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Senior High School Students' Perceived Level of Preparedness, Involvement and Knowledge on Emergencies

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ABSTRACT: This study was intended to determine the senior high school students' perceived level of preparedness and to examine the relationship between the perceived level of preparedness, involvement, knowledge, and personal emergency preparedness. The senior high school students at San Jose National High School were the respondents to the study. The descriptive cross-sectional design was used in this study. Furthermore, a modified survey questionnaire was used to gather data, and JASP was employed in data analysis. Findings showed that the respondents were moderately prepared in terms of their perceived level of preparedness. Moreover, there is a significant relationship between involvement and perceived level of preparedness. Meanwhile, there is no significant relationship between involvement and measures of personal emergency preparedness. It was also revealed that there is a significant relationship between knowledge and perceived level of preparedness. On the other hand, there is no significant relationship between knowledge and measures of personal emergency preparedness. The researcher recommends that future researchers should establish a relationship between knowledge and involvement.

KEYWORDS: Emergencies, Preparedness, Involvement, Knowledge, Disasters, Senior High School Students

THE PROBLEM AND ITS SETTING

Introduction

The world is being mocked by disasters each day. Disasters come in different forms; they can be a flood, hurricane, earthquake, nuclear, industrial, transport accident, shooting spree, or terrorist attack. All these bad events have the potential to endanger the people in a community and cause stress, including the risk to one's own life and physical integrity, vulnerability to death and dying, the death of a family member, profound loss, social and community destruction, and a continuing burden. Because of the frequency with which disasters occur, the question of whether they affect mental health has grown in importance over the years (Goldmann & Galea, 2014). Business Insider (2015) stated that by 2050, over six million people every year would likely be killed by air pollution alone. As the Earth heats up, hurricanes could be 300% more powerful, and as oceans get warmer, sea levels would rise across the globe.

Developed and least-developed countries have a high risk of disaster, so they have made long-term progress since their treatment and resources for poverty reduction and economic development were diverted to reconstruct damages, and the budget was transferred to disaster relief operations. Society nowadays is still unprepared to respond to the risks of various events. Their efforts over the past decades in development assistance, poverty reduction, and disaster risk response have not yet been fully sustained. Climate change affects developing countries in particular because their primary sources of income are agriculture and fishing, which are critical to economic progress. Developing countries also have limited human and financial capability to prevent the effects of disasters (Miyan, 2015).

China, the United States, India, Indonesia, and the Philippines have been the top five natural disaster-prone countries over the last decade. As one of the countries, the Philippines experienced the highest number of natural disasters in history in 2011. Floods and landslides, storms, volcanic eruptions, and earthquakes affected the country (Guha-Sapir & Vos, 2012). An archipelagic nation like the Philippines is affected by weather-related hazards frequently. Tropical storms and constant rain caused hazards like floods and landslides that turned into disasters. Severe typhoons and flooding incidents affect the Philippines, where different sectors tend to be damaged in various ways (Holden & Marshall, 2018).

According to a report by Balabo (2013), the Philippines is more vulnerable to climate risks than its neighboring countries. It was reported that there are at least 23 provinces that are considered to be at high risk for disasters due to the hazards of climate change. The different parts of the Philippines are unlikely to be exempt from any disaster, and that leaves the Filipinos vulnerable.

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Tschakert et al. (2017) define vulnerability to natural hazards as "the potential to be harmed by natural hazards." Vulnerability to natural hazards depends on the geography of the place.

Reminiscing what had happened during the typhoon, the Philippines' main disaster agency stated that more or less 3,633 people died, 12,487 were injured, and the dead bodies are located in unimaginable places and situations. More than 600,000 people were left homeless as a result of the chaos. It was reported that international aid had finally arrived; the United States Navy helicopters flew sorties from the aircraft carrier USS George Washington off the coast, dropping water and food to isolated communities. The US military said it would send 1,000 more troops, as well as additional ships and aircraft, to help with the relief effort (FOX NEWS World, 2013).

Even though there are many ways to minimize the effect of disaster, their threat remains considerable. The study published by the International Disaster and International Federation of the Red Cross and Red Crescent Societies (IFRC) in Database World Disasters Report revealed that the casualties brought by natural disasters is increasing and the economic losses of the places were high. The study also pointed out that the casualties were caused by climate-related hazards. If world's climate changes constantly, climate-related issues are likely to happen. Places will experience great events like heat and cold waves, extreme floods, drought, tropical cyclones, storms, and precipitation (Pörtner et al., 2022).

Experts warned that the Philippines' disaster preparedness measures were insufficient even before Typhoon Haiyan hit. A report released in 2010 by multinational risk consultancy Pacific Strategies and Assessments claims that the country has achieved progress in disaster preparedness but is "misleading." It was stated that there is a blatant lack of government resources and coordination between national and local officials to properly use international assistance; however, officials claim that they are continuously working to make the country more resilient to different kinds of disaster (Romero, 2013). For a nation like the Philippines, a proactive risk management approach is basic. More than 40 percent of Filipinos (37 million) are under 18. Children are the most vulnerable in any disaster, so their participation in disaster risk reduction (DRR) is critical. Several international, local, and non-government organizations support the conduct of programs and trainings for the youth. The Red Cross youth program provides training in various fields, such as leadership and disaster risk reduction, that is necessary for the emergency preparedness of the Filipino students.

Ranada (2013) said that Tacloban City is a place that is vulnerable to any disaster, and people in it are suffering from devastating effects such as typhoons. In his article, he emphasizes that Tacloban City has a weak preparedness plan that puts people residing in the city and other places in Leyte at risk. According to the study resulting from scenario-building exercises in Tacloban, the city was among the worst-hit by nightmare-turned-reality Super Typhoon (Haiyan) because of its large population, high level of urbanization, location, and weak coastal areas, which cause unique vulnerability. Many organizations and stakeholders in the city are vulnerable and affected by the effects of disaster; one of the organizations that needs attention in promoting preparedness for emergencies are schools.

San Jose National High School, being a school near the coastal area, is, in fact, a vulnerable school when a typhoon hits Tacloban City. Many casualties and damages occur, such as destroyed rooms and other facilities. In order not to face such a worst-case scenario in any disaster, authorities, officials, and students promote emergency preparedness, develop their knowledge of safety measures, and involve themselves in planning and practices. In addition, "schools play an important role in disaster risk reduction. Schools educate the community and often provide shelter during a disaster," according to the International Union for Conservation of Nature (2012). The school should be very knowledgeable about taking preventive measures during disasters because they play a big part in relaying information and identifying evacuation areas. Students are considered a risk group because most of them do not know what to do if they're in that situation when a certain disaster occurs. That is why they need to be taught how to handle an emergency (Khorraam-Manesh, 2017).

This premise, along with other evidence, indicates that those students are more likely to require the overall preparation. In this study, the researcher would want to (1) study senior high school students' perceived level of preparedness and (2) examine the relationship among the perceived level of preparedness, involvement, knowledge, and personal emergency preparedness.

