DISASTER AWARENESS AND PRACTICES: IMPLICATION TO THE LEVEL OF PREPAREDNESS ON RISK REDUCTION AND MANAGEMENT OF DISASTER AMONG INTERMEDIATE PUPILS

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Abstract

This research focuses on the risk reduction and management of disasters in the Philippines, a country prone to natural disasters due to its location in the Pacific Ring of Fire. The study specifically examines disaster awareness and practices among intermediate pupils and their implications for preparedness. The research design utilized a descriptive correlational approach with 100 intermediate pupils from the district of Rizal as respondents. The study found that the grade six pupils in Rizal district consistently demonstrated high levels of disaster awareness, including disaster education awareness, pre-disaster preparedness, and post-disaster awareness. They were knowledgeable about potential disasters and understood the importance of conducting multi-hazard drills. The study also aimed to identify the pupils' perception of disaster preparedness practices such as earthquake drills, first aid training, fire drills, and information reporting. The results indicated that the pupils recognized first aid training, fire drills, and information reporting as important disaster preparedness measures. Meanwhile, earthquake drills were perceived as earthquake-related preventive measures. The study further examined the preparedness level of the pupils in terms of early warning, planning, training, and logistics. The respondents observed and understood the significance of these elements in disaster preparedness, leading to risk reduction and effective disaster management. The study also revealed that the pupils recognized communication and hazard mapping as essential safety skills in risk reduction and management of disasters. The presence of hazard mapping and communication protocols increased the pupils' capacity for risk reduction. Significant relationships were found between the extent of disaster awareness and practices in the preparedness level of the pupil-respondents for risk reduction and disaster management. This suggests that increased awareness and consistent practice among pupils contribute to a higher level of preparedness. This study emphasizes the importance of promoting disaster preparedness and practice among intermediate pupils through education and training on emergency management and safety skills. It highlights the need for interventions that encourage the actual implementation of preparedness behaviors. By fostering disaster awareness and facilitating practical preparedness measures, the Philippines can enhance its risk reduction and disaster management capabilities.

Keywords – Disaster, Disaster Awareness, Disaster Preparedness, Emergency Management, Safety Skills, Hazard Mapping, Preparedness

1. Introduction

Disaster is said to be a serious problem that has to be taken into consideration in the country and in our own community as well. It disrupts the whole function and performance of people within a community. It involves all aspects like human, material, economic or environmental aspects in terms of impacts and losses which creates great problems and troubles for the community in coping using their own capacity and ability to recover. Our country is very prone to different disasters including typhoons, floods, earthquakes, tsunamis, fires, and landslides (Comighud 2018)

According to the study of Artificio(2019), disasters are a phenomenon that is not easy to cope with. They are caused by natural disasters like earthquakes, tsunamis, landslides, fire, typhoons, and drought that result in loss of life, material property, and economic activity that leads to the disruption of the community's social structure.

Disaster may be classified into two. It may be natural like a volcanic eruption, flood, typhoon, tsunami earthquake, or landslide, and human-induced like chemical spills, explosions, biological attacks, road accidents, and water contamination. (Gubalane,2015)

In the Philippines, we are visited by more than 20 typhoons every year. This is because our country lies along the Pacific Ring of Fire. Typhoons, volcano eruptions, earthquakes, landslides, floods, and tsunamis. and other natural calamities are common in the country. Due to the strategic location of the Philippines, and because our country is an archipelago that lies along the great bodies of water, this is very much favorable to the formation of strong typhoons(Maminta 2019). The preparedness of extremely susceptible countries has been hampered by the growing frequency of disasters(Yadav and Barve 2019). Plans for disasters could not be tested beforehand using exercises like drills to gauge their effectiveness as cited by Tansey(2015)

Gaining knowledge about how to react and cope in a certain situation is the goal of the activity of preparedness(Sutton & Tierney, 2006) as cited in the study of Fernandez (2019). Moreover, Filipinos are already exposed to this kind of tragedies of nature and have prepared themselves for additional disasters to arrive annually. The usual visit of different disasters to our country made our Filipino people more stronger and little by little learn how to cope with what they experienced. The same phenomenon may happen to anyone of us anytime of us because we are not exempted to the order of nature.

In education, it is also the thrust of the department to increase resiliency in times of disaster. The Department of Education issues the enclosed Comprehensive Disaster Risk Reduction guidelines to strengthen disaster risk reduction in education.(D.O. 37 s. 2015) From 2007, it started to set out programs and activities to increase the disaster awareness in the whole educational system in the Philippines. The Philippine government through the Philippine Disaster Risk Reduction and Management Act of 2010 requires the integration of DRRM in the school curriculum. (R.A.10121)

While the DRRM act provides a legal foundation for the Department of Education's disaster risk reduction directives, DepEd released DepEd No. 37, s. 2015 as the foundation of the Basic Education Framework with a more comprehensive Disaster Risk Reduction Management. The DepEd's offices and schools must have institutionalized DRRM structures, systems, protocols, and practices based on this framework. Furthermore, disasters always find its way into schools, as seen from violent typhoons and massive flooding that destroys school property. As member of the National DRRM Council, the DepEd is also committed to implement DRRM in basic education. The comprehensive DRRM in basic Education framework seeks to protect learners and education workers from death, injury and harm in school, plan for educational continuity in the face of expected hazards and threats, safeguard education sector investments, and strengthen disaster risk reduction and resilience through education(D.O. 27 s. 2015) Moreover, according to DepEd Order no. 55 s. 2007, the school must give priority and focus to disaster risk reduction in the whole school community. Support was given by Department of Education like Disaster Risk Reduction Resource Manual for school administrators, principals, supervisors and teachers which will help them on the execution of school programs and projects that will help in improving the disaster risk reduction practices of the school.
Anyone may be affected by a disaster, but children are the most vulnerable since children spend most of their time in school.(Kousky 2016).

