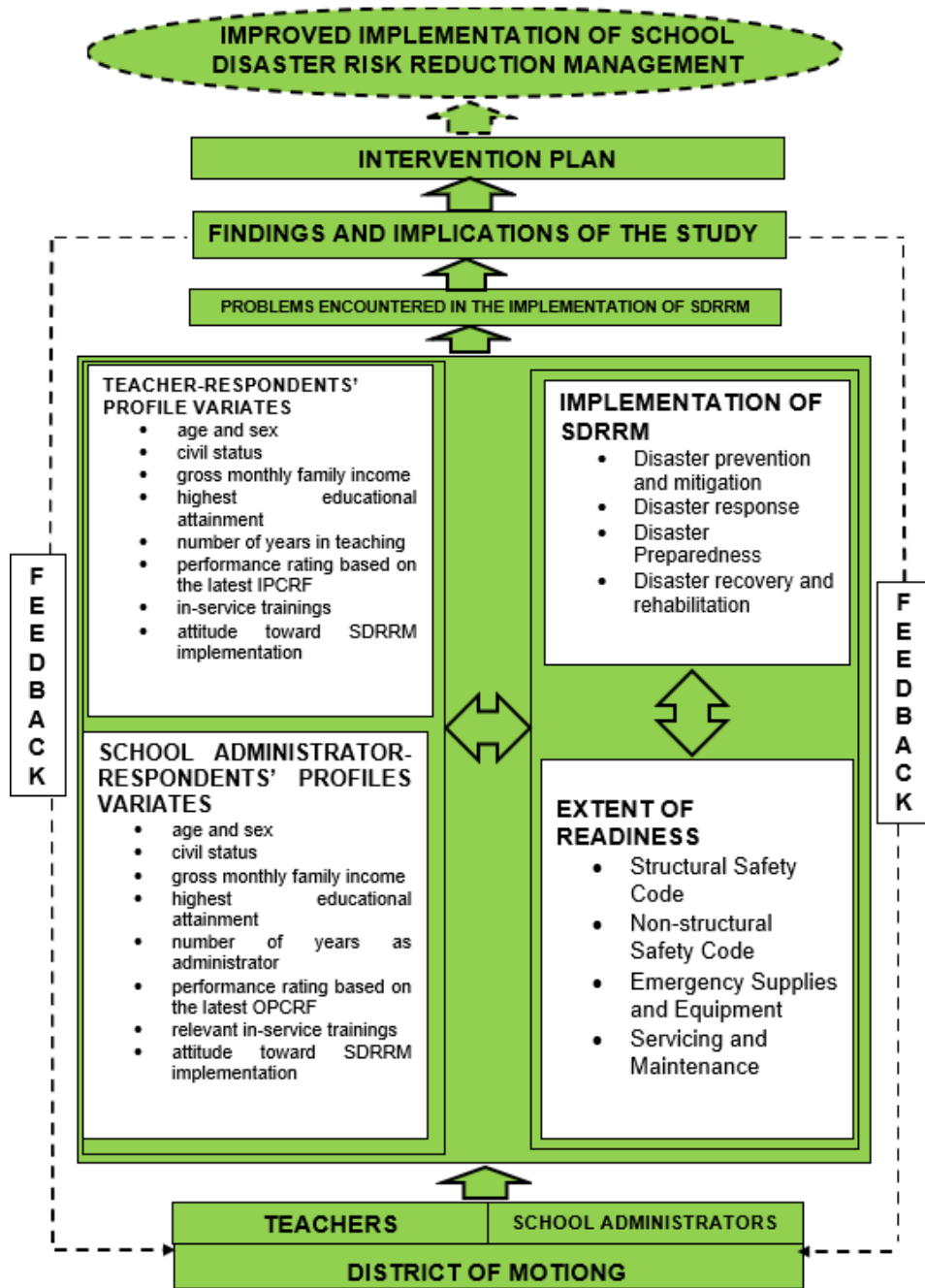


Figure 1. the paradigm of the study

Additionally, the descriptive research design assessed the extent of school disaster risk reduction implementation and readiness in elementary and secondary schools. The upper right side of the bigger frame presents the evaluation of disaster prevention and mitigation, disaster response, disaster preparedness, and disaster recovery and rehabilitation, while the lower right side shows the level of readiness in terms of structural code, non-structural safety code, emergency supplies and equipment, and servicing and maintenance.

