



## High School Students' Level of Awareness and Preparedness of Natural Disasters

Rudy R. Calamba Jr.   
Muertegui National High School, Philippines

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# High School Students' Level of Awareness and Preparedness of Natural Disasters

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## Abstract

Natural Disasters are unforeseen occurrences that put people's lives in peril, interrupt their lives, and result in fatalities, environmental damage, property losses, and psychological consequences. The study aims to determine the level of awareness and preparedness for natural disasters among high school students. Furthermore, this study employed a correlation research design conducted in a public secondary school of Eastern Philippines. The respondents of the study were 266 high school students who were selected through a stratified and a systematic random sampling technique. The study used an adapted survey questionnaire from Orbe et al. (2023). Findings revealed that high school students possess a highly aware of any kind of natural disaster. In addition, the result revealed that students are moderately prepared in natural disasters before, during, and after it occurred. Furthermore, the study found a significant relationship between the student's level of awareness and level of preparedness. Therefore, the students are highly aware and moderately prepared towards the occurrence of any kinds of natural catastrophes such as "floods, landslides, typhoons, etc." Since some of the students are attending a simulation drill in preparations of what should the proper way on how to lessen the effects of any disastrous events.

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## Introduction

Natural Disasters are unforeseen occurrences that put people's lives in peril, interrupt their lives, and result in fatalities, environmental damage, property losses, and psychological consequences (Cvetković & Stanišić, 2015). In addition, China, the United States, India, the Philippines, and Indonesia have experienced the world's top five highest densities of natural disasters over the past ten years. In connection, Asian nations have the highest potential status for disasters in the globe due to their ring-of-fire location, which results in significant physical and psychological harm (Wardana et al., 2021). According to the disaster year in review 2019 report published by the Center for Research on the Epidemiology of Disasters (CRED) (2020), natural disasters cause an estimated 11755 deaths globally, impacting 95 million people and costing up to 130 billion US dollars.

In addition, according to Hidayat (as cited in Wanda et al., 2022, p.271), there are numerous causalities when a catastrophe strikes, and there is a dearth of public awareness regarding disaster susceptibility and mitigation activities, according to students' preparedness is still poor. Apart from this, recent tragedies occurring across the

globe have resulted in intangible losses, especially for those uninformed of the calamity (Tufekci-Enginar et al., 2021). Also, according to Patel et al. (2020) and Nipa et al. (2020), students are among the most vulnerable populations to suffering when a disaster strikes; however, educational institutions fail to offer enough emergency awareness and preparedness programs for students. Moreover, to be aware of and ready for natural disasters when they occur, they need to possess a high degree of knowledge regarding awareness of and preparation for such events (Devianti & Anggaryani, 2022).

The Philippines is one of the countries that frequently experiences an unlimited number of deadly natural disasters due to its geographic location along the Pacific Ring of Fire (Olores et al., 2023). Due to the Philippines' location on two significant tectonic plates, there are often 100 to 200 earthquakes yearly. Various natural disasters, including typhoons, storm surges, earthquakes, volcanic eruptions, floods, and landslides frequently hit the nation. According to Save the Children Organization, Davao del Sur is one of the most affected areas, home to 3.2 million schoolchildren in Mindanao. As a result, students need more preparation and awareness of disasters (Montejo, 2015).

Furthermore, The National Disaster Risk and Management Council (NDRRMC) reported that the number of Yolanda-related fatalities has risen to 6,300, and the total number of injuries individuals are still missing; it reports that the cumulative losses with a total of 39.8 billion pesos, with 20 billion pesos in agriculture. With these pressing problems, there is a need to create scientific-based and contextualized interventions to reduce and minimize the effects of disasters.

According to the DRRM Coordinator of Muertegui National High School, conducting a drill inside the school is still present to assess the student's preparedness for disaster hazards. However, not all students are taking the drill seriously. Therefore, it is assumed that not all students are well-prepared when a disaster occurs. Furthermore, to the researcher's knowledge, no study was conducted about the level of awareness and preparedness of students in natural disasters. Thus, conducting this study in the school is necessary since it also encounters some natural disasters, such as earthquakes, flash floods, and typhoons.

Also, the result of this study will help the school determine if it is needed to improve students' awareness and preparedness toward natural disasters. In addition, it is advised that schools serve as a location where students may truly acquire the awareness, readiness, and information necessary to protect both themselves and others from disaster; by encouraging the students to respond quickly and positively, they can help themselves and those around them cope with the safety of a disaster (FEMA & Ozmen, 2009).

