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Assessment of Disaster Awareness and Preparedness of Maydolongnons

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Abstract
This study investigated the respondents' level of disaster awareness and preparedness, particularly on risks associated with natural hazards such as typhoons, floods, and earthquakes. The study employed the descriptive-comparative and descriptive-correlational methods of research and involved ninety-nine (99) randomly chosen respondents who were all residents of población barangays of Maydolong, Eastern Samar. Descriptive and inferential statistics were used to analyze the data gathered in this study. Results revealed that the majority of the respondents belonged to the 30-34 and 35-39 age brackets, were female-dominated and most were college-level or college graduates. The respondents indicated the highest level of awareness of disasters associated with earthquakes (with a mean of 4.49), followed by typhoons (4.13) and floods (3.00). Generally, they were "Very Much Aware" regarding disasters associated with the three natural hazards as manifested by an overall mean of 4.20. In terms of disaster preparedness, the respondents were found to be "Often" prepared when it comes to disasters as evidenced by an average mean of 4.08. The comparative analysis of the variables showed that there are no significant differences in the respondents' levels of awareness of disasters associated with typhoons, floods, and earthquakes. Meanwhile, the correlation analysis revealed that there is a very high correlation between the level of disaster awareness and preparedness and such a relationship is statistically significant at .05 alpha.

Keywords
Disaster awareness, Disaster, Preparedness, Descriptive comparative, Descriptive correlation, Maydolong, Eastern Samar

INTRODUCTION

Background of the Study

Without a systematic plan of preventing and mitigating the impact of a disaster, it may lead to deaths, severe injuries and disruptions in society. According to Castro et al. (2015), a disaster can be defined as a hazardous incident, which can either be natural, man-made or technological, that causes serious physical damage, loss of life, or other health impacts. On the other hand, Takeuchi et al. (2011) mentioned that heavy disaster losses such as those that occur during earthquakes, tsunamis, landslides and flood unexpectedly create poverty among a large number of people by destroying their houses, productive lands, other personal assets, and livelihood.

To prevent human loss and other detriments caused by disasters, the national government and its local counterparts have developed disaster management practices primarily aimed towards disaster risk reduction (DRR). Towards this end, Republic Act 10121 or the Philippine Disaster Risk Reduction Management Act was enacted in order to show the government's commitment in promoting and implementing measures for DRR (Soriano, 2019).

On March 18, 2015 during the Third United Nations (UN) World Conference on Disaster Risk Reduction in Sendai, Japan, the UN adopted the Sendai Framework for Disaster Risk Reduction 2015-2030. The framework outlines seven

clear targets and four priorities for action to prevent new and reduce existing disaster risks, to wit: (i) understanding disaster risk; (ii) strengthening disaster risk governance to manage disaster risk; (iii) investing in disaster reduction for resilience and; (iv) enhancing disaster preparedness for effective response, and to "build back better" in recovery, rehabilitation and reconstruction. The overarching aim of the framework is to substantially reduce disaster risk and losses in lives, livelihoods and economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries over the next fifteen (15) years.

Disaster mitigation and response is a multi-agency and multi sectoral activity and most countries have established national disaster response agencies, which may be decentralized to regional, district and village levels (Osei, 2007). It is therefore the role of these agencies to ensure increased public awareness and preparedness on the risks associated with natural hazards in order to avoid or reduce the loss of human lives and damages caused by disasters.

However, despite the efforts of the national and local governments there is still a palpable shortfall on how they respond to natural hazards and the risks brought by such hazards. Accordingly, public awareness and preparedness are important in order to take adaptive measures. According to Nifa et al. (2018), awareness is a skill that can be practiced through enhancing knowledge in a particular field; practicing the culture of awareness since childhood; participated in learning program or previous experience. On the other hand, emergency preparedness encompasses the planning and response to disasters (Puryear & Gnugnoli, 2021).

For example, some research findings reveal that if the psychological and the physical awareness and preparedness are practiced and learned by the people who live around flood prone areas, the awareness of people can possibly minimize the damage caused by flood and reduce the difficulties of rescue work by disaster risk management authorities (Grothmann & Reusswig, 2006). Hence, local knowledge, awareness, and preparedness cannot be undermined since the members of the community are most familiar on how to reduce the inimical effects of disaster. According to Sano (2010) communities play an integral part in managing disaster by reinforcing the capacities of the communities towards the risk and adverse impacts of natural hazards. Community awareness and preparedness on natural hazards is crucial because as mentioned by Victoria (2003) when disaster occurs, it is the community level which suffers most from its adverse effects.