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Conceptual Framework

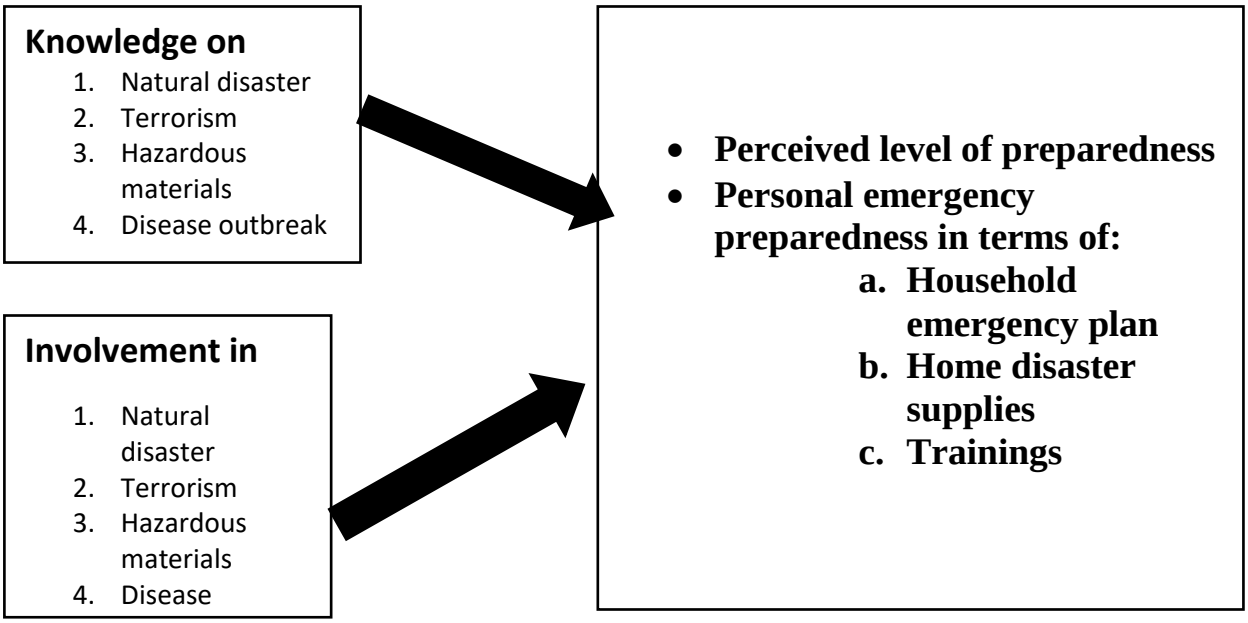

Figure 1. Framework of the study

The figure above shows the conceptual framework of this study. In this study, the researcher aims to know the perceived level of preparedness and personal emergency preparedness (in terms of household emergency plans, home disaster supplies, and training) of the senior high school students at San Jose National High School by identifying their current knowledge and involvement about disasters.

In order to measure the relationship between knowledge, involvement, and emergency preparedness of the students, the researcher used the Issue Process Model (Hallahan, 2022). According to the Issue Process Model, the study of issue dynamics is the main concern so that there will be an effective interaction between organizations and the public, resulting in very useful information that can be applied to actual campaigns. Issue dynamics talks about how disputes arise, and alternative responses organizations might use in order to solve issues as defined in the model. Based on this characterization, there were five prime publics classified by their level of knowledge and involvement in a specific topic as defined by Hallahan (2022). Even though the model appears condensed on the surface, it allows an individual to advance from one category of the public to another based on their knowledge and involvement in a particular subject. These are the foci of the model, which is represented by the diagram below. The assumption is that if a person has a high level of knowledge and involvement, then their attitude will be good, and they will be able to motivate an individual to take action.

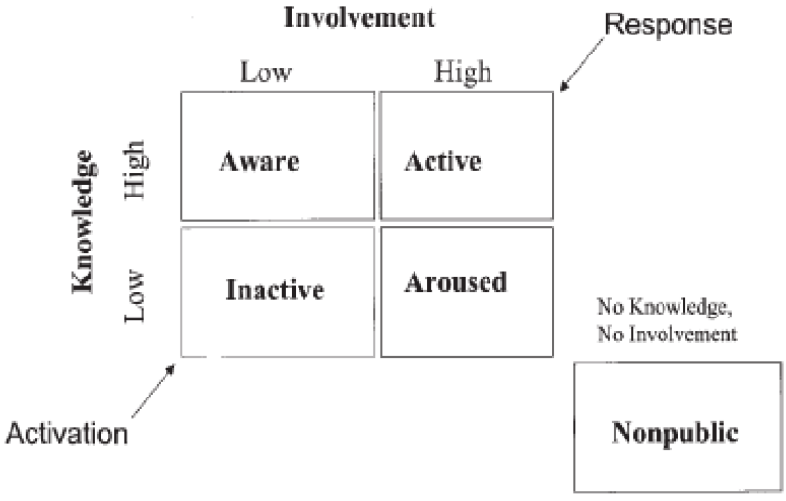

Figure 2. Five public model (Hallahan, 2022)

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Keeping in mind that the audience (students) is a key factor in attempting to spread a message from sender to receiver. A dynamic explanation that encompasses the variety of degrees to which the public is organized "to talk problems and issues," as proposed by Hallahan (2022). In this way, the public will be enlightened to create a group of individuals that are loosely organized toward an organization that has emergency objectives.

Knowledge

Robinson et al. (2017) stated that effective communication is about more than just exchanging information; it is about knowledge level and understanding the emotion and intention behind the information. The more effort and practice you put in, the more instinctive your communication skills will become. This is very useful in emergency response: the public and organizations must work together to ensure effective information transmission. To be understood by the listener or audience and have effective communication or to be knowledgeable, the transmission of the message must be clear and concise (Feliú-Mójer, 2015); through this, people will be able to take action in any emergency.

As stated by Donate & de Pablo (2015), for a positive relationship between the public and organization, people must be "knowledgeable." The role of knowledge is clearly important for effective collaborative practice. Being able to build trusting and respectful relationships and having a desire for continuous learning and reflection is considered essential to moving practice forward.

Fogli & Guida (2013) emphasize that knowledge and a better understanding serve as an advantage to qualify in any situation (ex., in the marketplace, where competition is fierce and the basis for qualification is intellectual capabilities). This only shows that those individuals who are more knowledgeable have more chances of survival in any situation and are better able to respond in any emergency. Essentially, the greater an individual's level of knowledge, the better prepared they are to make sense of a particular issue and the more likely they are to take action. Individuals become more aware of their own preparedness for emergencies as their knowledge grows, which leads to a higher level of knowledge and a more active state (Groves, 2013). Finally, the independent variable of knowledge was evaluated through three self-perceived measures: confidence in knowledge of preparation, knowing what to do during an event, and knowledge of information pertaining to preparedness.

Involvement

Apart from knowledge and communication, Seppänen et al. (2013) said that the communication of symbols alone does not make an organization more effective. Symbolic and behavioral relationships are "intertwined like the strands of a rope." They emphasized that organizations must evaluate their contributions and build good relationships with the public if they are to achieve their goals and missions. One of the most important aspects of effective emergency preparedness is public participation.

There are four primary leadership styles that the representative of an organization emphasizes in situational leadership theory, as stated by Cherry (2020): the first is telling, which involves the leader of an organization telling people what to do and how to do it. Second is "selling," its style involving more back and forth between leaders and followers; in this case, the leader "sells" their ideas and message to get the group members to buy into the process. Third is participating, in which people are given less direction and are allowed to think critically, create their own ideas, and make decisions. Fourth is delegating, which is less involved and termed a "hands-off approach to leadership," and most of the decisions and responsibility for what happens will depend on the members.

In Sociology guide (2017), individuals play an important role in the functioning of the organization. Each member of an organization must be induced or coerced to participate in it. The nature of individuals is that they tend to participate in organizations when they are going to gain something from them.

Individual motives play an important role in the fulfillment of organizational goals. People cannot work in organizations without any motives, purposes, or thinking. Individual involvement in organizations is critical to their ability to function productively; organizations do not operate automatically or mechanically (Sociology guide, 2017).

As stated by Anderson (2017), the solid foundation of any successful organization is its people. Involving people in the decision-making process not only empowers them to contribute to the success of an organization but also saves it time and money through increased productivity and reduced outsourcing. Members' participation in the decision-making process allows them to express their opinions and share their knowledge with others. While this improves the relationship between the organization and the public, it also encourages a strong sense of teamwork among them. Relationships with both of them lead to an increase in effectiveness and, ultimately, to better teamwork and performance that result in overall success.

One of the advantages of involving the public in an organization is that it will be able to achieve equilibrium, which means that it will be able to maintain the continued contribution of all its members and others by providing various types of inducements to work for its success (Sociology guide, 2017). Involvement is determined by measuring relevance, importance, and personal concern. These variables have been identified as valid measurements of involvement through past research.

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The Convergence of Knowledge and Involvement

Hallahan (2022) said that a person with a higher level of knowledge and involvement in a topic or issue is commonly the leader of that particular subject, known as the "active public." He emphasizes that most people in the community have this activist role, or they are more involved, but they possess a low level of knowledge on a particular issue known as the "aroused public," but when they acquire the necessary information and strategies, the public will become active.

Individuals with a low level of knowledge and involvement compose the segment dubbed "Inactive Publics." This segment needs the most amount of work, and they require increased "motivation, ability, and opportunity to attend to communication." These people lack initiative and foster a lack of interest in any organized activity.

