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Disaster Risk Awareness and Preparedness of Junior High School Students: Basis for Capability Building

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ABSTRACT : Given the increasing frequency and intensity of natural disasters, fostering disaster risk awareness and preparedness among young people is crucial for building resilient communities. This study assessed the disaster risk awareness and preparedness of Junior High School students in the District of San Jorge, Schools Division of Samar. Key findings revealed significant disparities in student preparedness levels, influenced by socioeconomic factors such as parental education and occupation, housing conditions, and student location of residence. School location also emerged as a crucial predictor. Statistical analysis revealed a significant relationship between the level of disaster risk awareness and preparedness among student-respondents and the factors that influence it. Challenges identified included limited awareness of human-induced disasters and concerns about managing fear and stress during emergencies. Recommendations include addressing socioeconomic disparities, implementing location-specific school preparedness plans, enhancing teacher training, fostering community-school partnerships, integrating comprehensive disaster education, promoting community engagement and peer-to-peer learning, providing psychosocial support, encouraging home resilience, and conducting ongoing monitoring and evaluation. The study emphasizes the need for a multi-faceted approach to enhance disaster preparedness among students, addressing both individual and community-level factors.

KEYWORDS : *Disaster Risk Reduction, Disaster Preparedness, Socioeconomic Factors, School Location, Community Engagement, Disaster Education*

I. INTRODUCTION

Understanding the importance of disaster risk awareness and preparedness among Junior High School (JHS) students in the Philippines is crucial given the country's escalating frequency and severity of natural calamities. With its susceptibility to typhoons, earthquakes, and volcanic activities, educating students on proper emergency response protocols and effective disaster safety management is essential for safeguarding lives and minimizing the impact of disasters. By equipping young learners with the necessary knowledge and skills to navigate such crises, not only can their individual safety be ensured, but they can also play a vital role in cultivating a resilient and prepared community for the years ahead. Integrating disaster safety management into their education will empower students to understand risk reduction measures, coordinate with relevant authorities, and actively participate in community safety initiatives. This, in turn, will enhance the overall preparedness and resilience of society.

It is undeniable that humans can become vulnerable when it comes to disasters, which are regarded as having lifelong impacts on human lives. As defined by the United Nations Office for Disaster Risk Reduction (2024) [1], a disaster is a serious disruption in the functioning of a community or a society at any scale, which may result in human, material, economic, and environmental losses and impacts. The International Federation of Red Cross and Red Crescent Societies (2024) [2] added that disasters may be caused by natural, man-made, and technological hazards that influence the exposure and vulnerability of a society.

Statistics further highlight the urgency for effective disaster risk management. According to the Global Assessment Report released by the UN Office for Disaster Risk Reduction in 2022, between 350 and 500 medium to large-scale disasters took place every year over the past two decades. The report also elaborated that the number of disaster events is projected to reach 560 a year by 2030 (United Nations, 2022) [3]. Meanwhile, the Philippines experienced 80 disastrous events related to natural hazards, 392 human-induced events, and 548 events from both natural and human-induced hazards, as revealed by the Philippine Disaster Report in 2021 (Citizens' Disaster Response Center, 2022) [4]. Additionally, the World Risk Index Report 2022 revealed that the Philippines had the highest disaster risk in Asia, emphasizing the country's vulnerability to the effects of

these disasters (Baclig, 2022) [5]. These statistics accentuate the need for disaster risk reduction and management among Filipinos to mitigate the detrimental impacts of these disasters.

To strengthen the disaster risk reduction and management system in the Philippines, the Republic Act No. 10121, known as the "Philippine Disaster Risk Reduction and Management Act of 2010," was established. It defined disaster risk reduction and management as the systematic process of using administrative directives, organizations, and operational skills and capacities to implement strategies, policies, and improved coping capacities to reduce the possibility of disaster and its adverse effects. With the DRRM system in place, all members of the community, especially young students, are encouraged to participate and involve themselves in this process to protect themselves and their families against the detrimental impacts of disasters.

In accordance with Department Order No. 37, series of 2015 entitled, "The Comprehensive Disaster Risk Reduction and Management in Basic Education Framework", the Department of Education enforces this framework to institutionalize DRRM structures, systems, protocols and practices in DepEd offices and schools. Moreover, this guideline shall provide common understanding and language in the implementation of DRRM in basic education at all levels (Department of Education, 2015) [6]. The Disaster Risk Reduction (DRR), as one of the framework's pillars, focuses on the integration of DRRM in the K-12 curriculum (Parallag, 2024) [7].

At its core, these initiatives seek to intensify students' awareness and preparedness on disaster risks as this can save their lives. While most are familiar with the disruptions caused by disasters, many are not aware of the negative impacts that they have on students. Disasters affect students by disrupting school activities, interrupting classes, and damaging school buildings. In recent years, several schools have begun to recognize the value of being prepared for disasters and their associated risks, and students have become more aware of disasters through personal experience, seminars, and the media. Disaster awareness denotes the extent of knowledge about disaster risk, and the factors that lead to disasters influence the actions that could be taken individually or collectively to address exposure and vulnerability to hazards, while disaster preparedness denotes the measures that are taken to prepare for/reduce the effects of disasters. Despite the increase in awareness, however, many universities and schools still lack adequate planning, response, and mitigation strategies (Safapour, 2021) [8].

