Building School Resilience In The Face Of Disaster: The Case of ASIST Main Campus Extension-La Paz

Joe Mary D. Ruizan
University of Baguio, Baguio City Philippines
20201220@s.ubaguio.edu

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Abstract

The effects of disasters on people's lives are increasing. People in a variety of organizations and institutions prepare for disasters as a result of these scenarios; nevertheless, few studies have examined the impact of disaster awareness on preparedness, particularly among college students studying Social Work, Political Science, and Criminal Justice Education. Hence, this study aimed to determine the level of disaster awareness and preparedness of students of ASIST Main Campus Extension – La Paz and to determine the significant relationship between age, sex, civil status, and the number of disaster management training/program they had attended to their disaster awareness and preparedness.

A descriptive-correlational quantitative design of research was utilized in this research. Samples were drawn using purposive-convenience sampling comprising 211 students from the three courses namely Political Science, Social Work, and Criminal Justice Education. The questionnaire used contained the awareness on different disasters such as earthquake, typhoon, and flood, and the disaster preparedness in terms of emergency planning and coordination, communication and information sharing, and Infrastructure and critical facilities. These were subjected to validation by experts in disaster management. Statistical tools used to answer the research questions includes frequency counts, percentage, mean, and bivariate analysis tested at 0.05 level of significance.

Results revealed that students have high level of disaster awareness (M=3.38) and high level of disaster preparedness (M=3.36). Further, the study revealed that there is a significant relationship exists between the sexes of the respondents and their disaster awareness (r=-0.181), as well as the number of Disaster Management Training/Program Attended by the respondents and their disaster awareness (r=0.195). Moreover, the course that the students are currently enrolled does not have a significant relationship to their disaster awareness. Further, there is no significant relationship existed between the profile of the respondents and their level of disaster preparedness. Further, the study also revealed that there is a significant relationship existed between the disaster awareness of the respondents and their disaster preparedness (r=0.623). Hence, when students are more aware of disasters it is also reasonable to believe that they are more prepared to disasters.

INTRODUCTION

Since the beginning of time, disasters – both natural and man-made have played a significant role in human history. Natural disasters that include storms, floods, wildfires, volcano eruptions, tsunamis, earthquakes, and pandemics are caused by a combination of biological, meteorological, and geological events. They frequently lead to the loss of life, the uprooting of communities, and extensive damage to infrastructure, property, and ecosystems.

The province of Abra is one of the most vulnerable regions in Northern Luzon for earthquakes, typhoons and floods. On July 27, 2022, a notably 7.3 magnitude earthquake hit some parts of the northern part of Luzon including the province of Abra. On the following year, super typhoon Egay landed on the Northern Luzon that struck the whole province of Abra.

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The magnitude of these disasters and the subsequent need for recovery has underscored the need for enhancing school resilience and a comprehensive disaster management plan. The devastating impacts of these events impel the need for effective strategies that enable schools to efficiently anticipate, respond to, and recover from such disaster. Hence, the purpose of this study is to assess the level of disaster knowledge and readiness of instructors, staff, and students at the ASIST Main Campus Extension-La Paz.

International Federation of Red Cross and Red Crescent Societies (IFRC, 2004) defines disaster as an unexpected, catastrophic event that results in extensive damage, devastation, or fatalities as well as a major disruption to regular operations. Natural disasters like earthquakes, hurricanes, and floods can also be caused by human activity, such as industrial mishaps, nuclear leaks, or terrorist attacks. Natural disasters frequently have an impact on social, economic, and environmental systems in addition to the direct physical harm they cause. The Emergency Event Database (EM-DAT) documented 387 natural disasters and hazards globally in 2022, affecting 185 million people and leaving 30,704 people dead. In addition, a new data from Save the Children suggests that landslides, cyclones, storms, floods, and wildfires had claim the lives of at least 12,000 people globally in 2023—a 30% increase from 2022.) Disaster management is "the discipline that deals with the preparation for, response to, recovery from, and mitigation of the effects of disasters. It involves planning, coordinating, and implementing measures to protect people, property, and resources from the impacts of disasters and to restore normalcy after an event." (Coppola D.P., 2015). On the other hand, Disaster education is defined the process of educating people and communities about the causes, effects, and management of disasters. It seeks to increase awareness, readiness, and resistance to many catastrophes, from man-made crises like industrial accidents to natural calamities like hurricanes and earthquakes (Davis, I., 2004).

As part of the 2030 Agenda for Sustainable Development, the United Nations adopted a set of 17 global goals known as the Sustainable Development Goals (SDGs) in 2015. They are made to safeguard the environment, foster prosperity, and tackle a variety of global issues. There are specific targets for each goal that must be met by 2030 (UN, 2015). The seventeen Sustainable Development Goals (SDGs) are interrelated; they recognize that progress must balance environmental, social, and economic sustainability and that actions taken in one area will affect other ones. SDG 13 states that urgent action is needed to mitigate the effects of climate change. From 1.64 in 2005–2015 to 0.86 in 2012–2021—the proportion of disaster-related deaths and missing individuals per 100,000 people has been steadily decreasing. The average disaster death rate from 2015 to 2021 was 47,337. But between 2005 and 2015, there were 1,198 fewer people damaged by disasters per 100,000 people than there were between 2012 and 2021 (2,113). By the end of 2021, 126 countries—up from 55 in 2015—will have national disaster risk reduction strategies in place. In light of this, 118 nations have declared that their policies broadly align with those of other international accords, including the Paris Agreement and the 2030 Agenda.

Data from the World Risk Index (WRI) rates 193 nations in 2023 according to how vulnerable they are to major natural disasters like earthquakes, tsunamis, floods, and droughts. Findings showed that the Philippines, Indonesia, and India have the highest overall disaster risk and the Philippines consistently remains the most at-risk country for 13 straight years. Owing to its placement on the "Pacific Ring of Fire," it is likely to experience frequent earthquakes and volcanic eruptions. (Simmons, M., 2010). The Philippines is located in the Pacific typhoon belt and experiences an average of 20 typhoons each year, five of which are damaging, according to the Asian Disaster Reduction Center (ADRC). Because its physical nature and geographic location, it is extremely vulnerable to droughts, tsunamis, floods, storm surges, and flash floods. Typhoon Yolanda (with an international name of typhoon Haiyan), as one of the deadliest typhoons to ever hit the Philippines, left 26 million people without power and took the lives of at least 8,000 people in 2013. About 70% of the people of the Philippines were directly threatened by rising sea levels, which has compelled many of them to relocate. The frequency and intensity of natural disasters in the country have increased as a result of climate change.