Aware publics include people with high levels of knowledge but low levels of involvement; this segment in his model is represented as "opinion leaders." They may not pilot causes, but they can join initiatives mobilized by others. Finally, the non-public represents people who have no knowledge of or involvement in a particular issue. Hence, they are unlikely to become aware of or involved with a particular issue.

Statement of the Problem

This study aims to determine the participants' perceived level of preparedness and its relationship with their actual emergency preparedness. Specifically, this study aims to seek the answers to the following questions:

1. What is the respondent's perceived level of emergency preparedness?
2. What is the respondent's personal emergency preparedness?
3. What is the respondent's involvement in emergencies?
4. What is the respondent's knowledge on emergencies?
5. Is there a significant relationship between involvement and perceived level of preparedness?
6. Is there a significant relationship between involvement and personal emergency preparedness?
7. Is there a significant relationship between knowledge and perceived level of preparedness?
8. Is there a significant relationship between knowledge and personal emergency preparedness?

Hypothesis

The researcher followed the .05 level of significance in testing the following:

Ho_1: There is no significant relationship between involvement and perceived level of preparedness.
Ha_1: There is a significant relationship between involvement and perceived level of preparedness.
Ho_2: There is no significant relationship between involvement and personal emergency preparedness.
Ha_2: There is a significant relationship between involvement and personal emergency preparedness.
Ho_3: There is no significant relationship between knowledge and perceived level of preparedness.
Ha_3: There is a significant relationship between knowledge and perceived level of preparedness.
Ho_4: There is no significant relationship between knowledge and personal emergency preparedness.
Ha_4: There is a significant relationship between knowledge and personal emergency preparedness.

Significance of the Study

People rely on disaster emergency response to mitigate, prepare for, respond to, and recover from the devastating effects of a disaster. With a thorough analysis of the knowledge and level of preparedness for emergency response to disaster, the researcher focused on the said study. Moreover, to determine their knowledge of emergency preparedness, this study focused on certain individuals, such as:

Students- Through this study, they will learn their own personal level of preparedness that is necessary for them to maximize their knowledge and apply it to future events and prevent awful disasters as much as possible.

Community- The result of this study will be a revelation: the readiness of the students can help not only themselves but also the community in taking appropriate action if ever a disaster occurs. The effect of disasters will be lessened if the community has the capability to prepare and respond to emergencies.

School- The result will be used by the school on their emergency preparedness to what necessary actions they should do for the welfare of their people. Upon knowing, the school can provide the appropriate resources that are needed in their school to avoid various disasters. The information will determine where the researcher will focus their efforts, and the school will be informed of what needs to be done.

Scope and Limitation

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The study focused on the perceived level of preparedness, involvement, and knowledge in emergencies. More specifically, the study determined whether there is a significant relationship between perceived level of preparedness, involvement, knowledge, and personal emergency preparedness. This study was conducted at San Jose National High School, which is situated in Manlurip, San Jose Tacloban City. Being near the coast, the school is vulnerable to typhoons. The population of the study was consisted of senior high school students. The respondents to the study were chosen through stratified random sampling. The study was implemented during the second semester of the school year 2022-2023.

The study has a time frame of three months. The researcher focused on San Jose National High School since it is located near the coastal area. The study is only limited to selected senior high school students in San Jose National High School since the population is very wide when it comes to the number of students. The research focused on the perception of senior high school students since they are mature enough to take part and participate during disaster preparedness. The data gathering procedure was conducted face to face through printing and giving out hard copies. The researcher followed the proper procedure and ethical considerations all throughout the conduct of the study.

Definition of Terms

Emergencies- refer to natural disaster, terrorism, hazardous material, disease outbreak, etc.

Disease outbreak- refers to the sudden or extensive occurrence of a disease in the area (example: the bird flu epidemic).

Hazardous material- causes harm to a person or damage to property but is not of intentional nature. Examples include: a large scale chemical spill, power plant accident, or over pressurization of holding tanks.

Involvement- refers to the involvement or participation of the students in emergency preparations relative to natural disaster, disease outbreak, terrorism, and hazardous material.

Knowledge- it is the awareness or familiarity of students gained from the experiences or education. It may be facts, information, and skills that is necessary to comprehend and respond to any emergency.

Natural disaster -it refers to events caused by a force of nature that could disrupt water, power, transportation, emergency, and public services. Examples to consider: earthquake, flood, tornado, wildfire, hurricane, etc. Consider the event that is most likely to affect your area.

Terrorism- refers to violent events carried out by individuals or groups for the purpose of political or social objectives. Examples to consider are explosives, biological, chemical, or radiological.

Personal emergency preparedness- This refers to personal emergency preparedness in terms of household emergency plan, household emergency supplies, and training.

Disaster supplies- refer to personal supplies and documents like photocopies of important paperwork and financial documents.

REVIEW OF RELATED LITERATURE

Participation of Educational Sector in Disaster Awareness and Preparedness

The DepEd (Department of Education) Order 50 Series of 2011 called for an independent office to cater to issues regarding Education in Emergencies (EiE) and Disaster Risk Reduction Management (DRRM). This DepEd order is entitled "Creation of Disaster Risk Reduction and Management Office." There is a need for reassessment of disaster risk reduction in the communities that are at high risk. The need for bottom-up and top-down actions and the continued rhetoric surrounding them are no longer adequate for the wider scalar debate in geography that needs to be translated into policy and action at all levels. This study set a roadmap for integrating knowledge and actions and discovered three key areas for improvement, including the need for consensus tools, practical frameworks, and changes in national policies. With the aid of telecommunication companies, the government made a joint memorandum circular no. oo1 s. 2015 that will provide free texts whenever a natural and manmade disaster occurs; this will be a nationwide early warning system that the people will be warned about with the use of mobile phones (Department of Education, 2011).

According to Lenihan's (2019) research, public schools around the world have emergency plans that have resulted in something negative. The study focuses on secondary schools and how they dealt with emergencies. The majority of schools have been inconvenienced by natural disasters at the same time. This emergency affects the school's function and damages the resources and the health of the students and staff. The results of the study suggest that schools should have emergency and disaster preparedness plans. Most of the literature suggests that to have the best emergency preparedness, they must undergo training and have enough resources. Most of the organizations believe that a written plan is just enough for an emergency. Few schools have disaster plans and show they are well-prepared when disaster strikes, but most schools lack emergency supplies and inadequate emergency response training for school personnel. It is also important for the schools to collaborate with different departments and

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agencies, since this group plays an important role in emergency response and preparedness, and school districts should participate in any of the activities that will be held to minimize the effect of disaster. The recent research suggests making future studies that could study the limitations of this study. Qualitative research, correlational, and cross-sectional studies on the school's emergency plans, training, and inventory of school equipment and resources could be beneficial.

A survey of emergency preparedness activities was conducted in 355 New Zealand schools. The study assessed existing levels of preparation for schools; most of them have performed a variety of emergency preparedness actions such as establishing plans, conducting exercises, and providing pupils with risk education. Even so, disparities in the degree of emergency preparedness activities exist amongst schools, indicating that several schools may be inadequately prepared to deal with future calamities, particularly if that response entails family reunification. The study also found data to back up the idea that prior disaster experience boosts readiness. The results reveal a demand for clarity of school statutory obligations as well as assistance with the development of benchmarks and standard operating procedures for emergency preparation operations to maintain uniformity among schools. Furthermore, enhanced involvement with stakeholders, parents, and emergency management practitioners is recommended to improve school preparedness activities. The baseline of the study implies that much work is needed to improve emergency and risk reduction awareness, and everyone in the school must participate for the betterment of the nation in general (Tipler et al., 2017).

A study about the level of compliance with the school risk reduction and disaster preparedness program among the public secondary schools in the District of Buenavista, Bohol, Philippines revealed that schools had a high degree of disaster preparedness conformance. Even so, several issues were faced, such as insufficient training materials and a shortfall in education among school disaster risk reduction management personnel. Hence, maintaining disaster preparation education and workshops, as well as financial allotment to support the creation and distribution of program training materials for transmission, must be done (Lopez et al., 2018).