When Super Typhoon Haiyan (locally known as Yolanda) hit the southern part of the Philippines in 2013, the municipality of Maydolong in the province of Eastern Samar was one of the areas that witnessed the most devastating effects of such weather disturbance. The impact of the catastrophic event did not only cause destruction to physical structures in communities, but it also brought unique experience to the survivors. Experts agree that the phenomenon caused large scale human and property loss due to the lack of awareness and clear understanding of the people on the term “storm surge”. Likewise, it set out why community awareness and preparedness on the risks associated with natural hazards is important.

The lack of sufficient understanding and knowledge on a particular phenomenon implies how awareness and preparedness play significant roles in avoiding and reducing human loss and physical destruction caused by natural disasters. The gamut of destruction brought by Super Typhoon Haiyan may finally open up the eyes of the Filipinos on how disaster risk reduction and management should be undertaken in the future. In particular, greater emphasis must be given to disseminating information to far-flung areas and translating and interpreting the message right, especially at the local levels (Santos & Marteleira, 2013).

As Maydolong, Eastern Samar is prone to different calamities, it is imperative to conduct a study that endeavors to determine the awareness and preparedness of the community on disaster risk. As mentioned by Redlener and Berman (2006), although governments are required to prepare for disasters, citizens are only weakly encouraged to prepare themselves through minimally effective, and generally poorly publicized, social action campaigns.

Objectives of the Study

Located along the typhoon belt in the Pacific, the Philippines is visited by an average of 20 typhoons every year, five of which are destructive. Being situated in the “Pacific Ring of Fire” makes it vulnerable to frequent earthquakes and volcanic eruptions. Its geographical location and physical environment also contributes to its high-susceptibility to tsunami, sea level rise, storm surges, landslides, flooding, and drought (Asian Disaster Reduction Center, 2011).

Because of constant threat of such destructive natural disasters, it is crucial that vulnerable populations are aware of and prepared for such disasters. Thus, this study aims to determine the awareness and preparedness of residents (referred to as Maydolongnons) on disasters associated with natural hazards such as typhoons, floods and earthquakes which have become a recurring phenomenon in the locality.

Specifically, this study was undertaken to attain the following objectives:

1. To describe the demographic profile of the respondents in terms of age, sex, and educational attainment;
2. To assess respondents’ level of awareness on disasters associated with typhoons, floods, and earthquakes;
3. To assess respondents’ level of disaster preparedness;
4. To determine if there are significant differences in respondents’ level of awareness on disasters associated with typhoons, floods, and earthquakes; and
5. To establish if there is a significant association between the respondents’ level of disaster awareness and level of disaster preparedness.

Significance of the Study

In conducting this study, the researchers endeavor to impart useful contribution to the following:

Local Government Units (LGUs). The findings of this study will help LGUs to further lay the foundation for better disaster risk reduction management, particularly in the area of disaster preparedness and mitigation, and institutionalizing information, education and communication (IEC) drives on disaster risk at the grassroots level.

Community. This study can help community members in identifying and reducing their vulnerabilities to disaster through increased disaster risk awareness and preparedness.

ESSU-Maydolong. The findings of the research will help the campus administration and its faculty, especially those engaged in extension and community outreach programs, in crafting a disaster risk reduction plan which can be adopted by the target beneficiaries/communities.

Researchers. Research data and findings can help other researchers in the conduct of similar studies focusing on different locales or communities.

Definition of Terms

Listed below are the conceptual and operational definitions of the various terms used throughout the study.

Awareness. Awareness is the state or ability to perceive, to feel, or to be conscious of events, objects, or sensory patterns (Gafoor, 2012). As used in this study, it refers to the self-perception and understanding of the respondents to a particular phenomenon such as typhoon, floods, and earthquakes.

Preparedness. This refers to the pre-conditioned practices of the people or community on a crisis, emergency, disaster or catastrophic event.

Disaster Risk Reduction. Disaster risk reduction is the concept and practice of reducing disaster risks through systematic efforts to analyze and reduce the causal factors of disasters.

Risk. A situation or condition that will lead to negative effect or danger.

Natural Hazard. An unexpected and/or uncontrollable natural event of unusual magnitude that might threaten people.

Poblacion Barangays. Refers to the seven barangays that comprise the town proper (población) of Maydolong, Eastern Samar, namely: Barangays 1, 2, 3, 4, 5, 6, and 7.

Earthquake. A sudden and violent shaking of the ground, sometimes causing great destruction, as a result of movements within the earth's crust or volcanic action.

Typhoon. Also called a hurricane, which occurs in the region covering the Philippines, the West Philippine Sea or the western Pacific Ocean.

Floods. An overflowing of a large amount of water beyond its normal confines, especially over what is normally dry land.

Scope and Delimitation of Study

The study focused on determining the level of disaster awareness and preparedness among Maydolongnons. It particularly dealt with disasters associated with three (3) natural hazards that are commonly experienced by the people of Maydolong, which include typhoons, floods, and earthquakes. Only residents of the seven (7) población barangays of Maydolong, Eastern Samar were included as respondents of the study.