According to the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), the Coriolis Effect causes typhoons to frequently move north or west across the nation. Typhoons consequently make landfall in the sections of the country that face the Pacific Ocean, particularly in the Northern Luzon, Eastern Visayas, and Bicol Region. The provinces in the Northern Luzon are Batanes, Cagayan, Isabela, Quirino, Nueva Viscaya, Ilocos Norte, Ilocos Sur, La Uniun, Aurora, Pangasinan, Benguet, Mountain Province, Ifugao, Kalinga, Apayao, and Abra.

The province of Abra is one of the most vulnerable regions in Northern Luzon for earthquakes, typhoons and floods. It is located in the Cordillera Administrative Region (CAR). The province is distinguished by its river basins, deep valleys, and mountainous terrains. The longest river in the province, the Abra River, travels from south to north, while the eastern portion of the province is

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traversed by the Cordillera Mountain Range. As the main branch of the Philippine fault in the Cordillera, the Abra River Fault - a left lateral strike-slip fault (Rigenbach et al., 1990)- makes the region vulnerable to earthquake hazards. Tropical monsoon climate in the Philippines includes dry season from October to April and wet season during the remaining months. During the wet season, heavy rainfall, overflowing rivers, and inadequate drainage systems can lead to flash floods and riverine flooding, causing damage to homes, crops, roads, and bridges.

On July 27, 2022, a notably 7.3 magnitude earthquake hit some parts of the northern part of Luzon including the province of Abra. The National Disaster Risk Reduction and Management Council (NDRRMC) reported that the earthquake causes a total of 12,802 damaged houses: 12,645 partially damaged and 157 fully damaged; and five people were killed and 131 were left injured. On the following year, super typhoon Egay landed on the Northern Luzon that struck the whole province of Abra. The super typhoon Egay destroyed 13,093 houses in total, 12,641 partially and 452 completely, according to the Philippine Information Agency (PIA). With 6,593 damaged houses, the municipality of Bangued has been reported with the highest number, followed by La Paz with 2,453 and San Quintin with 545. One of the area that was severely damaged by the typhoon is the ASIST Main Campus Extension-La Paz, where school buildings have been destroyed and classrooms have been immersed in muck.

The magnitude of these disasters and the subsequent need for recovery has underscored the need for enhancing school resilience and a comprehensive disaster management plan. The devastating impacts by these occurrences makes it necessary to develop efficient plans that help schools prevent, prepare for, and recover from disasters. This study focuses on assessing the level of disaster awareness and preparedness of the students, faculty, and staffs of ASIST Main Campus Extension - La Paz that is located approximately 700 meters away from the Abra River which is the seventh largest water system in the Philippines in terms of watershed size. This makes the school a high risk of earthquakes and floods during typhoons.

Conceptual Framework

This study's independent and dependent variables are fundamental to its conceptual framework. The respondents' profile, which includes their age, sex, course, highest educational attainment, and the number of disaster management training or programs they have attended, are the independent variables. On the other hand, the respondents' awareness of earthquake, flood, and typhoon risk, as well as their preparedness for such events in terms of emergency planning and coordination, communication and information sharing, infrastructure, and critical facilities, are the dependent variables.

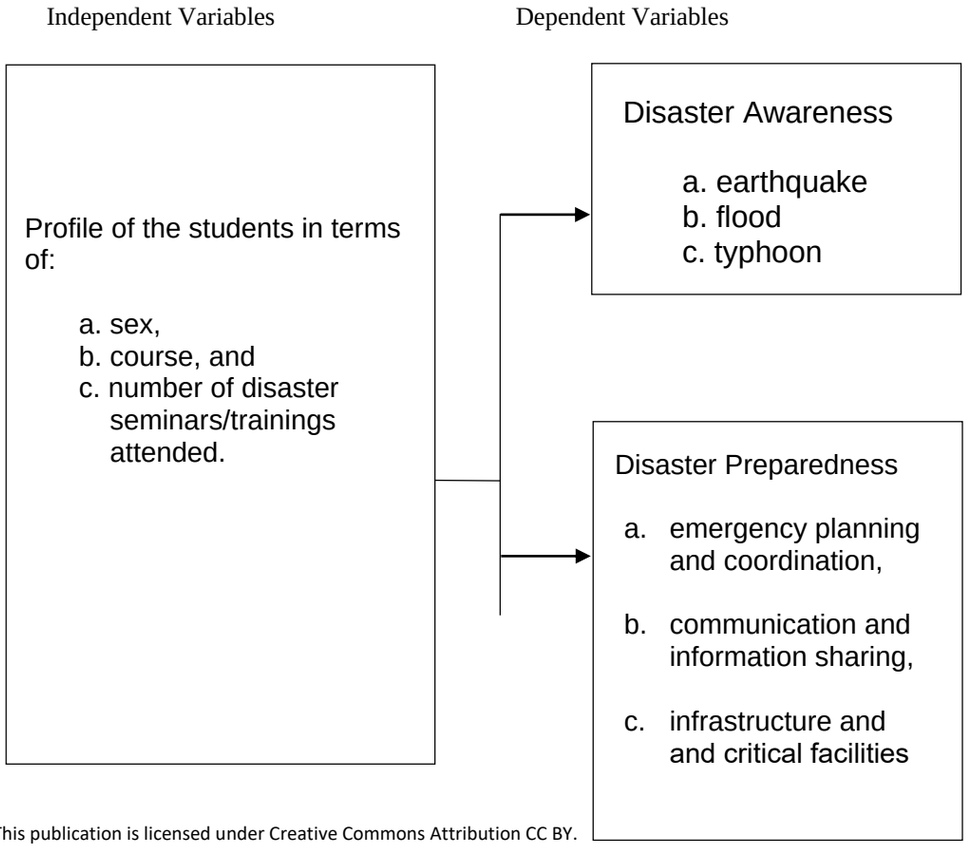

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Figure 1. Conceptual Framework

Disaster awareness is the understanding and perception of the possible risks associated with natural disasters as well as the level of preparedness of communities and individuals to deal with them (Thomas, 2018). Defined by the U.S Geological Survey (2021), an earthquake is the shaking of the Earth's surface caused by a sudden release of energy in the lithosphere of the planet, which generates seismic waves. Abrupt trembling of the earth's surface results in significant harm to human life and property. In addition, floods are the most common kind of natural disaster, happening when an overflow of water submerges normally dry ground. Floods are often caused by tropical cyclone storm surges or by an abundance of precipitation. Furthermore, typhoons are classified as natural disasters that can result in harm to people and property. They are caused by the production of tropical and subtropical ocean cyclonic eddies in a variety of activities that include strong winds, rainstorms, storm tides, and waves.