## **Review of Related Literature and Studies**

### **Related Literature**

Events known as Natural Disasters uproot a community's structure, economy, organization, cultural, and spiritual well-being by obliterating its means of subsistence (Paton & Johnston, 2007; Alexander, 2007). Furthermore, natural disasters involving large-scale human and material damage seriously disrupt how a community or

civilization functions (Bhat et al., 2017). Moreover, according to (Yusuf and Susanti, 2019), Natural disasters place students in a difficult situation, and they are accountable for both physical and psychological harm to students. In addition, A disaster is an occurrence that prevents society from operating as it should, affecting people, property, finances, and other aspects of life beyond what society can bear (Patel et al., 2020). According to Jaradat et al. (as cited in the study of Patel et al., 2020), students are placed in challenging situations when natural catastrophes like hurricanes and earthquakes disrupt courses and cause damage to school structures.

A calamity affects not just the children's life but also their schooling, families' finances, and psychological well-being. Furthermore, following a disaster, a significant portion of instruction times are missed, which causes an irreversible decline in the quality of education (Tuladhar et al., 2013). In connection with that, according to Herowati (2021), disasters threaten human life and cause disruptions, property losses, environmental harm, and psychological effects. Regardless of one's position or status in life, everyone's life is impacted by natural disasters, but their effects can be lessened by taking the appropriate precautions (Malonecio, 2023).

Furthermore, given that we are located near the Pacific Ocean, which is the birthplace of storms and tropical depressions, as well as the Pacific Ring of Fire, which contains earthquake fault lines, natural disasters like typhoons, earthquakes, volcanic eruptions, floods, and epidemic diseases are all too often (Daren et al., 2022). Likewise, according to Loquillano et al. (2021), when the right technology is applied, disaster can be reduced as well as prevented. Typhoons and earthquakes are unavoidable.

Moreover, typhoons, earthquakes, and volcanic eruptions are a few of the most frequent natural disasters that happen all around. Due to its position, the Philippines frequently experiences an unceasing stream of devastating natural hazards and calamities (Olores et al., 2023). In the Philippines, natural calamities have had a significant and terrible impact. Disaster risk reduction (DRR) safeguards the lives and livelihoods of communities and persons, which is the government's primary priority for these reasons. DRR aims to implement National Disaster Risk Reduction and Management, including budgetary allotments for emergency resources, to enhance the government's disaster risk mitigation management mechanism (Brion & Bersamina, 2023).

In addition, to help people cope with the adverse effects of natural and artificial disasters, it is essential for them. In order to be aware and equipped for emergencies, we must advance our knowledge, abilities, and moral principles on all fronts (Bhat et al., 2017). In connection, according to Akumu (2013), education planning has much to teach us about disaster Awareness. Planning for education begins with a vision that will improve or bring about change. Similarly, catastrophe awareness entails choosing actions to be made about disaster risk reduction. Schools that are adequately prepared for disaster are particularly good at managing risk.

Moreover, Disaster awareness in school can be implemented, according to Grant (2002), by carefully posting safety guidelines, setting up fire extinguishers and evacuation routes, maintaining buildings, hosting seminars on subjects involving peer education between children, utilizing music, print electronic media, actions learning, and introducing studies of disaster risk through science education. In addition, according to Muasya (as cited in the study of Malonecio, 2023), disaster awareness is the ability to recognize and lessen the effects of disaster by using

pertinent knowledge and skills in disaster management.

Along with this, the organization of several synchronized actions is required for the disaster awareness method. For instance, a thorough campaign may be carried out during a disaster awareness week, during which the media broadcast disaster messages on radio and television and in the newspapers; schools hold poster competitions and raise awareness of disasters, carry out disaster simulations and post-disaster poster in community centers (DP Malonecio, 2023). Furthermore, Rogayan et al. (2022) defined disaster awareness as the degree to which a person is aware of and educated about disasters, including their risk and potential devastation.

Additionally, disaster preparedness is defined as a set of actions that allow various units of analysis, such as individuals, households, organizations, communities, and societies, to react more quickly and effectively in a disaster. Moreover, preparation initiatives seek to guarantee that the resources required for reacting resources that can be used efficiently in a disaster are in place and that those who must respond know how to use the resources (Akumu, 2013).

Additionally, Waugh (2015) said that the creation of planning procedures to grantee Preparedness, creating disaster plans, gathering resources required for an efficient response, and developing skills and competencies to guarantee disasters are among the everyday activities connected to disaster preparedness. Moreover, according to The United Nations (as cited in the study of Malonecio, 2023), disaster preparedness is the ability and knowledge that the governments, professional response organizations, Communities, and individuals have developed to foresee and effectively respond to the impact of likely, imminent, or current hazard events or conditions. They are being prepared for a disaster, leading to improved coordination before, during, and after the events and a quicker recovery (Austin, 2012).

