



EARTHQUAKE PREPAREDNESS OF SELECTED POLICE STATIONS IN METRO MANILA, PHILIPPINES: TOWARDS OPERATIONAL CAPABILITIES

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ABSTRACT

This study employed quantitative research methods to evaluate the level of earthquake preparedness in selected police stations located in Metro Manila. The study examined four crucial aspects: Organization and Planning, Resources and Logistics, Coordination and Responsiveness, and Training. Information was gathered from two cohorts: 207 law enforcement officers stationed at the designated police stations and 200 individuals from the general population living in Metro Manila. The study utilized a survey questionnaire that applied a four-point rating scale, ranging from "Highly Prepared" to "Not Prepared," to assess the perceptions of both groups regarding the preparedness of these police stations. The findings revealed a significant disparity in the perception of earthquake readiness between police personnel and the civilian population at the selected stations. Police personnel usually maintained a favorable perspective, considering their stations well-equipped and competent, whereas the civilian populace reported lower confidence in their preparedness. This difference in perception highlights the necessity for enhanced communication, education, and community involvement to close the gap and increase public knowledge of the earthquake preparedness initiatives of police stations in Metro Manila. Hence, the research suggests prioritizing teaching programs for police personnel and cultivating closer ties with local people to establish confidence and enhance earthquake preparedness endeavors. Overall, this study provides significant knowledge about the earthquake readiness situation in specific police stations in Metro Manila. This information has implications for improving disaster management strategies and initiatives, ultimately leading to more efficient preparedness and response efforts in the event of earthquakes in the region.

KEYWORDS: *Earthquake Preparedness, Police Stations Operational Capabilities, Organization and Planning, Resources and Logistics, Coordination and Responsiveness, and Training. Information*

INTRODUCTION

Due to its geographical location in the Pacific Ring of Fire, the Philippines is susceptible to seismic and volcanic occurrences. The nation is making arrangements for an imminent seismic event known as "The Big One," which is projected to be a 7.2 magnitude earthquake originating from the West Valley Fault. This earthquake is anticipated to strike Metro Manila and its adjacent region. The Office of Civil Defense (OCD), in collaboration with the Bureau of Fire Protection (BFP) and other government organizations, has been organizing a sequence of earthquake drills. This is to acquaint the individuals with the anticipated consequences outlined in the 2004 Metro Manila Earthquake Impact Reduction Study (MMEIRS). Based on the data from MMEIRS, it is estimated that "The Big One" has the potential to demolish around 40% of residential structures and cause damage to 35% of public buildings. Additionally, there is a potential for 34,000 fatalities and 114,000 individuals sustaining severe injuries. Furthermore, the subsequent fire occurrences could

contribute to an additional 18,000 fatalities. The authorities anticipate a reduction in those figures through the implementation of exercises and education campaigns.

Section 5 of the Declaration of Principles and State Policies of Article II in the Philippines Constitution mandates the maintenance of peace and order, the protection of life, liberty, and property, and the promotion of the general welfare are essential for the enjoyment by all the people by the blessings of democracy. It is in the context of this constitutional provision that the Philippine National Police Mission states that: "*the PNP shall enforce the law, prevent and control crimes, maintain peace and order, and ensure public safety and internal security with the active support of the community*". The responsibilities of the PNP during an earthquake emergency include prompt reaction and rescue operations, traffic control, ensuring public safety, and effective communication and coordination. Their proactive readiness and swift, highly coordinated efforts are crucial in



protecting lives and limiting the consequences of earthquakes in the Philippines.

Upon the occurrence of an earthquake, it is imperative for the Philippine National Police (PNP) to assess the situation promptly. It is advisable to mobilize professional search and rescue teams trained in urban search and rescue tactics to find and rescue those trapped in collapsed buildings or impacted areas. These teams frequently collaborate with other emergency responders, such as firefighters and medical staff, to ensure efficient coordination of actions. The prompt and efficient reaction of the PNP is vital during the critical period immediately after an earthquake, known as the "golden hours," as it greatly influences the likelihood of saving lives and reducing injuries. Strategically placing incident command stations improves the coordination of rescue and relief activities.