In fact, according to Montecio (2023) [9], high levels of awareness reduce students' susceptibility to a particular disaster and that awareness of the disaster enhances students' ability to deal with issues brought on by it. In addition, students that are highly prepared for the risks of disasters will know what to do if unfortunate events ever strike their community. Yet despite the crucial function which students, the youth of today, may play in disaster risk reduction and management, their role has rather not received significant attention (Eker & Yilmabasar as cited in Ridzuan et al., 2022) [10]. Aside from this, the youth are underrepresented in the governance and decision-making processes in their communities (Krauss et al., 2020) [11].

In addition, awareness is important, but students must also be prepared for disasters by being taught the essential rescue skills that can significantly mitigate their effects (Haynes, 2015) [12]. These rescue techniques are a vital aspect of disaster education and should be taught by competent professionals. Prepared students are more confident and more likely to use their knowledge of the physical and psychological barriers precipitated by disasters to assist local disaster management agencies.

Educators in secondary schools play a crucial role in enhancing students' awareness and preparedness for disasters. By utilizing effective strategies such as integrating Disaster Risk Reduction (DRR) into the curriculum, conducting regular drills and simulations, promoting awareness, involving students in preparedness activities, using technology and media to create educational content that resonates with students' interests, fostering a culture of preparedness by encouraging open discussions about risks and resilience, and collaborating with parents and guardians by encouraging families to create emergency kits and develop family plans. By implementing these strategies, we can build a safer and more resilient school community (Santos, 2017) [13].

In the District of San Jorge, teachers encounter numerous challenges due to students' lack of disaster awareness and preparedness. Disaster Readiness and Risk Reduction (DRRM) is included in the K to 12 curriculum under the Science subject. The lesson focuses on applying scientific knowledge to practical problems related to disaster prevention and preparedness. It covers topics such as basic concepts of disaster and disaster risk, exposure and vulnerability, hazards, and earthquake-related risks. Among science teachers, 15 out of 25, or 60 percent, noted that students have a poor understanding of the importance of disaster awareness and preparedness. This lack of understanding is reflected in their science grades. Their average first quarter grade for the last school years are as follows: School Year 2021-2022 is 78 percent, School Year 2022-2023 is 76 percent, and School Year 2023-2024 is 77 percent. These grades indicate a need for improved educational strategies to enhance students' comprehension and application of disaster readiness and risk reduction concepts. (School Year 2021-2024 Average First Quarter Grade in Science 10) [14].

Additionally, every secondary school participates in the quarterly National Simultaneous Earthquake Drill (NSED) to enhance the preparedness and awareness of students, teachers, and school personnel regarding earthquake safety. However, teachers also observed that 98 out of 141 or 70 percent of the students are inattentive and do not perform the drill properly. These challenges arise because unprepared students panic during emergencies and fail to follow safety protocols,

making it difficult for teachers to maintain order and ensure everyone's safety. Furthermore, teachers struggle to coordinate emergency drills effectively when students are unfamiliar with evacuation procedures. Lastly, inadequate student preparedness can strain teachers' emotional well-being as they witness the potential consequences of unpreparedness during crisis situations (School Year 2023-2024 Quarter 1 National Simultaneous Earthquake Drill Report).

It is under this premise, that the present study aims to delve into the disaster risk awareness and preparedness of JHS students in the District of San Jorge, Schools Division of Samar. It was hoped, therefore, that the findings of the study would provide inputs for an intervention that would be provided for the aforementioned students.

II. RESEARCH QUESTIONS

This study determined the disaster risk awareness and preparedness of Junior High School students in the District of San Jorge, Schools Division of Samar, during the School Year 2024-2025.

Specifically, this study sought answers to the following questions:

1. What is the profile of the student-respondents in terms of the following variates:
   1.1 age and sex;
   1.2 parents' highest educational attainment;
   1.3 parents' occupation;
   1.4 gross monthly family income;
   1.5 location of residence;
   1.6 types of building materials used in house construction;
   1.7 number of times attended disaster drills/seminars; and
   1.8 attitude toward disaster awareness and preparedness?
2. What is the profile of the teacher-respondents in terms of the following variates:
   2.1 age and sex;
   2.2 highest educational attainment;
   2.3 area of specialization;
   2.4 number of years in teaching;
   2.5 number of relevant in-service training;
   2.6 school type;
   2.7 school location; and
   2.8 attitude toward disaster awareness and preparedness?
3. What is the level of disaster risk awareness and preparedness of the student-respondents in terms of:
   3.1 earthquake;
   3.2 flood;
   3.3 typhoon;
   3.4 storm surge;
   3.5 landslide; and
   3.6 fire?
4. What are the factors that influence the level of disaster risk awareness and preparedness among student-respondents in terms of:
   4.1 educational;
   4.2 psychological;
   4.3 social; and
   4.4 environmental?
5. Is there a significant relationship between the level of disaster risk awareness and preparedness of the respondents along the aforementioned parameters and the following variates:
   5.1 students' profile;
   5.2 teachers' profile; and
   5.3 factors that influence the level of disaster risk awareness and preparedness?
6. What problems may be encountered by the student-respondents relative to disaster awareness and preparedness in terms of entities responsible for their safety?
7. What solutions are suggested by the student-respondents to address the problems encountered?
8. What intervention program may be proposed based on the findings of the study?

