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Demographic Profile and Disaster Readiness in the Philippines: Inputs for Development Strategies

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Abstract

The article examines the relationship between the demographic profile and disaster readiness of residents in Barangay Poblacion, Guihulngan City, Philippines, to provide disaster development strategies for the Local Government Unit (LGU). Using a quantitative approach and the Hyogo Framework for Action—which emphasizes community participation, local knowledge, and resilience in disaster risk reduction—the study collected data from 369 respondents through stratified random sampling from a pool of 4,869 individuals. Findings indicate that age, gender, and educational attainment do not show a significant relationship with disaster readiness, which contrasts with Bagarinao (2016) and Unciano (2022). However, income was strongly correlated with disaster readiness, highlighting localized income disparities. Targeted financial aid for low-income households should be prioritized in LGU disaster plans, alongside livelihood aid, subsidies, and community training.

Keywords:

disaster risk reduction, demographic profile, quantitative approach, hyogo framework, Guihulngan City

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Introduction

Disaster readiness is widely described as the actions taken in advance to lessen the negative impact of disasters on communities or people through disaster planning for response and recovery. Hence, the transformation of these strategies should be implemented quickly and efficiently to maintain public awareness regarding hazards and risks. In connection, people have experienced harm due to disasters that strike suddenly, often compounded by a lack of preparedness. According to Kimuli et al. (2021), there is an increasing number of natural disasters in Asia and the Pacific (APAC), indicating an upward trend in flood occurrences and impacts across the sub-regions.

Furthermore, without any protective measures, a community will bear the most significant burden of damage from disasters. People suffer greatly, even die, because they do not understand disaster prevention measures or do not have proper infrastructure to guide them. For example, Acharya et al. (2023) found that only 35% of rural Indian households reported feeling prepared for natural disasters in terms of community preparedness. Socioeconomic variables, such as age, income, and educational levels, significantly influence preparedness for disasters. Those with lower incomes and less education were less prepared, and older age groups were particularly vulnerable.

Typhoons have remained the most deadly and costly natural disaster to hit the Philippines since 1991 (Balikuddembe et al., 2024). It disproportionately affects the psychosocial well-being, health, and functioning of the poorest sectors and most vulnerable populations worldwide . Such added disadvantage stems from various factors, which together explain why these populations suffer most with respect to access to medical, social, and economic support during disasters, and further identify that their needs have not been adequately addressed in disaster response and preparation plans.

In this global and national context, Guihulngan City is a relevant local case due to its flooding incidents in low-lying sitios and the economic vulnerability of many residents. Located along a coastal area often exposed to typhoons, its low-lying sitios are highly prone to flooding . Many households depend on farming and informal work, increasing their vulnerability. These conditions make Guihulngan a critical case study for localized disaster readiness.

Over the past year, flooding has become a persistent concern in Guihulngan City, particularly in Sitio Bateria, Sitio Bucana, and Sitio Larena, all of which are located within Barangay Poblacion. The most recent incident occurred on December 22, 2022, when the City Disaster Risk Reduction and Management Office (CDRRMO) reported one casualty and 1,154 residents displaced (from 261 households) in the mentioned areas due to a flood (NORSUnian, 2022). A study by Ahmad (2023) highlighted that citizens are often the first to respond to disasters, underscoring the importance of involving them in planning and preparedness activities, as well as the necessity for effective communication techniques that engage and empower them to take

action. Recognizing the significance of disaster preparedness and response, the Local Government Unit (LGU) of Guihulngan City has implemented several projects to enhance the community's capacity to manage disasters. However, these measures are not clearly observed because there are still residents who lack the appropriate awareness and knowledge to be prepared for any disaster.

Regionally, the ASEAN DRR stresses resilience and early warning. Yet, small cities like Guihulngan struggle to apply these due to limited resources, showing the gap between regional frameworks and local realities, and the need for income-sensitive planning.