Furthermore, Harowati (2021) defines disaster preparedness as the work and actions done in advance of a natural disaster in order to be ready to react swiftly and efficiently to events that arise, as well as those that arise right after them. Likewise, Disaster preparedness is the work and action done in advance of a natural disaster in order to be ready to react swiftly and efficiently to the events that arise as well as those that arise right after them. Disaster preparedness is creating a structure emergency response system that helps people, groups, and organizations deal with the risk associated with natural disasters. Being prepared is crucial because it can minimize various descriptions brought on by disaster, save lives, minimize injuries, and limit property losses (Herowati, 2021).

Moreover, according to the DRR Resources Manual, disaster preparedness, including tactics like planning, advocacy, training, and resources, is one way to control disaster risk management (Malonecio, 2023). Similarly, there are two kinds of disaster preparedness plans. The first focuses on the tasks required to guarantee effective and prompt disaster response operations. At the same time, the second is more concerned with people's safety and strategies to raise their awareness and readiness in the event of a disaster (NDRRMP as cited in the study of Malocenio, 2023). Moreover, Rogayan et al., (2022) defined the term disaster preparedness that describes person's proactive measures to lessen the impact of man- made or natural disaster.

## **Related Studies**

In addition, reducing the risk of natural disasters in Indonesia requires consideration of sustainability, involvement of all stakeholders, and the World Conference on Disaster Risk Reduction, which took place in Sendai, Japan, from March 14-18, 2015, and decide to implement the "Sendai Framework for Natural Disaster Risk 2015-2030", as stated by Suharini et al., (as cited by the study of Devianti & Anggaryani, 2022). In connection with that, according to Cavanagh's (2004) report on schools' reactions to terrorism, school tragedies, and near-misses have significantly impacted the adoption of safety and security protocols in European nations. In addition, Akumu (20113) found that concern has been raised about the partial or complete absence of school safety policy implementation in China and India.

Similarly, Odalo (2001) discovered that a lack of emergency exits and firefighting supplies caused the Kyanguli Secondary School fire's high death toll. The incidents claimed the lives of sixty-eight boys. Moreover, Akumu's (2013) study found that secondary schools in Homa Bay Country deal with various disasters of different sizes, most of which are related to prolonged periods of rain, such as floods.

Along with this, the study of Cvetkovic and Stanisic (2005) demonstrated that education played a role in forming fundamental knowledge about natural disasters. Young people who learn about natural disasters in school have a higher level of knowledge, and that knowledge is based on scientific facts, according to Adem (2011). In contrast, knowledge that young people learn about natural disasters from their families and the media is unstructured, disorganized, and can result in misconceptions and inaccurate information. More so, Cvetkotic and Stanisic (2015) conclude that students' knowledge of natural disasters is correlated with their gender. The findings indicated that female students have a greater understanding of natural disasters. However, the researchers discovered that gender does not affect how people perceive and are familiar with safety protocols for handling natural disasters.

According to Rogayan and Dollete (2020), a disaster results from natural or man-made conflict that causes substantial unrest, harm, physical damage, and economic description. Also, Rogaya et al. (2022) concluded that natural disasters can be regarded as the most dangerous situations for people because they have a major negative influence on people's lives and property. People ought to be ready for and able to adjust to climate changes and ecological disruptions. Also, Rogayan et al. (2022) concluded that natural disasters are the most dangerous situations for people because they have a major negative influence on people's lives and property. People ought to be ready for and able to adjust to climate changes and ecological disruptions. Natural hazards will always exist, but mitigating actions can lessen the harm and destruction they cause.

Furthermore, disasters that strike areas where people are unprepared for them can cause death, loss, and suffering in the wake of the incident (Lapada, 2022). Likewise, according to Mamon et al. (2018), most respondents demonstrated a good understanding of disaster concepts and ideas. Disaster studies addressed the sociological aspects of abrupt onset collective stress. Mass crises or disasters are the terms used to describe certain situations. Natural disasters, technological errors, violent intergroup conflicts, shortages of vital resources, and other grave threats to the existence, safety, wealth, well-being, and daily routines are examples of these situations (Daran et

2022).

Similarly, according to Rogayan and Dollete (2020) concluded that many calamities, including powerful typhoons, earthquakes, floods, and volcanic eruptions, have been experienced by the students. The student's experiences have taught them to be ready and equipped for potential calamities. Moreover, students are inspired to practice disaster preparedness by personal experiences.