III. CONCEPTUAL FRAMEWORK

Figure 1 shows the conceptual framework of the study illustrating, among other things, the research environment, the respondents, and the major variables of the study.

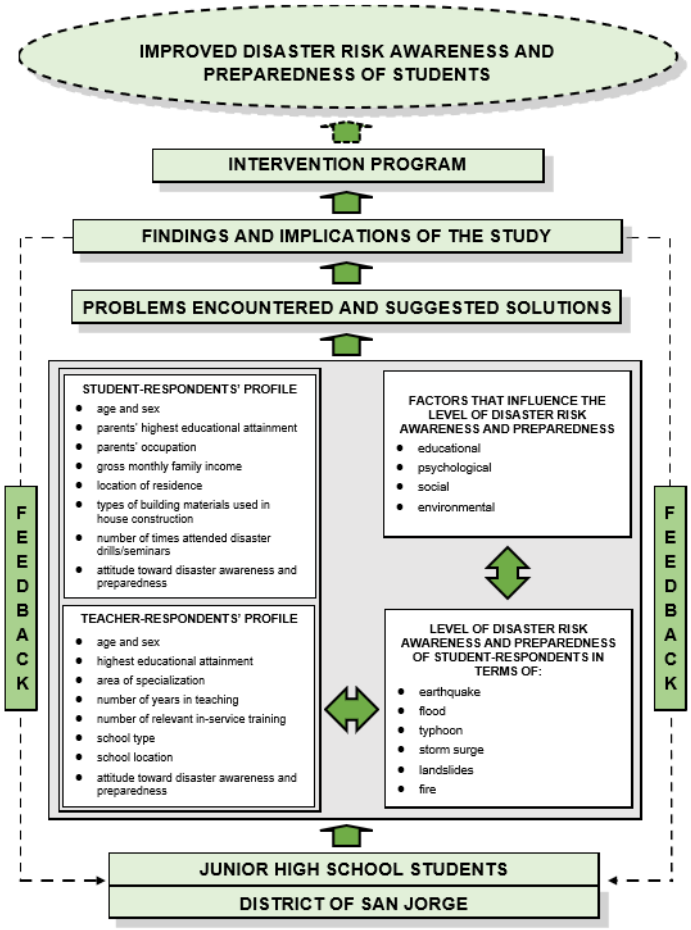

Figure 1. the paradigm of the study

The box at the base of the paradigm reflects the research environment which involved the Junior High School students who were considered as student-respondents from the District of San Jorge, Schools Division of Samar during the School Year 2024-2025.

The upper boxes enclosed by a bigger frame represent the major variables considered in the study. The first and the upper box at the left portion shows the profile of the student-respondents such as age and sex, parents' highest educational attainment, parents' occupation, gross monthly family income, location of residence, types of building materials used in house construction, number of times attended disaster drills/seminars, attitude toward disaster awareness and preparedness. Below it, lower box shows the profile of the teacher-respondents such as age and sex, highest educational attainment, area of specialization, number of years in teaching, number of relevant in-service training, school type, school location and attitude toward disaster awareness and preparedness, while the upper box at the right portion depicts the factors that influence the level of disaster risk awareness and preparedness, such as educational, psychological, social, and environmental factors. These three (3) boxes were correlated with the level of disaster awareness and preparedness of the student- respondents in terms of earthquake, flood, typhoon, storm surge, landslides and fire as shown by the two-way arrow.

Furthermore, problems encountered were elicited and also suggested solutions to address the problems encountered by the student-respondents relative to disaster risk awareness and preparedness in terms of entities responsible for their safety. After going through the aforesaid processes, findings and implications were drawn which provides feedback mechanism to the respondents of the study. The same findings and implications of the study served as a springboard for the proposed intervention program that, in turn, led to the ultimate goal of the study which is improved disaster risk awareness and preparedness of students.

IV. METHODOLOGY

Research Design

The study is quantitative research which employed the descriptive-correlation design aimed to determine the level disaster risk awareness and preparedness of Junior High School (JHS) students in the District of San Jorge. The study described the profile of the student-respondents such as age and sex, parents'

highest educational attainment, parents' occupation, gross monthly family income, location of residence, types of building materials used in house construction, number of times attended disaster drills/seminars, and attitude toward disaster awareness and preparedness. It also described the profile of the teacher-respondents such as age and sex, highest educational attainment, area of specialization, number of years in teaching, number of relevant in-service training, school type, school location, and attitude toward disaster awareness and preparedness.

Student awareness and preparedness were assessed specifically for earthquakes, floods, typhoons, storm surges, landslides, and fires. The study sought to identify and analyze the impact of educational, psychological, social, and environmental factors on student disaster risk awareness and preparedness. Furthermore, the study explored the relationships between student disaster risk awareness and preparedness and their own profile variables, teacher profile variables, and the identified influencing factors.

Data analysis employed a combination of descriptive and inferential statistical methods, including frequency counts, percentages, arithmetic mean, weighted mean, chi-square, Cramer's V, Spearman rho, and Fisher's exact test, to describe the data and determine significant relationships between variables.

Locale of the Study

Figure 2 shows the Map of San Jorge, Samar which specifically points out secondary schools in the District of San Jorge, Schools Division of Samar. The respondent schools are San Jorge National High School, Buenavista National High School, Blanca Aurora Integrated School, Rosalim Integrated School and Matalud Integrated School.

