Disaster Risk Management Practices and Readiness for Disasters among Selected Schools in City of Biñan, Laguna, Philippines

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Abstract

Everyone must be prepared as disasters can happen anywhere – at home, at the workplace or at school. Disaster plans should be in place to at least lessen the impact of disasters on peoples' lives especially. This descriptive-correlation study involved thirty (30) schools in City of Biñan, Laguna. The schools have very high level of implementation of disaster risk management practices for earthquakes, high level of implementation of disaster risk management practices for fires and floods, and high level of readiness for disasters. Schools with land area of one hectare and above had higher level of implementation of disaster risk management practices for earthquakes. Private schools and those with land area of 1-2 hectares had higher level of implementation of disaster risk management practices for fires. Private schools have higher level of implementation of disaster risk management practices for floods and have higher level of readiness for disasters than public schools. The higher is the schools' level of implementation of disaster risk management practices, the higher is their level of readiness for disasters.

Keywords: disaster risk management, disaster risk management practices, readiness for disasters

1. Introduction

Nobody can predict when a disaster like earthquake, fire and flood will exactly occur. Inasmuch as the Philippines is situated along the Pacific Typhoon Belt and is within the Pacific Ring of Fire, the country is vulnerable to natural hazards. According to the 2012 World Risk Report, as cited in the Disaster Management Practices in the Philippines: An Assessment (2013), the Philippines is ranked third among 173 countries in terms of disaster risk. As disasters can strike without warning, the importance of being ready should never be ignored. Every citizen is responsible for protecting himself and his family by knowing what to do before, during and after a disaster or calamity.

To address the nation's concerns of strengthening the country's disaster risk reduction system, Republic Act No. 10121 otherwise known as "The Philippine Disaster Risk Reduction and Management (PDRRM) Act of 2010" was passed into law in May 2010. It seeks the reduction and better management of disaster risk. Under this Act, the functions of the National Disaster Risk Reduction and Management Council (NDRRMC) include the development of a national disaster risk reduction and management framework, "which shall provide for comprehensive, multi-sectoral, inter-agency and community-based approach to disaster risk reduction and management. The National Disaster Risk Reduction Management Framework (NDRRMF) emphasizes that in time, resources invested in disaster prevention, mitigation, preparedness and climate change adaptation will be more effective in attaining the goal of adaptive, disaster-resilient communities and sustainable development. According to Ani, et al (2015) RA 10121 has taken disaster risk reduction and management at the forefront of national and local development plans and policies.

RA 10121 mandates all national government agencies to institutionalize policies, structures, coordination mechanisms and programs with continuing budget appropriation on Disaster Risk Reduction Management (DRRM) from national to local levels. In line with this Act, the Department of Education (DepEd) constituted the DepEd DRRM Core Group to provide a venue to discuss issues on DRRM and Education in Emergencies (EiE), to recommend policy actions, and propose programs/projects which will mitigate and reduce the impact of disasters to DepEd teaching/non-teaching personnel/staff, learners and properties. The DepEd created the DRRM Office (DRRMO) to institutionalize the culture of safety at all levels, to systematize the protection of education investments and to ensure continued delivery of quality education services. It shall serve as the focal and coordinative unit for DRRM-related activities. The DRRMO shall perform the following specific functions which is to act as the focal point for DepEd in planning, implementing, coordinating and monitoring of activities related to DRRM, EiE and Climate Change Adaptation (CCA), to develop and recommend policy standards and actions to DepEd management on DRRM/EiE/CCA matters, and to initiate and coordinate cooperation and collaborative activities with the national government agencies, nongovernmental organizations (NGO) and civil society organizations (CSO).