The PNP, as a stakeholder, follows specific procedures outlined in the Standard Operating Procedure (SOP) No. ODO-2010-003, dated August 9, 2010, for the Organization of the Critical Incident Management Committee (CIMC) and the Critical Incident Management Task Group (CIMTG). These procedures are in accordance with Presidential Decree 1566, which aims to enhance the Philippines' ability to control disasters, and Republic Act 10121, also known as the Philippine Disaster Risk Reduction and Management Act of 2010, which establishes the National Program on Community Disaster Preparedness. This document establishes the policies and standard procedures for managing critical occurrences, providing guidance to all units of the Philippine National Police (PNP) at every level in dealing with various crises. The text describes the identification of the composition and organizational structure of the Critical Incident Management Committee (CIMC) and the Critical Incident Management Task Groups (CIMTGs).

This study provides a concise and targeted approach for examining a crucial part of disaster management in a region prone to seismic activity. Given Metro Manila's high vulnerability to earthquakes, it is crucial to evaluate the preparedness of critical establishments such as police stations. This research is crucial as it seeks to assess the present condition of earthquake readiness inside these establishments, identifying their strengths and shortcomings, and eventually providing guidance for enhancing their operating capacities.

Furthermore, the study indicates a proactive attitude by highlighting the objective of advancing "towards operational capabilities." The study not only focuses on identifying inadequacies but also aims to offer practical ideas and solutions to enhance the capacity of police stations to effectively respond to earthquake disasters. Conducting this research can provide useful knowledge, resulting in better disaster response, greater public safety, and higher ability to withstand seismic disasters. Ultimately, this benefits the safety and well-being of the people in Metro Manila.

LITERATURE REVIEW

The importance of education and community participation in disaster risk reduction, specifically in earthquake preparedness for police stations in Metro Manila, is emphasized by UNESCO Bangkok (2017), World Health Organization (2017), and Maskrey (2013). These articles highlight the significance of knowledgeable and educated police personnel and communities in comprehending earthquake hazards, response methods, and the value of community engagement. Hence, police stations must prioritize educational initiatives for their staff and actively foster connections with local communities to enhance their readiness and effectiveness in handling emergencies. Maskrey (2013) promotes community-based initiatives to strengthen police stations by fostering cooperation and collective accountability within the community.

Morris (2016), FEMA (2015), and Sagala, Dwiyani, Bajek, Takeuchi, and Okada (2013) emphasize the importance of gathering data, coordinating efforts, and assessing vulnerability. Reliable data, as examined by Morris (2016), is crucial for making well-informed decisions during earthquake responses. The significance of collaboration among different agencies and the understanding of household-level characteristics for targeted preparedness are emphasized by FEMA's guidelines for coordination (2015) and the insights provided by Sagala et al. (2013). Police stations must implement explicit data gathering processes, efficiently collaborate with other groups, and identify susceptible communities to customize their initiatives accordingly.

The difficulties and factors to be taken into account as discussed in the papers by Koehler (2016), Chan (2015), and Simpson and Richards (2015). Koehler's chaos theory (2016) emphasizes the inherent unpredictability of earthquake responses, highlighting the need for police stations to balance adaptability and readiness. In his 2015 study, Chan emphasizes the intricate nature of disaster management, illustrating how police stations may be required to navigate various techniques when faced with relocation issues. The study conducted by Simpson and Richards (2015) emphasizes the importance of analyzing seismicity trends for police stations to anticipate and respond to earthquakes effectively. It is recommended that police stations prioritize predictive indicators while also placing a significant emphasis on education and readiness.

Jackson, Rantucci (2014), and Lachica (2015) provide historical perspectives and concerns for government responses. Jackson examines government reactions, encompassing global aid, emphasizing the necessity for local police stations in Metro Manila to comprehend these dynamics. Rantucci's historical analysis (2014) provides insights gained from previous calamities in the Philippines, which police stations can utilize to enhance their current readiness initiatives. In Lachica's evaluation of the function of security forces (2015), the significance of inter-agency cooperation in disaster response is emphasized, with police stations assuming a pivotal role.