Theoretical Framework

To understand the key factors on how to adequately prepare for disaster, this study was anchored on the vested interest theory, which responds to several fundamental queries on the relevance of the relationship between disaster preparedness and actual behavior (Miller et al., 2012).

Miller et al. (2012) gave emphasis on the importance of the basic-attitude-behavior relationship, thus there is objective importance in the interaction of many attitudes, which must occur in multiple levels, including the cognitive, the emotional, the contextual, and the cultural. Crano, (1983) defined vested interest concerns as the hedonic relevance of a particular attitude-object in its capacity to have meaningful personal consequences for an attitude holder. Hence, if an attitude object is hedonically relevant, that attitude will be highly vested, and act as a powerful predictor of outcome-relevant behavior. If the attitude is not highly vested, its associated behaviors and action tendencies are predicted to have lesser, little, or no relation to the focus of the attitude itself.

Conceptual Framework

To firmly explain the problem of this phenomena the researchers constructed some presumed variables of this study and developed two conceptual models.

The first conceptual model, as shown in Figure 1, is premised on the assumption that there are differences in the level of awareness among respondents as to the disasters associated with three different natural hazards: typhoons, floods and earthquakes. Figure 2 on the other hand, shows the schema of the second conceptual model, which assumes that there is an association between the dependent variable (level of disaster awareness) and the independent variable (level of disaster preparedness) used in the study.

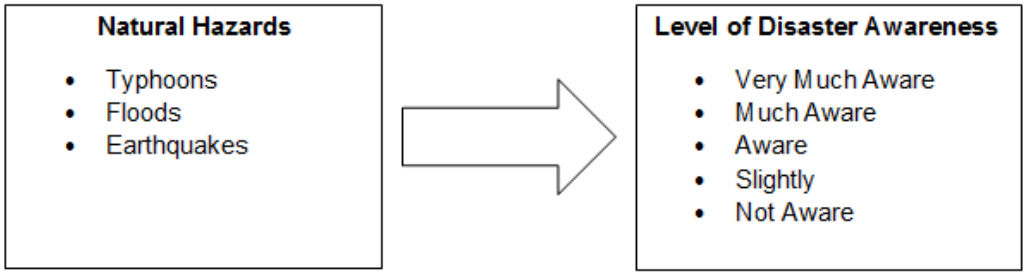

Fig. 1 Schema showing the first conceptual model of the study

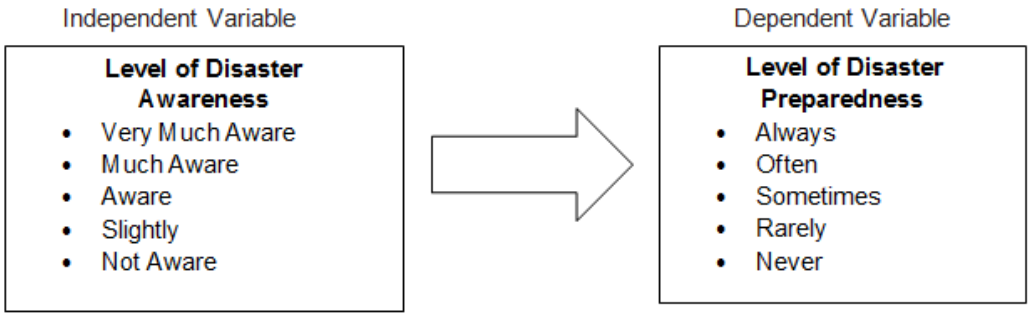

Fig. 2 Schema showing the second conceptual model of the study

Null Hypotheses

1. There are no significant differences in respondents' level of awareness on disasters associated with typhoons, floods, and earthquakes.
2. There is no significant association between the respondents' level of disaster awareness and level of disaster preparedness.

Research Design

The study utilized the descriptive-comparative and descriptive-correlational methods of research. In a descriptive-comparative study, researchers describe variables and examine differences in variables in two or more groups that occur naturally in a setting (Grove, 2019). As applied in this study, certain variables such as the respondents' profile characteristics and levels of disaster awareness and preparedness were first described before the researchers proceeded to testing if there exists significant differences in respondents' level of awareness on disasters associated with typhoons, floods, and earthquakes.

Quaranta (2017), on the other hand, averred that in a descriptive-correlational study, the researcher is primarily interested in describing relationships among variables, without seeking to establish a causal connection. In the present study, the association of the independent and dependent variables used in this research were tested to describe their relationship.