According to the United Nations International Strategy and Disaster Reduction (UNISDR, 2009), disaster preparedness is the capacity of individuals, communities, and governments to foresee, address, and recover from the effects of impending or current disaster events. Emergency planning and coordination refers to the participation of the residents in disaster preparedness drills, exercises, training programs, and workshops. Additionally, communication and information sharing refer to the effective communications and secured information exchange during disasters and emergencies. Moreover, infrastructure and critical facilities refers to availability of evacuation routes and shelters in high-risk areas, and accessibility to health facilities, emergency services, and transportation networks during disasters. Furthermore, resource stockpiling refers to the preparedness of emergency supplies (food, water, medical kits, etc.) and emergency medical supplies at household and community levels.

This study will identify the profile of the respondents in terms of age, sex, monthly income, and highest educational attainment. Furthermore, this study will also determine the level of disaster awareness and preparedness of the respondents in terms of earthquake, flood, and typhoon. Moreover, the study will also establish if significant relationship exists between the profile of the respondents and their disaster awareness and disaster preparedness. Lastly, this study will establish if significant difference exists between the respondents' disaster awareness and their disaster preparedness.

Significance of the Study

This result of this study will be relevant to effectively prepare for natural disasters and improve community preparedness for disasters. This study will be beneficial and significant to the following:

Students of the ASIST Main Campus Extension-La Paz

Findings of this study can help the students to be more aware and prepared when disaster may occur. The study can give them additional knowledge about disaster management that can lead them to safety during a disaster.

School Administrators

The result of this study can be used by the school administrators as response to improve their disaster preparedness and risk reduction measures and to create a more constructive resiliency plan.

Researchers

Results of this study will benefits researchers by providing references and access information on the current practices implemented in barangay level with regards to disaster preparedness and risk reduction.

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Objectives of the Study

This study aimed to determine the level of disaster awareness and preparedness of the students, faculty, and staff of Abra State Institute of Sciences and Technology Main Campus Extension-La Paz. Specifically, this study seeks the answer the following questions:

1. To determine the profile of the students in terms of:
    a. sex;
    b. course; and
    c. number of disaster seminars/trainings attended.

2. To Evaluate the level of disaster awareness of the respondents in terms of:
    a. earthquake;
    b. flood; and
    c. typhoon.

3. To evaluate the level of disaster preparedness of the respondents in terms of:
    a. emergency planning and coordination;
    b. communication and information sharing; and
    c. infrastructure and critical facilities.

4. To determine the significant relationship between the profile of the respondents and their disaster awareness?

5. To determine the significant relationship between the profile of the respondents and their disaster preparedness?

Procedures/ methodology

The researchers sought permission from the office of Campus Administrator to conduct the study. Upon approval, the researchers had created a survey-questionnaire that was validated by validators to ensure the validity and reliability of the data gathering instrument. With the permission to conduct a study, the survey-questionnaires was distributed to the respondents. The respondents was instructed on how to answer the said questionnaires and were informed about the nature and extent of the study together with their informed consent to participate in the said study. To give respondents enough time to carefully consider their responses before submitting them, the researcher left the questionnaires to the respondents. After which the researcher came back to the offices for the retrival of the questionnaire checklist. The questionnaires are retrieved approximately a month after the date of distribution. The questionnaire retrived are tallied, collated and tabulated with the aid of an expert statistician right after the retrieval. The researchers had recorded the data gathered and information that was obtained from the survey questionnaires was kept confidential and was used for this study purposes only. The data collected was put on the drawer/sealed cabinet were the researcher has the only access to the said files. After the data was interpreted and organized, the researcher then finalized the text of the study upon endorsement of the adviser will later be presented to the stakeholders/beneficiares of the study. After the study, the researcher went to acknowledge participants' valuable contributions and express gratitude for their time and effort. Ensured the participants that they are valued and informed about the study's completion as well as providing a copy of the study to the stakeholders for future reference.

Research Design

The study used a descriptive-correlational quantitative design of research. The researchers used descriptive to identify the demographic profile of the respondents and determine their level of disaster awareness and level of disaster preparedness. On the other hand, the researchers used correlation to establish if significant relationship exists between the profile of the respondents and their level of disaster awareness and preparedness, and to establish if significant relationship exists between disaster awareness of the respondents and their disaster preparedness.

Locale of the study

ASIST Main Campus Extension-La Paz was chosen as the locale for this study as it is one of the greatly affected areas during the typhoons and earthquakes for the past two years and is vulnerable to future disasters due its geographical location.

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Population and Sampling

The respondents of this study are the students of the Abra State Institute of Sciences and Technology Main Campus Extension-La Paz, Abra. The 211 respondents were identified through purposive-convenience sampling. Purposive sampling was used for the purpose that all students are all affected when disasters happen, and convenience sampling were used because only those who wanted to participate in the study became our respondents. Purposive sampling was used in this study to ensure that respondents possessed specific characteristics relevant to the research objectives which focuses on students and was deliberate because they are directly impacted by disasters, making them an appropriate group for understanding the study's subject matter. While purposive sampling is beneficial for targeting relevant respondents, it can introduce certain biases that may affect the study's outcomes like findings from sampled group may not be generalizable to the entire population, as the sample is not random and might not reflect the diversity of experiences across all students and those who opted to participate might differ systematically from those who did not.

Research Instrument

The data collection instrument used in this study was a survey questionnaire. The survey questionnaires were self-constructed and was validated by the Municipal Disaster Risk Reduction Management Officer (MDRRMO) of La Paz, Abra, Municipal Social Welfare and Development Officer (MSWDO) of Danglas, Abra, and the program head of the Bachelor of Science in Social Work in ASIST Main Campus Extension – La Paz.

Demographic Profile of the Respondents. The respondents were asked to provide information about their age, sex, civil status, and the number of disaster management training/program attended.

Disaster awareness. This portion of the survey questionnaire contains three subparts: earthquake, flood, and typhoon. All items were scored on a Likert scale of 1 to 4 (4 = Very much aware, 3 = Much aware, 2 = Slightly aware, 1 = Not aware).

Disaster preparedness. This section of the survey questionnaire contains three subparts: emergency planning and coordination, Communication and information sharing infrastructure and critical facilities; and the response options on a 4-point Likert scale ranging from 4 = Always, 3 = Sometimes, 2 = Rarely, and 1 = Never.

Statistical Treatment

Treatment of Data

The following statistical tools are to be used in order to support the presentation, analysis, and interpretation of the data that will be collected for this study.