During disasters, schools are critical, and at the same time, many of our teachers have limited training and whose skills and capacity in disaster risk reduction and management have to be fully utilized. It is not enough that we know about disasters. It is imperative that we need to take precautionary measures to avoid destruction or to lessen its effect. There must be preparations and plans to prepare. It is not enough that we do actions during the occurrence of a disaster. Mitigation and preparedness must be observed before the disaster happens.(Torani et. al 2019). In the present time, preparatory activities must be done. According to Benadusi (2014), Education is the primary means in order to inculcate the value and importance of awareness in disaster.He further stated that through education the knowledge and skills together with the important practices will be learned.

Disaster awareness can also be given at an early age. School children should be aware of disaster and should have the knowledge and skills about it. This awareness can be best achieved through active participation and involvement in all activities, programs and projects.(Khorram, Manesh et al., 2016; Wang, 2016).
According to the study of Dikmenli(2018), one of the best and most powerful way to fight disasters is to foresee the threats so that we can prepare, plan and take necessary steps ahead of time.
To achieve this, pre-disaster awareness must be extended to the school, and the community through constant practices . (Johnson et al., 2014).

Though there are only 3 elementary schools in the district of Rizal, our pupils consistently demonstrated high levels of disaster awareness, including disaster education awareness, pre-disaster preparedness, and post-disaster awareness. Our pupils pay attention to different infographic materials posted and always join in drills, workshops, and training that they think will help them.

In Rizal district,our school, disaster preparedness seems to be left alone at one corner of the school and takes little preparation at all. Hazard mapping is being done to know the different hazards and put some suggestions regarding its result but most of the time, it is just a suggestion and minimal action on this matter. Earthquake drills happen only every quarter. Seminars and workshops on disaster preparedness are also minimal. Fire drill happens only during fire prevention month because it is part of school's culminating activities during this month. At home, preparedness seems to be left behind. Safety and other precautionary measures are minimal. Parents do not pay more attention on safety issues. They will just prepare on the onset of disasters.

Our Rizal District has a limited activities regarding preparedness and is giving lesser effort and priority on this matter. The activities handed down by the division are usually the activities that the district is holding.

With this scenario the researcher would like to study the disaster awareness and practices and its implication to the level of preparedness on risk reduction and management of disaster among grade six pupils of Rizal District.

2. Literature Review

2.1 Disaster Preparedness

Disaster readiness is the process we use to mitigate, prepare, respond, and recover from disaster. A condition of readiness to respond to a disaster, crisis, or other form of emergency is known as disaster preparedness. With a better prepared, well-equipped service, the goal of disaster preparation is to be able to lower the immediate mortality and morbidity. Early warning systems, such as electronic information systems and satellites that can send information over vast areas and continents, are part of the planning for seasonal climate changes, flooding, and drought. (Elmadani,2022)

2.2 Comprehensive DRRM in Education

It is the thrust of the department of education to ensure the safety of the school children when it comes to disaster. The disaster risk reduction and management was strengthened in the school system thus, making it a safer place. Every school is tasked to participate in the national activities focusing on disaster preparedness like the quarterly earthquake drill, fire prevention month activities like fire drill and other first aid training activities. (D.O. 37 s. 2015)

Based on the study of Marion & Maingi(2010), schools should have emergency preparedness plans to guide students to safety. Nobody ever says they were too well prepared once a calamity strikes. No matter how well-prepared schools believe they are, there is always room for improvement when it comes to emergency planning.

A hazard mapping is one activity that is being done as technique for disaster prevention, mitigation, and management, and can be considered one of the most important things to put into practice. It is a process of identifying risks within the school. This may serve as basis for preparing plans, programs and projects that may benefit the pupils, teachers and the institution as well but, there is no common assessment standard for any kind of risk. (Wang, et.al 2016)

2.3 Pre-disaster Preparedness

According to Kron (2015), disasters, man-made or natural are continuously increasing and most of the time brings an intensifying effect to the community. Preparation before the disaster is the way to lessen the damage. The school together with the community must prepare. The school disaster risk reduction and management system must be organized. Teachers should be given seminar workshops and training. The pupils must have constant practice and regular disaster awareness training. The community together with the school must have an intense focus on disaster awareness.

As cited in the study of Delicado, A., Rowland, J., Fonseca, S., de Almeida, A. N., Schmidt, L., & Ribeiro, A. S. (2017), Children are one of the populations that experience the catastrophic effects of disasters more profoundly. Due to their partial or complete reliance on adults, children are "physically vulnerable to both sudden-onset and chronic disaster occurrences." In the aftermath of a disaster, older children and adolescents may have a variety of behavioral, psychological, and emotional problems in addition to being at risk for injury or death. In addition, disasters not only interfere with children's everyday routines, but they can also cause them to miss school and make slower academic development, miss out on social chances, and be exposed to more stressors in general.

Access, quality and governance are such DepEd outcomes that the country is longing for. This could be achieved if there is resiliency in education . Kangabam (2012) in his statement emphasized that every country is vulnerable to some type of natural or man-made disaster. To be prepared means that every country is ready to face any type of disaster and people are not ignorant about it.

As stated by Keim and Giannone in the book Disaster Preparedness, they said that emergencies and disasters are part of a relative continuum of events that occurs when a populations both exposed to a threatening event or potentially damaging phenomenon referred to as hazard. Moreover, emergency preparedness is a program of a long term development activities whose goals are to strengthen the overall capacity and capability of a country to manage all types of emergencies and to bring about an orderly transition from relief through recovery and back to sustained development.