This study examines the relationship between the demographic profile and disaster preparedness of the people residing in Barangay Poblacion, Guihulngan City. The focus is on how these factors affect the readiness of a local community that is frequently affected by flooding, and therefore, is immensely relevant for education and teacher education within the broader context of disaster risk reduction. Previous research typically examines a broader regional or national trend. Such a local approach thus drawn provides essential insights into how a wide-ranging demographic profile, such as age, socioeconomic status, and educational attainment, could heavily influence the community disaster preparedness plans. This study aims to contribute to a deeper understanding of preparedness education by examining the unique challenges faced by vulnerable communities. It also provides context-based findings that may support community- and school-level mechanisms for implementing effective disaster response and recovery. Thus, this study aimed to determine the demographic profile and disaster preparedness of the residents of Barangay Poblacion, Guihulngan City, along with the significant relationships between its variables. In this manner, this study strives to offer meaningful suggestions for LGU development strategies in disaster preparation, response, and recovery plans.

Literature Review

On Demographic Profile

Numerous studies have also examined the relationship between demographic profiles and disaster readiness. According to Bagarinao (2016), age, gender, educational level, and income accurately indicated disaster readiness. Older people, those with higher education, and individuals in white-collar occupations appeared to be more prepared for disasters than those with less education and those in blue-collar occupations.

Additionally, Unciano (2022) revealed that the demographic profile was significantly associated with disaster readiness in Ilocos Sur. Furthermore, Bulu et al. (2023) found that gender, age, and educational level were significant predictors of disaster preparedness and awareness. It also revealed that females were more aware of disasters and better prepared than men. These studies highlight that demographic features strongly shape their overall preparedness for disasters .

Such findings can serve as a reference for local government units to implement programs aimed at increasing disaster awareness among the people, especially in the vulnerable sector. However, unlike broader studies, this research focuses on how local income disparities shape preparedness in small, hazard-prone communities.

On Disaster Readiness

Disaster readiness is derived from actual knowledge and skills applied with the support of adequate resources to respond effectively and accordingly to a disaster before, during, and after (Kapucu, 2018). Similarly, Raza et al. (2023) noted that knowledge deficiency in disaster management affected the effectiveness of disaster responses in Quezon City.

Another point raised was that elderly people or those who had been exposed to a disaster before know better about disaster preparedness. However, older adults, due to age-related physical decline, are considered a high-risk group during disasters, indicating that age and experience should be taken into consideration while targeting these groups, as per Liao et al. (2025).

On the institutional side, Acharya et al. (2023) noted that governments and communities are making insufficient efforts to conduct disaster preparedness activities, and there is a strong need for interagency collaboration to enhance preparedness. This study emphasizes the necessity of teamwork and coordination in disaster readiness initiatives.

Moreover, according to the International Federation of Red Cross and Red Crescent Societies (2018), participatory engagement can ensure community resilience during disaster preparedness activities. The significance of early warning systems and risk assessments in diminishing disaster risks and enhancing disaster preparedness was also highlighted as an underlying factor . Despite these insights, there is little research that links income disparities to readiness in small, flood-prone cities.

Although previous research indicates that demographic traits influence disaster readiness, most studies focus on broad regional or national contexts, providing limited attention to small, high-risk cities. Existing studies (e.g., Bagarinao, 2016; Unciano, 2022) focus on national trends, neglecting the impact of income disparities on preparedness in small, flood-prone cities. Moreover, there is a lack of validated tools and limited integration of findings into practical strategies for Local Government Units (LGUs). This study addresses these gaps by applying the Hyogo Framework for Action in a localized setting, using a community-specific survey in Guihulngan City to analyze the relationship between demographics—especially income—and disaster readiness, and to develop income-sensitive strategies for resilience.

This study explores this gap by examining the relationship between demographic profiles and disaster readiness among individuals in Guihulngan City, providing evidence-based recommendations that can help the LGU develop strategies aimed at enhancing community resilience .

Using a survey questionnaire, this study examines the demographic profiles (age, gender, income, and education) and disaster preparedness of Guihulngan City, a small and often-affected city. While these factors have been examined on a broader scale in earlier studies, the present study offers fresh perspectives by elucidating them in the context of a single-vulnerability city. A gap in the literature concerning small communities has been closed by identifying often very different effects that demographic factors can have on local disaster preparedness. Furthermore, it aims to provide such insights to enhance community resilience.

