BORN RMT JOURNAL
OFFICIAL DEPARTMENTAL RESEARCH PUBLICATION OF THE COLLEGE OF MEDICAL LABORATORY SCIENCE
ISSN:3082-4249 MAIDEN ISSUE VOL. 1 NO. 1

STATUS, CHALLENGES, AND COPING STRATEGIES OF BARANGAY HEALTH EMERGENCY RESPONSE TEAMS (BHERTs) IN THE DISASTER MANAGEMENT PLAN IN SAN ISIDRO, IGUIG, CAGAYAN, AND SAN ROQUE, PEÑABLANCA, CAGAYAN

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ABSTRACT

This study assessed the status, challenges, and coping strategies of Barangay Health Emergency Response Teams (BHERTs) in implementing disaster management plans in San Isidro, Iguig, Cagayan, and San Roque, Peñablanca, Cagayan. Using a descriptive correlational research design, 52 respondents from these barangays were surveyed. Stratified random sampling was applied, and data were gathered using structured questionnaires. The findings revealed that BHERTs in San Isidro demonstrated a higher level of compliance with disaster management protocols compared to San Roque, highlighting the importance of preparedness and community cooperation. Key challenges included limited funding, insufficient training, and inconsistent engagement from local residents. San Isidro's BHERTs performed better in disaster risk assessments, hazard mapping, and communication systems, showcasing effective coordination and proactive measures. Conversely, San Roque faced challenges such as a lack of equipment and difficulties in mobilizing community resources, which hindered the efficiency of their disaster management strategies. Both barangays exhibited deficiencies in infrastructure retrofitting and operational handbook development, suggesting the need for additional technical training and resource support. Coping strategies employed by BHERTs included self-motivation, time management, and fostering community involvement through bayanihan (collective community action). Despite resource limitations, BHERTs showcased resilience, adaptability, and commitment to disaster risk reduction. The study emphasized that these grassroots teams serve as critical frontline responders, bridging gaps between local communities and higher government agencies during disasters. To enhance the effectiveness of BHERTs, the study recommended targeted capacity-building initiatives, increased resource allocation, and strengthened policies for disaster preparedness. Community engagement and awareness campaigns were highlighted as essential components to

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foster trust and cooperation, enabling more efficient implementation of disaster management plans. Furthermore, the study called for future research to explore the long-term impacts of BHERT initiatives on community resilience and disaster preparedness. In conclusion, this study underscores the indispensable role of BHERTs in disaster management within flood-prone areas. Addressing the identified gaps through enhanced training, sufficient resources, and improved community collaboration will significantly bolster their capabilities, ultimately reducing the risks and impacts of future disasters.

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Key words: *Barangay Health Emergency Response Teams, Disaster Management, Flood Management, Challenges, Coping Strategies*

INTRODUCTION

Disasters significantly disrupt lives, livelihoods, and economies, especially in vulnerable communities. Flooding, one of the most frequent natural disasters, poses severe challenges to barangays in flood-prone areas. Barangay Health Emergency Response Teams (BHERTs) are pivotal in implementing disaster management plans, serving as the first responders during crises. Collaborating with agencies such as the Department of Health (DOH) and the Department of the Interior and Local Government (DILG), BHERTs aim to mitigate the adverse effects of disasters through timely action and community health initiatives.

Despite their importance, BHERTs face persistent challenges, including inadequate training, limited resources, and insufficient community cooperation. This study addresses these gaps by evaluating the status, challenges, and coping strategies of BHERTs in San Isidro and San Roque—two barangays significantly affected by flooding. The findings will inform future policy decisions and capacity-building initiatives.

METHODOLOGY

This chapter provides a detailed description of the research approach and design employed in this study. The following sections discuss the research design, research participants, data gathering materials, data gathering procedure, and the method of analysis that will be done in the conduct of this research.

Research Design

This study employed a descriptive correlational research design to explore relationships between the status of disaster management implementation, challenges faced, and coping strategies employed by BHERTs.

Respondents of the Study

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A total of 52 respondents participated: 23 from San Isidro, Iguig, and 29 from San Roque, Peñablanca. Respondents included barangay officials, health workers, and other members of BHERTs. Stratified random sampling was used to ensure representativeness.

Data Gathering tool

A structured questionnaire, divided into four sections, was utilized to collect data: (1) demographic profile, (2) status of disaster management implementation, (3) challenges encountered, and (4) coping strategies. The questionnaire was validated by subject matter experts.

Data Gathering Procedure

The researchers obtained the necessary permissions and conducted a pre-survey orientation for participants. Questionnaires were distributed and collected within a specified period. Confidentiality was maintained throughout the process.

Data Analysis

Statistical tools were used to analyze the data, including frequency distribution, weighted mean, and Pearson correlation. One-way ANOVA was used to identify significant differences based on demographic variables.

RESULT AND DISCUSSION

Profile of the Respondents in terms of Age

In terms of the respondents' profile regarding age, it was revealed that the majority were 51-57 years of age, as they were primarily older and experienced people during response and disasters. As they are older, they should be more cautious in their workplace as they face the risks and dangers in their line of work.

Profile of the Respondents in terms of Sex

In terms of the respondents' profile regarding sex, the highest percentage of respondents are male. This means that the majority of the BHERT members are male which means that the Barangay Disaster Risk Reduction and Management (BDRRM) of the adopted community is a male-dominated group due to being physically demanding in emergencies and better suited for tasks associated with disaster response and risk management.