Planning and Coordination Before and During Disaster

The study by Kapucu & Hu (2016) on Collaborative Emergency Management, said that the main ingredient in facing the extreme devastation of disaster is to communicate and plan necessary precautions for the community to coordinate well. The study pointed out that participating in pre-disaster and emergency planning will foster strong organizational relationships and enhance communication and the effectiveness of response operations. Establishing relationships between municipalities and agencies is also necessary before the disaster, and coordinating and developing positive relationships between emergency agencies will help them respond effectively to it. Most importantly, developing trust, and relationships in the community must begin before the threat arrives. The study shows that planning and coordination are very important to being able to survive during a disaster. Moreover, the study reveals that public information coming from the authorities is vital. Having to overcome language barriers and different cultures helps communities defend themselves effectively in the face of disasters. Overall, the study focused on disaster response and preparedness.

Alexander (2015) developed a study about Disaster and Emergency Planning for Preparedness, Response, and Recovery. They put emphasis on the readiness for disaster threats and to minimize its effects. They suggested the importance of having an emergency plan but said it was not a sufficient condition for the preparedness of a community. It must undertake a procedure of planning, training, and utilizing equipment and apparatus to support emergency action. Their study clarifies the relationship between planning, training, and written plans, emphasizing their parts in the process of planning. The specific problem identified in their research that needs an emergency plan is terrorism. Terrorism planning is the core of the study since it can support preparedness overall. The application of emergency response and preparedness like evacuation, communication, emergency medical care, rescue operations, and morgue care can be applied to terrorism. Instructions in disaster planning are the most important thing to know among people who want to be prepared. Disaster comes anywhere and anytime, and it does not wait until emergency planning is fully established. Even if we have a written emergency plan, it does not mean we are prepared because it may be ineffective in practice; however, if we engage in ongoing planning and reflect planning principles, we can have a functional emergency response. However, lack of knowledge about appropriate planning principles can lead to bad outcomes such as misunderstanding the threat, shortage of appropriate protective equipment, or failure to determine where to put resources for emergency preparedness and response.

In the study conducted by Powell et al. (2012), it was revealed that in the future, our emergency preparedness for natural disasters will be disordered, have inconsistent actions in healthcare facilities, and be unfavorable to patients and the public. In their study, they suggested developing protocols to ensure capacity and guide decision-making in disasters involving public health and emergency management. Public officials should take part in sheltering affected patients. The study revealed that the budget for strengthening health care infrastructures to deal with damages seems not to be enough, and failure to invest will fail hospital transactions when disasters come. Researchers suggest that the secretary of Health and Human Services should issue a pre-disaster emergency declaration and that the investments should be used in different institutions, regulating health care groups, to be

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successful. In order to meet the needs of disaster response, facilities will need available resources like financial and material support and manpower. The investments will be needed to ensure the operation of health care services during and after a disaster. The amount of disaster preparedness we have cannot cope with the number of disasters we are experiencing, but with the help of NGOs working in coordination with the government, mitigation and preparedness activities such as community-based disaster management and socioeconomic projects will reduce people's vulnerability.

Engagement of the Government during Disasters

The Philippine government had already conducted emergency meetings for the preparation of disasters. However, even though this parameter was used, the effect of the disaster was still so drastic that the preparation they made was put to waste. Warning messages delivered before and during emergencies should be conveyed in a way that is understood by the population at risk. We recommend that the results from this study will be used to develop more effective messages to be used before future disasters (Ching et al., 2015). Managers of the emergency should understand the importance of assessing hazards and reducing vulnerability. They should seek support from public officials and seek the passage of laws and the enforcement of an ordinance that will probably reduce their vulnerability. Collaboration between experts and organizations with the public, private, and non-profit stakeholders is needed to promote disaster prevention and preparedness. Prevention and mitigation activities must be prioritized by emergency management. The emergency managers should focus their activities on developing emergency response plans by coordinating the first response to disasters. And, given the high-risk communities in which they operate, they must become more progressive and strategic (Cadag & Gaillard, 2012).

Impact of Disasters to Humans

There is a belief that the victims of disasters were so overwhelmed and traumatized that they were unable to take care of themselves after what happened. As study shows, when people are in a crisis, they are generally so focused on their neighbors and loved ones that they become extremely creative in dealing with the difficult situations caused by disasters. Ninety percent of the victims of disasters were rescued by private individuals. Having said that, these show that the officials need to establish synergy at all levels within their institution by harnessing the capabilities of human behavior during disasters. There is a widespread misconception that when a disaster strikes, a well-executed contingency plan will guarantee success. To foster improvisation and adaptability in an institution, history and past experiences must be passed down to its members through education and training (Hoffmann & Muttarak, 2017).

Students' Knowledge on Disaster Preparedness

A study by Kaplan et al. (2012) focused on students who are taking up nursing and their educational strategy to respond to disasters. In the study, they are using a strategy called "Emergency Preparedness Disaster Simulation" (EPDS), which is being implemented in the school's nursing simulation lab using patient simulators, task training mannequins, and live actors. The respondents who participated in the study were students in the final semester of their senior year. The survey responses were positive, indicating that students have an "increasing understanding of emergency preparedness." However, they have a low average result on the part of "prompting realistic expectations." The EPDS was based upon the Medical Association National Disaster Life Support Course, owing to the effectiveness of the strategy, which has been incorporated into the undergraduate curriculum. Through this strategy, it provides a tangible experience for the students of caring for communities in the event of a mass casualty incident. In addition, the simulation allows for the acquisition of skills through repeated practice and the management of emergencies without creating any risk to patients or students. The objective of the simulation is to increase students' understanding and confidence in skill acquisition while providing care during a disaster.

With the increased threat of danger, including terrorism, coupled with the ever-present natural disasters and public health emergencies, it is clearly necessary to incorporate bioterrorism preparedness and emergency response material into every school, as well as disaster risk preparedness. Ensuring a unified and coordinated approach to preparedness requires that benchmarks and standards should be consistent across healthcare disciplines and public health, with the most basic level of education in all schools. Educational competencies establish the foundation that enables graduates to meet occupational competencies. However, educational needs for students differ from the needs of practitioners. In addition, there must be a clear connection between departments of public health and all other healthcare entities to ensure proper preparedness. The researchers describe both a process and a list of core competencies for teaching emergency preparedness to students, which can be used to increase the students' knowledge of preparedness in future situations (Ghahremani et al., 2022).

Synthesis

Disasters may occur anytime and anywhere. Thus, the power of knowledge and preparedness is essential to ensuring everyone's safety. Having said that, the participation and coordination of schools, the government, public and private institutions, and non-governmental organizations must be emphasized. This also includes the engagement of the students so that the community will have a solid foundation for facing and mitigating disasters.

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METHODOLOGY

This chapter covers the methods that were undertaken in conducting this study. The chapter is comprised of discussions on the following: research design, participants of the study, research locale, research instrument, data gathering procedure, and data analysis.

Research Design

The researcher used descriptive cross-sectional. A descriptive cross-sectional study examines data at one moment in time. Informants in this study are chosen based on certain variables of interest. This form of study can be used to identify social features, but it cannot be utilized to demonstrate cause-and-effect links between different factors. This strategy is frequently used to draw conclusions about potential links or to collect early data to enable additional study and testing (Cherry, 2019). The descriptive method is applicable in this study because the researcher wanted to determine the perceived knowledge, involvement, and preparedness levels of senior high school students at San Jose National High School. Also, this study is cross-sectional in nature. A cross-sectional study explores the relationship between two variables and has the purpose of figuring out which variables have a connection. The method was used in order to find out the relationship among the perceived knowledge, involvement, and emergency preparedness of the senior high school students.

Respondents of the Study

The respondents of this study are senior high school students at San Jose National High School. To get the sample size or to determine who will be included in the study, Slovin's formula was used. The researcher got a sample from the total population of senior high school students at San Jose National High School. After the sample size was determined, the researcher used stratified random sampling. Stratified random sampling involves the division of a population into smaller groups known as "strata." The strata are formed based on members' shared characteristics or attributes. This was done to ensure representation in terms of tracks and strands at San Jose National High School.

The study was conducted at San Jose National High School through an onsite modality. The school is located in Brgy. 87 Manlurip, San Jose, Tacloban City, Leyte. The locale of the study was chosen because San Jose National High School is one of the most vulnerable schools relative to natural disasters.