In accordance with Przybylski (2015), the youth is the most in need of special care, support and protection in a disaster; simply because they're too young and don't have sufficient knowledge about the things they are going to do to save themselves.

The function of education(DepEd) in the Philippines Disaster Management System are directed by the following documents.

Executive Order No. 159 series of 1998 mandates that all heads of each department, bureaus, offices , agencies and instrumentalities and even political subdivisions of the government , including all corporations owned by the government, the armed forces, government hospitals, and public educational institutions to established their respective disaster control organization.

Disaster consequences may include of mortalities, injuries, morbidities and other adverse effects on human physical, mental and social well-being, coupled with the damage of properties, loss of services, social and economic upheaval and environmental degradation. (Blaikie et al., 2014).

The capability to engage in post-disaster repair and early recovery efforts, as well as the ability to initiate emergency actions to safeguard property and contain the damage and disruption, are all components of disaster preparedness. (Öztekİn et al. 2014). Disasters cannot be resolved without outside help, and they cause significant damage that cannot be repaired with available resources. The significance of disaster risk management, which necessitates government action, has been highlighted by the increase in the severity of the damages brought on by disasters. (Kim 2022)

In all these scenarios, a well-defined disaster management plan is needed. According to Joseph, (2015) The goal of a disaster management plan is to achieve disaster prevention, mitigation, preparedness, and response through a continuous, integrated multidisciplinary process of planning and execution of procedures.

Through Republic Act 10121, the National DRRM Framework (NDRRMF) and National DRRM Plan (NDRRMP)were developed. Both the NDRRMF and NDRRMP foresee a country which has "safer, adaptive and disaster resilient Filipino communities toward sustainable development". Together with the paradigm shift is the creation of the four thematic areas namely; a) Disaster Prevention and Mitigation, b) Disaster Preparedness, c) Disaster

Response, and d) Disaster Rehabilitation and Recovery. Each area has long-term goals and activities which will lead to the attainment of the overall vision in DRRM. According to the NDRRMF, resources invested in the four thematic areas must prioritize disaster prevention and mitigation, disaster preparedness and climate change adaptation to be more effective in attaining its goal and objectives(.R.A. 10121) More natural disasters strike Japan, China, Bangladesh, and the Philippines than any other country on Earth. They are the most dangerous nations in the world, having the greatest susceptibility to calamities like storms, floods, earthquakes, volcanoes, tsunamis, wildfires, and landslides (Kostigen, 2020).

Japan has recently been listed as one of the nations with the most natural disasters. The archipelago's location in the Ring of Fire, a region where several tectonic plates collide, makes it susceptible to natural calamities like earthquakes, tsunamis, and volcanic eruptions. Natural catastrophes are blamed for numerous reported deaths or missing persons each year. The majority of damage occurrences in natural disasters were flooded homes. Typhoons can cause heavy rainfall and floods, and they frequently impact Japan. Over 100 active volcanoes are found on the archipelago, which makes up 10% of all active volcanoes in the world. One of the most active volcanoes is Sakurajima, which erupts several hundred times annually thus making it one of the most active volcanoes in the country. There is also a lot of volcanic activity and big earthquakes. Due to its oceanic location, the nation is susceptible to tsunamis on a frequent basis (Statista Research Department, 2021). The Great East Japan Earthquake, usually referred to as the Tohoku Earthquake, happened in 2011, resulting in the greatest recorded cost of natural disaster damage. It was one of the strongest earthquakes ever recorded in the globe, based on Richter scale data. More destruction was caused by the ensuing tsunami than by the initial earthquake, which destroyed numerous Japanese cities and claimed the lives of over 15,000 people (Statista Research Department, 2021). 69 percent of China's geographical area is made up of mountains and plateaus due to its complex geological structure, which makes it susceptible to regular geological disasters like landslides, debris flows, and rock collapses. Along the coast, storm surges and red tides are frequent, and fires frequently break out in the country's woodlands and grasslands. Over 70% of Chinese cities are located in regions that are susceptible to meteorological, earthquake, geological, and oceanic calamities (Relief Web, 2020).

According to Cheng, Dai, Wu, Wei, Dong, and Lao (2013), the complex theory is effective at assessing the complexity and dynamical changes of a network system, which can enhance situation awareness after a disaster and help perceive the dynamic process that is crucial for high-quality decision making.

According to Gubalane (2015), contingency planning is a critical tool, but it cannot stand alone without an empowered populace, infrastructures, emergency response procedures, rehabilitation, and other critical logistics. The bottom line of the aforementioned would-be questions regarding the government's or local government units' financial capability (to be specific).

Asteria, (2016) claims that a calamity Information management is management relating to the catastrophe, message transmission, and receiving messages from the pre-disaster stage.

Additionally, Datiles (2018) said that the institution holds workshops for appropriate knowledge of the fundamentals of what to do in a particular situation in a disaster. We only require discipline because we can see that some kids or even elders do not take this thing seriously. Although the drills are real, some teachers don't treat them seriously, according to Datiles.(2018) came to a conclusion to guarantee the effectiveness of drills.A disaster is a situation that results in significant damage, harm, suffering, and affliction to humans. Disasters result in fatalities and significant disruptions in society, which urges the international community to take immediate action to deal with and lessen the effects of these inescapable disasters. This is the main point why the Philippine Disaster Risk Reduction and Management Act of 2010 or RA 101 21 mandates the inclusion of disaster risk reduction in the school's curriculum to increase students' understanding and strengthening of staff and student's awareness thus, leading to disaster-prepared environment.(Ventura & Madrigal 2020)

Drills for catastrophic disasters in schools can lessen the risk and minimize the potential for a community's crisis. In a Nelz piece The "Big One" (a significant earthquake) could occur anywhere. The region around Manila,

including its bordering municipalities, would be the most impacted cities like Cainta, Rizal, Marikina, Pasig City, and others.