The community is one of the oldest barangays of Gandara. Its history could be traced back to American regime. Even its name San Jorge was in honor of an American soldier by the name of George Curn who happened to own and donate the site where the old barangay was formerly located. The present location is the second site of the barangay. Its old site was located across the Sapinit River where the San Jorge Elementary School is presently nestled. When heavy rain and typhoon occur, the Sapinit River over-flow its bank and the community is over flooded. So, the inhabitants find inconvenience of the place and coupled with the opening and construction of the national road passing just across the said river.

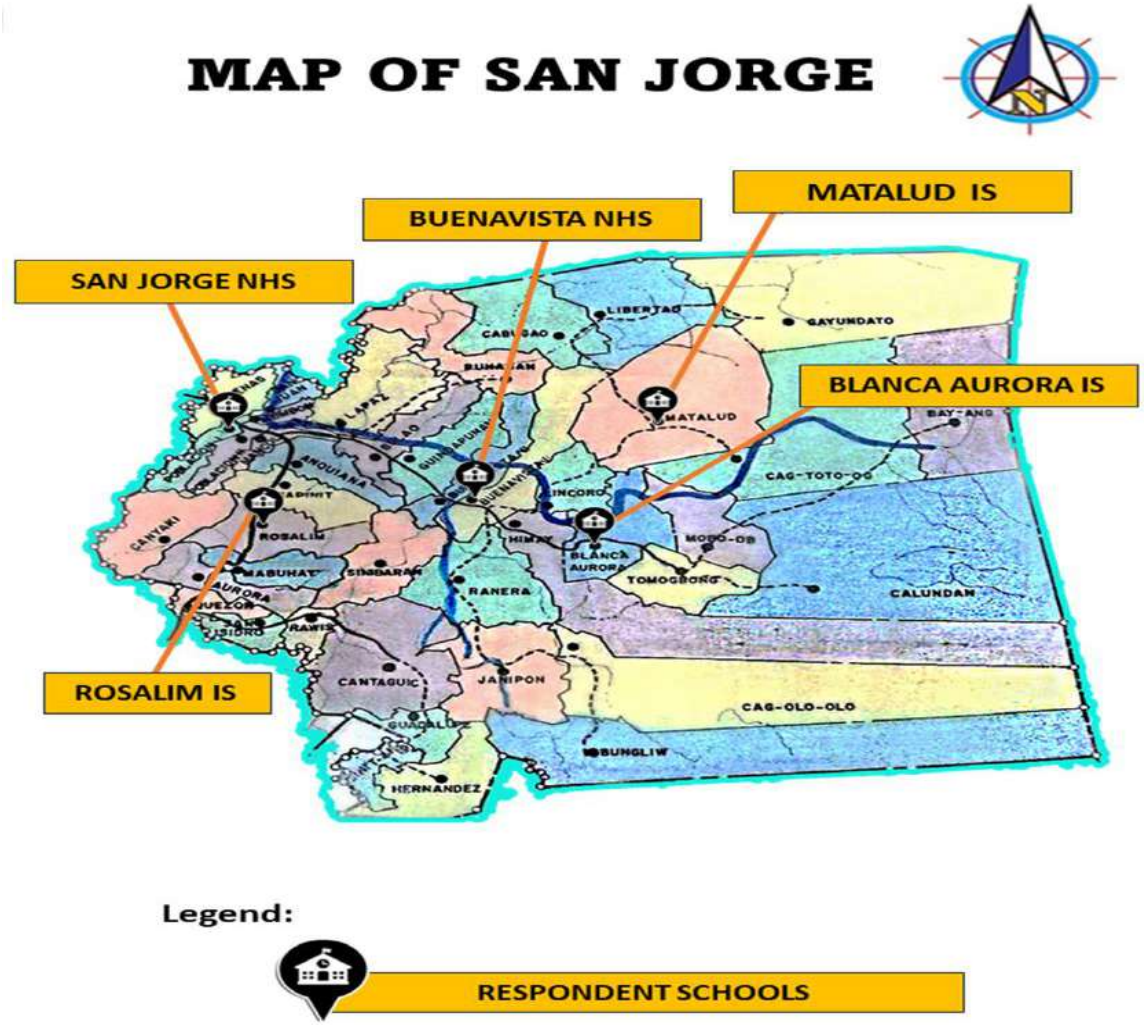

Figure 2. the map showing the locale of the study

Instrumentation

The researcher used a survey questionnaire as the main instrument for collecting pertinent data in this study. The researcher prepared two sets of questionnaires, one for student-respondents and another for teacher-respondents. The student-respondents' questionnaire consisted of six parts. Part I of both questionnaires gathered information on personal profiles. For student-respondents, this included age, sex, parents' highest educational attainment, parents' occupation, gross monthly family income, location of residence, types of building materials used in house construction, number of times attended disaster drills/seminars, and attitude toward disaster awareness and preparedness. For teacher-respondents, this included age, sex, highest educational attainment, area of specialization, number of years in teaching, number of relevant in-service trainings, school type, school location, and attitude toward disaster awareness and preparedness.

Part II assessed the student-respondents and teacher-respondents' attitude toward disaster awareness and preparedness with 15 statements rated using a 5-point Likert scale: 5 for Strongly Agree (SA), 4 for Agree (A), 3 for Uncertain/Undecided (U), 2 for Disagree (D), and 1 for Strongly Disagree (SD).