Instrument

A survey questionnaire was used to determine the perceived level of emergency preparedness, involvement, and knowledge in an emergency situation, as well as their relationship with each other. The use of a survey questionnaire provided inexpensive and efficient access to a large population sample, avoid personal bias, reduce pressure for immediate responses, and give the respondents a greater feeling of anonymity (Krosnic, 2018).

The instrument in this study was based on the instrument used in the study by Groves (2013), entitled Knowledge, Involvement, and Emergency Preparedness. Through e-mail, the researcher asked for the author's permission to use the survey questionnaire. The author approved the use of the questionnaire, as evidenced by his reply email. The researcher modified the instrument to ensure that it suited the context of the locale. The modifications were: (1) the deletion of a few items that were considered irrelevant to the study, such as the demographic profile (item numbers 15–23); (2) the use of a five-point Likert scale in the survey questionnaire instead of a seven-point Likert scale; and (3) the deletion of items 11, 12, 13, and 14 from the original questionnaire (see Appendix B).

The questionnaire consists of a consent form, which contains the letter to participants stating the objectives of the study and some important terminologies used throughout the survey. Furthermore, the questionnaire also includes questions pertaining to knowledge level, involvement, and emergency preparedness. Each question will be answered by marking the blank circle or box with regard to the respondent's level of agreement or disagreement. The questionnaire is about the level of agreement and disagreement on the students' perceived knowledge, involvement, and emergency preparedness in their community. The survey contains four (4) different measures of emergency preparedness: perceived level of preparedness, household emergency plan, home disaster supplies, and training.

Data Gathering Procedure

The researcher first sought the approval of the school head for the conduct of the study. Upon approval, the researcher set the date and time with the class advisers of the respondents so that the conduct of the data gathering will not disturb class discussions. The questionnaire was distributed and retrieved by the researcher's parents by printing out hard copies since during that time the

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researcher was in Manila. The participants were given enough time and were encouraged to maximize the allotted time when answering the survey questionnaire. Then, the data gathered by the researcher were analyzed using the statistical tools presented in the treatment of the data.

Data Analysis

The data gathered from the respondents were statistically analyzed using descriptive statistics such as frequency, mean, percent, and rank. Pearson's Product Moment Correlation Coefficient (Pearson's r) was used to determine whether there is a cross-sectional relationship between knowledge and involvement.

Scale	Interpretation
0.10 – 0.25	Very Weak
0.26 – 0.50	Weak
0.51 – 0.75	Moderate
0.76 – 1.00	Strong

To yield a more accurate and lesser human error on data calculations, the researcher employed JASP to efficiently complete all statistical calculations in the study.

To interpret the data effectively, the researcher employed the following treatment of the data:

The perceived personal level of emergency preparedness, measures of involvement, and knowledge was measured using a 5-point Likert Scale and the interpretation is shown below:

Scale	Interpretation
1.00 – 1.89	Not at all prepared
1.90 – 2.69	Slightly not prepared
2.70 – 3.49	Moderately Prepared
3.50 – 4.29	Prepared
4.30 – 5.00	Very prepared

The self-reported household emergency plan was recorded on a nominal level, with a yes or no response. The number of answer was calculated in percentage.

Participants chose all disaster supplies found in their homes as the third measure of individual emergency preparedness. These supplies are specifically for emergency purposes and ample enough for the entire family to subsist on. The frequency and mean of the chosen disaster supplies of the participants were calculated.

In determining the final measurement of personal emergency preparedness, participants chose any training that they attended in the past two years. Frequency and mean were computed.

To determine the overall level of involvement in emergencies among the respondents, the average for each of the four emergencies was calculated by the following parameters:

The extent at which each disaster type is personally relevant to the respondents.

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Scale	Interpretation
1.00 – 1.89	Irrelevant
1.90 – 2.69	Slightly irrelevant
2.70 – 3.49	Moderately Relevant
3.50 – 4.29	Relevant
4.30 – 5.00	Very relevant

The extent at which each disaster type is important to the respondents.

Scale	Interpretation
1.00 – 1.89	Not important
1.90 – 2.69	Slightly not important
2.70 – 3.49	Moderately Important
3.50 – 4.29	Important
4.30 – 5.00	Very important

The extent to which each disaster type is of personal concern to the respondents.

Scale	Interpretation
1.00 – 1.89	Not a concern
1.90 – 2.69	Slightly not a concern
2.70 – 3.49	Moderately of a Concern
3.50 – 4.29	A Concern
4.30 – 5.00	Very concern

Similarly, the overall level of knowledge of emergencies among the sample was measured using frequency and mean for each of the four types of emergencies. Furthermore, the said parameters were determined as shown below:

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How much the respondents believe in their personal preparation.

Scale	Interpretation
1.00 – 1.89	I do not believe
1.90 – 2.69	I do not believe slightly
2.70 – 3.49	I believe moderately

How confident are

3.50 – 4.29	I believe
4.30 – 5.00	I believe very much

the respondents in their knowledge of preparation.

Scale	Interpretation
1.00 – 1.89	Not confident
1.90 – 2.69	Slightly not confident
2.70 – 3.49	Moderately confident
3.50 – 4.29	Confident
4.30 – 5.00	Very confident

Does the respondents know what to do in case of emergencies.

Scale	Interpretation
1.00 – 1.89	Disagree
1.90 – 2.69	Slightly disagree
2.70 – 3.49	Moderately agree
3.50 – 4.29	Agree
4.30 – 5.00	Strongly Agree

How confident the respondents on the different sources of disaster information

Scale	Interpretation
1.00 – 1.89	Not confident
1.90 – 2.69	Slightly not confident
2.70 – 3.49	Moderately confident
3.50 – 4.29	Confident

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4.30 – 5.00	Very confident

To test the overall involvement, the scale below was used.

Scale	Interpretation
1.00 – 1.89	Not involved
1.90 – 2.69	Slightly involved
2.70 – 3.49	Moderately involved
3.50 – 4.29	Involved
4.30 – 5.00	Very involved

To test the overall knowledge, the scale below was used.

Scale	Interpretation
1.00 – 1.89	Not knowledgeable
1.90 – 2.69	Slightly knowledgeable
2.70 – 3.49	Moderately knowledgeable
3.50 – 4.29	knowledgeable
4.30 – 5.00	Very knowledgeable

To test the relationship between participants' involvement with each of the four types of emergencies (natural disasters, terrorism, hazardous materials, and disease outbreak) and their overall perceived level of emergency preparedness, household emergency plan, household emergency supplies, and training, Pearson's Product Moment Correlation Coefficient (Pearson's r) was used. To test the relationship between participants' knowledge with each of the four types of emergencies (natural disasters, terrorism, hazardous materials, and disease outbreak) and their overall perceived level of emergency preparedness, household emergency plan, household emergency supplies, and training, Pearson's Product Moment Correlation Coefficient (Pearson's r) was used.

RESULTS AND DISCUSSION

In this chapter, the results of the data analysis are presented. The data were collected and then processed in response to the research questions.

Perceived Level of Emergency Preparedness

Table 1. Perceived Level of Emergency Preparedness

Level of preparedness	Frequency (f)	Percentage
Not at all prepared	9	4%
Slightly not prepared	40	17%
Moderately prepared	111	48%
Prepared	64	28%
Very prepared	7	3%
TOTAL	231	100%

The perceived level of emergency preparedness was measured using a 5-point Likert scale. Most of the respondents were moderately prepared, with 48% of the total percentage shown in Table 1. This result is contrary to the result of the research of Grooves (2013), "Knowledge, Involvement, and Emergency Preparedness." In his study, 70% of the respondents were prepared for disaster.

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Active Household Emergency Plan

Table 2. Active Household Emergency Plan

	Frequency (f)	Percentage
YES	107	46%
NO	124	54%

The self-reported household emergency plan was recorded, with a yes or no response. A total of 124 participants responded to this question, representing 54% of the total. They do not have an active emergency plan. The result is parallel to that of Grooves (2013), where most of the respondents did not have an emergency plan.