Profile of the Respondents in terms of Barangay

The data showed that the highest percentage of 55.8 percent of the respondents are from San Roque, while the lowest percentage of 44.2 percent of the respondents are from San Isidro. This means that the higher percentage from San Roque indicates a larger population than San Isidro.

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Profile of the Respondents in terms of Designation

The data showed that the highest percentage of 36.5 percent of the respondents are Barangay Tanod, while the lowest frequency of 1.9 percent of the respondents is Nurses. This means that the involvement in local governance and security of Barangay Tanods reflects a vital role in the community.

Profile of the Respondents in terms of Number of Educational Attainment

Data showed that the highest percentage of 32.7 percent of the respondents are high school graduates, while the lowest percentage of 1.9 percent of the respondents are Elementary graduates. This implies that most of the BHERT members are high school graduates which means that they have the skills and knowledge necessary for community healthcare,and emergency response tasks and enables them to perform their duties effectively.

Profile of the Respondents in terms of Years in Service

Data showed that the highest percentage of 42.3 percent of the respondents' years of service is 2-5 years, while the lowest percentage of 3.8 percent of the respondents' years of service is 1 year. This implies that most of the BHERT members are 2-5 years in service which means that they have gained a moderate level of experience in their roles and had time to build trust within the community, develop essential skills, and understand local health concerns.

Profile of the Respondents in terms of Numbers of Trainings Attended in the Disaster Management Plan

Data showed that the highest percentage which is 69.2 percent of the respondents is 1-5 times, while the lowest percentage which is 3.8 percent of the respondents is 11-15 times. This implies that most of the BHERT members attended 1-5 times of training on disaster management in their service

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TABLE 2.1. ASSESSMENT OF THE RESPONDENTS ON THE STATUS OF IMPLEMENTATION OF BARANGAY HEALTH EMERGENCY RESPONSE PLAN OF FLOOD DISASTER MANAGEMENT IN TERMS OF DISASTER PREVENTION

STATEMENTS	MEAN	DESCRIPTION
1. Create an important facility inventory and conduct risk and vulnerability analyses.	3.52	COMPLIANT
2. Create rules for redesigning, retrofitting, or operating infrastructure.	3.13	COMPLIANT WITH MINOR DEFICIENCY
3. Key efforts include hazard mapping and vulnerability assessments.	3.50	COMPLIANT
4. Dissemination of information through relationships with diverse media.	3.31	COMPLIANT
5. Trainings for Barangay Health Emergency Response Team are specifically geared toward community members.	3.50	COMPLIANT
6. The Barangay Health Emergency Response Team have equipment or facilities allocated for training.	3.19	COMPLIANT WITH MINOR DEFICIENCY
7. The NGO(s) fund training activities of Barangay Health Emergency Response Team.	3.46	COMPLIANT
CATEGORICAL MEAN	**3.37**	**COMPLIANT**

Table 2.1 with the categorical mean of 3.37, interpreted as compliant, highlights BHERTs' adherence to including risk analyses and hazard mapping. However, the lower mean score of 3.13 for infrastructure retrofitting points to areas needing improvement. As outlined in the UNISDR's "Global Assessment Report on Disaster Risk Reduction" (2015), capacity building is key to improving disaster risk management. This underscores the need for technical training and funding to address deficiencies in retrofitting and operational infrastructure.

TABLE 2.2. ASSESSMENT OF THE RESPONDENTS ON THE STATUS OF IMPLEMENTATION OF BARANGAY HEALTH EMERGENCY RESPONSE PLAN OF FLOOD DISASTER MANAGEMENT IN TERMS OF DISASTER PREPAREDNESS

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STATEMENTS	MEAN	DESCRIPTION
1. The BHERTs has information, education, communication, and advocacy plans for any kind of typhoon.	3.63	COMPLIANT
2. Create and/or improve coordination and communication systems for the contract tracing system.	3.52	COMPLIANT
3. Develop and/or improve an operational handbook for disaster operations centers.	3.15	COMPLIANT WITH MINOR DEFICIENCY
4. Develop and/or improve emergency response team guidelines.	3.52	COMPLIANT
5. The formulation of contingency plans for disaster.	3.48	COMPLIANT
CATEGORICAL MEAN	**3.46**	**COMPLIANT**

Table 2.2 with the categorical mean of 3.46 indicates compliance with preparedness measures, particularly in information dissemination and advocacy plans, which scored the highest mean (3.63). However, the development of operational handbooks (mean 3.15) remains a minor deficiency. UNICEF (2017) highlighted that effective preparedness depends on clear communication strategies and standardized operational guidelines. Addressing this gap through targeted training and handbook updates will enhance preparedness efforts.

TABLE 2.3. ASSESSMENT OF THE RESPONDENTS ON THE STATUS OF IMPLEMENTATION OF BARANGAY HEALTH EMERGENCY RESPONSE PLAN OF FLOOD DISASTER MANAGEMENT IN TERMS OF DISASTER RESPONSE

STATEMENTS	MEAN	DESCRIPTION
1. Issuing public advisories in accordance with established norms.	3.42	COMPLIANT
2. Establishment of systems of coordination for effective and efficient relief and response operations.	3.29	COMPLIANT
3. The activation of distribution points and centers.	3.38	COMPLIANT
4. Develop and deploySRR systems in collaboration with relevant agencies.	3.38	COMPLIANT
5. Does the Barangay have a unit or committee that will conduct contact tracing.	3.37	COMPLIANT
CATEGORICAL MEAN	**3.40**	**COMPLIANT**

Table 2.3 with a categorical mean of 3.40, disaster response measures were rated compliant. BHERTs' strengths include issuing public advisories (mean 3.42) and managing relief operations. Bhattacharya et al. (2020) emphasized that effective response mechanisms rely on community-based teams capable of resource distribution and rapid adaptation. The results highlight the importance of consistent coordination systems to optimize response efficiency.