Research Locale

This study was conducted in the municipality of Maydolong,a fourth class municipality located in the south-central portion of the province of Eastern Samar. Specifically, the seven (7) barangays in the town proper of Maydolong, Eastern Samar were included in this study, these barangays are Poblacion Barangays 1, 2, 3, 4, 5, 6, and 7. Aside from their proximity to the campus, the poblacion barangays were chosen as a setting of the study because they are located in coastal areas and are exposed to different natural hazards such as typhoons, earthquakes, and floods. Maydolong is also one of the service areas of Eastern Samar State University-Maydolong.

Respondents of the study

This study involved a total of ninety-nine (99) respondents who were all residents of the seven (7) barangays in the town proper of Maydolong. The number of respondents per barangay were proportionally allocated based on the population of each barangay. The distribution of respondents by barangay is shown in the table below.

Barangay	Frequency	Percentage
1	16	15.95
2	8	8.03
3	14	14.37
4	25	24.81
5	12	12.93
6	11	11.22
7	13	13.39
Total	**99**	**100**

Sampling Technique

To determine the sample size, Slovin's equation was utilized by the researchers. The formula is given as follows:

$$n = \frac{N}{1+Ne^2}$$

where:

n= is the sample size
N= is the population size
e= is the allowable error

For this particular study the allowable error was set at 10 percent. Substituting the given formula with the corresponding values, the sample size was pegged at 99 as shown below:

$$n = \frac{6842}{1+6842(0.10)^2}$$

$$n = \frac{6842}{69.42}$$

$$n = 98.56 \text{ or } 99$$

The actual respondents were then randomly chosen using a table of random numbers.

Research Instrument

A research survey questionnaire was used as data gathering instrument. The research instrument was divided into three parts with each part seeking to collect data needed to attain the objectives of the study.

Part 1 inquired on the demographic information of the respondents such as their age, sex, and educational attainment.

Part 2 sought to look into the level of disaster awareness among respondents. For this purpose, the researchers adapted a survey questionnaire from Padernal (2016). Some items in the research questionnaires were omitted since they did not suit to the locality and the situation of the people residing in the area where the study was conducted. Thus, the researchers included only survey questions which apply to the following natural hazards: typhoons, floods, and earthquakes.

Part 3 measured the level of disaster preparedness of the respondents. Items in this section of the instrument were adapted from the United States Federal Emergency Management Agency (FEMA) disaster preparedness research tool. They consisted of six items.

Research Procedure

The researchers began by seeking and obtaining permission from the campus administrator to administer the research instrument. Upon receiving approval, they proceeded with data collection by personally distributing the instrument to the respondents.

After the respondents completed the instrument, the researchers promptly collected it. This process resulted in a 100 percent retrieval rate of the questionnaires. Following collection, the researchers meticulously tallied, tabulated, analyzed, and interpreted the data.

Data Treatment

According to De Vos et al. (2005) data analysis means the categorizing, ordering, manipulating and summarizing of data to obtain answers to research questions. In this study, both descriptive and inferential statistics were used to analyze the data using Excel spreadsheet.

Frequency, percentage and mean were used to summarize data pertaining to the demographic profile of the respondents and to measure and summarize both the level of disaster awareness and preparedness among respondents.

To interpret the individual levels of awareness and preparedness of the respondents, the following scale of mean ranges with their corresponding adjectival interpretations was used:

Mean Range	Level of Awareness	Level of Preparedness
4.21-5.00	Very Much Aware	Always
3.41-4.20	Much aware	Often
2.61-3.40	Aware	Sometimes
1.81-2.60	Slightly Aware	Rarely
1.0-1.80	Not Aware	Never

Analysis of variance (ANOVA) was used to test whether there are significant differences on the respondent's level of awareness on disasters associated with the three identified natural hazards.

Spearman's rank-order correlation (Spearman's rho) was utilized to test the degree of association between the variables subjected to correlation.

All tests of significance were set at 0.05.

Ethical Consideration

According to Arifin (2018), protection of participants' rights is very important, thus, ethical protocols should be observed in a study that involves human beings. As such, confidentiality of information was strictly maintained and respondents'

participation in the study was solicited on a voluntary basis. The researchers explained adequately the purpose of the research and gave them time to ask questions and clarification concerning the study.

RESULTS AND DISCUSSION

Socio-Demographic Profile of the Respondents

As shown in the table below (Table 1), majority of the respondents belonged to the 30 to 34 and 35 to 39 age brackets, accounting for 33.33 percent and 22.22 percent, respectively, of the total number of respondents. A smaller proportion of respondents had ages ranging from 25 to 29 (10.10 percent), 50 to 54 (8.08 percent), and 20 to 24 and 40 to 44 (each accounting for 6.06 percent).

In terms of sex, majority or 59.60 percent of the respondents were females and the remaining 40.40 percent were males. As to their educational attainment, about a third (35.35 percent) indicated that they had college level education, followed by those who were college graduates (26.26 percent), high school level (18.18 percent), and high school graduates (14.14 percent).