Home Disaster Supplies

Table 3. Home Disaster Supplies

List of Disaster Supplies	Frequency (f)	Percentage (231)
1 gallon of water per person per day	163	71%
Non-perishable food	110	48%
A portable battery-powered radio	130	56%
A supply of batteries and flashlight	152	65.85
A first aid kit	151	65.4%
Photocopies of important paperwork	149	65%
Financial documents	97	42%
Medications	108	46.8%
Goggles (e.g., eyeglass)	32	13.9%
Total	1,092	

Participants chose all disaster supplies found in their homes as the third measure of individual emergency preparedness. As shown in Table 3 above, respondents chose from a list of nine disaster supplies. Directions directed participants to choose all that apply. The supplies are specific for emergency purposes and ample enough for the entire family to subsist on one gallon of water per person per day; a supply of batteries and a flashlight; a first aid kit; and photocopies of important paperwork were the top four most common items the respondents stated were in their homes for emergency purposes. Goggles (e.g., eyeglasses), financial documents, and medications were the bottom three chosen.

Training Attendance less than 2 years

Table 4. Training Attendance < 2 yrs.

Nature of Training	Frequency (f)	Percentage (231)
A meeting on how to be better prepared for a disaster	125	54%
CPR training	26	11%
First aid skills training	72	31%
Training as part of a Community Emergency response Team (CERT)	3	1%
No training at all	68	29%
Total	295	

In the final measurement of preparedness, participants chose any training that they attended during the previous two years. 295 responses were recorded. A meeting on how to be better prepared for a disaster was chosen as the most common training

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attended by 125 respondents (54%). First aid skills training followed with 72 respondents (31%), while CPR training had 26 respondents (11%). Three respondents (1%) chose training as part of a Community Emergency Response Team (CERT). 68 respondents (29%) reported not attending any of the training.

Overall Involvement

Table 5. Overall Involvement

Involvement	Item Mean	Interpretation	Scale Mean	Interpretation
Natural Disaster			3.15	Moderately involved
a. Personal relevance	3.36	Moderately relevant		
b. Importance	2.32	Slightly not important		
c. Personal concerns	3.78	Concern		
Terrorism			3.04	Moderately involved
a. Personal relevance	2.77	Moderately relevant		
b. Importance	2.86	Moderately important		
c. Personal concern	3.49	Moderately of a concern		
Hazardous Material			3.13	Moderately involved
a. Personal Relevance	3.02	Moderately relevant		
b. Importance	2.93	Moderately important		
c. Personal concern	3.44	Moderately of a concern		
Disease Outbreak			3.18	Moderately involved
a. Personal relevance	3.00	Moderately relevant		
b. Importance	2.97	Moderately important		
c. Personal concern	3.57	A concern		

To determine the overall level of involvement in emergencies among the population sample, the average for each of the four emergencies was taken. 231 participants responded. Involvement with disease outbreak ranked highest with a mean of 3.18. Moreover, natural disaster had a mean of 3.15, hazardous material had a mean of 3.13, and terrorism had a mean of 3.04, as shown in Table 5. This means that the overall involvement of respondents in each emergency was moderately involved.

Overall Knowledge

Table 6. Overall Knowledge

Knowledge	Item Mean	Interpretation	Scale Mean	Interpretation
Natural Disaster			3.50	Knowledgeable
a. Personal Belief	3.77	I believe		
b. Confidence in knowledge	3.26	Moderately confident		
c. Will know what to do	3.46	Moderately agree		
Terrorism				
a. Personal belief	3.32	I believe moderately		
b. Confidence in knowledge	2.81	Moderately confident		

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c. Will know what to do	2.80	Moderately Agree	2.98	Moderately Knowledgeable
Hazardous Material			3.20	Moderately Knowledgeable
a. Personal belief	3.50	I believe		
b. Confidence in knowledge	3.02	Moderately confident		
c. Will know what to do	3.09	Moderately Agree		
Disease Outbreak			3.18	Moderately Knowledgeable
a. Personal belief	3.48	I believe moderately		
b. Confidence in knowledge	3.00	Moderately confident		
c. Will know what to do	3.06	Moderately Agree		

Similarly, the overall level of knowledge on emergencies among the sample was averaged for each of the four types of emergencies. Participants' self-assessed knowledge was the highest for natural disasters (M = 3.497835) and the lowest for terrorism (M = 2.976912). The means of hazardous material and disease outbreak knowledge were measured at (3.200577) and (M = 3.177489), respectively. This means that the overall knowledge of respondents in natural disaster was knowledgeable, while terrorism, hazardous material, and disease outbreak were moderately knowledgeable.

Relationship between Involvement and Perceived level of Preparedness

Table 7. Relationship between Involvement and Perceived Level of Preparedness

Involvement	Pearson's r	Interpretation	Relationship
Natural disaster	.75	Significant	Moderate Relationship
Terrorism	.66	Significant	Moderate Relationship
Hazardous material	.80	Significant	Strong Relationship
Disease outbreak	.80	Significant	Strong Relationship

Based on the table above, natural disaster and terrorism's measures of involvement have a significant moderate relationship, while hazardous material and disease outbreak's measures of involvement have a significant strong relationship with the perceived level of preparedness.

Relationship between Involvement and Personal Emergency

Table 8.1. Relationship between Involvement and Personal Emergency Preparedness in terms of Household Emergency Plan

	Correlation coefficient	Interpretation	Relationship
Involvement	Household emergency plan		
Natural disaster	.53	Significant	Moderate Relationship
Terrorism	.51	Significant	Moderate Relationship
Hazardous material	.56	Significant	Moderate Relationship
Disease outbreak	.56	Significant	Moderate Relationship

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The relationship between involvement (natural disaster, terrorism, hazardous material, and disease outbreak) and personal emergency preparedness in terms of the household emergency plan has a significant and moderate relationship.

Table 8.2. Relationship between Involvement and Personal Emergency Preparedness in terms of Home Disaster Supplies

	Correlation coefficient	Interpretation
Involvement	Home disaster supplies	
Natural disaster	-.59	Not significant
Terrorism	-.61	Not significant
Hazardous material	-.66	Not significant
Disease outbreak	-.66	Not significant

Further, as revealed by the data in the table above, the relationship between involvement and personal emergency preparedness in terms of home disaster supplies is not significant.

Table 8.3. Relationship between Involvement and Personal Emergency Preparedness in terms of Training

	Correlation coefficient	Interpretation
Involvement	Training	
Natural disaster	-.09	Not significant
Terrorism	-.26	Not significant
Hazardous material	-.21	Not significant
Disease outbreak	-.21	Not significant

Moreover, the relationship between the respondent's involvement in the different emergencies and personal emergency preparedness in terms of training is not significant.

Relationship between Knowledge and Perceived Level of preparedness

Table 9. Relationship between Knowledge and Perceived Level of Preparedness

Knowledge	Pearson's r	Interpretation	Relationship
Natural disaster	.81	Significant	Strong Relationship
Terrorism	.83	Significant	Strong Relationship
Hazardous material	.83	Significant	Strong Relationship
Disease outbreak	.83	Significant	Strong Relationship

Based on the table above, all measures of knowledge have a significantly strong relationship with the perceived level of preparedness.

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Relationship between Knowledge and Personal Emergency Preparedness

Table 10.1. Relationship between Knowledge and Personal Emergency Preparedness in terms of Household Emergency Plan

	Correlation coefficient	Interpretation	Relationship
Knowledge	Household emergency plan		
Natural disaster	.55	Significant	Moderate
Terrorism	.57	Significant	Moderate
Hazardous material	.55	Significant	Moderate
Disease outbreak	.54	Significant	Moderate

The relationship between knowledge (natural disaster, terrorism, hazardous material, and disease outbreak) and personal emergency preparedness in terms of the household emergency plan has a significant moderate relationship.

Table 10.2. Relationship between Knowledge and Personal Emergency Preparedness in terms of Home Disaster Supplies

	Correlation coefficient	Interpretation
Knowledge	Home disaster supplies	
Natural disaster	-.61	Not significant
Terrorism	-.67	Not significant
Hazardous material	-.63	Not significant
Disease outbreak	-.65	Not significant

Thus, the relationship between knowledge and personal emergency preparedness in terms of home disaster supplies is not significant.

Table 10.3. Relationship between Knowledge and Personal Emergency Preparedness in terms of Training

	Correlation coefficient	Interpretation
Knowledge	Training	
Natural disaster	-.20	Not significant
Terrorism	-.25	Not significant
Hazardous material	-.24	Not significant
Disease outbreak	-.23	Not significant

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The relationship between knowledge and personal emergency preparedness in terms of training is not significant.