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TABLE 2.4. ASSESSMENT OF THE RESPONDENTS ON THE STATUS OF IMPLEMENTATION OF BARANGAY HEALTH EMERGENCY RESPONSE PLAN OF FLOOD DISASTER MANAGEMENT IN TERMS OF DISASTER REHABILITATION

STATEMENTS	MEAN	DESCRIPTION
1. Analyze the post-disaster or post-conflict requirements of affected communities.	3.50	COMPLIANT
2. Establish support and communication channels among important stakeholders.	3.42	COMPLIANT
CATEGORICAL MEAN	**3.46**	**COMPLIANT**

Table 2.4 with a categorical mean of 3.46 reflects BHERTs' effectiveness in rehabilitation efforts, with a strong performance in analyzing post-disaster requirements (mean 3.50). Hogg et al. (2014) stressed the significance of community-specific recovery strategies that account for social and economic dynamics. The findings suggest that sustained communication among stakeholders and further capacity-building initiatives will enhance rehabilitation outcomes.

TABLE 3.1. CHALLENGES OF THE RESPONDENTS IN THE IMPLEMENTATION OF BARANGAY HEALTH EMERGENCY RESPONSE PLAN OF FLOOD DISASTER MANAGEMENT IN TERMS OF DISASTER PREVENTION

STATEMENTS	MEAN	DESCRIPTION
1. Locals did not adhere to safety procedures established by the government.	2.46	SOMEWHAT A CHALLENGE
2. Locals are not mindful of the things to do before, during and after typhoons.	2.37	SOMEWHAT A CHALLENGE
3. Lack of flood management programs such as tree planting and solid waste activity.	2.46	SOMEWHAT A CHALLENGE
4. Insufficient disaster warning systems.	2.38	SOMEWHAT A CHALLENGE
5. Lack of emergency response training.	2.38	SOMEWHAT A CHALLENGE
CATEGORICAL MEAN	**2.41**	**SOMEWHAT A CHALLENGE**

Table 3.1 with a categorical mean of 2.41 indicates that locals' adherence to safety procedures is somewhat a challenge. A lack of awareness regarding preventive measures and flood management programs was evident. Binasoy et al. (2018) emphasized that insufficient training and community involvement in disaster prevention programs limit the effectiveness of these initiatives. Addressing this issue through awareness campaigns and community education is essential.

TABLE 3.2. CHALLENGES OF THE RESPONDENTS IN THE IMPLEMENTATION OF BARANGAY HEALTH EMERGENCY RESPONSE PLAN OF FLOOD DISASTER MANAGEMENT IN TERMS OF DISASTER PREPAREDNESS

STATEMENTS	MEAN	DESCRIPTION

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1. Poor coordination between locals and rescue officers.	2.35	SOMEWHAT A CHALLENGE
2. Lack of typhoon alert.	2.40	SOMEWHAT A CHALLENGE
3. Insufficient first aid kit.	2.31	SOMEWHAT A CHALLENGE
4. Hardheaded residents.	2.38	SOMEWHAT A CHALLENGE
5. Lack of manpower.	2.35	SOMEWHAT A CHALLENGE
CATEGORICAL MEAN	**2.41**	**SOMEWHAT A CHALLENGE**

Table 3.2 with a categorical mean of 2.41 suggests moderate challenges in disaster preparedness, particularly in contingency planning and operational handbook development. According to Baldwin et al. (2021), effective preparedness is hindered by insufficient policy implementation and limited stakeholder engagement. BHERTs must prioritize comprehensive training and resource allocation to mitigate these challenges.

TABLE 3.3. CHALLENGES OF THE RESPONDENTS IN THE IMPLEMENTATION OF BARANGAY HEALTH EMERGENCY RESPONSE PLAN OF FLOOD DISASTER MANAGEMENT IN TERMS OF DISASTER RESPONSE

STATEMENTS	MEAN	DESCRIPTION
1. Relief supplies is insufficient for the duration of the evacuation period.	2.46	SOMEWHAT A CHALLENGE
2. Lack of search and rescue operation.	2.31	SOMEWHAT A CHALLENGE
3. Hotline numbers are not always active/unable to contact.	2.48	SOMEWHAT A CHALLENGE
4. Insufficient assessing of the initial damage.	2.37	SOMEWHAT A CHALLENGE
5. Insufficient evacuation hall/rooms.	2.44	SOMEWHAT A CHALLENGE
CATEGORICAL MEAN	**2.36**	**SOMEWHAT A CHALLENGE**

Table 3.3 with a categorical mean of 2.36 reflects challenges in resource distribution and coordination during disaster response. Bhattacharya et al. (2020) highlight the critical role of systematic resource management and stakeholder collaboration in effective disaster response. The findings suggest that strengthening communication and coordination mechanisms will address these gaps.