Moreover, Kay (2003) stated that schools in landslide-prone locations should be alert for any unusual movement of the earth during periods of heavy rain. Until the threat passes, alternate learning facilities should be employed as soon as odd movement is detected. In connection, the study of Akumu (2013) found that there was a significant portion of schools (89.6%) lacked disaster awareness rules, while the majority of schools (75.0%) lacked even school safety subcommittees. Nonetheless, it was found that most secondary schools (54.1%) regularly carry out spot inspections in the dorms while students are in class, outside, or engaging in other outdoor activities. The weather and floods are the main causes of natural disasters that impact people in Kashmir; earthquakes are the least common cause of catastrophes (Bhat et al., 2017).

Along with this, Patel et al. (2020) found that students who live on and off campus have quite different perceptions of DRR education. Based on race and place of residence, the student's opinions about the necessity of disaster risk reduction education range similarly. There was a notable understanding gap between Asian and non-Asian students about the university's medical supplies.

In addition, Malonecio (2022) found that students in higher education are aware of the essential facts regarding the calamities that frequently affect their region. According to Lapada (2022), one of the direct repercussions of a danger to the learning environment is the disruption of school operations, which psychologically affects instructors, students, and families. As Lapada (2022) revealed, there are no appreciable distinctions between catastrophe risk perception and disaster awareness. Likewise, since ninth-grade students frequently experience typhoons, earthquakes, and fires, students have a great understanding of various calamities. The study also discovered that a variety of media, including audio-visual presentations, posters, and educational and informational resources, can sustain and improve students' knowledge of the many disasters (Rogayan et al., 2022).

In connection to this, Orbe et al. (2023) concluded that students at college are extremely aware of disasters. The study suggests that university students have a keen awareness of natural disasters. Moreover, Rogayan and Dollete (2020) found that Zambaleños have a moderate awareness of earthquakes, landslides, floods, storm surges, tsunamis, and volcanic eruptions; people are extremely aware of the consequences of "strong" typhoons.

The awareness will save lives and the economy by educating the barrio communities about the various disasters. More so, Malonecio (2023) concluded that better planning and preparations are made to counteract the terrible effects of a disaster as a result of familiarity and awareness of the many types of disasters. Higher awareness reduces students' susceptibility to a particular disaster, but awareness of the disaster enhances students' ability to

deal with issues brought on by it.

Moreover, augmented reality-based disaster media, such as earthquakes and tsunamis, can help students become better prepared for emergencies (Herowati, 2021). The study by Patel et al. (2022) discovered that emergency protocols at the university and the duty of the government to assist students in the event of a disaster directly impact students' readiness for disaster relief. Students generally don't know enough about being aware of and prepared for disasters (Bhat et al., 2017). Moreover, disaster prevention projects may add other effects like flood protection structures, which can also yield additional benefits such as providing irrigation or drinking water and electricity (Mechler, 2005). In addition, Akumu (2013) concluded that some factors influence people's behavior and response to disaster preparedness. The factors may be categorized as socio-demographic factors that describe the qualities, characteristics, and composition of the community where the people belong.

Also, in the study, Akumu (2013) found that Kenya's lack of a comprehensive disaster preparedness policy means that the country typically responds slowly, erratically, and excessively expensively to high-risk events like major accidents, floods, epidemics, and droughts. Furthermore, Khan (2008) found that a whopping 77% of respondents said they didn't know what 119 warning systems were, 63% didn't know what rehearsals were, and 53% didn't know about planning, public education, or training. In accordance, Lindell and Perry (as cited in the study of Orbe et al., 2023, p.33) recommended that emphasizing the significance of disaster awareness will enhance students' readiness irrespective of their courses.

According to Rogayan et al. (2022), junior high school students frequently prepare for various disaster scenarios, especially those involving strong typhoons, floods, and volcanic eruptions. Similarly, Malonecio (2023) found that students in higher education are "Very Highly" prepared for disasters, which suggests that they are well-prepared for disasters and know what to do if a calamity strikes their community. The findings could also mean that the students have emergency plans and countermeasures to lessen the disaster's effects. Apart from this, Orbe et al. (2023) found that college students were only moderately prepared when it came to disaster preparedness.

However, Filipino households in the areas most affected by typhoons have the highest levels of preparedness; according to Bollettino et al. (2018), the inclusion of disaster education in the senior high school, from which some of the students graduated, is an additional potential factor to take into account. More so, Rogayan and Dollete (2020) stated that when strong typhoons, floods, volcanic eruptions, landslides, fires, and earthquakes occur, responders are frequently ready. The level of readiness is correlated with their comprehension of the guidance provided by news advisories and information from the university regarding local task forces for disaster risk reduction and management. Furthermore, Rogayan et al. (2022) concluded that disaster preparedness and awareness have a somewhat direct relationship. The researcher suggested that a disaster management plan may help students' awareness of and readiness for both man-made and natural disasters to be continually improved.