This literature combined highlights the significance of education, community involvement, data gathering, coordination, and vulnerability assessment in improving earthquake readiness at the police stations of Metro Manila. Nevertheless, they also emphasize the difficulties of achieving a harmonious equilibrium between adaptability and readiness, maneuvering through various approaches to catastrophe management, considering seismic trends, comprehending governmental reactions, and extracting insights from past occurrences. Law enforcement agencies should utilize this information to create thorough earthquake readiness strategies customized to their respective areas' distinct requirements and vulnerabilities.

OBJECTIVES OF THE STUDY

The study assessed the level of earthquake preparedness of selected police stations in Metro Manila to serve as the basis for an action plan.

Specifically, it sought answers to the following questions:

1. What is the level of preparedness of selected police stations in Metro-Manila, as perceived by the two groups of respondents in terms of:
 - 1.1 Organization and Planning;
 - 1.2 Resources and Logistics;
 - 1.3 Coordination and Responsiveness; and,
 - 1.5 Training?
2. Is there a significant difference in the assessments of the two groups of respondents on the level of earthquake preparedness of selected police stations in Metro Manila relative to the abovementioned variables?
3. Based on the study's findings, what measures can be proposed to enhance the earthquake preparedness and capabilities of selected police stations in Metro Manila?

METHODOLOGY

The descriptive-normative method of research was used in this study. The descriptive method of research was used to underscore all the data collected in the furtherance of data interpretation and analysis to arrive at an empirical answer to enhance better job and activity analysis concerning the problems presented in this study. The researcher undertook the utmost care in gathering data to come up with a complete and reliable input for this study. Descriptive statistics like the average weighted mean and the percentage rate were used in order to answer questions based on the study. The T-test was utilized because there are not more than two groups of respondents. Verbal interpretation was indicated through the four-point rating scale. To meet the actual requirements of the subject under investigation, the researcher will also use the normative research method to clearly describe and define the earthquake preparedness and capacity of the selected areas in Metro Manila, which is the central focus of this study. A normative survey is a fact-finding study with adequate and accurate interpretation. It collected demographic data about people's behavior, practices, intentions, beliefs, attitudes, opinions, judgments, interests, perceptions, etc. Then, such data was analyzed, organized, and interpreted in a normative survey;

it focused more attention on data collection so that all were adequately classified and categorized according to their relevance and contribution inputs to the analysis and interpretation of the collected data.

Scope and Delimitation

The scope of this study was limited to assessing the earthquake preparedness and operational capabilities of selected police stations in Metro Manila, specifically focusing on areas such as Organization and Planning, Resources and Logistics, Coordination and Responsiveness, and Training. The geographic coverage included the cities of Taguig, Makati, Pasig, Parañaque, and Muntinlupa, and data were collected from two groups of respondents: 207 personnel from the selected police stations and 200 individuals from the general populace. The study encompassed the years 2018, 2019, and 2020, offering insights into earthquake preparedness within these parameters while acknowledging potential limitations in applying the findings beyond this defined scope.

Data Gathering Tool

This study utilized a survey questionnaire designed to assess the level of earthquake preparedness and capabilities of selected police stations in Metro Manila, as perceived by two distinct groups of respondents: personnel from the selected police stations and individuals from the general populace. The questionnaire was structured to evaluate five key dimensions: Organization and Planning, Resources and Logistics, Coordination and Responsiveness, Information and Public Awareness, and Educational Training. Respondents were asked to rate the preparedness and capabilities of the police stations on each dimension using a four-point rating scale. The scale consisted of the following categories: "4 - Highly Prepared (HP)," "3 - Prepared (P)," "2 - Less Prepared (LP)," and "1 - Not Prepared (NP)."