Guiding Framework for Disaster Readiness

This study is grounded in the Hyogo Framework for Action (HFA), developed by the United Nations International Strategy for Disaster Reduction (UNISDR) in 2005 as a ten-year strategy for disaster risk reduction through multi-stakeholder engagement . The five priorities of HFA are: participatory preparedness and response, investment in risk assessments and early warning, addressing underlying risk factors, strengthening disaster governance, and increasing knowledge utilization to combat disaster risk.

The HFA provides valuable guidance, but it has been criticized for lacking measurable targets, making it difficult to assess actual progress. This limitation contributed to the development of the Sendai Framework for Disaster Risk Reduction (2015–2030), which introduced global targets and emphasized inclusivity, accountability, and resilience-focused strategies. However, the HFA was selected for this study because of its emphasis on community participation and localized risk factors, which directly align with the study's concern about income disparities in small, hazard-prone communities. Its flexible principles are better suited for local contexts than the global orientation of the Sendai Framework.

This study does not employ the HFA as a central analytical tool, but instead utilizes its general principles as a guiding framework. It fills a gap in disaster preparedness, examining how demographic characteristics —age, gender, income, and education—affect readiness in Barangay Poblacion. HFA has shaped global DRR discourse; little is known about its local impact.

The study aims to examine the demographic profile of residents and the level of disaster readiness in Barangay Poblacion, providing a foundation for development strategies. Specifically, it seeks to: 1) describe the demographic profile of residents in relation to HFA's focus on socio-economic risk factors; 2) determine their level of disaster readiness in terms of knowledge, preparedness, adaptation, awareness, and risk perception; and 3) analyze how demographic variations align with HFA's call to address the social, economic, and environmental dimensions of vulnerability. These objectives particularly resonate with HFA Priority 3, which stresses reducing underlying risk factors such as poverty, weak infrastructure, and limited resources.

Derived from the HFA, the methodology includes a survey on demographic and disaster readiness factors as the basis for analyzing the relationship between local people's demographics

and their disaster readiness . The LGUs will, therefore, gain data to design targeted plans for the community resilience and response capacity. In this regard, the HFA framework not only guides in designing the study but also ensures that its conclusions provide direction for efficient and context-based disaster management.

Methodology

Research Design

The overall goal of the study was to describe the demographic profile and readiness level for disaster risk management among the inhabitants of Barangay Poblacion, Guihulngan City. The researchers adopted the quantitative method to establish relevant relationships between the variables under investigation. This method was chosen because it enables the collection of standardized, measurable data from a large population, which is appropriate for establishing patterns and correlations among demographic and readiness variables.

Participants

The participants were grouped by age, gender, attained level of education, and income, as well as their specific area of residence. Using the Stratified Random Sampling Technique, the researchers determined the sample size among the respondents selected. A summary of all the respondents involved in the study is given in the table below. The study focused on Bateria, Bucana, and Larena in Barangay Poblacion, Guihulngan City, which were identified by the CDRRMO as having the highest flood risk. Barangay Poblacion has a total population of 16,161, and the selected sitios contain 4,869 individuals.

Table 1

Research Respondents

Sitio/Area	Total Population	Number of Respondents
Sitio Bateria	2410	183
Sitio Bucana	282	21
Sitio Larena	2177	165
Total Number of Respondents: 369		

Instruments

The research was conducted using a survey questionnaire developed by Columna et al. (2019), which addressed five broad themes: knowledge about disasters, preparedness for disasters, adaptation to disasters, awareness of disasters, and perception of disaster risk. These were also supplemented by some demographic characteristics of the respondents, such as their age, gender, degree, and income.

The items of the adapted tool were reviewed and localized to reflect the disaster history and community setup of flood-prone areas such as Bateria, Bucana, and Larena. The researchers interviewed barangay officials, educational experts in disaster education, and local disaster risk reduction officers to enhance the tool's content validity. The tool's validity was rated 4.17 by five quantitative research and disaster readiness experts. Thirty residents who had similar risk exposure were involved in a pilot study. Cronbach's alphas were 0.76 for disaster-related knowledge, 0.81 for disaster preparedness, 0.79 for disaster adaptation, and 0.80 for general awareness. The moderate reliability of the adapted tool suggests caution in generalizing findings.