### **Statement of the Problem**

This study aims to determine the level of awareness and level of preparedness among high school students in



Muertegui National High School towards natural disasters.

Specifically, it answers the following questions:

### **Research Questions**

1. What is the demographic profile of students in terms of their age, sex and grade level?
2. What is the level of high school students' awareness on natural disasters?
3. What is the level of high school students' preparedness on natural disasters?
4. Is there a significant relationship between the level of high school students' awareness and preparedness of natural disasters?

### **Hypothesis**

Ho: There is no significant relationship between the level of students' awareness and preparedness of natural disasters.

H<sub>a</sub>: There is a significant relationship between the level of students' awareness and preparedness of natural disasters.

### **Method**

#### **Research Design**

This study utilized a descriptive-correlational design to assess the relationship between the level of awareness and level of preparedness of high school students. Descriptive- Correlation research is to describe the relationship between variables rather than to infer cause and effect relationships. In addition, when the researchers have no control over the independent variables, the variables thought to produce or impact the dependent or outcome variable, descriptive correlational studies help explain how one phenomenon is related to another (Lappe, 2000).

#### **Research Locale**

This study was conducted at Muertegui National High School, a public secondary high school at Brgy. Daja Diot, San Isidro, Leyte. The school is seven kilometers away from the town of San Isidro.

#### **Respondents and Sampling Procedures**

The respondents of the study are high school students who are currently studying at Muertegui National High school in the school year 2023-2024. Using the Slovin's formula, the sample size comprises 266 high school students from a total population of 768 students. The respondents was selected through stratified random sampling technique to have an equal distribution of respondents from the given population and select every 2<sup>nd</sup> students from the form 2 file of the students using systematic random sampling technique.

Table 1. Sample Size Computation and Representation

Grade Level	Population	Sample Size	Number of Section	Sample Size per Section
7	130	45	3	15
8	117	40	3	13
9	132	45	3	15
10	140	48	3	16
11	131	45	3	15
12	118	40	3	13
<b>Total</b>	<b>768</b>	<b>263</b>	<b>18</b>	

### Research Instrument

The researchers used an adopted survey questionnaire from Orbe et al., (2023) entitled, Disaster Awareness and Disaster Preparedness to determine the students' level of disaster awareness and level of disaster preparedness towards natural disaster. Along with, part one of the survey questionnaire determined the demographic profile of the respondents, including the age, sex, and the grade level of the students. Also, part two of the survey questionnaire assessed the respondent's level of awareness towards natural disaster, consisting of 20 items entitled Disaster Awareness.

Scoring of the student's level of awareness toward natural disaster were based on a 5-point Likert Scale of Frequency, from (5)- Extremely Familiar, (4)- Very Familiar, (3)- Somewhat Familiar, (2)- Not Familiar, (1)- Not Familiar at all. While, part three of the survey questionnaire assessed the respondents' level of preparedness towards natural disaster, consisting of 15 items entitled Disaster Preparedness. Scoring of the students' level of preparedness towards natural disaster were based on a 5-point Likert Scale of Frequency, from (5)- Almost Always, (4)- Often, (3)- Sometimes, (2)- Seldom, (1)- Never.

### Data Collection Procedure

Prior to conducting the study, the researchers conducted first the Pilot testing of the survey questionnaire to the other sections, next the researchers prepared the instruments, also the researchers obtained the approval letter from the school head and class advisers to conduct the survey,. In collecting the data, the researchers personally distributed the questionnaires to the target respondents. The gathering of the data happened on December, 2023. After the data gathering, in the process of data entry and data coding, researchers tabulated the gathered data using MS Excel and data cleaning was followed to check for possible errors.

### Data Scoring and Interpretation

The interpretation of the mean was based on the following:

Score	Range	Response Choice		
5	4.51-5.00	Extremely Familiar	Almost Always	Very High

4	3.41-4.50	Very Familiar	Often	High
3	2.61-3.40	Somewhat Familiar	Sometimes	Moderate
2	1.81-2.60	Not as Familiar	Seldom	Low
1	1.00-1.80	Not Familiar at all	Never	Very Low

**Data Analysis Procedure**

The data gathered from research question number one, two, three, were statistically analyzed using descriptive statistics such as mean, frequency, percentage, and standard deviation, and average weighted mean. Meanwhile, research question number four was analyzed using Pearson Correlation with 0.05 significance level. Lastly the data gathered was processed through IBM Statistical Packages for Social Sciences (SPSS) v.27.