TABLE 3.4. CHALLENGES OF THE RESPONDENTS IN THE IMPLEMENTATION OF BARANGAY HEALTH EMERGENCY RESPONSE PLAN OF FLOOD DISASTER MANAGEMENT IN TERMS OF DISASTER REHABILITATION

STATEMENTS	MEAN	DESCRIPTION
1. Inadequate cleaning operations.	2.35	SOMEWHAT A CHALLENGE
2. No precise damage assessment is carried out.	2.42	SOMEWHAT A CHALLENGE

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3. Slow restoration of livelihoods.	2.29	SOMEWHAT A CHALLENGE
4. Slow community development.	2.35	SOMEWHAT A CHALLENGE
5. Insufficienttemporary basic needs.	2.29	SOMEWHAT A CHALLENGE
CATEGORICAL MEAN	**2.34**	**SOMEWHAT A CHALLENGE**

Table 3.4 with a categorical mean of 2.34 indicates challenges in post-disaster recovery efforts, including stakeholder communication and resource allocation. Hogg et al. (2014) emphasized the importance of tailored rehabilitation strategies that address the specific needs of affected communities. Improved coordination and funding mechanisms are recommended to overcome these challenges.

TABLE 3.5. CHALLENGES OF THE RESPONDENTS IN THE IMPLEMENTATION OF BARANGAY HEALTH EMERGENCY RESPONSE PLAN OF FLOOD DISASTER MANAGEMENT IN TERMS OF AVAILABLE EQUIPMENT

STATEMENTS	MEAN	DESCRIPTION
1. Insufficient rescue vehicle.	2.40	SOMEWHAT A CHALLENGE
2. Lack of PPE such as life jacket, boots, and helmet.	2.33	SOMEWHAT A CHALLENGE
3. Insufficient rescue rope.	2.40	SOMEWHAT A CHALLENGE
4. Lack of radio communications.	2.23	SOMEWHAT A CHALLENGE
5. Lack of foldingand inflatable stretchers.	2.35	SOMEWHAT A CHALLENGE
6. Lack of rescue boats.	2.19	SOMEWHAT A CHALLENGE
CATEGORICAL MEAN	**2.29**	**SOMEWHAT A CHALLENGE**

Table 3.5 with a categorical mean of 2.29, is interpreted as "somewhat a challenge," pointing to several critical equipment deficiencies that could hinder effective disaster response. It also revealed that the statements "Insufficient rescue vehicle" and "Insufficient rescue rope" got the highest mean of 2.40. On the other hand, the statement "Lack of rescue boats" got the lowest mean of 2.19. This implies that the challenges are related to the availability of essential equipment for disaster response, particularly regarding rescue vehicles, PPE, communication tools, and transportation resources. This suggests that strategic investments and resource allocation are crucial to addressing these deficiencies. Shaw and Izumi (2014) stress the importance of equipping first responders with adequate tools and PPE, which are necessary for safely conducting rescue operations in challenging conditions. The lack of essential rescue tools, such as ropes and other technical equipment, hinders effective search and rescue efforts.

TABLE 4.1. COPING STRATEGIES OF THE RESPONDENTS IN THE IMPLEMENTATION OF BARANGAY HEALTH EMERGENCY RESPONSE PLAN OF FLOOD DISASTER MANAGEMENT IN TERMS OF DISASTER PREVENTION AND MITIGATION

STATEMENTS	MEAN	DESCRIPTION
1. I enlighten the people on the preventative measures that need to accomplish before typhoon.	3.62	STRONGLY AGREE

2. I coordinate with the Barangay meetings for the management before and during the typhoon.	3.31	STRONGLY AGREE
3. I use social media to share typhoon and health related advice, rules, updates, and regulations.	3.65	STRONGLY AGREE
4. Advanced codes and standards are implemented.	3.21	AGREE
5. Vulnerability and risk assessments are accomplished before typhoon.	3.40	STRONGLY AGREE
CATEGORICAL MEAN	**3.39**	**STRONGLY AGREE**

The categorical mean of 3.39 was interpreted as “Strongly Agree” indicating a strong emphasis on disaster prevention that educates the public on how to prepare and work with local meetings ahead of as well as during a typhoon. It also revealed that the statement “I use social media to share typhoons and health-related advice, rules, updates, and regulations.” got the highest mean of 3.65 which was interpreted as “Strongly Agree” while the statement “Advanced codes and standards are implemented.” got the lowest mean of 3.21 which was interpreted as “Agree”. This implies that people recognized the importance of proactive measures, public awareness, and community engagement in disaster risk reduction (DRR) wherein communities are increasingly aware of the need to prepare and have processes in place ahead of natural disasters. The United Nations Office for Disaster Risk Reduction (UNDRR, 2017) emphasizes that public education is one of the most effective means of reducing vulnerability to disasters.

TABLE 4.2. COPING STRATEGIES OF THE RESPONDENTS IN THE IMPLEMENTATION OF BARANGAY HEALTH EMERGENCY RESPONSE PLAN OF FLOOD DISASTER MANAGEMENT IN TERMS OF DISASTER PREPAREDNESS

STATEMENTS	MEAN	DESCRIPTION
1. Rescue teams are always available for 24 hours.	3.48	STRONGLY AGREE
2. Rescue vehicles are sufficient.	3.42	STRONGLY AGREE
3. Budget for food, water, medicines are readily available.	3.54	STRONGLY AGREE
4. Monitoring teams are activated before, during and after typhoon.	3.50	STRONGLY AGREE
5. Rescuers undergo several trainings about disaster.	3.52	STRONGLY AGREE
CATEGORICAL MEAN	**3.50**	**STRONGLY AGREE**

Table 4.2 showed a categorical mean of 3.50 which was interpreted as “Strongly Agree”. It also revealed that the statement “Rescuers undergo several trainings about disaster.” got the highest mean of 3.52. On the other hand, the statement “Rescue vehicles are sufficient.” got the lowest mean of 3.42. These strategies provide a picture of what constitutes a prepared community and serve to underline the critical importance of pre-planning, thinking ahead, and taking protective action on behalf of those about to be hit by a flood disaster. Santos et al. (2019) note that consistent and scenario-based training (e.g., through simulations) enhances the skill set of responders, allowing them to remain effective even under stress. Such training can significantly improve rescue efforts, especially in disaster-prone areas.