Data Collection Procedure

The proper authorities were notified through a letter. With their approval, the researchers distributed the questionnaire to the intended respondents. Throughout the delivery of the survey questionnaire, the researchers ensure that respondents understand each question clearly in order to collect proper responses. Following the instrument gathering, the researchers tallied and measured the data. The data were statistically analyzed correctly to address the problem identified by the study .

Data Analysis

Frequency count and percentage count served to determine the profile of the respondents. Frequency counts and weighted means were used to assess the level of knowledge about disasters, preparedness for disasters, adaptation to disasters, disaster awareness, and perception of disaster risks. The mean scores were calculated using a Likert scale. The researchers used Spearman's Rank correlation analysis to confirm whether there is a significant relationship between residents' demographic profiles and disaster readiness. All of these processes provided valuable data on the general patterns, distribution, and variability of the data.

Ethical Considerations

The researchers adhered to the ethical standards for research, including maintaining the privacy of the study, ensuring the voluntary participation of respondents, and following an informed consent process to prevent any possible stigma or harm to the respondents. The researchers also constructed a bias-free data interpretation in examining the respondents' demographic profile

and disaster readiness. Lastly, the investigators acknowledged participants' rights to withdraw from the study at any time, even after they had agreed to participate. Though formal IRB approval was lacking, informed consent and privacy protocols were followed.

Results and Discussion

Demographic Profile of the Respondents

Table 2

Demographic Profile of the Respondents

Age	Figure	Percentage
18-30	165	44.72
31-45	96	26.01
46-60	72	19.51
61 and above	36	9.76
Total	369	100.00
Sex	**Figure**	**Percentage**
Male	162	43.90
Female	207	56.10
Total	369	100.0
Educational Attainment	**Figure**	**Percentage**
Elementary Level	65	17.62
Elementary Graduate	44	11.92
High School Level	65	17.62
High School Graduate	68	18.43
College Level	74	20.05
College Graduate	53	14.36
Total	369	100.00
Income	**Figure**	**Percentage**
Below 10,957	168	45.53
10,958 – 21,914	22	5.96
21,915 – 43,828	17	4.61
43,829 – 76,669	1	0.27
No Income	161	43.63
Total	369	100.00

The data in Table 2 illustrate the distribution of participants across age, sex, educational attainment, and income groups. The age range from 18 to 30, comprising 165 individuals or 44.72% of the overall population, represents the largest segment. Overall, those aged 18 to 30 constitute the majority, whereas individuals 61 years old account for the lowest percentage, with 36 people or 9.76%.

This suggests that disaster readiness efforts should specifically consider the 18–30 age group, which, despite its size, may lack direct disaster experience or awareness of structural risks. Tailored disaster education programs are encouraged to meet their informational needs and support proactive participation.

56.10% of the total service recipients are female, representing a greater number. On the contrary, the male category accounts for a smaller number of persons: 162 or 43.90%. The higher female participation could have implications for disaster risk reduction (DRR), as women often play key roles in household and community preparedness. This reflects women's gendered roles as primary household preparedness leaders, underscoring the importance of engaging them in DRR planning. This highlights the need to design DRR programs that address gender-specific needs and encourage women's active participation.

The category for college-level education showed the highest number of individuals among those mentioned, numbering 74, which stands for 20.05% of the whole population. This means that a significant portion of the sample holds a college degree. There are 44 people in the Elementary Graduate group, or 11.92% of the entire population.

Furthermore, it indicates how the population is grouped under the respective income category. The category of Less than 10,957 is the income group with the largest number of individuals, comprising 168, or 45.53% of the entire population. In comparison, the income group 43,829-76,669 has the fewest number of individuals, with one, representing 0.27% of the whole population.

Note: All income values are in Philippine Peso (₱). The income brackets used are based on the Income Classification Table published by the Philippine Institute for Development Studies (PIDS).