Part III captured data regarding the level of disaster awareness and preparedness of the student-respondents in terms of earthquake, flood, typhoon, storm surge, landslides, and fire. This was also rated using a five-point Likert scale: 5 for Extremely Aware (EA), 4 for Highly Aware (HA), 3 for Moderately Aware (MA), 2 for Slightly Aware (SA), and 1 for Not Aware (NA).

Part IV determined the factors that influenced the level of disaster risk awareness and preparedness among student-respondents in terms of educational, psychological, social, and environmental factors. This was rated using a five-point Likert scale: 5 for With Extreme Influence (WEI), 4 for With High Influence (WHI), 3 for With Moderate Influence (WMI), 2 for With Fair Influence (WFI), and 1 for Without Influence (WI).

Part V captured data on the problems encountered by the students from various natural hazards. This was rated using a five-point Likert scale: 5 for Extremely Felt (EF), 4 for Highly Felt (HF), 3 for Moderately Felt (MF), 2 for Slightly Felt (SF), and 1 for Not Felt (NF).

Part VI of the questionnaire captured data on the suggested solutions by the student-respondents with 20 statements rated using a 5-point Likert scale: 5 for Strongly Agree (SA), 4 for Agree (A), 3 for Uncertain/Undecided (U), 2 for Disagree (D), and 1 for Strongly Disagree (SD).

Validation of Instrument

The instrument questionnaire Part III, which captured data regarding the level of disaster awareness and preparedness of the student-respondents in terms of earthquake, flood, typhoon, storm surge, landslides, and fire, was adapted from the study of Padernal and Borga (2016) entitled "Disaster Risk Reduction Awareness among Junior High School Students of Surigao City."

The other parts were researcher-made and underwent the process of expert validation. Research experts, identified as the Senior Vice President for Academic Programs, Dean of the College of Graduate Studies, Research Director, Research Professors, and other experts in research, reviewed the questionnaire and validated it for face, content, and construct validity.

Furthermore, a pilot test of the validated questionnaire was conducted with ten junior high school students in the District of Gandara. Cronbach Alpha analysis was employed to assess the reliability of the instrument, resulting in a coefficient of 0.807, which is considered very good.

Data Gathering Procedure

Before the conduct of the study, the researcher obtained permission from the Schools Division Superintendent of the Division of Samar and requested the assistance of the Public Schools District Supervisor to conduct a survey in the District of San Jorge. The researcher also communicated the study's objectives to the relevant authorities.

The approved permit facilitated the researcher's interactions with school administrators, along with a cover letter accompanying the questionnaire. Strict confidentiality of respondent information was emphasized to encourage their participation and cooperation.

Data collection spanned approximately two months, considering travel time and the process of distributing and retrieving questionnaires. Subsequently, the researcher conducted manual editing and coding of the collected questionnaires in preparation for data analysis.

Data processing was carried out using available statistical software. This involved data entry and the generation of statistical tables.

V. SUMMARY OF FINDINGS

The following were the salient findings of the study:

1. The majority of the student-respondents in this survey are 15 years old, comprising 70% of the sample. The average age of the students is 14.73 years, while the median age is 15 years, indicating that half of the students are 15 years old or younger. The mean absolute deviation of 0.6388 years suggests that the ages of

the students are relatively close to the mean age, with an average deviation of about 0.64 years. Furthermore, the data reveals a significant gender disparity, with female students outnumbering male students by 213 to 87.

2. The analysis reveals that the majority of the student-respondents' fathers (23.33%) have an elementary level as their highest educational attainment. This is followed by fathers who are college graduates (23.00%). For mothers, the most common highest educational attainment is also the elementary level (27.67%), with high school graduates constituting the second-largest group (21.67%).

3. The majority of the student-respondents' fathers are farmers (31.67%), while the majority of their mothers are house helpers (63.67%).

4. The majority of the student-respondents (30.33%) reported a gross monthly family income between 5,000 and 9,999, followed by those with incomes between 10,000 and 14,999 (28.00%).

5. The majority of student-respondents (53.67%) reside along the highway, while 25.33% live near a river or waterway.

6. The majority of student-respondents (46.00%) live in houses primarily constructed with wood, followed by those with concrete building material (36.67%).

7. The majority of student-respondents (74.67%) have participated in four disaster drills or seminars.

8. The student-respondents demonstrated a strong sense of personal responsibility for their safety during emergencies, perceiving themselves (weighted mean: 1.62) and their parents (weighted mean: 1.81) as highly responsible. In contrast, friends (weighted mean: 3.61), school (weighted mean: 3.77), and government agencies (weighted mean: 4.25) were perceived as somewhat less responsible, with higher weighted means indicating lower perceived responsibility.

9. The student-respondents generally agree with the importance of disaster awareness and preparedness, as indicated by a grand weighted mean of 3.83, which is interpreted as "agree." This suggests a positive overall attitude towards disaster preparedness among the student population. The highest weighted mean, 4.16, is for the statement "I recognize the importance of making conversations about disasters with family members, neighbors, relatives, friends, and colleagues," also interpreted as "agree." This indicates a strong understanding among students of the importance of open communication and collaborative planning within families and communities regarding disaster preparedness. Conversely, the lowest weighted mean, 3.43, is for the statement "I have appropriate insurance coverage for disasters," which is interpreted as "uncertain/undecided." This suggests that students may have uncertainties or concerns regarding the availability and affordability of disaster insurance.