This data gathering tool aimed to provide a comprehensive assessment of the selected police stations' earthquake preparedness from both internal and external perspectives. The inclusion of two respondent groups allowed for a comparative analysis, highlighting potential gaps in perception between police personnel and the general populace regarding the stations' readiness for earthquake-related incidents. The use of a four-point rating scale offered a structured and quantifiable means of capturing these perceptions, enabling researchers to quantify and analyze the perceived preparedness and capabilities across the specified dimensions. Ultimately, this data gathering tool served as a crucial instrument in obtaining empirical insights into the earthquake preparedness status of the selected police stations in Metro Manila, shedding light on areas that may require improvement and guiding future disaster management efforts.

Data Gathering Procedures

The data collection methods utilized in this study involved two primary approaches: the acquisition of documentary or secondary data and the implementation of a survey.



The researchers began by collecting documentary or secondary data. This involved conducting a thorough search in library catalogs to find books and reading materials relevant to disaster management and earthquake preparedness programs. They also looked for legal mandates that were important for the study. The materials underwent a thorough evaluation and analysis to extract significant insights and information that would support the study's aims. The collected data was thoroughly evaluated for its pertinence and usefulness, and resources that met the criteria were either photocopied or condensed for easy access, with proper indexing of authorship, publishing details, and descriptions of resource materials. Establishing a thorough knowledge base through this method served as the foundation for the succeeding phases of the study.

The second primary data collection technique employed was the survey, necessitating the acquisition of consent and assistance from the five designated urban police stations and the civilian population involved in the study. The researchers received official authorization to carry out the survey and interacted with different groups of respondents, ensuring they comprehensively understood the study's objectives, purpose, and expected advantages. The survey was methodically designed and arranged, focusing on distinct topics pertinent to the inquiry. The researcher directly supervised the distribution and collection of survey questionnaires, guaranteeing that every group of respondents could share their perspectives. A comprehensive examination was conducted throughout the data collection procedure to verify that all questionnaire items obtained complete and comprehensive responses. Any elements that were left blank or had erasures that needed to be clarified and made it difficult to determine the chosen options were considered invalid.

After retrieving the questionnaires, the researchers condensed and organized the gathered data while a skilled statistician conducted the statistical analysis. The researchers assessed the survey data, and the statistician provided additional insights and input to contribute to the analysis. The use of a multi-phase method for data collection ensured that both qualitative and quantitative data were obtained, enhancing the study's results and establishing a solid basis for assessing the earthquake preparedness and

capabilities of the chosen police stations in Metro Manila, as well as the viewpoints of the civilian population involved in the study.

Ethical Considerations

During the study on earthquake preparedness in selected police stations in Metro Manila, numerous crucial ethical considerations were noted. All respondents, including both police officers and civilians, provided informed consent, demonstrating their voluntary involvement and comprehension of the study's objectives. Stringent protocols were implemented to preserve privacy and secrecy, safeguarding sensitive information. The study sought to mitigate harm, ensure equitable treatment of all respondents, and offer potential advantages to both people and society. When necessary, we secured ethical approval and ensured transparency throughout the research process. The findings were appropriately reported, and the respondents were provided with debriefing sessions. In summary, the study adhered to ethical norms by upholding integrity, respecting participants' rights, and complying with relevant rules.

RESULT AND DISCUSSION

Level of Earthquake Preparedness of Selected Police Stations in Metro Manila

Table 1 presents the level of earthquake preparedness of selected police stations in Metro Manila of Organization and Planning. It was prepared with an overall mean of 3.03. The PNP considered them highly prepared, with a mean of 3.59, but the Populace considered them less prepared, with a mean of 2.47. In general, all indicators were prepared. These were: “Operational plans are implemented properly” with a mean of 3.15; “Support agencies have specific roles in counter earthquake activity” with a mean of 3.13; “Police station is well organized to deal with an earthquake” with 3.03; “Standard procedures and operational plan before, during and after an earthquake known and understood by personnel” with 3.01; and, “Earthquake operational plan is reviewed regularly” with a mean of 2.89.