The most common age group is 18 to 30 years, suggesting younger populations might be more abundant but also require more sophisticated disaster readiness education. With considerable physical and informational handicaps that could limit their strengths, a reduced number of older people—those aged 61 years or above—indicates that disaster readiness programs need to be explicitly designed for the older population (Lindell & Perry, 2012). The study promotes disaster readiness, requiring strategies that include consideration of the problems older people encounter.

Regarding gender, the higher female participation rate (56.1%) is consistent with the research by Pérez-Gañán et al. (2022), which suggests that gender influences disaster readiness practices. Women's greater involvement may therefore stem from their traditional tendency towards the caring roles, as well as their historical responsibilities regarding local-level preparedness and response. This creates a compelling case for gender-responsive policy.

Most respondents held a college degree, thereby supporting the argument by Rivera (2021) that education enhances awareness and preparedness against disasters. The need for basing

disaster risk education within the compulsory school curricula thereby becomes all the more urgent in disaster-prone regions.

Income distribution suggests that a sizable proportion of the population falls in the lower-income bracket, which is consistent with Aldrich and Meyer (2015), whose study has shown that lower-income households are likely more vulnerable in times of disasters due to their minimal resource base. This study proposes the necessity of policies providing financial support to financially crippled communities and offering additional assistance in disaster recovery and mitigation, such as targeted disaster loans or low-income household subsidies.

These findings have significant implications for theories, regulations, and disaster readiness practices . It presents a call for local planning in the Philippines to integrate demographic factors in disaster risk reduction. Furthermore, it emphasizes the need for educational strategies that incorporate disaster readiness into community training programs and school curricula. Globally, it calls for the application of inclusive disaster risk management approaches that recognize age, gender, income, and educational attainment as significant determinants of preparation.

Disaster Readiness of the Respondents

Table 3

Disaster Readiness of the Respondents

Level of Disaster Readiness	Weighted Mean	Verbal Description
Disaster-related Knowledge	4.06	Agree
Disaster Preparedness	4.42	Strongly Agree
Disaster Adaptation	3.92	Agree
Disaster Awareness	4.56	Strongly Agree
Disaster Risk Perception	3.32	Disagree

The data shown in Table 3 reflect the respondents' responses regarding their level of disaster readiness . With a mean score of 4.06, participants generally agree that they have disaster-related knowledge of when disasters may occur, that disasters are inevitable, and what essential materials to prepare.

Table 3 also provides data on disaster readiness with an overall mean score of 4.42 points, indicating a "Strongly Agree" response. The findings suggested that the respondents made the necessary efforts to respond to potential disasters and mitigate their impacts.

It further indicates that the respondents' perception and attitudes toward disaster adaptation had an overall mean score of 3.92, translating to "Agree." Respondents were generally aware that disaster adaptation strategies are essential . However, most were largely unaware of the importance of community activities in disaster risk management.

In terms of disaster awareness, data indicated significant variability (4.56) in interest in campaigns. When queried about participation in natural disaster awareness programs, the majority showed very little interest. This suggests that, despite differences in participation, respondents agree on the necessity of disaster awareness across different geographical scales.

The data also show a wide range of confidence regarding disaster preparedness (3.32). Respondents expressed disagreement and doubt about the design and seismic resistance of their houses, reflecting concerns over structural integrity. This low perception may be attributed to many homes being built with light or non-permanent materials, leaving residents uncertain about stability during calamities. Confidence in the local government's disaster response, however, was higher.

Based on moderate to high average scores across knowledge, preparedness, and awareness (3.92-4.42), respondents generally exhibit a fair sense of preparation and sufficient knowledge regarding disasters. Nevertheless, concerns over house safety affect risk perception.

The difference between high individual preparedness scores (4.42) and low risk perception (3.32) shows a paradox. Respondents feel confident in their preparedness, but they may underestimate the risk due to structural vulnerabilities. This indicates overconfidence; people believe their preparations are sufficient, even though environmental hazards remain significant. Such a paradox may stem from overconfidence, where preparedness is equated with safety, or from structural vulnerabilities, where risks are downplayed because resources to address them are limited. This highlights the need for awareness that connects preparedness with a realistic view of risk.