The disaster risk management cycle consists of four phases: Prevention/Mitigation and Preparedness in the pre-disaster stage, and Response and Rehabilitation/Reconstruction in post-disaster stage. In the "Prevention/Mitigation" phase, efforts are made to prevent or mitigate damage (e.g. construction of dikes and dams against floods). Activities and measures for ensuring an effective response to the impact of hazards are classified as "Preparedness" (e.g. emergency drills and public awareness) and are not aimed at averting the occurrence of a disaster. "Response" includes such activities as rescue efforts, first aid, firefighting and evacuation. In the "Rehabilitation/Reconstruction" phase, considerations of disaster risk reduction should form the foundations for all activities. Taking appropriate measures based on the concept of disaster risk management in each phase of the disaster risk management cycle can reduce the overall disaster risk.

Disaster preparedness refers to pre-disaster actions and measures being undertaken within the context of disaster risk reduction and management which are based on sound risk analysis as well as pre-disaster activities to avert or minimize loss of life and property such as, but not limited to, community organizing, training, planning, equipping, stockpiling, hazard mapping, insuring of assets, and public information and education initiatives (RA 10121, 2010). It pertains to the preventive measures taken to reduce the severity of a disaster's effects with the potential to save lives and properties and to return the affected population to normalcy as quickly as possible.

School disaster management is the process of assessment and planning, physical protection and response capacity development designed to protect students and the staff from physical harm, minimize disruption and ensure the continuity of education for all children, and develop and maintain a culture of safety. School safety and educational continuity require a dynamic, continuous process initiated by management and involving workers, students, parents, and the local community. School disaster management involves the familiar cycle of steps found in all project management: assess hazards, vulnerabilities, capacities and resources; plan and implement for physical risk reduction, maintenance of safe facilities, standard operating procedures and training for disaster response; test mitigation and preparedness plans and skills regularly, with realistic simulation drills; and revise your plan based on one's experience (Disaster and Emergency Preparedness: Guidance for Schools, 2010).

Everyone must be prepared as disasters can happen anywhere – at home, at the workplace or at school. When a disaster happens at school, everyone should be prepared to handle it effectively. School administrators, faculty and students can prepare themselves for disasters like earthquakes, fires and floods. There should be a disaster preparedness plan suited for the number of people to be evacuated. School administrators must ensure that everybody in the school know what to do in case of a disaster. Being prepared can reduce danger, fear, anxiety and losses that accompany disasters.

In a study conducted by Campilla (2016), results revealed that disaster risk reduction management practices in terms of disaster preparedness, disaster management, disaster mitigation, response management and recovery management were "practiced" by the elementary school administrators of Pangasinan. However, Tuladhar (2014) found out in his study that initiatives taken for disaster education in Nepal are not enough and a major challenge for disaster risk reduction in a school community is implementing methods, especially at the individual level. Likewise, disaster education should not only be confined within the school students, but it must also be promoted to families and communities to contribute to a disaster safe society.

According to Garcia (2016), in his study on the status and implementation of disaster risk reduction management in flood-prone schools in Laguna, findings showed that preparation of disaster risk reduction plan, organization of disaster risk reduction group, and implementation of disaster risk reduction measures were "implemented" by the school principals and disaster risk reduction management coordinators. Similarly, the Flood Disaster Risk Management-Disaster Risk Reduction (DRM-DRR) programs of Pasig City for prevention and mitigation, disaster preparedness and risk reduction, emergency response, and rehabilitation and recovery are effective (Robas, 2014).

Findings from the study of Jurilla (2016) revealed that disaster risk reduction preparedness of Iloilo Province, Philippines has essentially achieved its goals in terms of implementation.

Unfortunately, in Kenya, most of the safety situation guidelines have not been adhered to and most of the schools are not competently ready to deal with disaster or crises situations. In addition, the schools have not constituted strong and effective school safety committees to oversee disaster preparedness and emergency planning and implementation. The study has also indicated that some of the schools do not have scouting movements and therefore students' training on dealing with disasters is non-existent. Further, the schools' infrastructure are reportedly rarely maintained and serviced. In addition, students rarely report on any spotted risk situations in the school. Moreover, the schools do not have trained personnel who can oversee their safety situations and who can deal with crises as and when they occur. In fact, some schools do not have copies of the Ministry of Education circulars on safety and therefore are not conversant with the specified safety standards and guidelines required to guarantee the safety and security of school community (Telewa, et al, 2015).