Table 1 Socio-Demographic Profile of the Respondents

Profile Characteristic	Categories	Frequency	Percentage
Age	15-19	7	7.07
	20-24	6	6.06
	25-29	10	10.10
	30-34	33	33.33
	35-39	22	22.22
	40-44	6	6.06
	45-49	4	4.04
	50-54	8	8.08
	55-59	0	0.0
	60 and above	3	3.03
Total		**99**	**100.00**
Sex	Male	40	40.40
	Female	59	59.60
Total		**99**	**100.00**
Educational Attainment	Elementary Level	1	1.01
	Elementary Graduate	3	3.03
	High School Level	18	18.18
	High School Graduate	14	14.14
	College Level	35	35.35
	College Graduate	26	26.26
	Post Graduate	2	2.02
Total		**99**	**100.00**

Respondents' Level of Disaster Awareness Associated with Typhoons

Table 2 shows the respondents' level of awareness on disasters associated with typhoons. From the ten (10) statements used to assess their awareness, the statement "I am aware that an emergency kit is a necessary preparation for typhoons, which includes food supply, flashlight, medical kit, etc." got the highest mean of 4.56, which is interpreted as "Very Much Aware". It was followed by the statement pertaining to the respondents' awareness on the significance of typhoon Alert Level 3, which had a mean of 4.42 and also interpreted as "Very Much Aware". The third statement that got the highest mean – which was 4.40 ("Very Much Aware") – was concerned with the respondents' awareness on the mechanisms by which PAG-ASA disseminates typhoon information to the public. Meanwhile, statements measuring awareness on evacuation centers and the possible flooding effect of tropical cyclones, garnered the lowest means of 3.85 and 3.79, respectively, with both interpreted as "Much Aware".

Generally speaking, the respondents indicated that they are "Much Aware" when it comes to disasters associated with typhoons as evidenced by an average mean of 4.13.

Table 2 Level of Awareness on Disasters Associated with Typhoons

	Statement	Mean	Adjectival Interpretation
1.	I am aware that an emergency kit is a necessary preparation for typhoons, which includes food supply, flashlight, medical kit, etc.	4.56	Very Much Aware
2.	I am aware that three short siren signals (Alert Level 3) alert the public to commence evacuation.	4.42	Very Much Aware
3.	I am aware that typhoon public information dissemination is done by PAG-ASA through radio, social media and text blast.	4.40	Very Much Aware

4.	I am aware that mangroves and coral reefs should be protected because they act as natural wave breakers.	4.29	Very Much Aware
5.	People should avoid building directly on the coastline because they are at a high risk to storm surge.	4.27	Very Much Aware
6.	I am aware that one short siren signal (Alert Level 1) alerts the public to be vigilant for upcoming disaster and suspends classes in pre-schools.	3.93	Much Aware
7.	Damage caused by typhoons could be reduced by doing structural measures or by building strong structure to withstand impact caused by the wind.	3.91	Much Aware
8.	I am aware that two short siren signals (Alert Level 2) alerts the public for possible evacuation and suspends classes in secondary schools.	3.87	Much Aware
9.	I am aware that there are evacuation centers allotted for those people living in medium built houses that are not well-constructed and built with light materials only.	3.85	Much Aware
10.	I am aware that flooding can also be caused by tropical cyclones.	3.79	Much Aware
	Average Mean	**4.13**	**Much Aware**

Respondents Level of Awareness on Disasters Associated with Floods

Table 3 presents the level of awareness of the respondents on disasters associated with floods. Results revealed that the highest mean of 4.32 – interpreted as "Very Much Aware" – was recorded on the statement about the respondents' knowledge on the dangers posed by building houses in flood-prone areas. Awareness statements on the necessity of flood evacuation drills and cognizance of the dangers of living in flood-prone areas came next as they got mean ratings of 4.21 ("Very Much Aware") and 4.07 ("Much Aware"), respectively. On the other hand, statements concerning awareness on local evacuation plans for flood-risk individuals and the municipal flood assistance hotline, registered the lowest means of 3.85 and 3.55, respectively, indicating that respondents were "Much Aware" on such items. The average mean of 4.13 for all seven (7) awareness statements denotes that respondents are generally "Much Aware" when it comes to disasters brought by floods.