Table 1
Level of Earthquake Preparedness of Selected Police Stations in Metro Manila in terms of Organization and Planning

| INDICATORS | PNP | | Populace | | OVERALL | |
|---|-------------|-----------|-------------|-----------|-------------|----------|
| | Mean | VI | Mean | VI | Mean | VI |
| The police station is well organized to deal with earthquake | 3.61 | HP | 2.44 | LP | 3.03 | P |
| Support agencies have specific roles in counter-earthquake activity | 3.73 | HP | 2.52 | P | 3.13 | P |
| Standard procedures and operational plans before, during, and after an earthquake known and understood by personnel | 3.56 | HP | 2.45 | LP | 3.01 | P |
| Earthquake operational plan is reviewed regularly | 3.27 | HP | 2.45 | LP | 2.86 | P |
| Operational plans are implemented properly | 3.80 | HP | 2.50 | P | 3.15 | P |
| OVERALL MEAN | 3.59 | HP | 2.47 | LC | 3.03 | P |



UNESCO Bangkok (2017), World Health Organization (2017), and Maskrey (2013) stress the significance of education and community involvement in reducing catastrophe risks, particularly in earthquake preparedness for police stations in Metro Manila. These articles emphasize the importance of well-informed and educated police personnel and communities in understanding earthquake risks, response strategies, and the benefits of community involvement. Therefore, it is imperative for police stations to give priority to educational efforts for their staff and aggressively cultivate relationships with local communities in order to improve their preparedness and efficiency in managing emergencies.

Morris (2016) underscores the need of data collection, as dependable data is crucial for making judicious judgments in the context of earthquake reactions. The importance of collaboration among many agencies is emphasized, and police stations must effectively cooperate with other groups to improve their earthquake readiness.

Koehler's chaos theory (2016) underscores the intrinsic unpredictability of earthquake reactions, underscoring the imperative for police stations to maintain a delicate equilibrium between adaptation and preparedness. The seismicity research

conducted by Simpson and Richards (2015) highlights the significance of examining seismicity patterns in order to anticipate and effectively address earthquakes for police stations. Police stations should prioritize the use of predictive indicators and also give considerable importance to education and preparation.

Table 2

Level of Earthquake Preparedness of Selected Police Stations in Metro Manila in terms of in terms of Resources and Logistics
 Table 2 depicts the level of earthquake preparedness of selected police stations in Metro Manila as perceived by two groups of respondents in terms of Coordination and Responsiveness. It was prepared with an overall mean of 2.98. It was highly prepared for the PNP with a mean of 3.49 and was less prepared for the Populace with a mean of 2.48. However, all indicators had an interpretation as prepared. These were: "Updated earthquake preparedness consciousness drive covering all preventable disasters" had a mean of 3.14; "Maintains ideal number of police personnel to implement earthquake preparedness program" had 3.11; "Responsiveness of personnel during rescue operation" had 3.02; "Mobilization of personnel during emergency service" had 2.92; and, "The police station is complemented by committed and skilled personnel to conduct rescue" had 2.74.

| INDICATORS | PNP | | Populace | | OVERALL | |
|---|------|----|----------|----|---------|----|
| | Mean | VI | Mean | VI | Mean | VI |
| Availability of financial and logistical support needed to sustain the police station earthquake preparedness program | 3.94 | HP | 2.39 | LP | 3.17 | P |
| Efficient flow and dependable communication system | 3.70 | HP | 2.50 | P | 3.10 | P |
| Availability of transportation mobility use for the evacuation of the victim | 3.74 | HP | 2.47 | LP | 3.11 | P |
| Enough funds for the supply of gasoline for responding to calls of duty | 2.97 | P | 2.47 | LP | 2.72 | P |
| Availability of evacuation center for emergency response | 3.17 | P | 2.35 | LP | 2.76 | P |
| OVERALL MEAN | 3.50 | HP | 2.44 | LP | 2.97 | P |

The police stations exhibit a heightened state of readiness, in accordance with FEMA's (2015) emphasis on the significance of logistics and resources in disaster management. The police stations' adherence to FEMA's criteria is clearly demonstrated by their strong performance in areas such as financial and logistical assistance, efficient communication systems, and transportation mobility. These factors are essential for an effective earthquake response (FEMA, 2015).