Musigapong (2013) suggested that strategy planning to improve attitudes and practices through proper training on how to conduct evacuation in case of fire among students are needed.

In Turkey, Ozwen (2006) conducted a study to determine the level of preparedness of primary schools towards earthquakes and found out that the school principals were not so effective in achieving high level of preparedness for earthquakes. Also, school staff were relatively unprepared to respond to earthquakes, therefore, recommended further training for all school staff.

Although teachers have a very good attitude during training, they do not have sufficient knowledge in detail for disaster preparedness. Their approach to disaster preparedness is not philosophical or holistic. It must be kept in mind that time is running out very fast and unsafe schools are under threat of the expected devastating earthquake. It is important to bear in mind that earthquake resistant schools will educate creative and powerful brains. The children who are going to build our future cannot be sacrificed to earthquakes (Ersoy and Kocak, 2016).

As the school is considered the second home of the students, their safety and security must be guaranteed at all times especially in cases of disasters and emergencies. It is in this regard that this study was conducted to determine the level of implementation of disaster risk management practices and level of preparedness for disasters among schools in Biñan City, Laguna.

2. Methodology

This study utilized the descriptive-correlation design inasmuch as it describes certain phenomena particularly the schools' level of implementation of disaster risk management practices and level of readiness for disasters. The study is also a correlational one since relationships between the variables were looked into.

Thirty (30) schools in Biñan City, Laguna, both private and public, participated in the study. The respondents were either the school head or the disaster risk management coordinator.

The researcher-made instrument used in this study was a three-part questionnaire. Part 1 covered the school's profile while Part 2 dealt with the school's level of implementation of disaster risk management practices. Part 3 dealt with the school's level of readiness for disasters. The instrument underwent reliability analysis using Cronbach's Alpha.

The statistical tools used for the quantitative analysis of the data gathered included percentage, which was used to describe the schools' profile, and weighted mean, which was used to determine the schools' level of implementation of disaster risk management practices and level of readiness for disasters. T test for independent samples and Kruskal-Wallis test were used to determine if there was significant difference in the schools' (a) level of implementation of disaster risk management practices and (b) level of readiness for disasters when they are grouped according to school profile. Pearson r was used to determine the relationship between the schools' level of implementation of disaster risk management practices and level of readiness for disasters.

3.Results and Discussion

This study aimed at determining the schools' profile, level of implementation of disaster risk management practices and level of readiness for disasters. It also looked into the difference in the (a) level of implementation of disaster risk management practices, and (b) level of readiness for disasters when grouped according to schools' profile. Lastly, it determined the relationship between the schools' level of implementation of disaster risk management practices and level of readiness for disasters.

As shown in Table 1, seventeen (17) public schools or 57% participated in the study while thirteen (13) or 43% were private schools. Eighteen (18) schools or 60% have land area of less than one hectare while nine (9) schools or 30% have land area of 1-2 hectares. Only three (3) schools or 10% have land area of three hectares and above. In case of a disaster, fourteen (14) schools or 47% need to evacuate not more than 500 people from their school, while six (6) schools or 20% need to evacuate 501 to 1000 people. An aggregate of ten (10) schools or 34% need to evacuate more than 1000 people.

In general, majority of the schools who took part in the study were public schools with land area of less than one hectare. Most of the schools need to evacuate 500 people and below.

As shown in Table 2, there was a "very high" level of implementation of disaster risk management practices like "conducting regular earthquake evacuation drills at least 2 times a year" (WM = 3.83), "acquainting students with safety procedures like "applying "duck, cover and hold" (WM = 3.77), taking cover under a sturdy table or strongly supported doorway" (WM = 3.77), "keeping calm" (WM = 3.73), "opening of the door by the nearest occupants to facilitate prompt exit" (WM = 3.67) and "watching out for falling objects" (WM = 3.60).