Table 3 Level of Awareness on Disasters Associated with Floods

	Statement	Mean	Adjectival Interpretation
1.	It is not safe to build houses in flood prone areas.	4.32	Very Much Aware
2.	I am aware that drill for flood evacuation is necessary to keep us safe.	4.21	Very Much Aware
3.	It is important to recognize the danger of the flood prone areas in our community.	4.07	Much Aware
4.	I am aware that there is a local warning system for flood.	4.06	Much Aware
5.	I am aware that reclaimed areas and expansion for urban settlements are usually flood prone areas.	3.89	Much Aware
6.	I am aware that local officials have evacuation plans for those at flood risk especially for the elderly and the young.	3.85	Much Aware
7.	I am aware of the local official flood assistance hotline of our municipality.	3.55	Much Aware
	Average Mean	**3.99**	**Much Aware**

Respondents Level of Awareness on Disasters Associated with Earthquakes

As can be gleaned from the table below (Table 4) the awareness statement on which the respondents indicated the highest level of awareness was "I am aware that the first thing to do during an earthquake is to duck, cover and hold." Such statement had a mean of 4.65, which was interpreted as "Very Much Aware". This was followed by the statement underscoring the importance of earthquake drills (with a mean of 4.62) and that which avers that open fields are safe places to go in the event of an earthquake (with a mean of 4.59). The respondents' levels of awareness in the two preceding statements were both interpreted as "Very Much Aware".

Conversely, the two awareness statements that registered the lowest means were, first, those that emphasize higher earthquake risk in areas situated near fault lines and, second, the structural integrity of houses built following the guidelines of the Building Code. Such statements had mean ratings of 4.34 (interpreted as "Very Much Aware") and 4.17 ("Much Aware"), respectively. The average mean of the nine awareness statements was computed at 4.49, which was interpreted as "Very Much Aware".

Table 4 Level of Awareness on Disasters Associated with Earthquakes

Statement	Mean	Adjectival Interpretation
1. I am aware that the first thing to do during an earthquake is to duck, cover and hold.	4.65	Very Much Aware
2. An earthquake drill is necessary to help us prepare and act properly during possible earthquake.	4.62	Very Much Aware
3. Open fields are safer places to avoid falling debris or objects caused by earthquakes.	4.59	Very Much Aware
4. It is not good to stay inside a building after an earthquake due to possible aftershocks that might cause the structure to collapse.	4.58	Very Much Aware
5. I am aware that that earthquakes might cause tsunami.	4.56	Very Much Aware
6. It is important to turn off the electrical supply during an earthquake.	4.47	Very Much Aware
7. Heavy objects must not be placed in high shelves because they have the potential to injure people.	4.47	Very Much Aware
8. I am aware that the areas near the fault line have higher earthquake risk.	4.34	Very Much Aware
9. I am aware that the houses that follow correctly the guideline on the Building Code will not easily collapse even at higher magnitude earthquake.	4.17	Much Aware
Average Mean	**4.49**	**Very Much Aware**

Respondents Overall Level of Awareness on Disasters

Juxtaposing the general awareness levels on disasters associated with the three natural hazards (as shown in Table 5), the respondents exhibited the highest level of awareness on disasters associated with earthquakes, which had an average mean of 4.49 ("Very Much Aware"). This was followed by typhoons, with an average mean of 4.13 ("Much Aware"), while floods got the lowest average mean of 3.99 ("Much Aware"). Overall, awareness level on disasters associated with all three natural hazards was pegged at 4.20, which was interpreted as "Very Much Aware".

Table 5 Overall Level of Awareness on Disasters Associated with the Three Natural Hazards

Natural Hazard	Average Mean	Adjectival Interpretation
Typhoons	4.13	Much Aware
Floods	3.99	Much Aware
Earthquakes	4.49	Very Much Aware
Overall Mean	**4.20**	**Very Much Aware**

Respondents' Level of Disaster Preparedness

Of the six statements used to assess the respondents' level of disaster preparedness, the statements "I talk to others on getting prepared" and "I participate in emergency drill" got the highest mean ratings of 4.47 each, which are interpreted as "Always". The two were followed by the statement on the information-seeking habits of the respondents, which got a mean of 4.37 and likewise interpreted as "Always". The same adjectival interpretation was ascribed to the other disaster prepared statements except that which states "I gather supplies that will last for 3 days", which only got a mean of 2.64 and interpreted as "Sometimes".

Generally, the respondents indicated that they are "Often" prepared when it comes to disasters as demonstrated by an average mean of 4.08.

Table 6 Level of Disaster Preparedness

Statement	Mean	Adjectival Interpretation
1. I talk to others on getting prepared.	4.47	Always
2. I participate in emergency drills.	4.47	Always
3. I seek information on preparedness.	4.37	Always
4. I attend local meetings/trainings.	4.28	Always
5. I make emergency plans.	4.26	Always
6. I gather supplies that will last for 3 days.	2.64	Sometimes
Average Mean	**4.08**	**Often**

Comparative Analysis of Respondents' Levels of Disaster Awareness

As can be gleaned from the table below (Table 7), the computed F-value of the analysis of variance (ANOVA) was 2.93, which was lower than the critical F-value of 3.026 at .05 level of significance. Further, the p-value of 0.555 was higher than the level of significance of .05. The said results led the researchers to accept the null hypothesis that there are no significant differences in respondents' level of awareness on disasters associated with typhoons, floods, and earthquakes.