The implementation of an emergency disaster drill; the participants' adoption of an attitude that is serious and uneasy in order to know what to do when a catastrophe happen in reality.

The occurrences of disaster can drastically affect the education in a variety of methods, including human injuries and losses, harm to school property. Long absences from school are required of students in the recovery and rehabilitation process, and their families require their assistance towards meeting the basic needs (Malahay & Estrope, 2018)

While the DRRM act gave the Department of Education (DepEd) a legal foundation for its disaster risk reduction directives, DepEd issued DepEd Order No. 37, s. 2017 with a more thorough approach to disaster risk reduction which will serve as the foundation for the Basic Education Framework. Within this framework, DRRM structures, processes, protocols, and practices shall be institutionalized throughout DepEd's offices and schools. Additionally, disasters always have an influence on schools through powerful typhoons and significant flooding that destroy school buildings. Consequently, the Philippines' vulnerability to disasters justifies a closer examination of its current disaster-related policies (Catanus, 2018; Mamhot, 2019)

2.4 Risk Reduction and Management of Disaster

The National Disaster Risk Reduction and Management Plan (NDRRMP) is first mentioned in (e), Section 3-Declaration of Policy of the IRR of R.A. No. 10121: "It is the policy of the State to develop, promote and implement a comprehensive National Disaster Risk Reduction and Management Plan (NDRRMP) that aims to strengthen the capacity of the national government and local government units (LGUs), together with partner stakeholders, to build the disaster resilience of communities, and – to institutionalize the arrangements and measures for reducing disaster risks, including projected climate change risks, and enhancing disaster preparedness and response capabilities at all levels."

This is the reason why the Department of Education, together with the partner agencies conducted school-based quarterly earthquake drill. An emergency disaster drill should be conducted, and the participants should exhibit a serious and apprehensive manner in order to know what to do in the event of a calamity. A safety drill is a practiced exercise that is done in conjunction with the emergency plan to get people ready for any event that might happen at any time. Safety drills are essential in schools in order to protect students and possibly save lives in the future. Some common disasters could be expected, giving schools enough time to prepare to evacuate; otherwise, schools might encounter rapid advancements that could endanger them at any time (Russell, 2018). A drill can be successful, according to Morton (2011), if there is full the participants' involvement. A complacent mindset might result in confusion and risk. If the heads and the proctors offer an excellent example for the participants, it will illustrate the value of understanding the laws and regulations in order to survive a real calamity. Despite the fact that more schools are realizing the value of emergency disaster plans, the majority still lacks readiness; 60% of organizations and groups don't have one, and the other 40% have made sure to develop their emergency disaster plans but still fail to be effective in the event of a disaster (Briton, 2017). According to the study conducted by Abriam et. al(2019) It is essential to be prepared for emergencies and to practice these procedures. It is feasible to reduce the chance of experiencing a significant percentage or amount of devastation, pain, and suffering if each person makes it possible and takes it seriously. A safe and assured approach is required since students and young people are among the most vulnerable groups in society. Discussion-based activities, such as seminars, workshops, and tabletop exercises, should be provided so that people can learn the fundamentals of surviving a natural disaster and the information required prior to a real drill. It will be important to involve public, corporate, and nonprofit sectors on a national and worldwide level in a coordinated effort to reduce dangers if disasters are to be treated as continuous issues rather than one-time emergencies. In order to accomplish this, it is necessary to take care of the following tasks, among others: identifying the participating organizations, setting up channels of communication and information sharing between them, creating

a set of benchmarks for measuring progress toward the common objective of risk reduction, and setting aside regular intervals for an evaluation of the current situation, feedback to all participants, and revision of action plans throughout the region.

Management of disaster is the same as management of crisis. It is an organized process to save the lives and property of people from unpredicted and natural and man-made disaster.

In an economic point of view, a disaster is a state of 'shock' that leads to combination of losses in the human, social and physical capital stock and a lessening of an economic performance such as generation of income, continuity of investment, production, consumption, and work. There are negative effects, because the poor are likely to be the most affected group.

However, on a larger scale, businesses need to be ready for disasters and put in place climate adaption strategies to reduce the impact of disasters on their operations and make it easier for them to recover in order to carry on with business. Government intervention at all levels will be required in this. The situation of Albay, Philippines, where the provincial government has steadfastly adopted Climate Change Adaptation as a program for disaster risk reduction for all involved. It is one example of such government action in disaster mitigation and climate adaptation. Salceda claimed that adaptation is an investment rather than a cost because it lowers risks and in return a rise in corporate profits. Even after typhoons Reming and Milenyo, the Mayon eruption, and a string of recent catastrophes, Albay has experienced an increase in investments. (Philippine Star, 2010) The destructive disasters in the Philippines pushed the DepEd (Department of Education) to include disaster risk reduction and management programs in their curricula. Section 14 of Republic Act 10121 (or the Philippine Disaster Risk Reduction and Management Act of 2010) mandates the DepEd among other agencies to include DRRM in education.. For the elementary and junior high school levels. Education in DRRM (Disaster Risk Reduction and Management) is only taught as a part of other courses including science, technology, and social science.