There was a "high level" of implementation of "conducting orientation on disaster risk management in case of earthquake at the beginning of the school year" (WM 3.50), "inspecting school buildings to determine if they are structurally sound and strong" (WM = 3.40), "having a search and rescue plan" (WM = 3.40) and "providing for a safe evacuation site where people will be directed after they have left the building" (WM = 3.37).

An average weighted mean of 3.60 indicates a "very high" level of implementation of disaster risk management practices for earthquakes.

As shown in Table 3, there was a "very high" level of implementation of disaster risk management practices like acquainting the students with safety procedures like "keeping calm" (WM = 3.53) and "following evacuation routes" (WM = 3.53).

There was a "high level" of implementation of acquainting students with safety procedures like "walk, do not run" (WM 3.50), "displaying prominently fire exit signages and maps" (WM = 3.47), "conducting orientation on disaster risk management in case of fire at the beginning of the school year" (WM = 3.47) and "conducting fire drills regularly at least 2 times a year" (WM = 3.47).

An average weighted mean of 3.41 indicates a "high" level of implementation of disaster risk management practices for fires.

As shown in Table 4, there was a "very high" level of implementation of disaster risk management practices like "facilitating the transfer of equipment and important documents to higher ground in case of flooding" (WM = 3.60).

There was a "high level" of implementation of "strict monitoring of the weather conditions in the locality in case of heavy rains and typhoons" (WM 3.43), "conducting orientation on disaster risk management in case of flood at the beginning of the school year" (WM = 3.43), "regular checking of drainage systems" (WM = 3.10) and "modifying the floor level and placing of barriers in low lying areas in the school" (WM = 3.40).

An average weighted mean of 3.24 indicates a "high" level of implementation of disaster risk management practices for floods.

According to Garcia (2016), schools had maintained the safekeeping of vital school records and learning materials.

As shown in Table 5, there was a "very high" level of readiness for disasters like "providing for a safe evacuation site to accommodate the evacuees" (WM = 3.53), "updating of contact numbers of parents and guardians" (WM = 3.53), and "providing whistles" (WM = 3.53).

There was a "high level" of readiness for disasters like "having a school disaster management committee to oversee disaster risk reduction and preparedness" (WM 3.50), "providing a disaster management plan suited for the number of people to be evacuated" (WM = 3.50), "complying with two exits for classrooms whenever possible" (WM = 3.50) and "designing classroom and office doors to open outwards" (WM = 3.47).

An average weighted mean of 3.35 indicates that the schools have a "high" level of readiness for disasters.

Findings from the study of Jurilla (2016) revealed that disaster risk reduction preparedness of Iloilo Province, Philippines has essentially achieved its goals in terms of implementation. However, the findings of Ozwen (2006) showed that the school principals were not so effective in achieving high level of preparedness for earthquakes. Also, school staff were relatively unprepared to respond to earthquakes, therefore, recommended further training for all school staff. In Kenya,

As shown in Table 6, there is no significant difference in the level of implementation of disaster risk management practices when the schools are grouped according to type of school ($p = 0.547$) and number of people to be evacuated ($p = 0.197$) in case of an earthquake. The schools have the same level of implementation of disaster risk management practices in case of fire irrespective of the type of school and number of people to be evacuated.

However, there is significant difference in the level of implementation of disaster risk management practices when the schools are grouped according to land area ($p = 0.024$). Schools with land area of 1 hectare or more had higher level of implementation of disaster risk management practices for earthquakes.

As shown in Table 7, there is no significant difference in the level of implementation of disaster risk management practices when the schools are grouped according to the number of people to be evacuated ($p = 0.327$) in case of fire. The schools have the same level of implementation of disaster risk management practices in case of fire irrespective of the number of people to be evacuated.