1. Frequency Counts and Percentage. It was used to describe the profile of the respondents in terms of age, sex, course, civil status, and number of disaster management training/program attended.
2. Weighted Mean will be used determine the level of disaster awareness of the respondents in terms of earthquake, flood, and typhoon. It will also be used to unveil the level of disaster preparedness of the respondents in terms of emergency planning and coordination, communication and information sharing, and infrastructure and critical facilities.
3. Bivariate Analysis (r) will be used to establish if significant relationship exists between the respondents' level of disaster awareness and their level of disaster preparedness.

All values are tested at 0.05 level of significance.

Ethical Considerations

To protect both the respondents, researcher and the institution, ethical considerations were put in place. This was to ensure the quality and integrity of the research study as well protecting the confidentiality and anonymity of the respondents. The participants was asked by the researcher to conduct the study. They were informed about the matter of the study and confidentiality of information to be gather,the respondents agree and was ask to answer the questions regarding their disaster awareness and preparedness. In the conduct of the study the participants was asked by the researcher if they are willingly to participate in the study without any coercion, manipulation, or undue pressure upon them. They were informed that they are free to participate without fear of negative consequences.

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Information about the study, including its purpose, procedures, potential risks and benefits, and their rights as respondents are also discussed. Respondents are informed about their right to withdraw from the study at any point without facing any negative consequences. As the respondents agrees they are asked to answer questions regarding study. The responses of the respondents are treated confidential and every effort was made to preserve the confidentiality which includes assigning codes/ numbers, writing the name in the questionnaire is also optional, and all the documents gathered was kept in a locked cabinet solely owned and accessed only by the researcher. Data from the study were saved on a password-protected computer.

RESULTS AND DISCUSSIONS

Profile of the Student-Respondents

Table 1: Profile of the Students-Respondents

Profile	**Frequency (f)**	**Percentage (%)**
Sex:		
Male	82	38.86
Female	129	61.14
Total	**211**	**100.00**
Course:		
BS Criminal Justice Education	95	45.02
BS Social Work	92	43.60
BA Political Science	24	11.37
Total	**211**	**100.00**
Number of Disaster Management Training/Program Attended:		
0	29	13.74
1	53	25.12
2	48	22.75
3	39	18.48
4	16	7.58
5	26	12.32
Total	**211**	**100.00**

Table 1 revealed that the majority of the student-respondents who answered the study were female (n=129, 61.14%) while the least respondents were male (n=82, 38.86%). Above results of the study can be explained by the fact that studies in social work, criminology, and political science which ASIST-La Paz Campus offers, may be more popular among women because of their greater interest in advocating social justice, equality, and community welfare.

According to the study of Trusz (2020), career decisions are significantly influenced by gender stereotypes. Girls are taught from a young age to be more sympathetic and nurturing, which fits in nicely with professions like political science and social work. Boys, on the other hand, are frequently encouraged to pursue careers in the sciences and technology. Their decisions about schooling and careers later in life are influenced by this socialization process. The study has indicated that gender stereotypes-based interpersonal expectations might result in self-fulfilling prophesies, whereby students internalize these expectations and choose jobs that are stereotypically connected to their gender.

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In connection, in terms of course, majority of the student-respondents who answered the study were Criminal Justice Education students (n=95, 45.02%) followed by Social Work students (n=92, 43.60 %), and the least number of student-respondents are the Political Science students (n=24, 11.37%). Above results can be attributed by the fact that the rise of true crime documentaries and podcasts has increased public fascination with crime, influencing students to pursue Criminal Justice Education. Further, findings conform the study of Trebilcock, J., & Griffiths, C. (2021) when he studied about Student motivations for studying criminology and he concluded that factors influencing students' choices in pursuing Criminology includes social influence, job prestige, and personal interest in the field.

Further, findings suggest that the least number of student-respondents are the Political Science students. This is possibly because in comparison to more specialized courses like engineering, computer science, or healthcare, some students may believe that political science offers less job options. Hence, Political science program enrollment may be discouraged by this notion. Findings of this study support the study of Ishiyama (2022) where he revealed several reasons why more students do not major in Political Science. One reason is that when compared to fields with more defined career trajectories, students may believe that there are less employment alternatives available with a political science degree.

Moreover, data above shows that most of the student-respondents had attended only one disaster management training/program (n=53, 25.12%). On the other hand, least number of student-respondents have attended four disaster management training/programs (n=16, 7.58%). The result is possibly because disaster seminars and trainings are not well-promoted within the school community. Student participation may also be impacted by the disaster seminars' location and accessibility. It is possible that students will attend seminars less frequently if they are held off campus or in less convenient locations.

Level of Disaster Awareness of the Respondents

The table below summarizes the responses of the respondents when they were asked about their disaster awareness.

Table 2: Level of Disaster Awareness of the Respondents

Disaster Awareness	**Students**	
	Mean	**DR**
EARTHQUAKE		
1. Earthquakes are not predictable.	3.39	VMA
2. Hundreds of earthquakes occur on Earth every day.	2.77	MA
3. Earthquakes can cause various hazards such as ground shaking, soil liquefaction, landslides, tsunamis, flooding, and fires.	3.58	VMA
4. Earthquake causes buildings and infrastructure to collapse, leading to injuries and fatalities.	3.61	VMA
5. Earthquake risk are higher to areas near the fault line	3.47	VMA
6. Earthquake risk is higher in ASIST-La Paz Campus because it is situated near the Abra River fault.	3.26	VMA
Sub mean	**3.35**	**VMA**
TYPHOON		
1. The Philippines is situated in the typhoon belt in the Pacific.	3.05	MA

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Norm:

2. Typhoon is a type of large storm system with strong circular winds that typically occurs in the Pacific Ocean.	3.34	VMA
3. Typhoons can cause destruction through extreme winds, storm surges, and flash flooding or landslides from heavy rainfall.	3.53	VMA
4. Typhoon public information-dissemination is done by the PAG ASA through TV, radio, and social media.	3.55	VMA
5. Damage caused by typhoons could be reduced by doing structural measures.	3.32	VMA
6. Signals and/or sirens are available in alerting the community.	3.22	MA
Sub mean	**3.34**	**VMA**
FLOOD		
1. Floods can be caused by a variety of factors, including heavy rainfall, rapid snowmelt, a storm surge from a tropical cyclone or tsunami in coastal areas, or the breach of natural or artificial barriers like dams.	3.46	VMA
2. Floods can have devastating effects on communities, including loss of life, damage to property, erosion of soil, and contamination of water supplies.	3.51	VMA
3. It is not safe to build houses and live in flood-prone areas.	3.55	VMA
4. There is a local warning system for the flood.	3.27	VMA
5. The presence of plants and trees along the riverbanks could help lessen the impact of floods.	3.47	VMA
Sub Mean	**3.45**	**VMA**
Total Mean	**3.38**	**VMA**

Point Value	Statistical Limit	Descriptive Rating (DR)
4	3.25 – 4.00	Very Much Aware (VMA)
3	2.50 – 3.24	Much Aware (MA)
2	1.75 – 2.49	Slightly Aware (SA)
1	1.00 – 1.74	Not Aware (NA)

Table 2 uncovers the level of disaster awareness of the respondents in terms of earthquake, typhoon, and flood. Indicator 4 of Earthquake “Earthquake causes buildings and infrastructure to collapse, leading to injuries and fatalities” has ranked the highest among the respondents garnered a weighted mean of 3.61 with a descriptive rating of Very Much Aware that is verbally interpreted as a high level of disaster awareness.