Based on the Disater Risk Reduction and Management Manual(Safer School Resource Manual) ,The Department is responsible for increasing the administration and basic education standards effectiveness in providing educational services that are pertinent and adhere to national laws aims for development. The Department, as the supplier 17 million students are served via basic education (School Year 2007-2008) and plans for exceptionally capable, civic-minded, life-skilled, and Filipino youngsters who will shape the future and love God contribute to the development of a compassionate,prosperous and healthy society. All the typhoons that ravaged our nation in 2006 caused 5,600 Southern schools to sustain damage.Luzon, with an estimated price of PHP 3.1.million and impacted roughly 8 million school-aged children both primary and secondary. Those destructive fortuitous events, prompted educational authorities to prepare and adopt this Safer Schools Resource Manual to guide education offi cials, school administrators, teachers and eventually the schoolchildren on what to do before, during and after the onslaught of any hazard, in order to reduce its disastrous impact and damages. This Manual of the Department of Education is based on the Hyogo Framework for Action, a 10-year plan to make the world safer from natural hazards. This was formulated during the World Conference on Disaster Reduction held in Kobe, Hyogo, Japan, January 2005.

The Manual is for school administrators, supervisors and school teachers, to provide them with information needed to reduce risk and make schools safer. The Department of Education (DepED) through the Technical Working Group (TWG) of the Department's Disaster Risk Reduction Management conceptualized the promotion of hazard/disaster awareness, to manage impacts, and to help all school communities to reduce the risk of threats from natural and human-made/induced disasters. Furthermore, the ultimate goal of this resource manual is to protect the lives of the members of the school community and property. Every school personnel must: • Analyze the condition of the school or conduct situational analysis; • Identify possible hazards/threats faced by the school; • Follow and strictly act according to the disaster management strategies especially in times of emergencies, calamity/disaster; • Provide feedback to the authorities for policy formulation; and • Request the DepED Division/ Regional/Central Offices / other local and international GOs, NGOs and stakeholders for any assistance. Prevention and mitigation are actions taken to make sure that the impact of a hazard is lessened. We cannot stop natural hazards from happening but we can reduce

the damages if we institute prevention and mitigation measures. Taking measures in order to avoid an event turning into a disaster is prevention, which includes planting trees in order to prevent erosion, landslides and drought. On the other hand, measures that reduce vulnerability to certain hazards is mitigation which includes for instance improved building practices and standard designs to ensure that school buildings are constructed in risk free school sites, houses and hospitals can withstand earthquake or a typhoon. (DRR Resource Manual, 2008) This manual further describes that prevention and mitigation in schools begins with: Knowing which hazards and risks the school is exposed to (hazard mapping); Meeting with all stakeholders in education and making plans to reduce those hazards and risks; and Implementing plans to reduce vulnerabilities.It is also the thrust of the DepEd to strengthen the implementation of DRR in every school thus preparing it to a safer environment. The school assigned one person to spearhead the activities of the Department of education on matters related to DRR.

The DepEd issues the enclosed Coordination and Information Management Protocols for the schools, schools divisions offices (SDOs) and regional offices (ROs) and coordinators to establish the system of coordination and information management and provide guidance to DepEd field offices, schools and DRRM coordinators on their respective roles and functions relative to DRRM implementation.(D.O.21, s. 2015)This Protocol as well as the roles and responsibilities of the DepEd region, schools division and schools, including the DRRM coordinators are being articulated here with the following objectives:provide guidance to regions and schools divisions, including DRRM coordinators on how to act before, during and after disasters; capacitate the DRRMO coordinators and other DepEd constituents to disasters and emergencies; and facilitate immediate and efficient information flow during disasters and emergencies. The Coordination Protocol provides the basis for and directs which office should respond depending on the extent of a disaster/emergency. On the other hand, the Information Management Protocol demonstrates the proper flow of data from schools to central office, and vice versa. The roles and responsibilities of ROs and SDOs in DRRM are guided by the provisions from the National Disaster Risk Reduction and Management (NDRRM) Plan 2011-2028 and RA No. 9155 or Governance of Basic Education Act of 2011.

PD. No 1566 of June 1978, Strengthening the Philippine Disaster Control , Capability and Establishing the National Program on community disaster Preparedness stresses on the hardships endured by our people due to the hostile environment and has continually sought survival against hazard. The decree stated the urgency of the need to direct, control and coordinate the manpower, material, monetary, and spiritual resources of the entire Filipino nation to reduce the impact of hazard.

Based on DepEd Order No. 21 s. 2015, The SDRRM Team will undertake the following: Ensure the establishment of an Early Warning System(i.e bulletin board for weather advisories, bell/siren emergency signals and the like.: conduct the annual student -led risk identification and mapping within and around the school premises to ensure a safe environment that is conducive to teaching and learning.; maintain close coordination with local DRRM council on the conduct of preparedness activities and on response needs, among others; provide capacity building activities for teachers, non-teaching staff and learners on DRRM. Specifically, the school head may serve as the school DRRM Coordinator but shall appoint an alternate among other school personnel to assist in the implementation of DRRM; acknowledges the receipt of advisories and reminders from SDS and/or the SDO DRRM Coordinator; spearhead the conduct of multi-hazard drills and other disaster prevention, mitigation, and preparedness activities in the school. Ensure the conduct of annual student-led risk Identification and mapping; communicate notable results of risk assessment and other disaster preparedness activities of the SDO; serve as the point person for collaboration and coordination with local DRRM council and other partner organizations; ensure that emergency hotlines are maintained, updated and posted; ensure the availability of baseline data of the school;submit situational reports and provide real-time updates to the SDO; accomplish and submit Rapid Assessment of Damage Report(RADAR) within 72 hours after any hazards or emergency via SMS; track and report the progress of recover and rehabilitation initiatives to the SDO; and report and update the SDO on the demobilization of evacuation centers in schools.