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TABLE 4.3. COPING STRATEGIES OF THE RESPONDENTS IN THE IMPLEMENTATION OF BARANGAY HEALTH EMERGENCY RESPONSE PLAN OF FLOOD DISASTER MANAGEMENT IN TERMS OF DISASTER RESPONSE

STATEMENTS	MEAN	DESCRIPTION
1. Emergency protocols are activated.	3.63	STRONGLY AGREE
2. I conduct contact tracing for residents who have had affected with typhoon.	3.31	STRONGLY AGREE
3. Medical assistance and first aid kit are sufficient for residents who have had affected with typhoon.	3.63	STRONGLY AGREE
4. Water levels are always monitored.	3.35	STRONGLY AGREE
CATEGORICAL MEAN	**3.48**	**STRONGLY AGREE**

Table 4.3 showed a categorical mean of 3.48 which was interpreted as “Strongly agree”. It also revealed that the statement “Emergency protocols are activated” and “Medical assistance and first aid kit are sufficient for residents who have had affected with typhoon” got the highest mean of 3.63. On the other hand, the statement “I conduct contact tracing for residents who have had affected with typhoon” got the lowest mean of 3.31. This implies a collective readiness and positive attitude toward managing flood-related health emergencies, highlighting the importance of preparedness and community resilience in disaster response efforts. The United Nations Office for Disaster Risk Reduction (UNDRR, 2017) emphasizes that community resilience can be significantly enhanced when local governments and community members work together to prepare for and respond to disasters. In this case, the activation of emergency protocols and adequate medical assistance are clear indicators of a community’s resilience to typhoons and related health impacts.

TABLE 4.4. COPING STRATEGIES OF THE RESPONDENTS IN THE IMPLEMENTATION OF BARANGAY HEALTH EMERGENCY RESPONSE PLAN OF FLOOD DISASTER MANAGEMENT IN TERMS OF DISASTER REHABILITATION

STATEMENTS	MEAN	DESCRIPTION
1. Implementation of clean-up drive programs.	3.65	STRONGLY AGREE
2. Assessment of damage establishments, wires, etc. are monitored and reported immediately.	3.40	STRONGLY AGREE

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3. Temporary basic needs of evacuees are provided.	3.60	STRONGLY AGREE
CATEGORICAL MEAN	**3.55**	**STRONGLY AGREE**

Table 4.4 showed a categorical mean of 3.55 which was interpreted as “Strongly agree”. It also revealed that the statement “Implementation of clean-up drive programs” got the highest mean of 3.65. On the other hand, ,the statement “Assessment of damage establishments, wires, etc. are monitored and reported immediately” got the lowest mean of 3.40. This implies a strong consensus among respondents regarding the effectiveness of various coping strategies which reflect a proactive and organized approach to disaster rehabilitation, underscoring the community's commitment to ensuring safety and support during emergencies. Srinivasan (2015) also emphasizes that cleaning up disaster-affected areas reduces environmental hazards, ensuring safer living conditions for returning populations. Furthermore, these programs are instrumental in preventing secondary health crises that might otherwise delay recovery efforts.

TABLE 5.1. DIFFERENCE IN THE STATUS ON THE IMPLEMENTATION OF BARANGAY HEALTH EMERGENCY RESPONSE PLAN OF FLOOD DISASTER MANAGEMENT OF THE RESPONDENTS BASED ON THEIR PROFILE VARIABLES

VARIABLES		**STATUS ON THE IMPLEMENTATION OF BARANGAY HEALTH EMERGENCY RESPONSE PLAN OF FLOOD DISASTER MANAGEMENT**			
		DISASTER PREVENTION	**DISASTER PREPAREDNESS**	**DISASTER RESPONSE**	**DISASTER REHABILITATION**
AGE	f- value p-value	.542 .798	.360 .921	.485 .840	.655 .709

SEX	t- value p-value	.144 .886	.834 .408	.435 .665	.645 .522
BARANGAY	t- value p-value	2.829 .007*	5.885 .000*	4.430 .000*	3.110 .003*
DESIGNATION	f- value p-value	.490 .873	1.172 .337	1.831 .091	1.659 .130
HIGHEST EDUCATIONAL STATUS	f- value p-value	2.375 .045*	3.568 .006*	3.000 .015*	1.820 .117
YEARS IN SERVICE	f- value p-value	2.558 .051	1.261 .298	2.005 .109	1.687 .169
NUMBER OF TRAININGS ATTENDED IN THE DISASTER MANAGEMENT PLAN	f- value p-value	1.855 .134	1.455 .231	1.694 .167	1.900 .126

Table 5.1 highlights significant differences in the implementation of the Barangay Health Emergency Response Plan for flood disaster management based on the barangay variable, with p-values of 0.007 (disaster prevention), 0.000 (disaster preparedness and response), and 0.003 (disaster rehabilitation). This indicates that barangay-specific factors, such as resources, leadership, and community engagement, influence effectiveness.

Educational status also showed significant differences in implementation, with p-values of 0.045 (disaster prevention), 0.006 (disaster preparedness), and 0.015 (disaster response), suggesting that higher education levels improve plan execution. San Isidro outperformed San Roque across all disaster management stages.

Tailored strategies, community engagement, and localized training are recommended to address barangay-specific needs. Additionally, educational programs for disaster personnel can enhance overall capacity. As Filho (2017) emphasizes, local plans should consider socioeconomic contexts and community capacity for effective disaster management.