Nevertheless, the public's view of the level of resource allocation at police stations is categorized as "Less Prepared," suggesting a perceived discrepancy between the actual resources available in police stations and the community's beliefs about their availability. This disparity highlights the necessity for police stations to augment public consciousness, as advised by UNESCO Bangkok (2017), the World Health Organization

(2017), and Maskrey (2013). The articles highlight the need to involve the community and educate the public in reducing the risks associated with disasters, specifically in terms of being prepared for earthquakes (UNESCO Bangkok, 2017; WHO, 2017; Maskrey, 2013). Interacting with the community to convey the accessibility and sufficiency of resources can assist in closing this gap in perception and improving overall preparation.

Furthermore, the data point that emphasizes the presence of evacuation centers for disaster response reveals a need for better logistical assistance. This is in line with Koehler's (2016) advice, which underscores the significance of comprehending the intricacies and difficulties associated with disaster response, including the presence of appropriate infrastructure (Koehler, 2016).



To summarize, although the chosen police stations demonstrate a commendable degree of earthquake readiness in terms of resources and logistics, it is necessary to address the discrepancy in perception among the general public. This can be accomplished by actively involving the community and implementing educational programs, in accordance with the ideas specified in the mentioned references. Increasing public knowledge can help improve the cohesiveness and effectiveness of the earthquake response strategy in Metro Manila.

Table 3
Level of Earthquake Preparedness of Selected Police Stations in Metro Manila in terms of Coordination and Responsiveness

| INDICATORS | PNP | | Papulace | | OVERALL | |
|---|-------------|-----------|-------------|-----------|-------------|----------|
| | Mean | VI | Mean | VI | Mean | VI |
| Maintains the ideal number of police personnel to implement the earthquake preparedness program | 3.94 | HP | 2.27 | LP | 3.11 | P |
| Updated earthquake preparedness consciousness drive covering all preventable disasters | 3.76 | HP | 2.51 | P | 3.14 | P |
| Responsiveness of personnel during rescue operation | 3.38 | HP | 2.65 | P | 3.02 | P |
| The police station is complemented by committed and skilled personnel to conduct rescue | 2.97 | HP | 2.51 | P | 2.74 | P |
| Mobilization of personnel during emergency service | 3.38 | HP | 2.46 | LP | 2.92 | P |
| OVERALL MEAN | 3.49 | HP | 2.48 | LP | 2.98 | P |

Sagala (2017) examines socioeconomic vulnerability in natural catastrophes, such as earthquakes, to identify potential reasons contributing to this disparity. Police stations can enhance their coordination and responsiveness efforts by identifying the particular vulnerabilities present within the community and tailoring their strategies accordingly. Furthermore, the study conducted by Patel, Patel, and Hemani (2016) emphasizes the significance of evaluating coping strategies within communities to mitigate risks through community-based disaster preparedness plans. Differences in the perception of the effectiveness of police stations may contribute to the perception gap. In order to narrow this disparity, police stations can establish cooperative initiatives with local communities to bolster earthquake readiness and promptness, along with the suggestions put forth by Patel et al. These tactics can aid in synchronizing the perceived and actual capacities of police stations regarding coordination and reaction during earthquake occurrences.

In addition, Rao's (2017) focus on the significance of local communities and organizations in disaster management provides helpful direction. Local community engagement in earthquake preparedness initiatives can enhance coordination and responsiveness. Police stations should proactively collaborate with local groups and communities to bolster their capacities and efficiently address any discrepancies in public image. The significance of efficient data collecting and analysis for making well-informed decisions during earthquake responses is

Table 3 depicts the level of earthquake preparedness of selected police stations in Metro Manila as perceived by two groups of respondents in terms of Coordination and Responsiveness. It was prepared with an overall mean of 2.98. It was highly prepared for the PNP with a mean of 3.49 and was less prepared for the Populace with a mean of 2.48. However, all indicators had an interpretation as capable. These were: "Updated earthquake preparedness consciousness drive covering all preventable disasters" had a mean of 3.14; "Maintains an ideal number of police personnel to implement earthquake preparedness program" had 3.11; "Responsiveness of personnel during rescue operation" had 3.02; "Mobilization of personnel during emergency service" had 2.92; and, "The police station is complemented by committed and skilled personnel to conduct rescue" had 2.74.