Further, the influence of media is crucial in shaping this disaster awareness. Major earthquake events are routinely covered by news organizations, movies, and digital platforms, highlighting the disastrous effects on structures and infrastructure. For example, the widespread media coverage of earthquakes like those that struck Bohol, Philippines (2013, M7.2), Davao del Sur (2019, M6.9), and

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Abra (2022, M7.0) has brought dramatic pictures of collapsing buildings and rescue efforts into homes and classrooms all throughout the world. By demonstrating the extent of the harm that earthquakes may inflict, this visual exposure helps students understand the significance of structure integrity and readiness.

This supports the study of Fu, Q., & Zhang, X. (2024) that indicates that social media helps spread real-time information, instructional materials, and emergency bulletins, which contributes significantly to students' increased knowledge of earthquakes.

On the other hand, indicator 3 “Earthquakes can cause various hazards such as ground shaking, soil liquefaction, landslides, tsunamis, flooding, and fires” ranked the highest among the faculty-respondents and obtained a weighted mean of 3.68 with a descriptive rating of Very Much Aware that is verbally interpreted a high level of disaster awareness.

This is possibly because of their ongoing education and professional development. Regular training sessions and workshops centered on disaster preparedness and response are mandated by numerous governments and educational institutions. These shows frequently cover a wide range of topics, including the science of earthquakes and the particular risks they provide, like landslides, tsunamis, flooding, fires, and tremors in the ground. Teachers who take part in these training courses acquire current information and useful skills that they can subsequently impart to their students.

Meanwhile, indicator 2 “Hundreds of earthquakes occur on Earth every day” ranked the lowest among the respondents (M=2.77 and faculty respondents (M=3.11) with a descriptive rating of Much Aware and is verbally interpreted as moderate level of awareness.

Many respondents are largely unaware that hundreds of earthquakes occur on Earth every day, despite the fact that earthquakes are commonplace around the planet. The nature of earthquake occurrence can be used to explain this low level of disaster awareness. Most earthquakes are small and go unreported by the public. These minor earthquakes, which usually have lower Richter scale magnitudes, do not cause significant damage or attract much notice. Because of this, it's possible that neither students, teachers nor the general public are aware of how frequently these occurrences occur. When there are no obvious effects or extensive media coverage, small earthquakes happen frequently and go mostly unnoticed.

Becker, J. S., et al. (2013) proposed that the public's image of earthquakes is sometimes shaped by the media's tendency to focus exclusively on catastrophic events, rather than portraying them as common occurrences. This has an impact on students' and teachers' awareness and comprehension.

Further, in terms of typhoon, indicator 4 “Typhoon public information-dissemination is done by the PAG ASA through TV, radio, and social media” and has ranked the highest among respondents and has accumulated a weighted mean of 3.55 among the student-respondents and 3.94 among the faculty-respondents with a descriptive rating of Very Much Aware verbally interpreted as high level of disaster awareness.

Results above can be attributed to the fact that, PAGASA uses radio, television, and social media as part of a multi-platform information dissemination strategy. This tactic makes sure that a large audience, including students, is informed. Redundancy is made possible by using numerous channels, which guarantees that there are backup options in case one media fails. In the Philippines, radio and television are reliable and conventional information sources that are frequently used by homes from all socioeconomic backgrounds. On the other hand, social media, which offers interactive elements and real-time updates, is particularly well-liked by students and teachers.

Further, the study of Dela Cruz, R.G. (2018) found that due to regular DRRM workshops, the inclusion of disaster preparedness subjects in the curriculum, and PAG-ASA's constant dissemination of information through various media channels, it was discovered that both groups have high awareness.

Meanwhile, indicator 1 “The Philippines is situated in the typhoon belt in the Pacific” ranked the lowest among the student-respondents that garnered a weighted mean of 3.05 with a descriptive rating of Much Aware.

Students' awareness may be impacted by the methods and teaching strategies utilized in geography classes. It's possible that traditional teaching strategies that mostly focus on memorization and rote learning won't adequately engage students or help them comprehend the real-world applications of geographic data. A more thorough and interesting learning experience can be achieved through the use of cutting-edge and interactive teaching techniques like field excursions, simulations, and technology. Unfortunately, a

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shortage of funding frequently results in the underutilization of these techniques, especially in poor institutions. The problem is further made worse by the lack of current textbooks and instructional materials that emphasize the significance of the Philippines' location within the typhoon belt. This contradicts the study of Bollettino et al. (2018) where he found out that the most prepared Filipino households are found in the areas most affected by typhoons thus affects their disaster awareness.

In addition, in terms of flood, indicator 3 “It is not safe to build houses and live in flood-prone areas” ranked the highest among the respondents that has accumulated a weighted mean of 3.55. This has a descriptive rating of Very Much aware which can be verbally interpreted as a high level of awareness. Results above can be attributed to the fact that there are public awareness initiatives and governmental laws that essentially informs the public about the dangers of residing in flood-prone areas. Building rules and zoning laws have been enacted by numerous governments to limit construction in high-risk areas. Additionally, schools and other educational institutions are frequently targeted as important distribution locations for public campaigns aiming at disaster preparedness and risk reduction.

Concurrently, indicator 4 “There is a local warning system for the flood” ranks the lowest among the respondents (M=3.27) that has a descriptive rating of Very Much Aware and is verbally interpreted as High level of Awareness. This signifies that the respondents are least aware that there is a local warning system for the flood. Results above can be attributed to the fact that authorities may not have collaborated with colleges and universities in order to integrate information about flood warning systems into extracurricular activities or community service projects. In the absence of these cooperative initiatives, chances to inform and involve the academic community are lost, which perpetuates the continued lack of awareness.

