

Barangay Volunteer Fire Brigade Program in Quezon, Palawan

Alton Alviar Labaria

Master in Public Administration Holy Trinity University, Graduate School, Puerto Princesa City, Philippines

Publication history: Received: May 08, 2026; Revised: June 1, 2026; Accepted: June 12, 2026

Email of Corresponding Author: labaria.alton@gmail.com

Abstract

This study assessed the implementation of the Barangay Volunteer Fire Brigade Program in Quezon, Palawan, with emphasis on the participants' demographic profile, their perceptions of program implementation, the problems encountered, and the relationships among these variables. The study focused on three groups of participants: community members, Bureau of Fire Protection uniformed personnel, and barangay volunteer firefighters. Findings showed that many participants had direct involvement in volunteer firefighting, with an average length of service of 9.61 years, and several had attended relevant training related to fire prevention and emergency response. The assessment revealed varied perceptions among the participant groups. Community members perceived the program as fairly implemented in terms of organization and personnel, but poorly implemented in training and capabilities, practice drills, facilities, and equipment or apparatus. Bureau of Fire Protection personnel rated the program as fairly implemented across the assessed areas, while barangay volunteer firefighters viewed organization and personnel as very much implemented, training and capabilities as fairly implemented, and practice drills, facilities, and equipment or apparatus as poorly implemented. Significant relationships were found between selected participant profiles and their assessment of program implementation, as well as between participant profiles and the problems encountered. Factors such as sex, occupation, employment status, place of residence, fire victim status, highest educational attainment, and training attended influenced participants' perceptions and experiences. Based on the findings, a proposed program was formulated to strengthen the organization, training, capabilities, facilities, equipment, and overall implementation of barangay volunteer fire brigades in Quezon, Palawan.

Keywords: Barangay Volunteer Fire Brigade, Fire Brigade Program, Program Implementation, Training and Capabilities, Firefighting Equipment and Apparatus

1. Introduction

Volunteer firefighters play a vital role in protecting lives, properties, and communities, especially in areas where government fire protection resources are limited. Their service requires commitment, discipline, physical readiness, and willingness to respond to emergencies despite personal risks and limited compensation. In many communities, volunteer fire brigades serve as the first line of response during fire incidents and other emergencies, making their organization and preparedness essential to public safety. However, volunteer firefighting also faces persistent challenges, including declining membership, insufficient equipment, limited training opportunities, and the difficulty of sustaining active participation among members (Vinton, 2019; Moirmai, 2018).

The need for effective volunteer fire brigade programs has become more significant as communities continue to experience fire-related risks and emergency response gaps. Firefighting is considered one of the most physically demanding and high-risk public safety roles, requiring proper training, discipline, and operational readiness (Noella, 2017). In the global context, volunteer firefighters remain important contributors to emergency response systems, yet many volunteer fire departments struggle with recruitment, retention, funding, protective equipment, and continuous training. These challenges may reduce the capacity of volunteer brigades to respond effectively during emergencies and may place both volunteers and community members at greater risk.

In the Philippine setting, barangay volunteer fire brigades are important partners of the Bureau of Fire Protection in strengthening local fire prevention and emergency response. The Fire Code of the Philippines provides the legal basis for the organization, training, and operation of fire volunteer organizations and fire brigades. At the barangay level, volunteer fire brigades help support fire prevention campaigns, emergency preparedness activities, and immediate response during fire incidents. However, the effectiveness of these brigades depends on several factors, including proper organization, qualified personnel, adequate training, regular practice drills, and sufficient facilities, equipment, and apparatus.

In Quezon, Palawan, the Barangay Volunteer Fire Brigade Program is particularly relevant because local fire protection services may be supported by community-based volunteers who assist during emergencies. While these volunteer firefighters contribute time, effort, and service to the community, questions remain regarding the level of implementation of the program and the problems encountered by different stakeholders. These concerns are important because weak implementation in training, facilities, equipment, or coordination may limit the ability of barangay fire brigades to perform their duties effectively.

This study assessed the implementation of the Barangay Volunteer Fire Brigade Program in Quezon, Palawan, as perceived by community members, Bureau of Fire Protection uniformed personnel, and volunteer firefighters. Specifically, it examined the demographic profile of the participants, their assessment of program implementation, the problems encountered, and the relationship among these variables. The study focused on key implementation areas, namely organization and personnel, training and capabilities, and practice drills, facilities, and equipment or apparatus. The findings of the study may serve as a basis for strengthening barangay volunteer fire brigades, improving local emergency preparedness, and developing a proposed program that supports more effective and sustainable fire protection services in the municipality.