TABLE 5.2. DIFFERENCE IN THE CHALLENGES OF THE RESPONDENTS IN THE IMPLEMENTATION OF BARANGAY HEALTH EMERGENCY RESPONSE PLAN OF FLOOD DISASTER MANAGEMENT BASED ON THEIR PROFILE VARIABLES

VARIABLES	CHALLENGES ON THE IMPLEMENTATION OF BARANGAY HEALTH EMERGENCY RESPONSE PLAN OF FLOOD DISASTER MANAGEMENT				
	DISASTE R PREVENT ION	DISASTER PREPAREDNES S ESS	DISASTE R RESPONS E	DISASTER REHABILITATA TION	AVAILABLE EQUIPMENT

AGE	f- value p-value	1.439 .215	.642 .719	1.209 .318	.913 .505	.985 .455
SEX	t- value p-value	1.315 .194	1.176 .245	1.373 .176	1.601 .116	1.542 .129
BARANGAY	t- value p-value	8.672 .000*	9.365 .000*	9.255 .000*	10.356 .000*	9.636 .000*
DESIGNATION	f- value p-value	.562 .820	.607 .784	.526 .847	.656 .743	.565 .817
HIGHEST EDUCATIONAL STATUS	f- value p-value	.673 .672	.843 .544	.827 .555	.758 .606	.732 .626
YEARS IN SERVICE	f- value p-value	.387 .817	.335 .853	.867 .491	.331 .856	.432 .785
NUMBER OF TRAINING ATTENDED IN THE DISASTER MANAGEMENT PLAN	f- value p-value	2.348 .068	3.029 .027*	2.301 .073	1.872 .131	1.711 .163

Table 5.2 shows significant differences in respondents' challenges with the implementation of the Barangay Health Emergency Response Plan across all five areas—disaster prevention, preparedness, response, rehabilitation, and equipment—based on the barangay variable (p-value = 0.000). This suggests that challenges vary by barangay due to differences in resources, leadership, and community dynamics.

Training attendance also significantly affected preparedness challenges (p-value = 0.027), indicating that training can help address some of these issues.

Given the varying challenges across barangays, targeted interventions are needed to address specific needs. Training programs focused on practical skills and local needs can improve preparedness and response. San Roque faces more challenges than San Isidro, particularly in prevention, preparedness, and equipment. Research by Mastrorillo et al. (2016) and Mason et al. (2018) supports the idea that community-specific approaches and targeted training enhance disaster management effectiveness.

TABLE 5.3. DIFFERENCE IN THE COPING STRATEGIES OF THE RESPONDENTS IN THE IMPLEMENTATION OF BARANGAY HEALTH EMERGENCY RESPONSE PLAN OF FLOOD DISASTER MANAGEMENT BASED ON THEIR PROFILE VARIABLES

VARIABLES		**COPING STRATEGIES ON THE IMPLEMENTATION OF BARANGAY HEALTH EMERGENCY RESPONSE PLAN OF FLOOD DISASTER MANAGEMENT**			
		DISASTER PREVENTION	DISASTER PREPAREDNESS	DISASTER RESPONSE	DISASTER REHABILITATION
AGE	f- value p-value	1.738 .125	1.292 .276	1.211 .317	.960 .472

SEX	t- value p-value	1.284 .205	1.390 .171	1.190 .240	1.655 .104
BARANGAY	t- value p-value	2.333 .024*	1.172 .247	.886 .380	1.478 .146
DESIGNATION	f- value p-value	1.630 .138	.685 .718	.941 .501	1.253 .291
HIGHEST EDUCATIONAL STATUS	f- value p-value	1.540 .187	2.009 .084	.830 .553	1.236 .306
YEARS IN SERVICE	f- value p-value	1.089 .373	1.124 .357	1.219 .315	.468 .759
NUMBER OF TRAININGS ATTENDED IN THE DISASTER MANAGEMENT PLAN	f- value p-value	1.389 .252	2.048 .103	1.145 .347	.777 .546

Table 5.3 shows significant differences in respondents' coping strategies for disaster prevention based on the barangay variable (p-value = 0.024). This suggests that different barangays adopt unique strategies for preventing disasters. The findings highlight the need to tailor strategies to each barangay's specific context to improve disaster management.

San Isidro respondents reported better coping strategies for disaster prevention than those in San Roque, reinforcing the role of barangay context in shaping these strategies. According to Parker and Morrissey (2017), factors like topography, access to early warning systems, and community preparedness influence the effectiveness of preventive strategies, which may explain the differences between barangays.

TABLE 6.1. RELATIONSHIP BETWEEN THE STATUS OF IMPLEMENTATION AND CHALLENGES OF THE RESPONDENTS IN THE IMPLEMENTATION OF BARANGAY HEALTH EMERGENCY RESPONSE PLAN OF FLOOD DISASTER MANAGEMENT

VARIABLES			CHALLENGES OF THE RESPONDENTS IN THE IMPLEMENTATION OF BARANGAY HEALTH EMERGENCY RESPONSE PLAN OF FLOOD DISASTER MANAGEMENT				
			DISASTER PREVENTION	DISASTER PREPAREDNESS	DISASTER RESPONSE	DISASTER REHABILITATION	AVAILABLE EQUIPMENT
STATUS ON THE IMPLEMENTATION OF	DISASTER PREVENTI	r-value	.197	.235	.210	.238	.236