The difference between community participation and individual readiness reflects a poor understanding of collective disaster management. Higher self-assessed preparedness (4.42) versus lower adaptation scores (3.92) suggests individual readiness is not reinforced by collective engagement. Local government is generally trusted, though some weaknesses exist.

Individual preparedness is high (4.42); however, a greater understanding of community participation is still needed. This is supported by the low score on community adaptation and engagement, pointing to an opportunity for enhanced public involvement. Respondents were confident in the local government's disaster management. The other facets were the low score for risk perception, which implies a relatively high appreciation among people of the personal risks, i.e., the structural safety of their houses. Furthermore, education is correlated with disaster preparedness, highlighting its role in encouraging proactive steps.

Those knowledgeable about disasters are also observed by Genc et al. (2022) to focus on taking the initiative, creating emergency plans, and assembling emergency kits for at least 2-3 days. Kapucu (2018) emphasized the importance of having the necessary knowledge, skills, and resources ready before, during, and after a disaster. The Manila Bulletin (n.d.) stressed the importance of coordination and communication among various stakeholders for an effective disaster response. Risk perception was identified as significant in Chen et al. (2019), as individuals who perceive themselves as being at higher risk are more likely to invest in preventive measures, such as flood barriers or relocating to safer areas.

These results have significant implications for practice, policy, and education in disaster readiness. In the Philippines, there is a pressing need for improved disaster resilience education that focuses on structural safety and the role of community initiatives in disaster risk management at both individual/public levels. Continuous strengthening of structural integrity in housing and infrastructure should be a core focus of policy in disaster-prone areas. The insights here implied that disaster readiness programs should provide, globally, encouragement and cooperation among people, communities, and governments. This will facilitate efficient disaster response through open communication and the sharing of resources. The conclusion emphasizes the need to foster local proactive disaster risk management further and integrate disaster readiness into education curricula.

Relationship between Demographic Profile and Disaster Readiness

Table 4

Relationship between Demographic Profile and Disaster Readiness

Variables	Correlational Coefficient	P-value
Age	.8	.20
Sex	.4471	.55
Educational Attainment	.2609	.62
Income	-1	.00*
TOTAL	.20	.80

**significant @ p < .05*

Table 4 shows no significant correlation between demographic profile and disaster readiness. Findings indicate no significant relationship between disaster readiness and age (.8), sex (.4471), or educational attainment (.2609), suggesting that preparedness is more strongly influenced by contextual and experiential factors, such as previous disaster exposure, access to information, or institutional support, than by basic demographic characteristics.

However, there is a substantial association between disaster preparedness and income, which correlates negatively with a coefficient of -1. Simply stated, individuals with lower income

and higher dependency may be less prepared for a disaster. In contrast, those with higher income are more likely to be well-prepared and have the means to handle the onset of disaster. This negative correlation underscores the need for targeted actions, such as subsidies or support programs, for low-income households. These directly connect to the HFA's priority of addressing risk factors. By addressing socio-economic vulnerabilities, such policies can improve disaster resilience and ensure that income-related barriers do not restrict community readiness.

According to Baker et al. (2021), households and individuals with lower incomes are typically less disaster-ready than those with higher incomes, illustrating the significant influence that income has on disaster readiness among individuals . People with lower incomes may struggle to take the financial step into disaster readiness mandates due to the economic challenges posed by limited resources.

These results suggest that disaster readiness programs should focus more on addressing socioeconomic inequalities, with income inequality being foremost among them. Concrete measures such as disaster loans, cash-for-work programs, and low-income household subsidies could enhance the disaster resilience of economically vulnerable communities. Disaster readiness interventions in relatively poorer Philippines must include financial assistance or support for lower-income families so that these families will not suffer disproportionately during disasters. Education programs could therefore be amended to provide reasonably affordable strategies for readiness, taking into account the limited resources of disadvantaged groups. Community-based approaches to disaster risk management should also be encouraged to leverage social networks and group resources, ensuring that disaster preparedness support reaches low-income communities.

Conclusion and Recommendations

The primary objective of this study was to examine the relationship between disaster readiness and demographic profile, providing local government units with essential information for targeted planning in resilience and response. This would fill the gaps in the literature concerning preparedness and reactions in Guihulngan City, especially among low-income groups, leading to more focused and hence effective disaster preparedness strategies. Additionally, the findings provide valuable insights into the much-needed gap in disaster preparedness in relation to local socio-economic factors.