10. The majority of the teacher-respondents fall within the age bracket of 27 to 31 years old, constituting 26.80% of the sample. This demographic is closely followed by teachers aged 32 to 36 years old, comprising 25.77% of the respondents. The average age of the teachers surveyed is 34.38 years old, while the median age is 33 years old, indicating that half of the teachers are younger than 33 and the other half are older. The mean absolute deviation of 6.1074 years suggests a moderate level of variability in the ages of the teachers. Furthermore, there are more female teachers (72) compared to only 25 male teachers.

11. The majority of the teacher-respondents surveyed have achieved a Master's degree (MA) as their highest educational attainment, constituting a significant 70.10% of the sample.

12. The majority of teacher-respondents specialize in science, accounting for 35.05% of the sample. English is the second most common area of specialization among respondents, with 16.49%, followed closely by values education at 15.46%.

13. The majority of teacher-respondents have been teaching for 6-10 years, representing 39.18% of the sample. This group is followed by teachers with less than 5 years of experience, comprising 34.02% of the respondents.

14. The analysis of teacher-respondents' participation in relevant in-service trainings reveals varying levels of engagement across different administrative levels. At the school level, the weighted mean of 3.09, interpreted as "oftentimes," suggests a high frequency of participation in these trainings. In contrast, participation at the district and division levels is less frequent, with weighted means of 2.38 and 2.14, respectively, both falling under the "sometimes" category. At the regional and national levels, the weighted means of 1.40 and 1.25, respectively, indicate that participation is "never" or very infrequent.

15. The majority of the teacher-respondents (91.75%) are from rural schools, while a smaller proportion (8.25%) are from urban schools.

16. The majority of teacher-respondents work in schools located along the highway, accounting for 47.42% of the sample. This is followed by schools situated near a river or waterway, comprising 18.56% of the respondents.

17. The analysis reveals that teacher-respondents generally hold positive attitudes towards disaster awareness and preparedness, with a grand weighted mean of 4.26, indicating an overall "agree" sentiment. This positive attitude is most strongly reflected in their recognition of the importance of discussing disaster preparedness with their social circles, as evidenced by the highest weighted mean (4.56) for the statement "I recognize the importance of making conversations about disasters with family members, neighbors, relatives,

friends, and colleagues." Conversely, the lowest weighted mean (4.13) for the statement "I am prepared with emergency kits and bags in case of disaster," while still indicating an "agree" sentiment, suggests a slightly lower level of perceived preparedness among the respondents.

18. The student-respondents demonstrated a high level of disaster risk awareness and preparedness concerning earthquakes, with a grand weighted mean of 3.82. This indicates a strong understanding of earthquake safety measures. The highest awareness was observed regarding the crucial "duck, cover, and hold" technique during an earthquake, with a weighted mean of 4.25. This suggests a widespread knowledge of this essential lifesaving action. While overall awareness was high, the statement regarding the structural integrity of buildings constructed according to building codes received the lowest weighted mean (3.53), still indicating a high level of awareness but slightly lower than other aspects.

19. The student-respondents exhibited a high level of disaster risk awareness and preparedness concerning floods, with a grand weighted mean of 3.77. This suggests a strong understanding of flood safety measures. The highest awareness was observed regarding the statement "It is not safe to build houses and live in flood-prone areas," with a weighted mean of 3.94. This indicates a clear recognition of the dangers associated with inhabiting flood-prone regions. While overall awareness was high, the statement regarding reclaimed areas and urban expansions as flood-prone areas received the lowest weighted mean (3.50), still indicating a high level of awareness but slightly lower than other aspects.

20. The student-respondents demonstrated a high level of disaster risk awareness and preparedness concerning typhoons, with a grand weighted mean of 3.77. This indicates a strong understanding of typhoon safety measures. The highest awareness was observed regarding the statement 'An emergency kit is a necessary preparation for typhoons which includes food supply, flashlight, medical kit etc.,' with a weighted mean of 3.98. This suggests a widespread knowledge of the importance of emergency preparedness for typhoons. While overall awareness was high, the statement 'Wind-proof buildings are needed to provide communities with shelter' received the lowest weighted mean (3.63), still indicating a high level of awareness but slightly lower than other aspects. This suggests a potential area for further education and emphasis on the importance of structural resilience in typhoon-prone areas.

21. The student-respondents exhibited a high level of disaster risk awareness and preparedness concerning storm surges, with a grand weighted mean of 3.82. This signifies a strong understanding of storm surge safety measures. Notably, the highest awareness was observed regarding the statement emphasizing the importance of organizing emergency supplies, including essential items like food, water, first aid kits, flashlights, and battery-operated radios, with a weighted mean of 3.97. This suggests a widespread recognition of the critical role of preparedness in mitigating the impact of storm surges. While overall awareness was high, the statement regarding the importance of keeping a portable radio handy for weather updates received the lowest weighted mean (3.72), still indicating a high level of awareness but slightly lower than other aspects. This highlights a potential area for further emphasis in educational efforts to ensure that individuals understand the critical role of staying informed during storm surge events.