highlighted by Morris' (2016) research on data gathering during disasters. In order to enhance coordination and promptness, police stations must prioritize the implementation of comprehensive data collection procedures, as emphasized by Morris. This would guarantee their access to precise information, facilitating efficient disaster management. By integrating these observations from the mentioned sources, police stations in Metro Manila can narrow the disparity in perception and improve their coordination and responsiveness in earthquake preparedness, ultimately leading to more efficient disaster response endeavors.

Table 4
Level of Earthquake Preparedness of Selected Police Stations in Metro Manila in terms of Training

Table 4 illustrates the earthquake preparedness of five selected police stations in Metro Manila as perceived by two groups of respondents in terms of Training. It had an interpretation of capable with a mean of 2.98. All indicators were interpreted as prepared as echoed from their corresponding mean. They were: "Sustained training and seminar" had a mean of 3.09; "Pre-earthquake and post-earthquake training pursued" had 3.04; "Knowledge acquired in training is being fully applied" had 2.95; "Updated plan thru conduct of rehearsal and dry run" had 2.86; and, "Personnel are properly trained in responding to earthquake" had 2.84. The Populace said the PNP was capable, with a mean of 2.53, and the PNP group was competent, with a mean of 3.38.



| INDICATORS | PNP | | Populace | | OVERALL | |
|---|-------------|-----------|-------------|----------|-------------|----------|
| | Mean | VI | Mean | VI | Mean | VI |
| Sustained training and seminar | 3.62 | HP | 2.56 | P | 3.09 | P |
| Updated plan thru the conduct of rehearsal and dry run | 3.17 | P | 2.55 | P | 2.86 | P |
| Knowledge acquired in training is being fully applied | 3.35 | HP | 2.54 | P | 2.95 | P |
| Pre-earthquake and post-earthquake training pursued | 3.55 | HP | 2.52 | P | 3.04 | P |
| Personnel are appropriately trained in responding to earthquake | 3.21 | P | 2.46 | LP | 2.84 | P |
| OVERALL MEAN | 3.38 | HP | 2.53 | P | 2.95 | P |

The evaluation of earthquake readiness among specific police stations in Metro Manila, with regards to training, demonstrates various crucial components emphasized in the mentioned sources. Morris's (2016) research highlights the significance of data collection and analysis, which is strongly linked to the necessity for ongoing training and practice exercises. The strong recognition of ongoing training and seminars (HP) corresponds with Morris's emphasis on collecting dependable data and the necessity of continual education for efficient earthquake response. Nevertheless, the somewhat diminished perception (P) concerning updated plans and the application of information highlights the need to improve training programs to guarantee that they result in practical knowledge and operational preparedness, as emphasized by Morris (2016).

The recommendations provided by FEMA in 2015 about disaster preparedness, which emphasize the importance of public awareness, are relevant to the indicators associated with pre-earthquake and post-earthquake training. The high level of awareness (HP) in this regard implies that police stations acknowledge the significance of educating both their staff and the general public regarding earthquake preparedness by FEMA's guidelines. FEMA's recommendations also stress the need for individuals to receive proper training in earthquake response. Nevertheless, the observed deficiency in the application of

knowledge (P) indicates the need to enhance training outcomes into earthquake response initiatives, consistent with FEMA's emphasis on practical preparedness.

Maskrey (2013) highlights the importance of community-based strategies for reducing disaster risks, aligning with the difference in perception regarding staff training. The average indicates that police personnel have a good impression of their training (HP), whilst the general public has a comparatively lower perception (P). In order to fill this void, police stations might adopt Maskrey's strategy and engage the community in their training endeavors. Maskrey emphasizes that community interaction can improve the effectiveness of training and the application of knowledge, leading to a better understanding of earthquake response and ensuring that workers are properly trained. By integrating these observations, police stations can synchronize their training endeavors with the ideas and principles described in the referenced references, thereby augmenting their earthquake preparedness and capabilities.