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

Summary

The researcher used a descriptive cross-sectional design. The descriptive method is applicable in this study because the researchers wanted to determine the perceived knowledge, involvement, and preparedness levels of senior high school students at San Jose National High School. Also, this study correlates the specific results of the study to determine the relationships. The method was used in order to find out the relationship among the perceived knowledge, involvement, and emergency preparedness of the senior high school students.

The respondents to this study were senior high school students. To get the sample size or to determine who will be included in the study, Slovin's formula was used. After the sample size was determined, the researcher used stratified random sampling. This was done to ensure representation in terms of tracks and strands at San Jose National High School.

Data was collected with the use of a survey questionnaire adapted from the study of Grooves (2013) and modified by the researcher to suit the context of the study.

The following were the major findings:

Findings showed that the senior high school students were moderately prepared in terms of their perceived level of preparedness.

In terms of personal emergency preparedness, most of the respondents did not have an active household emergency plan. Most respondents have the top 4-5 disaster-ready supplies present in their homes, which include batteries and flashlights, one gallon of water per person per day, a first aid kit, and photocopies of important paperwork. On the other hand, the least disaster-related supplies are goggles, financial documents, medications, and nonperishable foods. Lastly, relative to training, the most attended is the meeting on how to be better prepared for a disaster, while the least attended is the training as part of a Community Emergency Response Team (CERT).

The result shows that the overall involvement of respondents in each emergency was moderately involved. Furthermore, the overall knowledge of respondents in natural disaster was knowledgeable, while terrorism, hazardous material, and disease outbreak were moderately knowledgeable.

It was revealed that there is a significant relationship between involvement and perceived level of preparedness. Meanwhile, there is no significant relationship between involvement and measures of personal emergency preparedness such as home disaster supplies and training, except for the household emergency plan. It was also revealed that there is a significant relationship between knowledge and perceived level of preparedness. Meanwhile, there is no significant relationship between knowledge and measures of personal emergency preparedness, such as home disaster supplies and training, except for household emergency plan.

Conclusion

This study contributed to an understanding of the respondents' perceived level of preparedness and its relationship with their actual emergency preparedness. Specifically, the study revealed the respondents' perceived level of emergency preparedness, personal emergency preparedness in terms of household emergency plan, home disaster supplies, training, respondents' involvement in natural disaster, terrorism, hazardous materials, disease outbreak, respondents' knowledge on natural disaster, terrorism, hazardous materials, disease outbreak, and determine whether there is a significant relationship between involvement and perceived level of preparedness, personal emergency preparedness in terms of household emergency plan, home disaster supplies, training, and whether there is a significant relationship between knowledge and perceived level of preparedness, personal emergency preparedness in terms of household emergency plan, home disaster supplies, and training. Henceforth, through these, they will bring enlightenment, realization, education, drive, and a strong push to highlight and emphasize these important matters that will help themselves and the entire community during emergencies since, given the results, not all findings showed that their preparedness, involvement, and knowledge on emergencies are not yet generally firm and not yet strongly founded.

Recommendation

The researcher recommends the following: (1) establish a relationship between knowledge and involvement; (2) conduct more training as part of a Community Emergency Response Team (CERT); (3) perform the study in a different sample set related to disaster risk reduction management, like high school and college students; (4) conduct an awareness campaign on emergencies and preparedness; and (5) encourage students to be involved in natural disaster management training. This area may be an inquiry for future researchers.

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APPENDICES

Appendix A

Survey Questionnaire

Dear Respondents,

We, the researchers, would like to invite you to participate in a research study on emergency preparedness. The purpose of this research study is to measure the respondents' perceived level of preparedness, involvement, and knowledge in emergencies.

You are being asked to participate in this study because you are Senior High School Students chosen purposely. The questions need to be checked/marked in accord to your agreement or disagreement, most questions will be on a scale of 1 to 5, others will ask to mark items. There are no risks anticipated with participation in this study. The study is not expected to immediately benefit you personally. However, the study is expected to benefit society and the emergency management /homeland security fields by providing insight into the motivation for personal emergency preparedness, which may assist the development of emergency management communication campaigns. No compensation will be provided for your participation in this study. Thank you for your consideration.

Throughout this survey, whenever the term "**natural disaster**" is used, it is referring to events caused by a force of nature that could disrupt water, power, transportation, emergency, and public services. Examples to consider: earthquake, flood, tornado, wildfire, hurricane, etc. Consider the event that is most likely to affect your area.

The term "**terrorism**" refers to violent events carried out by individuals or groups for the purpose of political or social objectives. Examples to consider: explosives, biological, chemical, or radiological.

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"**Hazardous accidents**" cause harm to a person or damage to property but are not of intentional nature. Examples include: a large scale chemical spill, power plant accident, or over pressurization of holding tanks.

A "**disease outbreak**" refers to the sudden or extensive occurrence of a disease in your area. Example: the bird flu epidemic. Instruction: Please check the box whichever is applicable to you.

1. Using the scale provided, how would you describe your personal level of emergency preparedness?

Check (/)	Scale	Interpretation
	1	Not at all prepared
	2	Slightly not prepared
	3	Moderately prepared
	4	Prepared
	5	Very prepared

2. Do you have an active household emergency plan?

	YES
	NO

3. Choose all disaster supplies you have in your home. These supplies should all be separate from day-to-day supplies, to be used only for emergencies. All supplies should be ample for the entire family.

	1 gallon of water per person per day
	Non-perishable food
	A portable battery-powered radio
	A supply of batteries and flashlight
	A first aid kit
	Photocopies of important paperwork
	Financial Documents
	Medications
	Goggles

4. Which of the following training/s have you attended for the past 2 years?

	A meeting on how to be better prepared for a disaster
	CPR training
	First aid skills training
	Training as part of a Community Emergency response Team (CERT)
	None of the above

5. Using the scales below, please rate the extent of each disaster type that is personally relevant to you.

Scale	Interpretation	Irrelevant
1		
2		Slightly irrelevant
3		Moderately Relevant
4		relevant
5		Very relevant

	1	2	3	4	5

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Natural disaster					
Terrorism					
Hazardous materials					
Disease outbreak					

6. Using the scales below, please rate the extent of each disaster type that is important to you.

Scale	Interpretation
1	Not important
2	Slightly not important
3	Moderately Important
4	Important
5	Very important

	1	2	3	4	5
Natural disaster					
Terrorism					
Hazardous materials					
Disease outbreak					

7. Using the scales below, please rate the extent of each disaster type that is of personal concern to you.

Scale	Interpretation
1	Not concern
2	Slightly not concern
3	Moderately Concern
4	Concern
5	Very concern

	1	2	3	4	5
Natural disaster					
Terrorism					
Hazardous materials					
Disease outbreak					

8. Please rate how much you believe personal preparation will help you handle ...

Scale	Interpretation
1	I do not believe at all
2	I slightly do not believe
3	I moderately believe

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4	I believe
5	I believe very much

	1	2	3	4	5
Natural disaster					
Terrorism					
Hazardous materials					
Severe Disease outbreak					

9. How confident are you in your knowledge of preparation for the following?

Scale	Interpretation
1	Not at all confident
2	Slightly not confident
3	Moderately confident
4	Confident
5	Very confident

	1	2	3	4	5
Natural disaster					
Terrorist act					
Hazardous materials outbreak					
Contagious disease outbreak					

10. I will know what to do in the event of...

Scale	Interpretation
1	Strongly disagree
2	Slightly disagree
3	Moderately agree
4	Agree
5	Strongly Agree

	1	2	3	4	5
Natural disaster					
A terrorist attack					
A hazardous materials accident					
Contagious disease outbreak					

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Appendix B

Original Survey Questionnaire

1. Confidentiality Statement:

The purpose of this research is to obtain participants' views about their state of emergency preparedness in four major categories. Your participation in this survey is entirely voluntary. No identifying information will be collected and your responses will be kept confidential. No identifying information will be associated with your responses or included in any reports. For questions about the survey administration or confidentiality concerns please contact Season Groves at Season.Groves@gmail.com.

Please choose yes below to continue onto the survey. Thank you for your cooperation and time.

○ Yes, I understand the confidentiality statement and choose to continue onto the survey.