The DepEd also celebrates National Disaster Resilience month. This initiative of the DepEd calls for preparedness in any disastrous situation. "The threat of the Big One always looms in the distance," Department of

Education (DepEd) Undersecretary for Administration Alain Del Pascua said during the Earthquake Resilience Forum held in celebration of the National Disaster Resilience Month on July 23 at the Bulwagan ng Karunungan, DepEd Central Office. The forum focused on Metro Manila's readiness for a magnitude 7.2 earthquake, also dubbed as the "Big One." Joan Salcedo, Supervising Science Research Specialist of the Department of Science and Technology–Philippine Institute of Volcanology and Seismology (DOST-PHIVOLCS), discussed the science of earthquakes, as well as the history of major earthquakes in the Philippines."Earthquakes do not kill people. Building and structures do. And who has control on these? Nature doesn't. We have," Renato Solidum Jr., Undersecretary for Disaster Risk Reduction and Climate Change Adaptation of DOST-PHIVOLCS, said in his visualization of the scenario for the "Big One." Solidum also mentioned that the "Big One" scenario is certain, but the day and time cannot be predicted. With this, he highlighted the need for a public service continuity plan as most of the decision-making during disasters is centered in Metro Manila.

As stated in the DepEd Memorandum No. 300 s. 2006, the earthquake drill is part of the communications campaign under the "Safe Ka Ba" project formulated by all agencies of the NDCC as part of the four-point agenda being implemented by the Office of Civil Defense. Safety in schools must always be a priority concern of all school administrators in order to sustain the government's efforts to provide a safe, secure, and conducive teaching-learning environment to school children.

2.5 Conceptual Framework

Independent Variables   **Dependent Variable**

I. Disaster Awareness

- Disaster Education Awareness

- Pre-Disaster Preparedness

- Post Disaster Awareness

II. Practices on Disaster Preparedness

- Earthquake Drills

- First aid Trainings

- Fire Drills

- Information Reporting

RISK REDUCTION AND MANAGEMENT OF DISASTER

I. Disaster Preparedness

- Early Warning System

- Planning

- Training

- Logistics

II. Emergency Management

- Preparedness

- Prevention and Mitigation

- Response

- Rehabilitation and Recovery

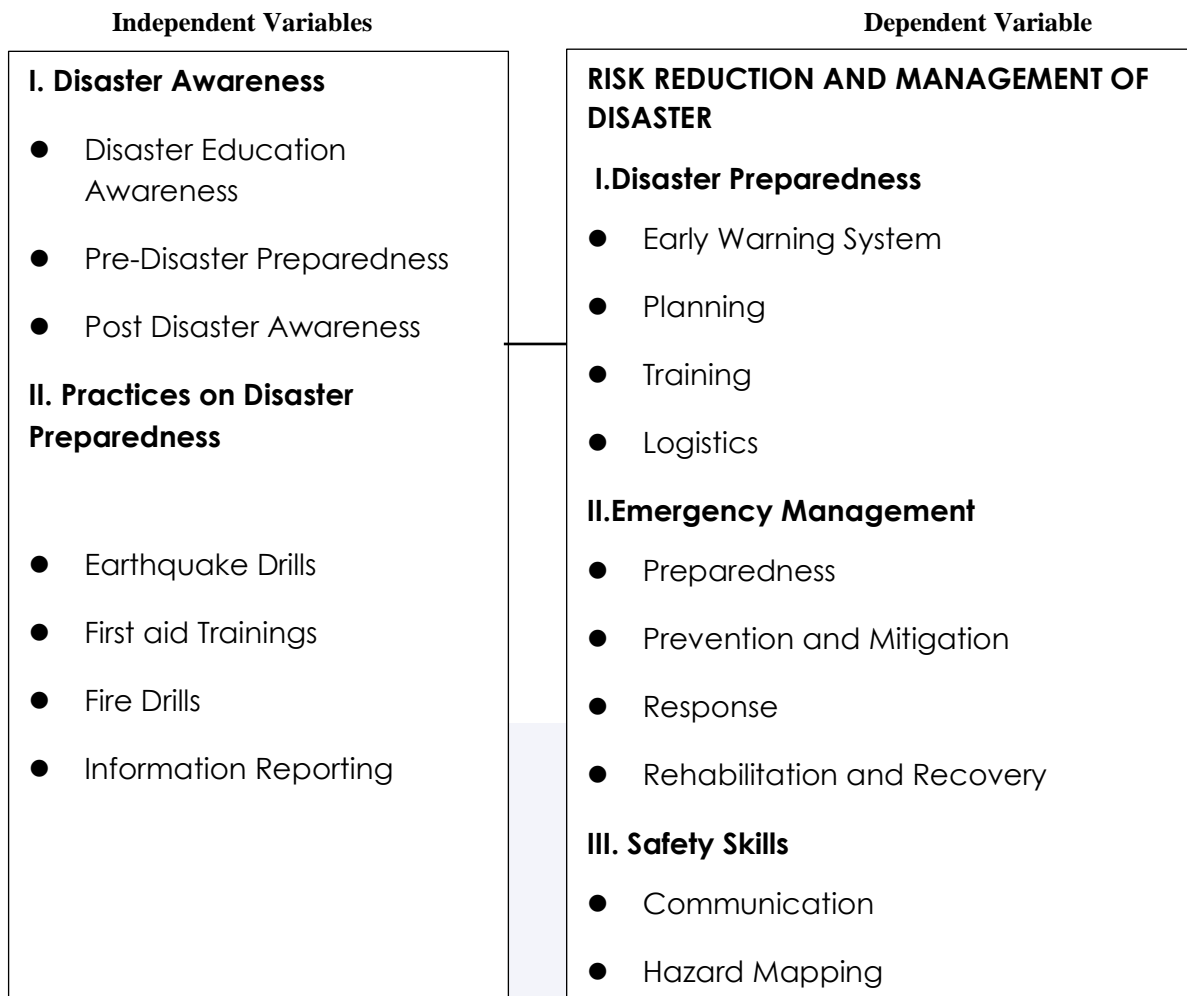**III. Safety Skills**

- Communication

- Hazard Mapping

Figure 1- Showing the Research Paradigm of the study.

