ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XII Issue III March 2025

Level of Awareness and Preparedness of the BNHS Main Community on Earthquakes: As Basis for SDRRM Plan for School Year 2022 - 2023

Rod Edmon S. Torreliza, Lpt, Maed

Lead Philippines (Members), Humanitarian Organization of Multidisciplinary Education (Home) (Director of Community Development)

DOI: https://doi.org/10.51244/IJRSI.2025.12030076

Received: 10 March 2025; Accepted: 22 March 2025; Published: 16 April 2025

ABSTRACT

Earthquake preparedness plays a vital role in ensuring the safety of individuals. This study aimed to determine the level of awareness and disaster preparedness regarding earthquakes among selected students, teachers, non-teaching staff, and parents of Bacoor National High School Main Community. The study quantitatively assessed the extent to which these groups learned about disaster preparedness within the school setting. The findings of this research serve as the basis for safety and mitigation planning for the upcoming school year. Using a 5-point Likert scale earthquake preparedness survey, data were gathered from 350 respondents, selected through stratified random sampling. Results revealed that the BNHS Main Community has a high level of awareness regarding earthquake occurrences and is generally well-equipped with necessary precautions. The researchers concluded that while preparedness levels are high, continued training and drills are essential. The study recommends maintaining and enhancing earthquake preparedness through frequent earthquake drills and related activities.

INTRODUCTION

Earthquakes are natural disasters that occur unexpectedly, posing significant risks to human lives and infrastructure. Given the unpredictable nature of earthquakes, preparedness is crucial in mitigating their impact. Schools, as fundamental institutions of society, must ensure that students, teachers, and staff are well-prepared to handle such emergencies effectively.

The Department of Education mandates disaster preparedness measures in schools to safeguard students and school personnel. Disaster risk reduction and management (DRRM) efforts not only prevent property damage but also promote coordination among stakeholders to save lives. Teachers, students, parents, and school staff must actively participate in disaster preparedness initiatives to raise awareness and minimize risks associated with earthquakes. According to Russell (2018), school administrators, teachers, staff, parents, and students can collaborate to establish a safe school environment and mitigate the effects of disasters.

This study investigates the level of awareness and preparedness of the Bacoor National High School Main Community regarding earthquakes. The research findings aim to support the development of a School Disaster Risk Reduction and Management (SDRRM) Plan to enhance disaster preparedness for the academic year 2022-2023.

To further understand the significance of this study, previous research has underscored the importance of assessing school communities to enhance disaster response strategies. Studies indicate that well-informed communities can better mitigate earthquake-related risks through proactive safety measures and preparedness training.

Research Questions

This study seeks to assess the earthquake preparedness and awareness levels of randomly selected members of the Bacoor National High School Main Community. Specifically, it aims to answer the following questions:

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XII Issue III March 2025

1. What is the level of awareness regarding earthquakes among students, teachers, workers, and parents of the Bacoor National High School Main Community?

2. What is the level of preparedness of the entire Bacoor National High School Main Community in the event of an earthquake?

3. What areas should be prioritized in the SDRRM Plan for the School Year 2022-2023?

REVIEW OF RELATED LITERATURE

The Importance of Earthquake Preparedness in Schools

Disasters disrupt community functions, causing widespread losses that exceed local resources (Najafi et al., 2017). Despite efforts to promote earthquake preparedness, studies indicate that pre-disaster preparedness adoption rates have not significantly increased since the 1970s (Nigg & Paz, 1986; Russell, Goltz, & Bourque, 1995; Nguyen et al., 2006). Many individuals fail to recognize the importance of preparedness until they experience a disaster firsthand (Kirschenbaum, 2005).

Public Awareness and Disaster Risk Reduction

Public awareness initiatives, such as earthquake drills and seminars, play a crucial role in fostering a culture of preparedness (Magunda, 2010). Research suggests that some communities, particularly those frequently affected by seismic activities, exhibit heightened awareness and fear of earthquakes (Armas, 2008). However, in other regions, residents do not perceive earthquakes as significant risks (Turner, Nigg, & Paz, 1986).