22. The student-respondents demonstrated a high level of disaster risk awareness and preparedness concerning landslides, with a grand weighted mean of 3.77. This indicates a strong understanding of landslide safety measures. The highest awareness was observed regarding the statement 'Aware of the development of an early warning system to measure rainfall level,' with a weighted mean of 4.09. This suggests a widespread knowledge of the importance of early warning systems in landslide preparedness. While overall awareness was high, the statement 'Rapid increase in creek water levels accompanied by increased soil turbidity is an indication of possible landslide occurrence' received the lowest weighted mean (3.59), still indicating a high level of awareness but slightly lower than other aspects. This suggests a potential area for further education and emphasis on recognizing specific early warning signs of landslides.

23. The student-respondents demonstrated a high level of disaster risk awareness and preparedness concerning fire, with a grand weighted mean of 3.92. This indicates a strong understanding of fire safety measures. The highest awareness was observed regarding the statement 'Keeping your home clean and free of clutter, especially near heat sources or electrical equipment,' with a weighted mean of 4.07. This suggests a widespread knowledge of the importance of maintaining a clutter-free environment to prevent fires. While overall awareness was high, the statement 'Overloading your circuits is a big fire hazard' received the lowest weighted mean (3.76), still indicating a high level of awareness but slightly lower than other aspects. This suggests a potential area for further education and emphasis on the dangers of overloading electrical circuits.

24. The student-respondents perceived educational factors as having a high influence on their disaster risk awareness and preparedness, with a grand weighted mean of 4.04. This suggests that educational initiatives play a significant role in shaping their understanding and readiness for disasters. The highest influence was observed for 'Participation in disaster preparedness drills at school,' with a weighted mean of 4.31. This indicates that hands-on experience through drills is highly valued by students in developing their disaster preparedness skills. While all educational factors were perceived as having a high influence, 'Feeling confident in the ability to respond to a disaster based on what's learned at school' had the lowest weighted mean (3.87).

This suggests that while students recognize the importance of education, there may be a gap between the knowledge gained and their perceived ability to apply it in a real-life disaster situation.

25. Psychological factors have a high influence on the level of disaster risk awareness and preparedness among student-respondents, with a grand weighted mean of 3.97. This suggests that mental and emotional aspects play a significant role in how well students understand and prepare for disasters. The highest influence is observed for 'Thinking about what to do in the event of a disaster,' with a weighted mean of 4.09. This indicates that actively considering potential actions during a disaster significantly impacts preparedness levels. While all psychological factors have a high influence, 'Belief in the ability to manage panic in a disaster situation' had the lowest weighted mean (3.88). This suggests that while students may be aware of psychological factors, concerns about managing panic during a crisis may still pose a challenge for some.

26. Social factors have a high influence on the level of disaster risk awareness and preparedness among student-respondents, with a grand weighted mean of 4.03. This suggests that social interactions and community dynamics significantly impact how well students understand and prepare for disasters. The highest influence is observed for 'Belief that community involvement is important in disaster preparedness,' with a weighted mean of 4.20. This indicates that students who believe in the importance of community action in disaster response are more likely to be aware of and prepared for disasters. While all social factors have a high influence, 'Trust in the disaster preparedness information provided by community leaders' had the lowest weighted mean (3.94). This suggests that while students recognize the importance of social factors, the level of trust in community leaders and their information may vary. Building and maintaining trust between community leaders and residents is crucial for effective disaster preparedness efforts.

27. Environmental factors have a high influence on the level of disaster risk awareness and preparedness among student-respondents, with a grand weighted mean of 4.06. This suggests that understanding the environmental context significantly impacts how well students understand and prepare for disasters. The highest influence is observed for 'Awareness of the natural hazards specific to the area,' with a weighted mean of 4.27. This indicates that students who are aware of the specific natural hazards that threaten their community are more likely to be prepared for them. While all environmental factors have a high influence, 'Engaging in activities to make the home more disaster-resilient' had the lowest weighted mean (3.90). This suggests that while students may recognize the importance of environmental factors, actively taking steps to make their homes more resilient may require further encouragement and support.

28. The study found significant correlations between various student-respondent profile variables and their level of disaster risk awareness and preparedness across six hazard types: earthquakes, floods, typhoons, storm surges, landslides, and fires. Student location of residence emerged as the strongest predictor, demonstrating a very strong correlation (Cramer's V = 0.87, p-value = 0.000). Other significant correlates included sex (V = 0.77, p-value=0.000), fathers' occupation (V=0.67, p-value=0.000), mothers' occupation (V=0.68, p-value=0.000), and the types of building materials used in house construction (V=0.75, p-value=0.000).

29. While student attitude towards disaster awareness and preparedness showed a moderate correlation (Spearman rho = 0.450, p-value = 0.000), other variables like age, parental education, income, and attendance at disaster drills or seminars exhibited weaker correlations despite statistical significance. These findings underscore the influence of socio-economic, environmental, and demographic factors on student disaster preparedness levels.

30. The survey results indicate that only one teacher profile variable, school location, significantly correlates with the level of disaster risk awareness and preparedness of student-respondents across various disaster parameters (earthquake, flood, typhoon, storm surge, landslide, and fire). The computed p-value of 0.018 is less than the significance level of 0.05, confirming a statistically significant relationship. Furthermore, Cramer's V value of 0.74 suggests a strong strength of correlation between school location and student disaster preparedness.