Table 2. Rule of Thumb for Interpreting the Size of a Correlation Coefficient

Size of Correlation	Interpretation
.90 to 1.00 (-.90 to -1.00)	Very high positive (negative) correlation
.70 to .90 (-.70 to -.90)	High positive (negative) correlation
.50 to .70 (-.50 to -.70)	Moderate positive (negative) correlation
.30 to .50 (-.30 to -.50)	Low positive (negative) correlation
.00 to .30 (.00 to -.30)	Negligible correlation

Table 3. Guidelines for Interpreting Pearson Correlation Coefficient (r)

Strength of Relationship Between variables	Positive	Negative
Weak	.10 to .29	-.10 to -.29
Moderate	.30 to .49	-.30 to -.49
Strong	.50 to 1.00	-.50 to -1.00

**Ethical Consideration**

Researchers followed the code and principles of ethical consideration. The participants will not suffer any harm as a result of their participation. Voluntary participation, informed consent, anonymity, and confidentiality were observed during the conduct of the study. Respondents were given the right to withdraw in participating the study. Researchers did not give pressure to the respondents from ceasing to participate in the study. Lastly, all communication regarding in this study was truthful.

**Results and Discussion**

The following table presents the statistical data and analysis relative to the problem pointed out in the statement of the problem in the study. The corresponding analysis and interpretation are incorporated and presented clearly and concisely.

Table 4. Demographic Profile of Senior High School Students in terms of Age, Sex, and Grade Level

	<i>f</i>	%
<b>Age</b>		
12-14	118	44
15-17	136	51
18-20	11	4
<b>Total</b>	<b>266</b>	<b>100</b>
<b>Sex</b>		
Male	107	40
Female	159	60
<b>Total</b>	<b>266</b>	<b>100</b>
<b>Grade Level</b>		
Grade 7	46	17
Grade 8	40	15
Grade 9	46	17
Grade 10	48	18
Grade 11	46	17
Grade 12	40	15
<b>Total</b>	<b>266</b>	<b>100</b>

Table 4 revealed the demographic profile of high school students who are currently enrolled at Muertegui National High School of the school year 2023 to 2024. Majority of the students aged from 15 to 17 years old ( $n=136$ , 51%) followed by 12 to 14 ( $n=118$ , 44%), and then followed by the ages from 18 to 20 ( $n=11$ , 4%), and lastly the least of the students ages from 20 and above ( $n=1$ , .37).

In connection, in terms of sex, majority of the respondents who answered the study were female ( $n=159$ , 60%) while the least respondents were male ( $n=107$ , 40%). In addition, in terms of grade level, majority of the students were grade 10 ( $n=48$ , 18%) followed by grade 7 ( $n=46$ , 17%), grade 9 ( $n=46$ , 17%), and grade 11 students ( $n=46$ , 17%) and lastly it followed by grade 8 students ( $n=40$ , 15%) and grade 12 students ( $n=40$ , 15%).

Table 5. Disaster Awareness of High School Students towards Natural Disasters

Statements	M	SD	Interpretation
1. A natural disaster such as typhoons, floods, tsunamis storm surge, and earthquakes can occur anytime.	4.09	.88	Very Familiar
2. There are specific action response during a disaster awareness.	3.78	.93	Very Familiar
3. The country has been experiencing numerous disaster events in a year (e.g an	3.54	1.04	Very Familiar

<b>Statements</b>	<b>M</b>	<b>SD</b>	<b>Interpretation</b>
average 20 typhoons/year)			
4. As a result of a disaster, more possible disastrous events may likely to follow.	3.63	.97	Very Familiar
5. A small kit with emergency supplies must be brought always if evacuation is necessary.	4.06	1.01	Very Familiar
6. Preserving or keeping food safe after a disaster should be taught in disaster seminar.	3.89	1.00	Very Familiar
7. The Philippines ranks among the most disaster-prone country in the South-East Asia.	3.60	.69	Very Familiar
8. The government has several seminars and forums laid out in preparation for possible new disaster that may occur in the future (e.g. "The Big One")	3.66	1.05	Very Familiar
9. The Philippines, as an archipelago, puts risk during a storm surge	3.55	1.08	Very Familiar
10. The Philippines is situated in a weather pathway near the equator known as the Typhoon Belt.	3.55	1.04	Very Familiar
11. The government hosts several mass simulation drills to prepare the population for future unwanted disastrous events.	3.61	1.03	Very Familiar
12. Local government units and agencies has provided hotlines which can be contacted during an event of a disaster.	3.74	.99	Very Familiar
13. There is a disaster plan that has been formulated at my school.	3.71	1.06	Very Familiar
14. My school hosts seminars and forums to prepare us for a disaster.	3.61	1.01	Very Familiar
15. There is no message that encourage the students to takes steps to be prepared for emergency situations in the school.	3.14	1.18	Somewhat Familiar
16. There is no possible dangers that can occur after a disaster.	3.12	1.26	Somewhat Familiar
17. The local media has not given any information regarding preparation in disasters.	3.11	1.28	Somewhat Familiar