However, there is significant difference in the level of implementation of disaster risk management practices when the schools are grouped according to type of school ($p = 0.047$) and land area ($p = 0.024$). Private schools and those with land area of 1-2 hectares had higher level of implementation of disaster risk management practices in case of fire.

As shown in Table 8, there is no significant difference in the level of implementation of disaster risk management practices when the schools are grouped according to land area (p = 0.342) and number of people to be evacuated (p = 0.129) in case of flood. The schools have the same level of implementation of disaster risk management practices in case of fire irrespective of the schools' land area number of people to be evacuated.

However, there is significant difference in the level of implementation of disaster risk management practices when the schools are grouped according to type of school (p = 0.025). Private schools have higher level of implementation of disaster risk management practices in case of flood than public schools.

As shown in Table 9, there is no significant difference in the schools' level of readiness for disasters when the schools are grouped according to land area (p = 0.615) and number of people to be evacuated (p = 0.586). Schools have the same level of readiness for disasters irrespective of the schools' land area number of people to be evacuated.

However, there is significant difference in the schools' level of readiness for disasters when the schools are grouped according to type of school (p = 0.025). Private schools have higher level of readiness for disasters than public schools.

As shown in Table 10, there is a significant relationship between the schools' level of implementation of disaster risk management practices in case of earthquake (p = 0.001), fire (p = 0.000) and flood (p = 0.002) and their level of readiness for disasters. The higher is the schools' level of implementation of disaster risk management practices for earthquakes, fires and floods, the higher is their level of readiness for disasters.

According to the 2005 Hyogo Framework for Action (HFA), disaster preparedness is one element of a holistic approach to the reduction of risk associated with natural hazards as an adequate level of preparedness can be particularly essential to saving lives and livelihoods in the face of a natural hazard event.

4. Conclusion

Based on the results presented, it can be concluded that: Majority of the school who participated in the study are public schools, with land area of less than one hectare and will evacuate around 500 people in case of a disaster. The schools have a very high level of implementation of disaster risk management practices for earthquakes. The schools have a high level of implementation of disaster risk management practices for both fires and floods. The schools have a high level of readiness for disasters. Schools with land area of 1-2 hectares had higher level of implementation of disaster risk management practices for earthquakes. Private schools and those with land area of 1-2 hectares had higher level of implementation of disaster risk management practices for fires. Private schools have higher level of implementation of disaster risk management practices for floods. Private schools have higher level of readiness for disasters than public schools. The higher is the schools' level of implementation of disaster risk management practices for earthquakes, fires and floods, the higher is their level of readiness for disasters.

5. Directions for Future Use

Based on the conclusions drawn, the following recommendations are offered: School authorities should revisit their disaster plans regularly to adapt to the changes in the number of people to be evacuated each year. There should be a search and rescue plan properly coordinated with the local disaster risk reduction and management council. Orientation on disaster risk management should be done regularly so students are constantly reminded of the safety procedures to be undertaken in the event of a disaster. Thorough inspection of school buildings must be undertaken to ensure that they are structurally sound and strong. Declogging of canals should be frequently implemented. Schools must have a vehicle readily available for use during disasters. Public schools especially, must coordinate with local government units to find ways and means to improve their level of readiness for disasters. Research findings can be utilized by the local disaster risk reduction management council as bases for disaster policies to make all stakeholders ready for disasters.