A comparative analysis has been conducted to determine any differences in the assessment of implementation and readiness between teacher and school administrator-respondents. Correlation analysis was also performed to explore the relationship between their perceived level of SDRRM implementation and personal variables, as well as their perceived extent of readiness.

The findings of the study, displayed in the third higher frame, provided valuable insights to propose an intervention plan (fourth higher frame) to enhance the implementation of school disaster risk reduction management, as depicted in the topmost frame of the schema. The broken loops connecting the third higher frame to the base frame symbolize effective feedback mechanisms to achieve the study's objective.

## IV. METHODOLOGY

### Research Design

This study employed a quantitative research design with a descriptive-correlation method, utilizing a questionnaire as the primary data collection tool. The descriptive aspect will focus on detailing the profiles of both the teacher and school administrator respondents. Moreover, the respondents' profile variables were correlated with their perceptions regarding the level of implementation of school disaster risk reduction, covering areas such as disaster prevention and mitigation, disaster response, disaster preparedness, and disaster recovery and rehabilitation. In the same manner, the personal profile variables will be correlated with their readiness levels in terms of structural code compliance, non-structural safety measures, availability of emergency supplies and equipment, and servicing and maintenance procedures. Also, the collected data underwent statistical analysis using both descriptive and inferential statistical tools.

### Locale of the Study

Fig. 2 provided a visual representation of the vicinity of Motiong, Samar. The study took place in the District of Motiong, within the Division of Samar. Motiong is a fourth-class municipality, situated within Samar Province, Philippines. The Motiong District comprises a total of twenty-nine (29) elementary schools and three (3) secondary schools.

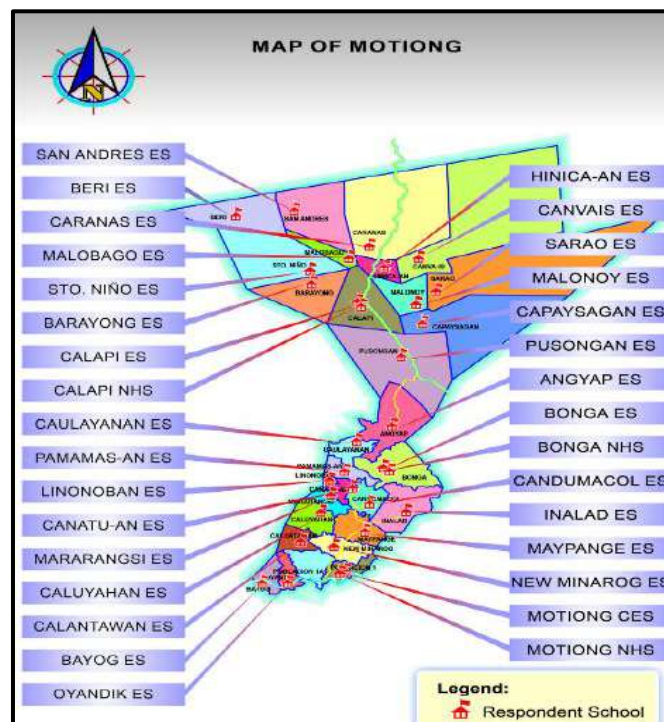


Figure 2. the map showing the locale of the study

### Instrumentation

The researcher utilized several data gathering instruments to collect essential information needed in this study, namely: questionnaire, and documentary analysis.