The first significant finding suggests that Barangay Poblacion is somewhat prepared for disasters; moreover, they have much faith in governmental emergency responses. Meanwhile, there are still gaps in personal preparedness, especially in home safety. These results reinforce the Hyogo Framework for Action's two main principles: resource allocation and community involvement, aimed at reducing risk in disaster response . Indeed, this highlights the need to focus efforts on bridging the knowledge and resource gaps among citizens.

The second significant finding reveals that the profile of socioeconomic variables—especially income—exerts a varying influence on disaster readiness. Lower-income households have limited preparedness scores, attributed to their limited financial resources; thus, this supports socioeconomic inequalities. This study complements frameworks of disaster risk reduction that emphasize addressing socioeconomic vulnerabilities by focusing on vulnerable groups to mitigate the impact of disasters.

In conclusion, the study's results suggest that, although there is a moderate level of citizen awareness and confidence in the government's reaction, there are still gaps in personal readiness—especially regarding home safety. The poorer households also face formidable financial hurdles. The result highlights the importance of comprehensive disaster readiness initiatives that address extreme socioeconomic inequalities and promote both individual and collective efforts . Local governments should prioritize enhancing community-based programs, increasing infrastructure safety, and providing assistance to disadvantaged groups. These echo disaster risk reduction frameworks, most conspicuously the Hyogo Framework for Action, which promotes resilience through participation and resource allocation. In the case of Barangay Poblacion, this means prioritizing community education, infrastructure support, and inclusive planning processes that involve economically vulnerable households.

In brief, this study highlights the importance of socio-economic considerations—particularly income—in disaster readiness. While the results revealed no significant relationship between disaster readiness and age, sex, or educational attainment, income was found to be statistically significant, affirming its role as a critical factor in disaster readiness. The findings highlight that, although deep public knowledge is crucial and has a substantial impact on preparedness, it is the poor who bear the most significant burden, despite their supposed ability to undertake some form of preparation .

As income was the only demographic factor found to be significantly linked to disaster readiness, the study's findings indicate that local government units prioritize income-sensitive disaster readiness programs, such as livelihood assistance and emergency subsidies for supplies. Lastly, the low risk perception score for disaster readiness indicates a need for public education campaigns that focus on structural safety and local hazard awareness. Community training and collaborative planning are just two examples of readiness activities that could be enhanced at the barangay level to reduce the gap between community and individual participation, as reported. Integration into school curricula and local government is, however, essential to maintain high awareness over the long term, even though education, sex, and age were not statistically significant . The Hyogo Framework for Action, and specifically its focus on knowledge sharing, community participation, and inclusive risk governance in risk-prone areas such as Barangay Poblacion, can serve as a template for these efforts.

The major drawback of the study is its emphasis on Barangay Poblacion, which limited the generalizability of the results. The study has also placed more emphasis on quantitative data,

failing to provide a comprehensive qualitative picture of community experiences. Future studies should consider qualitative methodologies, such as focus groups and interviews, in addition to a broader geographic scope, to provide a more comprehensive account of disaster readiness.

Future studies should include research on disaster readiness in other areas to compare regional patterns. Longitudinal studies could examine how readiness has evolved over time, particularly in the aftermath of significant disasters or policy changes. By adopting qualitative approaches, researchers can gain a deeper understanding of the social and cultural factors that may influence disaster readiness, ultimately leading to the development of a more coherent disaster risk reduction strategy.

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Declaration of Generative AI in scientific writing

The author(s) utilized ChatGPT and QuillBot for the purposes of aiding in the mere organization of thoughts and grammar correction in this work. Following the use of these tools, the author(s) further carefully scrutinized the text, adjusting it to conform with any norms of acceptable publication, and taking full responsibility for the final version.

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Ethical approval

This research was conducted in accordance with the ethical standards. Informed consent was obtained from all the participants at the beginning of the study. Although the university did not have a formal ethics committee during the research, the work was conducted in accordance with established ethical guidelines and principles .

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