○ No, I choose not to continue onto the survey and understand I will now be redirected from this survey.

Throughout this survey, whenever the term "natural disaster" is used, it is referring to events caused by a force of nature that could disrupt water, power, transportation, and emergency and public services. Examples to consider: earthquake, flood, tornado, wildfire, hurricane, etc. Consider the event that is most likely to affect your area.

The term "terrorism" refers to violent events carried out by individuals or groups for the purpose of political or social objectives. Examples to consider: explosives, biological, chemical, or radiological.

"Hazardous accidents" cause harm to a person or damage to property but are not of intentional nature. Examples include: a large scale chemical spill, power plant accident, or over pressurization of holding tanks.

A "disease outbreak" refers to the sudden or extensive occurrence of a disease in your area. Example: the bird flu epidemic.

2. Using the scale provided, how would you describe your personal level of emergency preparedness?

Very Prepared						Not at all prepared
○	○	○	○	○	○	○

3. I currently have an active household emergency plan.

- ○ Yes
- ○ No

4. Choose all disaster supplies you have in your home. These supplies should all be separate from day-to-day supplies, to be used only for emergencies. All supplies should be ample for the entire family.

- ☐ 1 gallon of water per person per day
- ☐ Non-perishable food
- ☐ A portable battery-powered radio
- ☐ A supply of batteries
- ☐ A flashlight;
- ☐ A first aid kit
- ☐ Photocopies of important paperwork

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- ■ Financial Documents
- ■ Medications
- ■ Eyeglasses

5. In the past 2 years, I have ...

- Attended a meeting on how to be better prepared for a disaster
- Attended CPR training
- Attended first aid skills training
- Attended training as part of a Community Emergency response Team (CERT)
- None of the above

6. Using the scales below, please rate the extent each disaster type is personally relevant to you.

	Very personally relevant					Not personally relevant at all
Natural disaster	○	○	○	○	○	○
Terrorism	○	○	○	○	○	○
Hazardous Materials	○	○	○	○	○	○
Disease outbreak	○	○	○	○	○	○

7. Using the scales below, please rate the extent each disaster type is important to you.

	Very important to me					Not at all important to me
Natural disaster	○	○	○	○	○	○
Terrorism	○	○	○	○	○	○
Hazardous Materials	○	○	○	○	○	○
Disease outbreak	○	○	○	○	○	○

8. Using the scales below, please rate the extent each disaster type is of personal concern to you.

	Of concern to me					Of no concern to me
Natural disaster	○	○	○	○	○	○
Terrorism	○	○	○	○	○	○
Hazardous Materials	○	○	○	○	○	○
Disease outbreak	○	○	○	○	○	○

9. Please rate how much you believe personal preparation will help you handle ...

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	I believe very much					I do not at all believe
Natural disaster						
Terrorism						
Hazardous Materials outbreak						
Severe Disease outbreak						

10. How confident are you in your knowledge of preparation for the following?

	Very confident					Not at all confident
Natural disaster						
Hazardous Materials accident						
Contagious Disease Outbreak						
Terrorist Act						

11. I will know what to do in the event of...

	Strongly agree					Strongly disagree
A terrorist attack						
Hazardous Materials accident						
Contagious Disease Outbreak						
A natural disaster						

12. To what extent are you knowledgeable with the following...

	Strongly agree					Strongly disagree
Alerts and warning systems in your community						
Official sources of public safety information						
Community evacuation routes						
Shelter locations near me						

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Who to contact for help with evacuating or getting to a shelter	
Where to find information on local hazards	
Where to find information about a local public health emergency	
My children's school emergency and evacuation plan	

13. How confident are you in the following sources of disaster information?

	Very confident					Not at all confident
Local media	○	○	○	○	○	○
Local government official	○	○	○	○	○	○
Government website	○	○	○	○	○	○
Health care provider	○	○	○	○	○	○
Neighborhood association	○	○	○	○	○	○
Faith-based organization	○	○	○	○	○	○
Schools or child-care facilities	○	○	○	○	○	○
Workplace	○	○	○	○	○	○
Friends or family members	○	○	○	○	○	○

14. I have volunteered to help in a disaster.

○ yes ○ no

15. In your current residence, do you live

- With family members
- With roommates (including boyfriend/girlfriend)
- With both family members and roommates
- Alone

16. Which best describes your job status?

- Work full-time
- Work part-time
- Not working
- Other

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17. From which of the following sources have you received information about disasters in the last 12 months? (Check all that apply.)

- ■ Friends or Family
- ■ Local media
- ■ Local government official
- ■ Government website
- ■ Health care provider
- ■ Neighborhood association
- ■ Faith-based organization
- ■ Schools or childcare facilities
- ■ Workplace
- ■ None
- ■ Other

18. I would describe the location of my residence as

- ■ Urban
- ■ Suburban
- ■ Rural
- ■ Don't know

19. What is the highest level of education that you attained?

- ■ Less than 12th grade (no diploma)
- ■ High school graduate or GED
- ■ Some college but no degree
- ■ Associate degree in college
- ■ Bachelor's degree
- ■ Master's degree
- ■ Doctorate degree
- ■ Don't know

20. Which of the following best describes your race?

- ■ White
- ■ Black or African American
- ■ Hispanic or Latino
- ■ Asian
- ■ American Indian or Alaska Native
- ■ Native Hawaiian or other Pacific Islander
- ■ Other
- ■ Don't know

21. Please enter your age.

22. What is your annual household income range?

- ■ Less than $25,000
- ■ $25,000 to less than $50,000
- ■ $50,000 to less than $75,000
- ■ $75,000 or more
- ■ Don't know

23. What is your gender?

- ■ Male
- ■ Female

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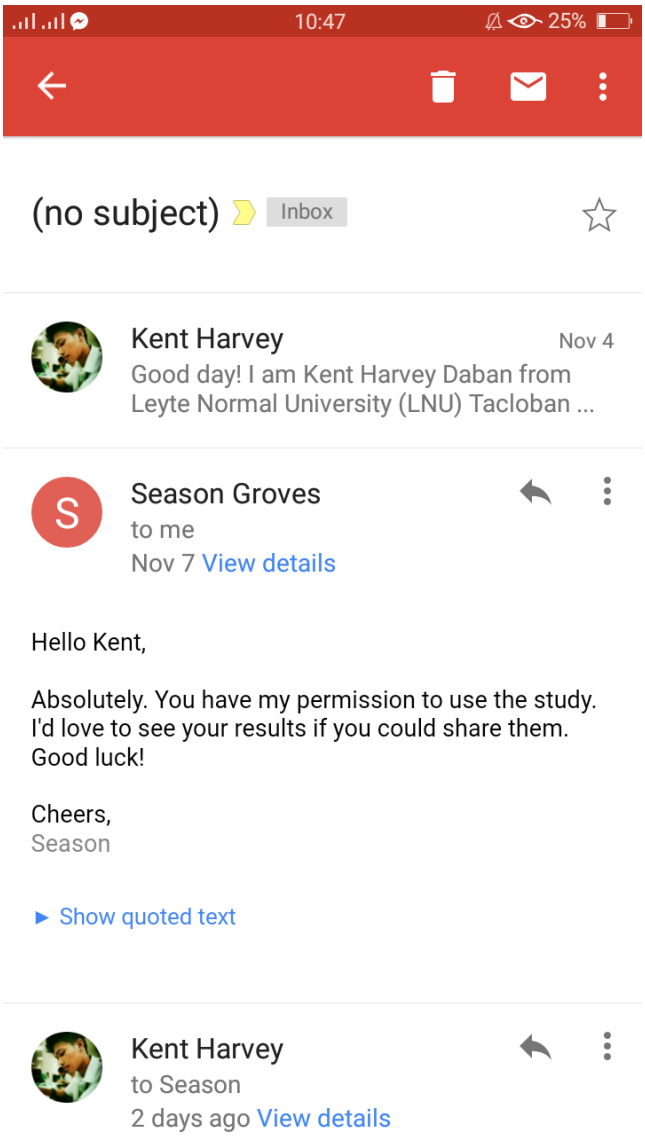
Appendix C

Permission to Use the Survey Questionnaire

The researchers formally asked the owner/author of the survey questionnaire tool via e-mail. Having said that, the picture below serves as a means of verification:



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