6. Tables

Table 1. Profile of the Schools

Profile	Frequency	Percentage, %
Type of school		
Private School	13	43
Public School	17	57
Land area		
Less than 1 hectare	18	60
1-2 hectares	9	30
3 hectares and above	3	10

Number of people to be evacuated in case of a disaster		
500 and below	14	47
501 to 1000	6	20
1001-2000	5	17
2001 and above	5	17
Total Number of Schools = 30		

Table 2. Schools' Level of Implementation of Disaster Risk Management Practices for Earthquakes

Indicators	Weighted Mean	Interpretation	Rank
School buildings have been inspected to determine if they are structurally sound and strong.	3.40	High	8.5
There is a safe evacuation site where people will be directed after they have left the building.	3.37	High	10
Regular earthquake evacuation drills are conducted at least 2 times a year.	3.83	Very High	1
Orientation on disaster risk management in case of earthquake is conducted at the beginning of the school year.	3.50	High	7
The students are acquainted with safety procedures like:			
applying "duck, cover and hold"	3.77	Very High	2.5
taking cover under a sturdy table or strongly supported doorway,	3.77	Very High	2.5
keeping calm,	3.73	Very High	4
watching out for falling objects,	3.60	Very High	6
occupants nearest the door should open it to facilitate prompt exit	3.67	Very High	5
The school has a search and rescue plan.	3.40	High	8.5
Average Weighted Mean	3.60	Very High	

Table 3.Schools' Level of Implementation of Disaster Risk Management Practices for Fires

Indicators	Weighted Mean	Interpretation	Rank
There is a strong warning system in place for fires that will set off alarms throughout the building.	3.23	High	10
Building floor plan or blueprints are displayed in prominent areas to help firefighters navigate the school in case of fire.	3.33	High	9
Fire exit signages and maps are prominently displayed in the buildings.	3.47	High	5
Orientation on disaster risk management in case of fire is conducted at the beginning of the school year.	3.47	High	5
Regular fire drills are conducted at least 2 times a year.	3.47	High	5
The students are acquainted with safety procedures:			
stop, drop and roll	3.40	High	8
walk, do not run	3.50	High	3
keep calm	3.53	Very High	1.5
follow evacuation routes	3.53	Very High	1.5
There is a safe evacuation site where people will be directed after they have left the building.	3.43	High	7
The school has a search and rescue plan.	3.20	High	11
Average Weighted Mean	3.41	High	

Table 4. Schools' Level of Implementation of Disaster Risk Management Practices for Floods

Indicators	Weighted Mean	Interpretation	Rank
There is strict monitoring of the weather conditions in the locality in case of heavy rains and typhoons.	3.43	High	2
Orientation on disaster risk management in case of flood is conducted at the beginning of the school year.	3.17	High	3
Counter measures like modifying the floor level and placing of barriers in low lying areas in the school prone to flooding had been undertaken.	2.90	High	5
Drainage systems are regularly checked.	3.10	High	4
The school can readily facilitate the transfer of equipment and important documents to higher ground in case of severe flooding.	3.60	Very High	1
Average Weighted Mean	3.24	High	

Table 5. Schools' Level of Readiness for Disasters

Indicators	Weighted Mean	Interpretation	Rank
There is a school disaster management committee to oversee disaster risk reduction and preparedness.	3.50	High	5
There is a disaster management plan suited for the number of people to be evacuated.	3.50	High	5
There is a safe evacuation site ready to accommodate the evacuees.	3.53	Very High	2
Communication facilities are on hand to coordinate with local government units in emergency cases like earthquake, fire and flood.	3.40	High	10
Building occupants can be readily evacuated as they are knowledgeable on the standard operating procedures to be observed during emergencies.	3.40	High	10
Classroom and office doors are designed to open outwards.	3.47	High	7
Classrooms have two exits whenever possible.	3.50	High	5
School authorities have updated contact numbers of the parents or guardians.	3.53	Very High	2
A vehicle is readily available to transport calamity victims.	2.97	High	17
The school can provide for adequate emergency supplies / equipment such as:			
safe drinking water,	3.40	High	10
emergency food,	3.13	High	16
first aid kits with routine medications	3.40	High	10
flashlight / batteries	3.40	High	10
chemical light sticks / matches	3.07	High	14.5
small radio (battery-operated, portable)	3.07	High	14.5
toiletries / personal hygiene items	3.23	High	13
whistle	3.53	Very High	2
Average Weighted Mean	3.35	High	