BARANGAY HEALTH EMERGENCY RESPONSE	ON	p-value	.162	.094	.134	.090	.092
	DISASTER PREPAREDNESS	r-value	.362	.425	.416	.437	.429
		p-value	.008*	.002*	.002*	.001*	.002*
	DISASTER RESPONSE	r-value	.229	.321	.339	.321	.303
		p-value	.103	.020*	.014*	.020*	.029*
	DISASTER REHABILITATION	r-value	.109	.203	.217	.186	.176
		p-value	.442	.148	.121	.187	.213

Table 6.1 examines the relationship between the status of Barangay Health Emergency Response Plan implementation and the challenges faced. Disaster preparedness showed a low correlation with disaster prevention (r = 0.362) and moderate correlations with challenges in disaster preparedness (r = 0.425), response (r = 0.416), rehabilitation (r = 0.437), and equipment availability (r = 0.429), all with p-values less than 0.05, indicating significant relationships. This suggests that better preparedness may reduce these challenges.

Disaster response also showed low correlations with preparedness (p = 0.020), response (p = 0.014), rehabilitation (p = 0.020), and equipment availability (p = 0.029), indicating its significance in addressing implementation challenges. Strengthening disaster preparedness and response activities can help address these challenges effectively. Zhu et al. (2015) found that strong preparedness and pre-positioned resources improve response effectiveness by reducing delays and coordination issues.

TABLE 6.2. RELATIONSHIP BETWEEN THE STATUS OF IMPLEMENTATION AND COPING STRATEGIES OF THE RESPONDENTS IN THE IMPLEMENTATION OF BARANGAY HEALTH EMERGENCY RESPONSE PLAN OF FLOOD DISASTER MANAGEMENT

VARIABLES			COPING STRATEGIES OF THE RESPONDENTS IN THE IMPLEMENTATION OF BARANGAY HEALTH EMERGENCY RESPONSE PLAN OF FLOOD DISASTER MANAGEMENT			
			DISASTER PREVENTION	DISASTER PREPAREDNESS	DISASTER RESPONSE	DISASTER REHABILITATION
STATUS ON THE IMPLEMENTATION OF BARANGAY HEALTH	DISASTER PREVENTION	r-value	.521	.490	.403	.482
		p-value	.000*	.000*	.003*	.000*

EMERGENCY RESPONSE	DISASTER PREPAREDNESS	r-value	.642	.485	.521	.559
		p-value	.000*	.000*	.000*	.000*
	DISASTER RESPONSE	r-value	.676	.421	.450	.522
		p-value	.000*	.002*	.001*	.000*
	DISASTER REHABILITATION	r-value	.656	.428	.414	.565
		p-value	.000*	.002*	.002*	.000*

Table 6.2 examines the relationship between the status of Barangay Health Emergency Response Plan (BHERP) implementation and respondents' coping strategies. Disaster prevention showed a moderate correlation with all coping strategy components (r = 0.403 to 0.521), suggesting that effective prevention enhances coping mechanisms.

Disaster preparedness had a moderate to high correlation (r = 0.485 to 0.642) with coping strategies, indicating its strong influence on managing flood disasters. Disaster response showed a moderate to high correlation (r = 0.421 to 0.676), emphasizing its importance in coping, though slightly less than preparedness. Disaster rehabilitation also showed moderate to high correlations (r = 0.414 to 0.656), highlighting its role in long-term recovery.

Improving preparedness and response in the BHERP is key to strengthening coping strategies. Prevention and rehabilitation also support coping but may need additional focus. Aitsi-Selmi et al. (2016) highlights that reducing vulnerability through prevention helps communities better adapt to flood disasters, aligning with the moderate correlation between prevention and coping strategies.

TABLE 6.3. RELATIONSHIP BETWEEN CHALLENGES AND COPING STRATEGIES OF THE RESPONDENTS IN THE IMPLEMENTATION OF BARANGAY HEALTH EMERGENCY RESPONSE PLAN OF FLOOD DISASTER MANAGEMENT

VARIABLES			COPING STRATEGIES			
			DISASTER PREVENTION	DISASTER PREPAREDNESS	DISASTER RESPONSE	DISASTER REHABILITATION
CHALLENGES	DISASTER PREVENTION	r-value	.070	.050	.008	.070
		p-value	.621	.724	.955	.621
	DISASTER PREPAREDNESS	r-value	.196	.029	.070	.154

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		p-value	.163	.839	.622	.274
	DISASTER RESPONSE	r-value	.147	.061	.001	.055
		p-value	.297	.668	.995	.701
	DISASTER REHABILITATION	r-value	.142	.014	.012	.089
		p-value	.317	.923	.935	.529
	AVAILABLE EQUIPMENT	r-value	.126	.024	.029	.105

Table 6.3 shows that the challenges in implementing the Barangay Health Emergency Response Plan (BHERP) have little to no impact on respondents' coping strategies. Correlation values ranged from 0.008 to 0.196, indicating negligible relationships, with p-values greater than 0.05, meaning the correlations were not statistically significant.

This suggests that coping strategies may be influenced more by external factors, such as prior training, community support, or individual resilience, rather than the challenges faced. Sliwinski and Rittman (2016) note that coping mechanisms are shaped by external resources like government aid and community organizations, rather than by the challenges encountered during disasters

Conclusions

This study underscores the critical role of BHERTs in disaster management. While San Isidro's BHERTs exhibited better preparedness and coping mechanisms, both barangays require improved training, resources, and community engagement to enhance their disaster management capabilities. Addressing these gaps will strengthen BHERTs' effectiveness in mitigating the impact of disasters.