Table 7 Summary Result of the Analysis of Variance (ANOVA)

Source of Variation	Sum of Squares	df	MS	F-value	p-value	F-critical
Between Groups	0.167	2	0.837	2.93	0.555	3.026
Within Groups	8.411	294	0.028			
Total	**8.579**	**296**				

Correlation Analysis of Respondents' Level of Disaster Awareness and Level of Disaster Preparedness

Table 8 shows the result of the correlation analysis of the variables used in the study. The computed r-value was 0.989, which indicates a very high correlation between the respondents' level of disaster awareness and level of disaster preparedness. Moreover, the p-value of 2.2^{-16} was lower that the level of significance of .05, which led the researchers to reject the null hypothesis that there is no significant relationship between the respondents' level of disaster awareness and level of disaster preparedness.

Table 8 Summary Result of the Correlation Analysis

Variables	Mean	Standard Deviation	p-value	r-value
Level of Disaster Awareness	48.5	27.79	2.2^{-16}	0.989
Level of Disaster Preparedness	48.5	27.62		

SUMMARY

Natural hazards like typhoons, floods, and earthquakes are disastrous phenomena that occur frequently in the country. To lay a good foundation in disaster planning and mitigation, the first step should be knowing the level of awareness and preparedness of the community on the disaster risks associated with natural hazards. This study investigated the respondents' level of disaster awareness and preparedness, particularly on risks associated with natural hazards such as typhoons, floods, and earthquakes. It also endeavored to determine the significant differences of the respondent's level of awareness on the disasters associated with the aforementioned natural hazards; and if there exists a significant relationship between their level of disaster awareness and preparedness.

The study employed the descriptive-comparative and descriptive-correlational methods of research and involved ninety-nine (99) randomly chosen respondents who were all residents of población barangays of Maydolong, Eastern Samar. Both descriptive and inferential statistics were used to analyze the data gathered in this study. Analysis of variance (ANOVA) was used to test if there are significant differences among the variables subjected to comparative analysis while Spearman's rho was utilized to test whether there is a significant relationship between the respondents' level of disaster awareness and preparedness.

Results revealed that majority of the respondents belonged to the 30-34 and 35-39 age brackets, were female dominated and most were college level or college graduates. The respondents indicated the highest level of awareness on disasters associated with earthquakes (with a mean of 4.49), followed by typhoons (4.13) and floods (3.00). Generally, they were "Very Much Aware" when it comes to disasters associated with the three natural hazards as manifested by an overall mean of 4.20. In terms of disaster preparedness, the respondents were found to be "Often" prepared when it comes to disasters as evidenced by an average mean of 4.08.

The comparative analysis of the variables tested for significant differences showed that there are no significant differences in the respondents' levels of awareness on disasters associated with typhoons, floods and earthquakes. Meanwhile, the correlation analysis revealed that there is a very high correlation between the level of disaster awareness and preparedness and such relationship is statistically significant at .05 alpha.

CONCLUSIONS

Based on the results of the study, the following can be concluded from the study:

1. Residents of Maydolong, Eastern Samar, particularly those from the town proper, have a very high level of awareness when it comes to disasters associated with earthquakes and high awareness levels in terms of disasters associated with typhoons and floods. Generally, they are "Very Much Aware" of the disasters associated with the three natural hazards.
2. In terms of disaster preparedness, Maydolongnons exhibit an excellent level of preparedness as they are "Often" prepared for disasters.
3. The levels of awareness on disasters associated with typhoons, floods and earthquakes are more or less the same as it was found out that differences in the disaster awareness levels associated with the three natural hazards are not statistically significant.
4. There is a very high and statistically significant relationship between the level of disaster awareness and the level of disaster preparedness, which means that as disaster awareness increases, disaster preparedness also increases, and vice versa.

RECOMMENDATIONS

The following recommendations are hereby given:

1. Notwithstanding the respondents' high level of awareness on the disasters associated with the identified natural hazards, dissemination of information, trainings, seminars, and emergency drills should be conducted on a regular

basis to sustain or improve their level of disaster awareness. The Extension Services Office of Eastern Samar State University-Maydolong may consider the establishing partnerships with the local government unit in the conduct of such activities.