3. Hypotheses

The following hypotheses were posited in the study:

H1. There is no significant relationship between the extent of disaster awareness and the preparedness level of the pupil respondents.

H2. There is no significant relationship between the perception on practices in Risk Reduction and Management of Disaster in school and the level of disaster preparedness of the pupil respondents.

4. Methodology

This chapter provided an appropriate research design, population and sampling technique, data gathering procedure, respondents of the study, research instrument, and the statistical treatment of data as a solution to the main problem investigated. This study used the descriptive correlational design. Descriptive research is a study that focuses on describing people who take part in the study. A descriptive-correlational design was the method utilized by the researcher. The researcher was primarily interested in describing the relationship among variables without seeking to establish a causal connection. The purpose of this design is to find out the influence of disaster awareness and practices on Risk Reduction and Management of disaster and tis implication to the level of preparedness among Grade Six pupils of Antipolo Sulsuguin Elementary School, Pook Elementary School and Rizal Elementary School in the District of Rizal, S.Y. 2022-2023. The respondents of the study were the 100 Grade Six pupils came from Antipolo Sulsuguin Elementary School, Pook Elementary School and Rizal Elementary School in the District of Rizal, S.Y. 2022-2023. The simple random sampling of 100 pupils of Antipolo Sulsuguin Elementary School, Pook Elementary School and Rizal Elementary School in the District of Rizal were   given a survey questionnaire to determine the level of preparedness among those pupils when it comes to disaster awareness and practices on Risk Reduction and Management of Disaster.

5. Result

5.1 Testing of Hypotheses

Table 1. Significant Relationship of the Disaster Awareness and Respondents' Preparedness Level

Risk Reduction and Management of Disaster (Dependent Variable)	Disaster Awareness(Independent Variable)		
	Disaster Education Awareness	Pre-Disaster Preparedness	Post Disaster Awareness
Disaster Preparedness			
Early warning System	.273**	.368**	.408**
Planning	.225**	.387**	.470**
Training	.223**	.397**	.578**
Logistics	-	.379**	.471**
Emergency Management			
Preparedness	.223**	.341**	.367**
Prevention and Mitigation	.223**	.357**	.563**
Response	-	.308**	.460**
Rehabilitation and Recovery	.206**	.438**	.490**
Safety Skills			
Communication	-	.465**	.456**
Hazzard Mapping	-	.412**	.476**

 **Correlation is significant at the 0.01 level (2-tailed).   *Correlation is significant at the 0.05 level (2-tailed).

As seen in the table, the post disaster awareness shows a moderate positive correlation on disaster preparedness. However, disaster education awareness shows a weak correlation with disaster preparedness.

Nevertheless, the correlation value shows a significant relationship between disaster awareness and the preparedness level of the respondents. Suryaratri, et. al. (2020) emphasized the relationship between disaster awareness and disaster preparedness. As they mentioned, there is a positive and significant impact between disaster

awareness towards disaster preparedness. This means that when the awareness of disaster of an individual increases, there is a high possibility that the level of preparedness of that individual also increases. This further shows that the disaster education awareness, pre-disaster preparedness and post disaster awareness activities of our schools in the district of Rizal promote risk reduction and management of disaster

It is also noticeable that disaster awareness shows a weak to moderate correlation to the emergency management as part of the pupils' level of preparedness.

On the other hand, the pre-disaster preparedness and post disaster awareness of the respondents shows a moderate correlation with their level of preparedness in terms of safety skills.

With the result mentioned and discussed, the disaster awareness shows a significant relationship with the level of preparedness of the respondents. This means that the null hypothesis at 0.05 level of significance is not sustained. As a support of this claim, Gerdan (2014) mentioned the importance of proper education in terms of disaster awareness, from pre-disaster to post disaster awareness. The higher the education on disaster awareness the higher the level of preparedness of each individual. The activities of our district; contingency planning, preparedness workshops and training on first aid, and the regular execution of earthquake and fire drill contributed to the higher level of preparedness of the pupil-respondents.

Table 2. Significant Relationship of the Practices on Disaster Preparedness and Respondents' Preparedness Level

Risk Reduction and Management of Disaster (Dependent Variables)	Practices on Disaster Preparedness (Independent Variables)			
	Earthquake Drills	First Aid Trainings	Fire Drills	Information Reporting
Disaster Preparedness				
Early warning System	.362**	.335**	.538**	.563**
Planning	.376**	.297**	.524**	.564**
Training	.426**	.488**	.537**	.643**
Logistics	.366**	.465**	.367**	.587**
Emergency Management				
Preparedness	.381**	.250**	.356**	.521**
Prevention and Mitigation	.268**	.358**	.475**	.631**
Response	.236**	.272**	.506**	.633**
Rehabilitation and Recovery	.347**	.333**	.514**	.543**
Safety Skills				
Communication	.299**	.317**	.541**	.647**
Hazzard Mapping	-	.284**	.472**	.652**

**Correlation is significant at the 0.01 level (2-tailed). *Correlation is significant at the 0.05 level (2-tailed).
Verbal Interpretation of r-values: +1.0 Perfect positive +/- association +0.8 to +1.0 Very strong +/- association +0.6 to +0.8 Strong +/- association +0.4 to +0.6 Moderate +/- association +0.2 to +0.4 Weak +/- association 0.0 to +0.2 Very weak +/- or no association

The table shows the correlation (r-values) of the practices on disaster preparedness to the level of preparedness of the pupil-respondents. And as depicted on the table, it was revealed that information reporting shows a strong level of correlation with the training as part of disaster preparedness (r=0.643). On the other hand, first aid trainings showed a weak correlation with planning as part of disaster preparedness.