Overall, the study reveals that the respondents are Very Much Aware of disasters and has a high level of disaster awareness (M=3.48). Students' awareness is greatly increased when schools integrate disaster preparedness into their curricula. Modules on natural disasters and emergency response are frequently included in subjects like geography, science, and social studies. These modules help students comprehend the risks and the necessary precautions (Patel et al., 2023)

Level of Disaster Preparedness of the Respondents

The table below summarizes the responses of the respondents when they were asked about their disaster preparedness.

Table 3. Level of Disaster Preparedness of the Respondents

Disaster Preparedness	**Students**	
	Mean	**DR**
EMERGENCY PLANNING AND COORDINATION		
1. Participation in mass simulation drills hosted by my school in preparation for future disastrous events.	3.28	A
2. Attendance to seminars and forums laid out by the school and the government, in partnership with several non-government offices for more knowledge	3.11	S
3. Attendance to first aid/basic life support training	3.21	S
4. Familiarize the disaster preparedness plan of my school.	3.17	S
Sub Mean	**3.19**	**S**
COMMUNICATION AND INFORMATION SHARING		
1. Paying attention to weather and disaster updates.	3.53	A
2. Encouraging my friends and/or classmates to learn more about disaster management.	3.15	S
3. Turning on my phone to receive necessary information and updates regarding disasters	3.53	A
4. Saving the emergency hotlines of the emergency response team in our locality.	3.31	A

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Sub Mean	**3.38**	**A**
INFRASTRUCTURE AND CRITICAL FACILITIES		
1. Awareness on the location of the shelter areas or evacuation centers and open spaces in our school premises.	3.50	A
2. Awareness on the location of Fire stations, rescue teams, and emergency responders	3.51	A
3. Awareness on the location of health facilities that is accessible in the event of a disaster	3.47	A
4. Awareness on the location of government offices such as city halls, municipal offices, and public service centers as they provide essential services such as disaster recovery assistance and relief assistance.	3.55	A
Sub Mean	**3.51**	**A**
Total Mean	**3.36**	**A**

Norm:

Point Value	Statistical Limit	Descriptive Rating (DR)
4	3.25 – 4.00	Always (A)
3	2.50 – 3.24	Sometimes (S)
2	1.75 – 2.49	Rarely (R)
1	1.00 – 1.74	Never (N)

Table 3 unveils the level of disaster preparedness of the respondents. In terms of Emergency Planning and Coordination, indicator 1 “Participation in mass simulation drills hosted by my school in preparation for future disastrous events” ranks the highest among the respondents (M=3.28). It has a descriptive rating of ‘always’ that is verbally interpreted as high level of preparedness. This indicates that the respondents are always participating in mass simulation drills hosted by the school.

Above results can be explained by the fact that one important factor in promoting participation is the perceived value of readiness. People need to be well-prepared because of the frequency and intensity of natural and man-made disasters have grown in today's society. Students agree that having the information and abilities to handle disasters can drastically lower the likelihood and effects of disasters. Their willingness to actively participate in drills stems from their understanding that doing so is a proactive measure to ensure their own safety as well as the safety of their classmates.

Meanwhile, indicator 2 “Attendance to seminars and forums laid out by the school and the government, in partnership with several non-government offices for more knowledge” ranks the lowest among the student-respondents with a weighted mean of 3.11. This has a descriptive rating of ‘Sometimes’ and is verbally interpreted as moderate level of disaster preparedness.

Students' frequent excessive academic workloads are the main cause of their inconsistent attendance. Students usually find it difficult to set aside extra time for seminars and forums due to the abundance of homework, projects, exams, and other academic duties. Even when students see the potential benefits of participating in extracurricular activities, they may find it difficult to justify their attendance due to the pressure to maintain strong academic achievement. Students must prioritize their commitments due to the competing demands on their time and attention, which frequently results in less attendance at optional events. Findings conform the study of Wignaraja, K., & Ramachandran, S. (2020) where they indicated that the seminars' timetables may clash to students' extracurricular or academic commitments. Students are less likely to attend seminars that are held during school hours or in less accessible places.

According to Patel et al. (2022), students' preparedness for disaster assistance is directly impacted by university emergency procedures and the government's obligation to support students in the event of a crisis.

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In terms of Communication and Information Sharing, indicator 1 “Paying attention to weather and disaster updates” ranks the highest among respondents. This has a descriptive rating of ‘Always’ and is verbally interpreted as high level of disaster preparedness. This signifies that students always pays attention to weather and disaster updates. Results above arose from the fact that cellphones, social media, and specialized weather applications so widely available, students may now get real-time information more easily than ever. Students are continually informed of the most recent advancements because to the rapid notifications and updates that these technology tools provide. Students are encouraged to stay educated all the time by having access to information, and this habit becomes ingrained in their daily lives.

Meanwhile, indicator 2 “Encouraging my friends and/or classmates to learn more about disaster management” ranks the lowest among respondents with a weighted mean of 3.15. It has a descriptive rating of ‘Sometimes’ and is verbally interpreted as a moderate level of disaster preparedness. This signifies that respondents sometimes encourage their friends and/or classmates to learn more about disaster management.

Further, in terms of Infrastructure and Critical Facilities, indicator 4 “Awareness on the location of government offices such as city halls, municipal offices, and public service centers as they provide essential services such as disaster recovery assistance and relief assistance” ranks the highest among in terms of Infrastructure and Critical Facilities, indicator 2 “Awareness on the location of government offices such as city halls, municipal offices, and public service centers as they provide essential services such as disaster recovery assistance and relief assistance” ranks the highest among the respondents (M=3.55). It has a descriptive rating of ‘Always’ and is verbally interpreted as high level of disaster awareness. It implies that students are always aware on the location of government offices such as city halls, municipal offices, and public service centers as they provide essential services such as disaster recovery assistance and relief assistance.

Results above is attributable to the fact that public awareness programs are frequently carried out by governments and local authorities to inform the public about catastrophe preparedness and response. The locations and operations of government offices in charge of disaster recovery and humanitarian assistance are usually disclosed in these campaigns. Students, faculty members and staff members are informed about the significance of knowing where to obtain assistance in an emergency using a variety of methods, including social media, websites, public service announcements, and community outreach activities.

Meanwhile, indicator 3 “Awareness on the location of health facilities that is accessible in the event of a disaster” ranks the lowest among the respondents with a weighted mean of 3.47. It has a descriptive rating of ‘Always’ and is verbally interpreted as high level of disaster awareness. It implies that students are least prepared in terms of their awareness on health facilities when disaster happens.

Results above can be explained by the fact that education and awareness efforts about disaster preparedness frequently center on urgent safety precautions, like evacuation routes, emergency packs, and basic first aid. Even though these factors are significant, they may override the significance of understanding where medical facilities are located. The focus on quick fixes may overshadow other important aspects of preparation, such as knowing where to find medical assistance.