Table 5

Test of Significant Difference in the Perceptions between the two groups of respondents on the Earthquake preparedness of selected police stations in Metro Manila in terms of:

| Variables | Degree of freedom | Computed t-value | Tabular t-value | Decision |
|---------------------------------|-------------------|------------------|-----------------|------------------|
| Organization and Planning | 8 | 12.08 | 2.306 | Reject Ho |
| Resources and Awareness | 8 | 5.713 | 2.306 | Reject Ho |
| Coordination and Responsiveness | 8 | 5.601 | 2.306 | Reject Ho |
| Training | 8 | 9.354 | 2.306 | Reject Ho |

Table 5 outlined the Significant Difference in the Perceptions between the two groups of respondents on the Earthquake preparedness of selected police stations in Metro Manila in terms of the aforementioned variables. It showed that the computed t-values of all aforementioned variables (Organizing and planning had 12.08; Resources and Logistics had 5.713; Coordination and responsive had 5.601; and Training had 9.354) are all greater than the tabular t-value of 2.306. At 0.05 level of significance and 8 degrees of freedom, reject the null hypothesis. This implied a Significant Difference in the Perceptions between the two groups of respondents on the Earthquake preparedness and capabilities of selected police stations in Metro Manila in terms of the

aforementioned variables. To the PNP, they were prepared but to the Populace, the PNP was less prepared.

CONCLUSIONS AND RECOMMENDATIONS

Practical Implications

Based on the results, it is suggested that certain police stations in Metro Manila prioritize continuous training and education programs for their personnel to improve their readiness for earthquakes. This entails enhancing and modernizing training material to guarantee the efficient application of knowledge in practical earthquake response situations. Furthermore, it is crucial to actively include and interact with local populations in order to close the gap in understanding between police officials and the



general public when it comes to earthquake preparedness. Police stations should provide adequate allocation of resources for transportation, communication systems, and logistical requirements to enhance and maintain their preparedness.

Theoretical Implications

The study highlights the significance of the community-based disaster risk reduction approach, underscoring the necessity of engaging local communities in disaster preparedness endeavors. The favorable perception of consistent training corresponds to the theoretical framework of continuous learning and adaptation in disaster preparedness, emphasizing that disaster preparedness is a dynamic process that necessitates continual education and skill enhancement. The findings further substantiate the actual implementation of principles advocated by organizations such as FEMA, underscoring the significance of converting theoretical knowledge into tangible measures in disaster preparedness endeavors.

Based on the provided data, the following recommendations are proposed:

- Enhanced Training:** Police stations in Metro Manila should prioritize implementing frequent and current training programs to enhance the skills and knowledge of their personnel. The scope of this training will encompass earthquake readiness, response methods, and the efficient collaboration required during emergencies. Furthermore, it is imperative to regularly revise the training material to integrate the most recent advancements in disaster management.
- Community Engagement:** Police stations ought to coordinate community outreach initiatives, seminars, and simulations to enlighten locals on the dangers and appropriate actions to take in the event of an earthquake. This can serve as a means to establish a connection between the police force and the people, promoting collaboration in times of crisis.
- Resource Allocation:** Sufficient resources must be supplied to police stations, encompassing finances for transportation, communication systems, and logistical requirements. This guarantees that law enforcement professionals can promptly and proficiently react during seismic occurrences. Ensuring regular maintenance and testing of communication equipment should be of utmost importance.
- Data Gathering and Analysis:** In order to enhance readiness, law enforcement agencies should give priority to the collection and examination of data. This entails gathering data on seismic activity trends, conducting evaluations of susceptibility, and identifying the individual needs of each community. Accurate data is crucial for making well-informed decisions during disaster response.
- Inter-Agency Collaborations:** As emphasized by FEMA guidelines, collaborative efforts among different agencies should be fostered. Police stations should

actively coordinate with other organizations and authorities involved in disaster management to streamline response efforts and share resources and information.

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