<b>Statements</b>	<b>M</b>	<b>SD</b>	<b>Interpretation</b>
18. There is no established specific meeting placed to reunite with my classmates and teachers.	3.23	1.06	Somewhat Familiar
19. The government's assigned agency has not been inspecting the vulnerability of public and private institutions in a disaster.	3.34	1.12	Somewhat Familiar
20. Damaged areas can't be a reservoir site for possible aftershocks which can be more sever.	3.39	1.18	Somewhat Familiar
Average Weighted Mean	4.08		Very Familiar

Table 5 showed the students' level of awareness towards natural disasters. Regarding the level of awareness of the students, the table above further showed the majority of the high school students are very familiar towards the any kinds of natural disasters such as typhoons, floods, earthquakes, etc. ( $M= 4.09$ ,  $SD=.88$ ). Also, the results revealed that students are aware since students know what specific actions they should do before, during, and after the disasters occurred. This indicate that high school students are possessed a high level of awareness towards natural disasters.

According to the results of the current study, high school students self-report having a high level of awareness about many disasters, but a modest level of awareness regarding natural disasters. In Addition, the high awareness level of students in the present study conforms to the results, of the study of Ventura and Madrigal (2020) wherein high school students of a public high school demonstrate remarkable disaster awareness and practice of natural disasters.

Meanwhile, the result also revealed that some of the students are not aware towards natural disasters which could be the reasons why there are a lot of the students have a lack of information's or knowledge towards natural disasters. Since Local media outlets have not provided any information on catastrophe preparedness ( $M= 3.11$ ,  $SD= 1.28$ ). However, in the study of Orbe et al, (2023 revealed that some of the students are least familiar with regions that can sustain damage, such as reservoir sites, they are highly aware that disasters can strike at any time.

Overall, the level of awareness towards natural disasters represented the table above that high school students possess a high level of awareness towards natural disasters ( $AWM=4.08$ ). This inferred that high school students are highly aware in any natural disaster.

Table 6. Disaster Preparedness of High School Students towards Natural Disasters

<b>Statements</b>	<b>M</b>	<b>SD</b>	<b>Interpretation</b>
1. I stay away from large body of waters, especially when I hear about a new disaster may happen	3.90	1.01	Often

<b>Statements</b>	<b>M</b>	<b>SD</b>	<b>Interpretation</b>
2. I will evacuate calmly	4.02	.90	Often
3. I practice how to drop to my hand and knees, cover my head and neck with my arms, and hold on to any sturdy furniture until the shaking stops	4.21	.98	Often
4. I follow the way leading to the river during a storm	3.34	1.34	Sometimes
5. In an event of an earthquake, I will stay near glass windows, outside doors and walls	2.75	1.52	Sometimes
6. If my house has been slightly destroyed after a typhoon, I will go inside my house right away	2.81	1.46	Sometimes
7. I participate in the disaster plan that has been formulated by my school.	3.86	1.05	Often
8. I attend seminars about being prepared for a disaster hosted by my school.	3.69	1.07	Often
9. I do not participate in the practice drills hosted by my school.	2.65	1.43	Seldom
10. I do not stay home whenever there are announcements by the government through their social media accounts about dangerous disasters that may happen.	3.30	1.32	Sometimes
11. I will not leave immediately even if I have been told to do so.	3.05	1.30	Sometimes
12. I attend seminars and forums laid out by the government, in partnership with several non-government offices for more knowledge.	3.58	1.10	Often
13. I participate in government-hosted mass simulation drills in preparation for future disastrous events.	3.66	1.05	Often
14. I have not obtained the established specific meeting place to reunite with other students and teachers	3.22	1.20	Sometimes
15. I do not have the emergency numbers and contact details of the qualified personnel such as the local fire department, police, hospitals, and barangay officials.	3.20	1.28	Sometimes
Average Weighted Mean	3.41		Sometimes

Table 6 revealed the students' level of preparedness towards Natural Disasters. As the table represented above, majority of the high school students are often in practicing how to do the drop to my hands and knees, cover my head and neck with my arms, and hold on to any study furniture until the shaking stops, (M=4.21, SD=.98). Also, the results showed that students are evacuating calmly since they are prepared what should they do during the occurrence of the disasters. This indicate that students are highly prepared towards natural disasters, that the students know what should they do before, during, and after the disasters occurred.