RECOMMENDATION

1. The BHERTS must set a meeting to create rules for redesigning, retrofitting or operating infrastructure.

2. The BHERTs must do revisions to improve their operational handbook for disaster operations.
3. The BHERTS must allocate funds for the emergency kits and must have a complete equipment especially rescue vehicles, rope, boats, and life jacket.
4. The BHERTS must conduct a training for those who want to volunteer as a member of search and rescue team.
5. BHERTS must create a Facebook account to serve as their means of disseminating important information and to give updates with regard to the current situation of their barangay when there is a disaster.

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REFERENCES

Adaku et al., 2021. Flooding in Nigeria and Ghana: Opportunities for partnership in Disaster Risk Reduction.
Aitsi-Selmi, A., et al. (2016). Disaster Risk Reduction and Resilience Building. UNISDR.
Ani, U. D., et al. (2019). A Review of Critical Infrastructure Protection Approaches: Improving Security through Responsiveness to the Dynamic Modelling Landscape.
Atienza, M. E., et al. (2020). Livelihood and Vulnerability in the Wake of Typhoon Yolanda: Lessons of Community and Resilience.
Antonio, H. et al., 2017. Effectiveness of the Barangay Disaster Risk Reduction and Management Committees (BDRRMCs) in Flood-Prone Barangays in Cabanatuan City, Philippines.
Baquilod, M., et al. (n.d.). Chapter 13: Republic of the Philippines Establishing the Philippines Barangay Health Emergency Response Teams (BHERTs): Community Control of Emerging Infectious Diseases in a Decentralized Government System.
Baldwin, C. et al., 2022. Disaster risk reduction and climate policy implementation challenges in Canada and Australia.
Casimiro, R. et al., 2021. Mainstreaming Disaster Risk Reduction and Climate Change Adaptation in Comprehensive Development Planning of the Cities in Nueva Ecija in the Philippines.
Chaisri, B. et al., 2022. Flood Hazard Mapping and Flood Preparedness Literacy of the Elderly Population Residing in Bangkok, Thailand.
Dagohoy, R. (2021). Accounts of Barangay health workers in geographically isolated and disadvantaged areas in the new normal. Social Science Research Network.
Dela Cruz, Eva (2014). Flood Preparation and Mitigation of Local Government Units of Cagayan.

DILG: Amended Guide to Action Against the 2019 Novel Coronavirus Acute Respiratory Disease. Memorandum Circular No. 2020-023 (2020, February 6)
Disaster risk reduction: a development concern Link to Policy Briefng Document. (n.d.).
Donato, Maria Flordeliza Usal., (2022). Safety And Health Practices on Disaster Risk Reduction and Management: Cagayano's Resiliency During Typhoons and Floods.
Filho, W. L. (2017). Handbook of Climate Change Management. Springer.
Fu, Q., & Zhang, X. (2024). Promoting community resilience through disaster education: Review of community-based interventions with a focus on teacher resilience and well-being.
Ganoe, M. G. (2017) the impact of volunteerism on Community Resilience in Disaster
Management. The Impact of Volunteerism on Community Resilience in Disaster Management.
Ilija Gubic and Hossein Maroufi. (2017). Role of Communities in Post- disaster Recovery: Learning from the Philippines. 10 INU Study Day: “Crisis and Rebirth of Cities.
Kristian, I., & Mohammad, O. K. (2024). Integrating Community-Based Approaches into National Disaster Management Policies: Lessons from Recent Natural Disasters.
Lagmay, A. et al., 2017. Disseminating near-real-time hazards information and flood maps in the Philippines through Web-GIS. Journal of Environmental Sciences-china, 59, 13–23.
Maguigad, Abraham, Jr. (2016). Emergency Management: The Case of Most Affected Barangays by Super Typhoon Lawin in Tuguegarao City.
Manesh, A. K. (2017). Handbook of disaster and emergency management Handbook of Disaster and Emergency Management (First Edition).
Mastrollilo et al., 2016. The influence of climate variability on internal migration flows in South Africa. Global Environmental Change.

ISSN:3082-4249 MAIDEN ISSUE VOL. 1 NO. 1

Moalafhi et al., 2022. Evaluation of national disaster management strategy and planning for flood management and impact reduction in Gaborone, Botswana.

Morrissey, J., & Parker, D. (2017). "Community resilience and disaster risk management." Journal of Environmental Management.

Nguyen, M. et al., 2021. Understanding and assessing flood risk in Vietnam: Current status, persisting gaps, and future directions. Journal of Flood Risk Management, 14(2).

Paton, D. (2019). Disaster risk reduction: Psychological perspectives on preparedness. Australian Journal of Psychology, 71(4), 327– 341.

Santos et al. (2019). Improving the Effectiveness of Rescue Operations Through Scenario-Based Training. Journal of Disaster Management, 13(1), 33-45.

Samuel, G., et al. (2022). Evaluation of national disaster management strategy and planning for flood management and impact reduction in Gaborone, Botswana.

Sawangnate, C., et al. (2022). Flood Hazard Mapping and Flood Preparedness Literacy of the Elderly Population Residing in Bangkok, Thailand.

Sserwanja et al. 2021. COVID-19 in conflict border regions: a case of South Kordofan, Sudan.

Stamperdahl, B. (2020). Looking back: Typhoon Yolanda. Give2Asia.

Srinivasan, R. (2015). Logistics in Disaster Management: Resource Gaps and Strategies for Improvement. Disaster Logistics Review, 8(4), 211-230.

Raikes, J., et al. (2022). Disaster risk reduction and climate policy implementation challenges in Canada and Australia.