2. The local DRRM plan and contingency plans on the three identified natural hazards should be updated taking the results of the study as an inputs in the revision of such documents in order to come up with a is well-informed plan that is based on reliable and comprehensive information covering all specific issues that need to be addressed.
3. Climate change is associated with the increasing frequency and magnitude of natural hazards and the disaster risks they bring. Therefore, there is a need for the community to be educated in climate trends with the help of concerned institutions, such as ESSU-Maydolong.
4. Further studies should be conducted on other locales or by expanding the number of respondents involved in the study. Studies on related research topics such as disaster coping mechanisms and disaster response of the community should also be conducted.

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RESEARCH INSTRUMENT

The faculty of Eastern Samar State University-Maydolong, College of Criminal Justice Education will be conducting a study titled **"Assessment of Disaster Awareness and Preparedness of Maydolongnons"** In view of this, we would like to ask for your cooperation to answer the following questions. Information gathered will strictly be treated with utmost confidentiality.

Please check on the statements that best suit your situation.

I. Demographic Profile of the Respondents

Age

15-19___
20-24___
25-29___
30-34___
35-39___
40-44___
45-49___
50-54___
55-59___
60 and above___

Sex

Male___
Female___

Educational Attainment

Elementary Level___
Elementary Graduate___
High School Level___
High School Graduate___
College Level___
College Graduate____
Post Graduate____

II. Awareness on the Associated with Typhoon

No.	Statement	Very Much Aware 5	Much Aware 4	Aware 3	Slightly Aware 2	Not Aware 1
1	I am aware that one short siren signal alert level 1 alerting the public to be vigilant for upcoming disaster, pre-schools are suspended.					
2	I am aware that two short siren signals alert level 2 alerting the public for possible evacuation, secondary school are suspended.					
3	I am aware that three short siren signals alert level 3 alerting the public to commence evacuation (To those high risk areas)					
4	I am aware that typhoon public information dissemination is done by the PAG ASA through radio, social media and text blast.					
5	People should avoid building directly on the coastline because they are at a high risk on storm surge.					
6	Damage caused by typhoons could be reduce by doing structural measures or by building strong structure to with standard impact caused by the wind					
7	Be flood ready cause it could also be caused of cyclones.					
8	I am aware that there are evacuation centers allotted for those people living in medium built houses that are not well-constructed and built with light materials only.					
9	I am aware that mangroves and coral reefs should be protected because they act as natural wave breakers.					
10	I am aware that emergency kit is a necessary preparation for typhoons which includes food supply, flashlight, medical kit etc.					

III. Awareness in the Disaster Risk Reduction as to Floods

No.	Statement	Very Much Aware 5	Much Aware 4	Aware 3	Slightly Aware 2	Not Aware 1
1	I am aware that there is a local warning system for flood					
2	It is not safe to build houses in the flood prone areas.					
3	I am aware that drill for flood evacuation is necessary to keep us safe.					
4	I am aware of the local official flood assistance hotline of our municipality.					
5	I am aware that reclaimed areas and expansion for urban settlements are usually flood prone areas.					
6	It is important to recognize the danger of the flood prone area in our community.					
7	The local officials have evacuation plan for those at flood risks especially for the elderly and the young. I am aware that the local officials have evacuation plan for those at flood risk especially for the elderly and the young.					

IV. Awareness on the Risks Associated with Earthquake

No.	Statement	Very Much Aware 5	Much Aware 4	Aware 3	Slightly Aware 2	Not Aware 1
1	I am aware that the first thing to do during an earthquake is to duck, cover and hold.					
2	I am aware that the areas near the fault line have higher earthquake risk					
3	An earthquake drill is necessary to help us prepare and act properly during possible earthquake					
4	I am aware that that earthquake might cause tsunami.					
5	Heavy objects must not be placed in high shelves because they have the potential to injure people.					
6	I am aware that the houses that follow correctly the guideline on the building code will not easily collapse even at higher magnitude earthquake					
7	It is not good to stay inside a building after an earthquake due to possible aftershocks that might cause this structure to collapse. It is not good to stay inside a building after an earthquake due to possible aftershocks that might cause this structure to collapse. It is not safe to stay inside a building after an earthquake					
8	It is not good to stay inside a building after an earthquake due to possible aftershocks that might cause the structure to collapse					
9	An earthquake drill is necessary to help us prepare and act properly during possible earthquake An earthquake drill is necessary to help us prepare and act properly during possible earthquake An earthquake drill is necessary to help us prepare and act properly during possible earthquake it is important to turn off the electrical supply during an earthquake					
10	Open fields are safer place to stay to avoid falling debris or objects caused by earthquakes. Open fields are safer place to avoid falling debris or objects caused by earthquakes					

V. Disaster Preparedness Action

No.	Statement	Always 5	Often 4	Sometimes 3	Rarely 2	Never 1
1	I gather supplies that will last for 3 days.					
2	I talk to others on getting prepared					
3	I attend local meeting/training					
4	Seek information on preparedness					
5	I participate in emergency drill					
6	I make emergency plan					