2. Material and methods

2.1 Research Design

This study employed a mixed-method research design to assess the implementation of the Barangay Volunteer Fire Brigade Program in Quezon, Palawan. The quantitative component was used to determine the demographic profile of the participants, their level of assessment on the implementation of the program, and the problems they encountered in relation to organization and personnel, training and capabilities, practice drills, facilities, and equipment or apparatus. The qualitative component complemented the numerical data by gathering deeper insights from the participants regarding their actual experiences, observations, and suggestions for improving the program. This design was appropriate because the study did not only measure the extent of implementation but also explored the practical conditions that affected the operation of barangay volunteer fire brigades. Descriptive research is suitable for examining present conditions, practices, and perceptions, especially when the goal is to describe an existing program or situation as it naturally occurs (Calderon et al., 2017). Through this approach, the study was able to generate both statistical findings and contextual explanations that served as the basis for the proposed program.

2.2 Research Locale

The study was conducted in the Municipality of Quezon, Palawan, particularly in barangays covered by the Quezon Fire Station. The locale included Alfonso XIII, Aramaywan, Berong, Calumpang, Isugod, Calatagbak, Maasin, Malatgao, Panitian, Pinaglabanan, Quinlogon, Sowangan, Tabon, and Tagusao. These barangays were selected because they were directly connected to the implementation of the Barangay Volunteer Fire Brigade Program and represented the communities that may benefit from improved fire prevention and emergency response services. The selection of Quezon, Palawan as the study locale was relevant because barangay-based fire response is important in areas where response time, distance, manpower, and availability of equipment may affect emergency operations. The Fire Code of the Philippines provides the legal basis for the formation, training, and operation of fire volunteer organizations and fire brigades, emphasizing the importance of local preparedness and community participation in fire safety. Thus, the locale provided an appropriate setting for examining how the program was implemented at the community level.

2.3 Participants of the Study

The participants of the study were composed of three groups: community members, Bureau of Fire Protection uniformed personnel, and barangay volunteer firefighters. These groups were included because each had a different but important role in assessing the implementation of the Barangay Volunteer Fire Brigade Program. Community members represented the residents who benefit from fire prevention services and emergency response activities. BFP uniformed personnel provided technical and operational perspectives because of their professional involvement in fire suppression, inspection, training, and emergency response. Barangay volunteer firefighters provided firsthand insights because they were directly involved in the actual implementation of the program at the barangay level. Including these three groups allowed the study to compare perceptions from both service providers and community stakeholders. Their responses helped identify not only the perceived strengths of the program but also the gaps that needed to be addressed in organization, training, facilities, equipment, and coordination.

2.4 Population and Sampling Procedure

The study used an appropriate sampling procedure to ensure that the selected participants could provide relevant information about the implementation of the program. The barangays served as the main coverage of the study, while the participant groups were selected based on their connection to fire safety, emergency response, and community-level implementation. The inclusion of community members, BFP personnel, and barangay volunteer firefighters helped ensure that the data were not limited to one point of view. This was important because the implementation of a barangay fire brigade program involves different sectors, including residents, local officials, trained volunteers, and professional fire protection personnel. Participants were selected based on their availability, willingness to participate, and relevance to the objectives of the study. Through this sampling process, the researcher was able to gather data from respondents who had direct or indirect experience with the barangay volunteer fire brigade system in Quezon, Palawan.

2.5 Research Instrument

The study used a researcher-made survey questionnaire as the primary instrument for data collection. The questionnaire was designed to gather information on the demographic profile of the participants, their assessment of the implementation of the Barangay Volunteer Fire Brigade Program, and the problems they encountered. The demographic profile included sex, age, civil status, highest educational attainment, occupation, monthly income, employment status, length of service, place of residence, fire-related experience, and relevant training attended. The implementation section measured the program in terms of organization and personnel, training and capabilities, and practice drills, facilities, and equipment or apparatus. These areas were aligned with the concerns of fire volunteer organization and program implementation under the Fire Code of the Philippines and related Bureau of Fire Protection standards. The questionnaire used a Likert-type scale to quantify the responses of the participants. In addition, semi-structured interview questions were used to gather qualitative information that could explain or support the survey results. This combination of instruments helped produce a more complete understanding of both measurable conditions and lived experiences related to the program.

2.6 Validation of Instrument

The research instrument underwent validation to ensure that the items were clear, relevant, and aligned with the objectives of the study. Experts and professionals with knowledge of fire safety, emergency response, and research reviewed the questionnaire and provided comments for improvement. Their evaluation helped determine whether the questions were appropriate for the participant groups and whether the items could properly measure the intended areas of implementation and problems encountered. Suggestions from the validators were incorporated in refining the wording, organization, and content of the instrument. This process helped strengthen the content validity of the questionnaire and ensured that the instrument could gather reliable and meaningful data. The validation process was important because the study involved technical areas such as fire brigade organization, training capability, emergency drills, facilities, and firefighting equipment. A properly validated instrument helped reduce ambiguity and improved the accuracy of the participants' responses.