However, the overall relationship between the practices on disaster preparedness and the level of preparedness of the pupils in terms of disaster preparedness was seen to have a weak to moderate association. Maminta (2019) mentioned that informative implications, practice, and be ready at all times is recommended to sustain the practices on disaster preparedness. This is an effective strategy in handling situations during emergency.

In terms of the relationship between the practices on disaster preparedness and emergency management, it is shown that information reporting showed a strong relationship on prevention and mitigation ($r=0.631$) and response ($r=0.633$). However, the relationship between the first aid training and the preparedness have the lowest correlation value ($r=0.250$) and interpreted as weak relationship.

On the other hand, the overall relationship between the practices on disaster preparedness and the level of the respondents' preparedness in terms of emergency management is seen to be weak to strong.

In addition, the relationship on the practices on disaster preparedness and safety skills was also computed. The result shows that the information reporting have a strong positive correlation with the safety skills, communication ($r=0.647$) and hazard mapping ($r=0.652$). However, it is noticeable that the earthquake drill as a practice of disaster preparedness showed weak relationship with hazard mapping.

Overall speaking, it is found out that there is a significant relationship between the practices on disaster preparedness and the level of preparedness of the respondents. The null hypothesis at 0.05 level of significance is not sustained. This means there is a weak to moderate correlation between the practices on disaster preparedness and the level of the respondents' preparedness. Furthermore, this implies that when the practice on disaster preparedness increases, the level of disaster preparedness of the respondents also increases.

Several studies have examined the relationship between disaster preparedness and practice. For example , a study conducted by Johnson and colleagues (2015) found a moderate positive relationship between disaster preparedness and actual practice of preparedness behavior among residents in a flood-prone area. Similarly a study by Tan and colleagues (2018) found that households with higher level of disaster preparedness were more likely to engage in disaster preparedness behaviors,such as having an emergency kit and a family communication plan.

Regarding the relationship between emergency management and disaster preparedness practices, a study by McCauhey and colleagues (2010) found that training in emergency management was associated with a higher level of preparedness among hospital employees. Another study by Lindell and Perry (2000) found that individuals who perceived themselves to be more knowledgeable about emergency management were more likely to engage in preparedness behaviors.

Overall, these studies suggest that there is a moderate positive relationship between disaster preparedness and practice, emergency management and practices on disaster preparedness, and safety skills and practices on disaster preparedness. These findings highlight the importance of promoting disaster preparedness and practice through education and training on emergency management and safety skills, as well as through interventions that encourages the actual implementation of preparedness behaviors.

6. Discussion

The study revealed the following findings:

1. It is found out that the intermediate pupils are always educated in disaster awareness. This implies that the students are well informed of the disaster as natural phenomena and could happen anytime. In terms of pre-disaster preparedness, the finding shows that the intermediate pupils agreed that the school must always have preparedness measures. This also shows that pupils are sometimes aware of the frequent disasters in the region they belong. As to post disaster awareness, the result revealed that the respondents always know the importance of conducting multi-hazard drills.

2. Additionally, the result of the study on the pupil-respondents' perception on first aid training, fire drills and information reporting revealed that pupils sometimes perceived these practices as disaster preparedness measures. On

the other hand, earthquake drills is always perceived by the pupil respondents as earthquake-related preventive measures. This implies that the pupils should have knowledge on the exit plans; execution of duck, cover and hold; and readiness when earthquake happens.

3. To identify the level of preparedness of pupil-respondents under risk reduction and management of disaster in terms of early warning, planning, training and logistics were observed by the pupil-repondents. This indicates that the respondents manifested that they observe early warning, planning, training and logistics as part of disaster preparedness.

4. In terms of emergency management, all indicators revealed that pupil respondents observed all the pillars of risk reduction and management of disaster.

5. As to the finding in terms of safety skills, pupil-respondents observed the importance of communication and hazard mapping in risk reduction and management of disaster.

6. Meanwhile, the result of the study shows that there is significant relationship between disaster awareness and practices on the preparedness level of the pupil-respondents on risk reduction and management of disaster.

7. Conclusion

The findings gathered in the study led to the formulation of the conclusion:

1. The hypothesis stating that there is no significant relationship between the extent of disaster awareness and the preparedness level of the pupil respondents is not sustained hence it is found out that there is a significant relationship between the practices on disaster preparedness and the level of preparedness of the pupil respondents when it comes to risk reduction and management of disaster.
2. The hypothesis stating that there is no significant relationship between the perception on practices in Risk Reduction and Management of Disaster in school and the level of disaster preparedness of the pupil respondents is not sustained.

8. Recommendations

In relation to the above findings and conclusions, the following recommendations were made.

1.   Since it is found out that there is a significant relationship between disaster awareness and practices with the level of preparedness of the respondents, preparedness activities may also be given special consideration in preparing the annual improvement plan. Disaster awareness campaign and the different practices about disaster preparedness may also be strengthened in school. Activities that may lead to disaster awareness may be integrated in every subject. Furthermore, this implies that when the practice on disaster preparedness increases, the level of disaster preparedness of the respondents also increases. Schools may always perform activities like drills, first aid training and workshops. More preparedness activities mean more prepared learners when it comes to disaster.

2. DRRM Coordinators may constantly plan activities integrating the practices including but not limited to earthquake drills, first aid training, fire drills, and information reporting to increase the preparedness level of out pupils-respondents.

3.   Similar studies may be conducted by future researchers that may correlate the variables being used in the study with a bigger scope.

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