Table 6. Difference in the Schools' Level of Implementation of Disaster Risk Management Practices for Earthquakes When Grouped According to School Profile

School Profile	Mean	Statistical Test	p-value	Interpretation
Type of school	X_1 (Private) = 3.6462 X_2 (Public) = 3.5706	(t test) t = 0.610	0.547	Not Significant
Land area	X_1 (less than 1 hectare) = 3.4778 X_2 (1-2 hectares) = 3.7667 X_3(3 hectares and above) = 3.8667	(Kruskal-Wallis Test) X^2 = 7.464	0.024	Significant
Number of people to be evacuated	X_1 (500 and below) = 3.4786 X_2 (501 to 1000) = 3.7167 X_3(1001 to 2000) = 3.5600 X_4(2001 and above) = 3.8600	(Kruskal-Wallis Test) X^2 = 4.672	0.197	Not Significant

0.05 level of significance

Table 7. Difference in the Schools' Level of Implementation of Disaster Risk Management Practices for Fires When Grouped According to School Profile

School Profile	Mean	Statistical Test	p-value	Interpretation
Type of school	X_1 (Private) = 3.6215 X_2 (Public) = 3.2847	(t test) t = 2.080	0.047	Significant
Land area	X_1 (less than 1 hectare) = 3.2456 X_2 (1-2 hectares) = 3.7311 X_3(3 hectares and above) = 3.6400	(Kruskal-Wallis Test) X^2 = 7.450	0.024	Significant
Number of people to be evacuated	X_1 (500 and below) = 3.3686 X_2 (501 to 1000) = 3.4733 X_3(1001 to 2000) = 3.2840 X_4(2001 and above) = 3.7000	(Kruskal-Wallis Test) X^2 = 3.454	0.327	Not Significant

0.05 level of significance

Table 8. Difference in the Schools' Level of Implementation of Disaster Risk Management Practices for Floods When Grouped According to School Profile

School Profile	Mean	Statistical Test	p-value	Interpretation
Type of school	X_1 (Private) = 3.4923 X_2 (Public) = 3.0471	(t test) t = 2.368	0.025	Significant
Land area	X_1 (less than 1 hectare) = 3.1222 X_2 (1-2 hectares) = 3.4222 X_3(3 hectares and above) = 3.4000	(Kruskal-Wallis Test) X^2 = 2.146	0.342	Not Significant
Number of people to be evacuated	X_1 (500 and below) = 3.1714 X_2 (501 to 1000) = 3.4333 X_3(1001 to 2000) = 2.8400 X4(2001 and above) = 3.6000	(Kruskal-Wallis Test) X^2 = 5.672	0.129	Not Significant

0.05 level of significance

Table 9. Difference in the Schools' Level of Readiness for Disasters When Grouped According to School Profile

School Profile	Mean	Statistical Test	p-value	Interpretation
Type of school	X_1 (Private) = 3.5292 X_2 (Public) = 3.2206	(t test) t = 2.369	0.025	Significant
Land area	X_1 (less than 1 hectare) = 3.3167 X_2 (1-2 hectares) = 3.3656 X_3(3 hectares and above) = 3.5467	(Kruskal-Wallis Test) X^2 = 0.974	0.615	Not Significant
Number of people to be evacuated	X_1 (500 and below) = 3.3107 X_2 (501 to 1000) = 3.3717 X_3(1001 to 2000) = 3.2240 X4(2001 and above) = 3.5860	(Kruskal-Wallis Test) X^2 = 1.935	0.586	Not Significant

0.05 level of significance

Table 10. Relationship between the Schools' Level of Implementation of Disaster Risk Management Practices and their Level of Readiness for Disasters

Disaster Risk Management Practices for	Pearson r	p value	Interpretation
Earthquakes	0.596	0.001	Significant
Fires	0.712	0.000	Significant
Floods	0.539	0.002	Significant

0.01 evel of significance

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