Overall, the study revealed that the respondents have a high level of disaster preparedness (M=3.36). Similar findings were made by Malonecio (2023), who discovered that college students are "Very Highly" prepared for disasters. This indicates that they are aware of what to do in the event of a disaster and are well-equipped for disasters. The results can also indicate that the students have backup plans and ways to mitigate the effects of the calamity.

Relationship between the Profile of the Respondents and their Disaster Awareness

Table 4. Correlation Matrix showing the relationship between the Profile of the Students and their Disaster Awareness.

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Profile	Awareness			Total
	Earthquake	Typhoon	Flood	
Sex	-0.160*	-0.126	-0.199**	-0.181**
Course:				
BS in Criminal Justice Education	-0.063	-0.001	-0.103	-0.063
BS in Social Work	0.061	0.002	0.122	0.069
BS in Political Science	0.004	-0.001	-0.028	-0.010
Number of Disaster Management Training/Program Attended	0.190**	0.181**	0.153*	0.195**

Legend:

*- Significant at 0.05 level.

**- Significant at 0.01 level

Table 4 above revealed that there existed a significant relationship between the characteristics of the student-respondents as being a male or a female and their disaster awareness (r = -0.181) particularly on earthquake (r = -0.160), and flood (r = -0.199). The relationship between the sex of the students and their awareness in terms of flood is significant at 0.01 while the relationship of the sex the students and their earthquake awareness is at 0.05. In the coding, female respondents received an arbitrary equivalence of 0 while the male respondents have an arbitrary assignment of 1. Therefore, the negative sign of the correlation value denotes an inverse relationship which means that the awareness of the female respondents is significantly higher than the awareness of the male respondents. Above results of the study could be attributed to the fact that in general, women tend to have more extensive social networks and are more willing to share resources and information with one another. Information about preparedness and disaster awareness may spread more widely as a result. It is also possible that women may be more inclined to talk about and participate in conversations about safety and readiness, which could raise their knowledge through social interactions.

Results from the study of Cvetkotic and Stanisic (2015) conforms that there is a gender correlation in students' understanding of natural disasters. The results showed that female students has a higher level of disasters knowledge better than male students.

It was found in this study that there was no significant relationship between the course of the students where they were enrolled and their disaster awareness. None from the variables of disaster awareness such as earthquake, flood, and typhoon was found to be significantly affected by the course of the students. This means that whatever course a student may enroll in college it does not affect his or her knowledge about disasters. Further, findings signify that the awareness of the BS Criminal Justice Education students is at par as the awareness of the BS Social Work students and as just the same as the awareness of the BA Political Science students.

The same knowledge that the students gained from their various course enrollments may be examined from the lenses of institutional regulations, general education requirements, curriculum design, and the widespread nature of disaster awareness in contemporary society. For example, there were already topics about disaster awareness that were already incorporated in the curriculum of the courses offered in ASIST Main Campus Extension – La Paz such as the Natural Science courses, and as well as the NSTP courses, particularly ROTC and CWTS. According to the study by Reyes and Vallente (2017), students that received NSTP training showed increased emergency response and first aid skills. Training in first aid, basic life support, and rescue operations—all vital skills during emergencies—is frequently included in NSTP programs.

It was revealed that the number of disaster management training or program attended by the students yielded a great impact to their disaster awareness (r = 0.195) which was found significant at 0.01 level, hence highly significant. Particular results were seen from the results of correlation between the number of disaster management training or program attended by the students and their awareness to earthquake (r = 0.190), and typhoon (r = 0.181) which were found highly significant at 0.01. Meanwhile the relationship of this variable to the awareness of the students in flood (r = 0.153) is significant at 0.05 level. The positive sign of the correlation value denotes a direct relationship which suggests that the more number of disaster management training or program attended by the students could spell a higher or a better disaster awareness.

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Study of Paton, D., Johnston, D., & Mamula-Seadon, L. (2014). "Disaster Resilience: Integrating Individual, Community, Institutional, and Environmental Perspectives" argue that by promoting a common knowledge of dangers and encouraging community involvement in preparedness efforts, seminars are crucial for enhancing community resilience.

Relationship between the Profile of the Student-Respondents and their Disaster Preparedness.

Table 5. Correlation Matrix showing the relationship between the Profile of the Students and their Disaster Preparedness.

Profile	**Preparedness**			
	Emergency planning and coordination	**Communication and information sharing**	**Infrastructure and critical facilities**	**Total**
Sex	-0.001	-0.050	-0.122	-0.064
Course				
BS in Criminal Justice Education	0.114	0.064	-0.078	-0.005
BS in Social Work	-0.056	0.094	-0.156	0.069
BS in Political Science	-0.091	-0.046	-0.121	-0.099
Number of Disaster Management Training/Program Attended	0.108	0.155	0.123	0.149

Legend:

*- Significant at 0.05 level.

**- Significant at 0.01 level

Table 5. above shows that there was no significant relationship existed between the sexes of the student-respondents and their level of disaster preparedness. None of the variables of disaster preparedness such as emergency planning and coordination, communication and information sharing, and infrastructure and critical facilities was found to be significantly affected by the sex of the student-respondents. This means that whatever the sexes of the student-respondents, it has no significant effect to their disaster preparedness. However, studies by Chakrabarti and Basu (2017) states that gender has a big impact on how people perceive risk when a disaster strikes. Because of their societal roles, obligations, and informational availability, women frequently view hazards differently than males, which affects how they prepare.

There was no significant relationship found in this study between the student's academic program (course of enrollment) and their disaster preparedness. This implies that students are generally the same when it comes to preparing, communicating, and being ready for disasters, regardless of their course.

Moreover, According to Turan et al. (2017), education is essential for giving people knowledge and helping them apply that knowledge to their daily lives. Thus, regardless of programs, emphasizing the value of disaster awareness will also increase students' preparedness.

Results above entails that there was no significant relationship between the number of disaster management training/program attended by the student-respondents and their level of disaster preparedness. None of the variables of disaster preparedness was found to be significantly affected by the number of disaster management training/program attended by the student-respondents. Hence, this indicates that the number of disaster management courses or programs that the student respondents have taken has no effect on how prepared they are for disasters.

Relationship between the Disaster Awareness of the respondents and their Disaster Preparedness

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Table 6: Correlation Matrix showing the relationship between the Disaster Awareness of the respondents and their Disaster Preparedness.