However, in the study of Khan et al. 2020 (as cited in the study of Rogayan et al. 2022) revealed that in term of preparedness, students frequently get ready for a variety of disasters that could strike the area. Their degree of preparation can still be raised by exposing them to various disaster exercise and relative activities includes in the well-planned disasters management program. Thus, it indicated that students should enhanced their level of preparedness towards natural disasters to protect their lives.

Meanwhile, the study also revealed that some of the students abstain from taking part in the drills that my school organizes (M=2.65, SD=1.43), that could be a reason why the some of the students possess a low level of preparedness towards natural disasters. This indicate that students possess a low level of disaster preparedness since some of them did not take the drills that conducted at their school. Thus, this indicate that most of them are not prepared towards natural disasters, that students don't know what they should do when a disaster occurred. Moreover, the study of Rogayan et al. (2022) revealed that students used to get better at the following cheering their disaster supplies and replenishing as the necessary discussing evacuation plans with family members and learning about their community storms response strategy. Overall, the level of preparedness towards natural disasters represented above revealed that high school students possess a good level of preparedness towards natural disasters (AWM= 3.56). This implied that students sometimes or often prepared of what they should do when a disaster occurred.

Table 7 shows the results of the Pearson's correlation which revealed the correlation between the level of awareness and level of preparedness of high school students towards natural disaster. Findings revealed that there is a high positive correlation between level of awareness and level of preparedness towards natural disasters (R=.980). This indicated that there is a relationship between the level of awareness and level of preparedness of high school students towards natural disasters. This simplifies that when the students have a higher awareness towards natural disasters, a high preparedness can be also assumed.

Table 7. Correlation between Level of Awareness and Preparedness of High School Students towards Natural Disasters

<b>Variable</b>	<b>r value</b>	<b>p value</b>	<b>Correlation</b>	<b>Decision</b>
Awareness	.980	.007	Very high Positive Correlation	Reject Null Hypothesis
Preparedness				

Since the computed p value (.007) is greater than 0.05 level of significance, thus the null hypothesis is rejected. Therefore, there is a significance relationship between the level of awareness and level of preparedness towards



natural disasters. This indicated that student's level of awareness and level of preparedness will affect its one another if one of it is low and the other one is high then it can affect the student's preparedness or awareness towards natural disaster. It indicated that students should possess a high level of these two variables for their safety towards natural disaster. In addition, according to Regayan and Dollete (2020), 'Knowing about disaster risk can be a significant precursor to being prepared in time of these unfortunate events. According to these results, it indicates that students were more to the extent that knowledge of the tragedy increased on how the students to lessen the damage taken when a disaster occurred.

## **Conclusion**

A level of awareness and preparedness towards natural disasters is one of the most important things that the student should possess. Since the students are one of those vulnerable people towards natural disasters, they should have a high level of awareness and preparedness since the Philippines is one of the countries which is prone to natural disasters due to its geographic location. Based on the findings, the results showed that the students of Muertergui National High School possessed a high level of awareness and high level of preparedness towards natural disasters. Therefore, the students of Muertergui National high school are highly aware and moderately prepared towards the occurrence of any kinds of natural catastrophes such as floods, landslides, typhoons, etc. Also the study revealed that some of the students who are currently enrolled at Muertergui National High School are moderately prepared towards natural disasters. Since some of the students are attending a simulation drill in preparations of what should be the proper way on how to lessen the effects of any disastrous events. Lastly, result showed a significant correlation between high school students' awareness and preparedness levels for natural disasters; this suggested that students' levels of these two variables should be equal in order for them to be able to prevent or lessen the damage caused by any natural disasters that may occur.

## **Recommendations**

Based on the findings and conclusion presented, the following recommendations are suggested:

1. The school should have a regular drills, simulations, and instructional programs should be carried out by the school, along with the development of emergency response plans, routine facility inspections collaboration with neighborhood emergency services, and staff and teachers training.
2. The teachers should include disaster preparedness into lessons, practiced on a regular basis, community involvement encouraged, critical thinking skills fostered, collaboration and teamwork promoted, teachers should provide ongoing training and resources, and students should be assisted in becoming resilient in the face of disasters.
3. The parents should review emergency response plan with their children, create emergency kits, community service opportunities, and stay informed about natural disasters in their area.
4. The students should participate in emergency preparedness, report hazards, create emergency kits, and learn about natural disasters through educational program and field trips.
5. The future researchers should conduct a study assessing the effectiveness of the current educational programs on catastrophe preparedness by comparing the knowledge and abilities that students have

acquired before and after the programs.

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### **Author Information**

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**Rudy R. Calamba Jr.**

 <https://orcid.org/0009-0008-6046-2625>

Muertegui National High School

Philippines

Contact e-mail: [calambarudy7@gmail.com](mailto:calambarudy7@gmail.com)

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