Impact of Earthquakes on Schools

Children are among the most vulnerable during earthquakes, especially if they are in school when a disaster occurs. The physical and emotional impact of earthquakes on students underscores the importance of school preparedness measures (Ziauddin, 2016). Schools must implement proper evacuation procedures, maintain earthquake-resistant structures, and conduct regular drills to ensure student safety.

RESEARCH METHODS

Participants and Data Sources

The study involved selected students, teachers, non-teaching staff, and parents from the Bacoor National High School Main Community. Using purposive sampling, 30 students, 30 teachers, 30 non-teaching staff, and 30 parents participated in the research.

Data Gathering Methods

Before data collection, the researchers secured approval from the school principal and research adviser. A 5-point Likert scale questionnaire was distributed to respondents during their free time to assess their level of earthquake preparedness and awareness. Respondents were given sufficient time to complete the questionnaire, after which the data were collected and analyzed.

Data Analysis

A quantitative research design was employed. The weighted mean and percentage distributions were used to analyze respondents' awareness and preparedness levels. The classification of preparedness levels was determined using a standard Likert scale interpretation, where 1.00-1.80 represents "Very Low," 1.81-2.60 represents "Low," 2.61-3.40 represents "Moderate," 3.41-4.20 represents "High," and 4.21-5.00 represents "Very High."

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XII Issue III March 2025

FINDINGS

This section presents an in-depth analysis of the level of earthquake awareness and preparedness among students, teachers, non-teaching staff, and parents of Bacoor National High School Main. The results are displayed in Tables for clearer interpretation, followed by a comprehensive discussion.

Level of Awareness Regarding Earthquakes

Respondents	Weighted Mean	Interpretation
Grade 7	3.78	High Level of Awareness
Grade 8	3.94	High Level of Awareness
Grade 9	3.92	High Level of Awareness
Grade 10	3.82	High Level of Awareness
Students' Average	3.87	High Level of Awareness
Non-Teaching Staff	4.04	High Level of Awareness
Teachers	3.88	High Level of Awareness
Parents	3.78	High Level of Awareness

The results indicate that all groups demonstrated a **high level of awareness** regarding earthquakes. The scores among students, teachers, non-teaching staff, and parents consistently fall within the 3.78 to 4.04 range, indicating strong knowledge about earthquake causes, risks, and safety protocols.

Among students, Grade 8 students exhibited the highest awareness level (**3.94**), while Grade 7 and parents had the lowest scores (**3.78**), though still classified as high awareness. The slight variations may be attributed to differences in exposure to disaster preparedness training and participation in earthquake drills.

The **non-teaching staff had the highest awareness level (4.04)** among all groups. This suggests that they may have received more focused training or developed knowledge through prior experiences. Teachers also scored well (**3.88**), emphasizing their role in disseminating earthquake-related information to students.

Parents, while also demonstrating a **high level of awareness (3.78)**, had the lowest score among adults. This could indicate that earthquake preparedness initiatives have been more focused on school-based stakeholders rather than extending fully to families.

Level of Preparedness Regarding Earthquakes

Respondents	Weighted Mean	Interpretation
Grade 7	4.46	Very High Level of Preparedness
Grade 8	4.36	Very High Level of Preparedness
Grade 9	4.66	Very High Level of Preparedness
Grade 10	4.50	Very High Level of Preparedness
Students' Average	4.50	Very High Level of Preparedness
Non-Teaching Staff	4.52	Very High Level of Preparedness
Teachers	4.56	Very High Level of Preparedness
Parents	3.90	High Level of Preparedness

The findings reveal that most respondents possess a **very high level of preparedness**, as indicated by scores above **4.21**. This suggests that earthquake safety measures, such as evacuation drills and safety protocols, have been successfully implemented within the school setting.