Disaster Awareness	**Disaster Preparedness**			
	Emergency planning and coordination	**Communication and information sharing**	**Infrastructure and critical facilities**	**Total**
Earthquake	0.374**	0.416**	0.421**	0.471**
Typhoon	0.465**	0.537**	0.583**	0.615**
Flood	0.390**	0.573**	0.573**	0.594**
Total	**0.455****	**0.566****	**0.585****	**0.623****

Legend:

*- Significant at 0.05 level.

**- Significant at 0.01 level

Table 6 above shows the relationships between disaster awareness (earthquake, typhoon, flood), and disaster preparedness components (emergency planning and coordination, communication and information sharing, infrastructure and critical facilities).

Earthquake. There are significant relationships found between disaster awareness of earthquake and disaster preparedness in emergency planning and coordination (r=0.374), communication and information sharing (0.416), infrastructure and critical facilities (r=0.421). This suggests that awareness on earthquake are closely related to effective disaster preparedness in emergency planning and coordination, communication strategies among response agencies, and infrastructure and critical facilities.

Results of the study can be explained by the fact that the fundamental role of education is one of the most important ways that increased awareness translates into improved preparedness for disasters. Teachers and students are more likely to comprehend and carry out the necessary precautions when they are well-informed on the risks associated with earthquakes and safety procedures. A knowledgeable community can be fostered through educational programs that address the causes, impacts, and specialized safety practices of earthquakes.

Findings of the study conform to the study of Muttarak, R., & Pothisiri, W. (2013) titled "The role of education on disaster preparedness: Case study of 2012 Indian Ocean Earthquakes on Thailand's Andaman Coast." This study looks at the relationship between earthquake awareness and disaster preparedness. The results indicate that education greatly improves people's readiness, both students and teachers included. Typhoon. Similarly, there are significant relationships between communication and information sharing (r=0.537), emergency planning and coordination (r=0.465), infrastructure and essential facilities (r=0.583), and typhoon awareness. This emphasizes how crucial it is to have all-encompassing preparedness plans that include these essential elements in order to lessen the effects of typhoons.

Findings of the study can be attributed to the fact that Schools regularly provide workshops and specialized training sessions to improve teachers' and students' readiness for disasters like typhoon. Experts from non-governmental groups and disaster management agencies frequently lead these workshops. Along with teaching theoretical information, this kind of training also teaches useful skills like emergency communication, evacuation protocols, and first aid. Professionals are involved to guarantee that the training is thorough and current, representing the most recent best practices in disaster management. According to the study of Djalante, R., & Garschagen, M. (2017) titled "A Review of Disaster Trend and Disaster Risk Governance in Indonesia: 1900–2015", awareness campaigns such as disaster trainings and seminars in educational institutions greatly raise staff and students' level of disaster preparedness.

Flood. There is also significantly relationship between flood awareness and disaster preparedness in terms of emergency planning and coordination (r=0.390), communication and information sharing (r=0.573), and infrastructure and critical facilities (r=0.583). Proactive planning, effective channels of communication, and robust infrastructure are necessary for effective flood preparedness in order to reduce vulnerabilities and improve response capabilities.

Above results can be explained by the fact that raising awareness causes behavioral changes that in turn promote a preparation culture in communities and schools. Teachers and students are more inclined to promote safety measures and preparedness techniques when they are aware of the dangers and effects of flooding. This shift in culture can take many forms, such keeping emergency supplies

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on hand, taking part in neighborhood flood preparedness initiatives, and keeping up with local flood dangers. A domino effect occurs when knowledge grows, inspiring friends and family to emphasize emergency preparedness as well. Study of Dufty, N. (2008) titled "A new approach to community flood education" centers on community education tactics for flood readiness, suggesting that educational initiatives can boost community resilience and readiness, encompassing educational establishments.

The overall relationships between the awareness of categories of disasters and preparedness elements support the holistic idea of disaster preparedness. Planning, coordinating, communicating, and developing infrastructure are all important components of integrated approaches that make a community more resilient and capable of responding effectively to a range of calamities. These results highlight the necessity of all-encompassing disaster management plans that take into account many aspects of preparedness in order to protect communities against diverse disaster situations.

Significant findings from the study of Gerdan, (2014); Park, (2019), indicates that there is a moderately positive association between disaster preparedness and disaster awareness. This suggests that preparedness increases with increased disaster awareness. Furthermore, the DRR Resources Manual states that one method of managing disaster risk is through disaster preparedness, which includes strategies including advocacy, planning, training, and resource provision (Malonecio, 2023).

Moreover, studies of Paton, D., & Johnston, D. M. (2006) show that communities with greater levels of disaster awareness have better preparedness outcomes. By being aware of potential threats, resources that are accessible, and what to do in an emergency, a community's resilience is increased.

CONCLUSIONS AND RECOMMENDATIONS

This section summarizes the study's findings and makes recommendations about the ASIST Main Campus Extension – La Paz present level of preparedness and awareness for disasters. Furthermore, recommendations are given to improve the institution's disaster's resilience plans and support larger initiatives in disaster management education in light of these conclusions.

Conclusions

Respondents of the study was dominated by females, Bachelor of Science in Criminal Justice Education students, and has attended one (1) disaster management training/program. Students of ASIST Main Campus Extension - La Paz are well-informed regarding disasters such as earthquake, flood, and typhoon. Flood come out to be the disaster they are most aware. Students, of ASIST Main Campus Extension - La Paz are always prepared in the coming of disasters in terms of emergency planning and coordination, communication and information sharing, and infrastructure and critical facilities. Information and critical facilities was found as their strength when it comes to disaster preparedness.male students are more aware to disasters particularly earthquake and flood. However, course of the students does not affect their disaster awareness. Meanwhile, students who have attended more disaster management training/programs tended to have shown higher level of disaster awareness. Students of any sex, course, and number of disaster management training/program they attended do not spell how students are prepared in the coming of disasters and the level disaster awareness of the student-respondents of ASIST Main Campus Extension – La Paz in terms of earthquake, typhoon, and flood shapes their level of disaster preparedness in terms of emergency planning and coordination, communication and information sharing, and infrastructure and critical facilities.

Recommendation

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

1.It is encouraged that the level of disaster awareness and preparedness of the students, of the ASIST Main Campus Extension – La Paz may be maintained or even make it higher by creating a Memorandum of Agreement (MOA) to agencies to provide regular training to students.

2.Regular monitoring may be maintained to ensure that students, faculty and staffs are equipped with not only basic skills but also with survival skills and knowledge during emergency.

3. Likewise, the school may adhere to implement safety precaution measures and are encouraged to be equip with materials and tools in case of disaster emergencies.

4. Future studies may consider some of the factors not considered in this study that may affect the disaster awareness and preparedness of the students.

5. A parallel study may be conducted not only in schools but also to other agencies.

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