### Validation of Instrument

The questionnaire undergoes a comprehensive validation process overseen by the esteemed Panel of Oral Examiners from the College of Graduate Studies at Samar College. This meticulous validation endeavor encompasses a thorough examination of face validity, content validity, and construct validity, ensuring the seamless adaptation of the questionnaire to the unique local context of the current study. Additionally, the personal profiles of the respondents underwent an equally meticulous validation process, steered by the distinguished Panel of Oral Examiners at Samar College's College of Graduate Studies. This validation procedure aims to discern the suitability and relevance of each profile item. Through this judicious evaluation, items that necessitate refinement, removal, or inclusion were discerningly identified, culminating in a comprehensive profile that resonates profoundly with the study's local context and objectives.

### Data Gathering Procedure

The researcher initiated the process by seeking approval from the Schools Division Superintendent of Samar Division. This approval was essential to obtain the necessary authorization to distribute the questionnaire among respondents affiliated with the identified elementary and secondary schools within the District of Motiong. It served as an official reference point for securing permissions from the District Supervisor and the Principals of the respondent schools.

Once the Schools Division Superintendent granted approval, the researcher approached the District Supervisor and Principals of the secondary schools. The purpose was to request their consent for administering the research questionnaire to the intended respondents, namely, the administrators and teachers within their respective institutions.

Subsequently, after obtaining permissions from both the Division Superintendent and the school-level authorities, the researcher took a hands-on approach by personally delivering and administering the research instrument to the administrators and teachers. This direct involvement ensured a high response rate and facilitated the efficient retrieval of completed questionnaires. Additionally, it allowed the researcher to address any queries or concerns from the respondents promptly, which ultimately enhanced the overall quality of the data collection process

## V. SUMMARY OF FINDINGS

The study investigated the perception of teachers and school administrators on the implementation of School Disaster Risk Reduction Management (SDRRM). Here's a summary of the findings:

**Teacher Demographics:** Most teachers were female (69%), around 30 years old, married (60%), with some graduate studies (39%), and a moderate income (around 25,000). They reported attending some school-level training and occasional district-level training.

**Administrator Demographics:** Similar to teachers, administrators were mostly female (72%), around 33 years old, married (81%), with graduate degrees or ongoing studies (62%). They had a moderate income (around 35,000) and had been administrators for 3 years. They typically attended district-level trainings.

**Perceptions on SDRRM Implementation:** Both teachers and administrators agreed that the school implements SDRRM programs in disaster prevention, mitigation, preparedness, response, and recovery.

**Readiness for SDRRM:** Both groups rated the school's readiness for SDRRM as moderate in structural safety, non-structural safety, and emergency supplies. However, teachers felt servicing and maintenance was moderately ready, while administrators found it slightly ready.

**Factors Affecting Implementation Perception:** Teachers with higher education, better performance ratings, and a positive attitude towards SDRRM perceived a higher level of implementation. However, factors like age, sex, or training didn't significantly affect their perception. For administrators, none of the factors significantly affected their perception of implementation level.

**Relationship Between Implementation and Readiness:** Teachers who perceived a higher level of SDRRM implementation also felt the school was more prepared.

**Problems Encountered:** Both groups considered the problems encountered in implementing SDRRM to be moderate.

## VI. CONCLUSION AND RECOMMENDATION

The study found that teachers and administrators have positive attitudes towards implementing School Disaster Risk Reduction Management (SDRRM) programs. Both groups agreed that the school effectively implements these programs and feels prepared to handle disasters. Teachers with higher education and positive attitudes were more likely to perceive a higher level of implementation.

The study recommends focusing on areas to improve SDRRM readiness. This includes:

- Encouraging teachers to pursue further education, potentially beyond graduate programs.
- Providing teachers with ongoing technical support from administrators.
- Conducting more frequent emergency drills.
- Ensuring alternative learning methods are available during emergencies.
- Regularly submitting data to the Department of Education's RADAR app.
- Investing in additional training for teachers who coordinate SDRRM programs.
- Re-evaluating the school's SDRRM preparedness and providing support to teachers based on the findings.
- Conducting further studies to confirm these results.

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