31. The remaining teacher profile variables, including age, sex, highest educational attainment, area of specialization, years of teaching experience, number of relevant in-service trainings, school type, and attitude towards disaster awareness and preparedness, did not demonstrate a significant correlation with student disaster preparedness levels.

32. The statistical analysis revealed a significant relationship between the level of disaster risk awareness and preparedness among student-respondents and the factors that influence it. The null hypothesis, which posits no such relationship, was rejected due to a highly significant p-value of 0.000. This strong association is further supported by a Spearman rho value of 0.708, indicating a strong correlation between these variables.

33. Student-respondents reported encountering significant problems related to disaster awareness and preparedness, with a grand weighted mean of 3.85, indicating that these challenges are "Highly Felt." The most significant problem identified was the tendency of some students to overlook human-induced disasters, hindering their ability to respond effectively to emergencies, with a weighted mean of 4.11. While all problems

were considered "Highly Felt," the least significant problem reported was the need for guidance on coping with fear and stress during disasters, with a weighted mean of 3.68.

34. Student-respondents strongly agreed on the solutions proposed to address the problems encountered in disaster awareness and preparedness, with a grand weighted mean of 4.23. This indicates a strong consensus among students regarding the effectiveness of these proposed solutions. The most strongly supported solution was the inclusion of comprehensive disaster education in the school curriculum, covering hazards, emergency procedures, and risk reduction strategies, with a weighted mean of 4.55. This suggests a strong belief among students that formal education plays a crucial role in enhancing their disaster preparedness. While all proposed solutions were generally agreed upon, the statement regarding older students mentoring younger peers on disaster preparedness received the lowest level of agreement (4.11), although still considered "agree." This suggests that while peer-to-peer learning can be valuable, students may perceive other solutions as more impactful in addressing the challenges they face.

VI. CONCLUSION AND RECOMMENDATION

Based on the provided findings, it is clear that while Junior High School students in the District of San Jorge have a generally high level of disaster risk awareness and preparedness, their vulnerability is deeply tied to a complex web of socioeconomic and environmental factors. A significant portion of the student population comes from low-income families with limited parental education, residing in homes and communities that are structurally and geographically vulnerable to disasters. Despite a high rate of participation in disaster drills and strong self-perceptions of responsibility, a gap exists between this knowledge and practical application, particularly in managing panic and preparing for human-induced disasters like fires. The students' preparedness is significantly predicted by their residential location and the materials of their homes, indicating that direct exposure to risks is a powerful driver of awareness. This suggests that while formal education efforts are somewhat effective, a holistic approach is needed to address the underlying vulnerabilities and translate theoretical knowledge into concrete, life-saving actions.

The study's findings highlight a critical link between the school and community context and student preparedness. While a teacher's individual profile doesn't show a strong correlation with student preparedness, the location of the school does. This suggests that a school's environment, its resources, and the community it's in play a more significant role than a teacher's personal background. This reinforces the need for a community-wide approach to disaster preparedness, where schools act as hubs for resilience-building. To bridge the existing gaps, future initiatives should focus on creating a comprehensive disaster education program that addresses both natural and human-induced hazards, provides practical, hands-on training, and offers psychological support to help students manage fear and stress during crises. Fostering strong partnerships between schools, local government, and communities to support families in creating emergency plans and building more resilient homes will be crucial for creating a safer and more prepared society for the future.

The paper recommends the following:

1. Prioritize outreach and support for students from low-income families, those residing in vulnerable locations (e.g., floodplains, landslide-prone areas), and those whose parents have limited education or work in hazardous occupations. Ensure equitable access to resources and opportunities for disaster preparedness, such as access to information, training, and emergency supplies.

2. Develop and implement location-specific disaster preparedness plans for schools, considering the unique hazards and vulnerabilities of the surrounding area.

3. Provide teachers with training on location-specific hazards, effective teaching methods for disaster risk reduction, and strategies for integrating disaster preparedness into the curriculum.

4. Foster strong partnerships between schools and local communities to enhance disaster preparedness efforts, such as conducting joint drills, developing evacuation plans, and establishing community emergency response teams.

5. Integrate comprehensive disaster education into the school curriculum, covering a wide range of hazards (natural and human-induced), emergency procedures, risk reduction strategies, and psychosocial support. Emphasize hands-on learning activities, such as drills, simulations, and real-life experiences (e.g., community clean-up drives), to enhance practical skills and build confidence. Pay particular attention to addressing the issue of students overlooking human-induced disasters, such as fires, technological disasters, and pandemics.

6. Promote a culture of community engagement and peer-to-peer learning through activities such as student-led disaster preparedness campaigns, mentorship programs, and community-based drills.

7. Provide access to mental health and psychosocial support services to help students cope with fear, stress, and anxiety related to disasters.

8. Encourage and support actions to make homes more disaster-resilient, such as retrofitting structures, securing belongings, and developing family emergency plans.

9. Conduct regular assessments to monitor the effectiveness of disaster preparedness programs, identify

areas for improvement, and track changes in student knowledge, attitudes, and behaviors. Utilize data collected from assessments and other sources to inform and improve disaster preparedness policies and programs.

10. Conduct further research to delve deeper into the mechanisms through which school location, socioeconomic factors, and other identified variables influence student disaster preparedness. Employ qualitative research methods, such as interviews and focus groups, to gain deeper insights into student perspectives, experiences, and challenges related to disaster preparedness.

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