Among students, Grade 9 exhibited the highest level of preparedness (**4.66**), while Grade 8 students had the lowest (**4.36**). This could suggest that as students' progress through higher grade levels, they develop a greater understanding of disaster preparedness, possibly due to repeated participation in earthquake drills and school safety programs.

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XII Issue III March 2025

The **non-teaching staff (4.52)** and **teachers (4.56)** reported very high preparedness levels, reflecting their active role in ensuring earthquake safety measures in the school. This emphasizes the importance of their involvement in implementing safety protocols and guiding students during earthquake-related emergencies.

However, **parents had a slightly lower preparedness level (3.90), categorized as high but not very high**. This finding highlights a gap between school-based preparedness initiatives and household-level preparedness. The lower score suggests that while parents may be aware of earthquake safety measures, they may not have undergone as many drills or preparedness activities as school staff and students.

Implications

The findings indicate that students demonstrated a high level of earthquake awareness, except in specific areas such as participation in disaster risk education seminars, first aid training, and preparedness with emergency kits. Similarly, teachers, parents, and non-teaching staff also displayed high levels of awareness, yet their responses to the same questions suggest moderate levels of preparedness in those areas.

This implies that while the Bacoor National High School Main Community has a strong foundation in earthquake awareness, there is a need to enhance practical disaster preparedness measures. The school management should prioritize implementing comprehensive disaster resilience seminars, ensuring all stakeholders, including students, teachers, parents, and non-teaching staff, receive sufficient training in first aid and emergency response. Additionally, increasing accessibility and awareness of emergency kits and preparedness tools should be part of the school's long-term disaster risk reduction initiatives.

RECOMMENDATIONS

To the Administrators:

- Conduct more frequent earthquake drills to reinforce awareness and disaster preparedness.
- Strengthen the SDRRM plan by incorporating specialized first aid training and disaster risk reduction seminars for students, teachers, parents, and non-teaching personnel.
- Encourage all members of the BNHS Main Community to maintain emergency go-bags in their homes and school facilities.

To the Students, Teachers, Workers, and Parents:

- Actively participate in earthquake drills and disaster preparedness activities.
- Attend training sessions on first aid and emergency response to enhance preparedness levels.

To Future Researchers:

- Use this study as a reference for assessing disaster preparedness in different settings, with a wider sample size and a focus on various types of natural disasters.

Research Work Plan and Timelines

ACTIVITIES	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
Research Proposal Approval						
Data garthering						
Analysis of gathered data						

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XII Issue III March 2025

Plans for Dissemination and utilization

ACTIVITIES Add rows if Necessary	**Month 1**	**Month 2**	**Month 3**	**Month 4**	**Month 5**	**Month 6**
Creating an School Safety and Mitigation Plan base on the results of gathered data						
Implementation of the school safety and mitigation plan						
Evaluation of school safety and mitigation plan						

REFERENCES

1. Najafi M, Ardalan A, Akbarisari A, Noorbala AA, Elmi H. The Theory of Planned Behavior and Disaster Preparedness. PLOS Currents Disasters. 2017 Sep 6 Edition 1. doi: 10.1371/currents.dis.4da18e0f1479bf6c0a94b29e0dbf4a72.
2. Kirschenbaum, A. 2005. "Preparing for the Inevitable: Environmental Risk Perceptions and Disaster Preparedness." International Journal of Mass Emergencies and Disasters*23*: 97–127.
3. Turner, R., J. Nigg, and D. Heller-Paz. 1986. Waiting for Disaster: Earthquake Watch in Southern California. Berkeley: University of California Press.Google Scholar
4. Russell, L. A., J. D. Goltz, and L. Bourque. 1995. "Preparedness and Hazard Mitigation Activities Before and After Two Earthquakes." Environment and Behavior 27: 744–770.CrossrefGoogle Scholar
5. Malcolm E. Baird, Ph.D., P.E. Vanderbilt Center for Transportation Research (VECTOR) January 2010http://www.science.earthjay.com/instruction/HSU/2017_spring/GEOL_308/text/phases_emergency_mgt_Baird_2010.pdf