2.7 Data Gathering Procedure

The researcher secured the necessary permissions before the conduct of the study. Letters of request were prepared and submitted to the concerned offices, including the graduate school, Quezon Fire Station, and barangay officials. After permission was granted, the researcher coordinated with the proper authorities to identify qualified participants and schedule the administration of the survey questionnaires. The participants were informed about the purpose of the study, the voluntary nature of their participation, and the confidentiality of their responses. After securing consent, the researcher administered the questionnaires to the selected respondents and provided sufficient time for them to answer. Completed questionnaires were collected, checked for completeness, organized, and prepared for tabulation and analysis. For the qualitative part, selected participants were asked follow-up questions to clarify their experiences and observations regarding the program. These procedures helped ensure that the data were gathered systematically and ethically from participants who were knowledgeable about the Barangay Volunteer Fire Brigade Program.

2.8 Treatment of Data

The data gathered from the survey questionnaires were treated using appropriate descriptive and inferential statistical tools. Frequency and percentage were used to describe the demographic profile of the participants, including their sex, age, civil status, educational background, occupation, income, employment status, length of service, place of residence, fire-related experience, and training attended. Mean and standard deviation were used to determine the level of assessment on the implementation of the program and the extent of problems encountered by the participants. These tools helped summarize the responses and identify the general pattern of perceptions among the participant groups. Spearman Rho was used to test significant relationships between participant profile, level of implementation, and problems encountered. The Mann-Whitney U test was applied to determine differences between fire victims and non-fire victims, while the Kruskal-Wallis test was used to determine differences among the three participant groups. These non-parametric tests were appropriate because the study involved ordinal data from Likert-type responses and compared perceptions across different groups.

2.9 Analysis Plan and Ethical Considerations

The analysis of data followed the objectives of the study. First, the demographic profile of the participants was summarized using descriptive statistics. Second, the level of implementation of the Barangay Volunteer Fire Brigade Program was analyzed according to the three major areas of organization and personnel, training and capabilities, and practice drills, facilities, and equipment or apparatus. Third, the problems encountered by the participants were examined to determine which areas required the most attention. Fourth, statistical tests were applied to determine significant relationships and differences among the variables. The qualitative responses were also reviewed and grouped into common themes to support the numerical findings and guide the development of the proposed program. Ethical standards were observed throughout the study. Participants were informed about the purpose of the research, their participation was voluntary, and their identities were kept confidential. The data collected were used solely for academic purposes and were presented in

summary form to protect the privacy of the respondents. These ethical measures ensured that the study was conducted with fairness, respect, and responsibility toward all participants.

3. Results and Discussion

3.1 Profile of the Participants

The findings showed that the participants came from different barangays in Quezon, Palawan and represented three important groups: community members, Bureau of Fire Protection uniformed personnel, and barangay volunteer firefighters. Their varied backgrounds provided a broader view of how the Barangay Volunteer Fire Brigade Program was experienced and assessed at the community level. Many of the participants had direct involvement in volunteer firefighting, while others were residents who benefited from or observed the program during fire prevention and emergency response activities. The study also revealed that some participants had experienced being fire victims, while others had attended fire-related training. These factors are important because personal exposure to fire incidents and participation in training may influence how respondents evaluate the readiness, capability, and weaknesses of the program.

The profile of the participants suggests that the assessment of the program was shaped not only by observation but also by actual community experience. This is consistent with the Sendai Framework for Disaster Risk Reduction, which emphasizes that disaster preparedness and risk reduction should consider local conditions, community participation, and the experiences of people directly exposed to hazards (UNDRR, 2015). In the case of Quezon, Palawan, the presence of trained and experienced volunteers is an important asset, but the effectiveness of the program still depends on how well these volunteers are organized, supported, and equipped.

3.2 Level of Assessment on the Implementation of the Barangay Volunteer Fire Brigade Program

The implementation of the Barangay Volunteer Fire Brigade Program was assessed in terms of organization and personnel, training and capabilities, and practice drills, facilities, and equipment or apparatus. The findings showed that the three groups of participants had different perceptions of the program's implementation. Community members perceived the program as fairly implemented in terms of organization and personnel, but poorly implemented in training and capabilities, as well as in practice drills, facilities, and equipment or apparatus. This indicates that while the community recognized the presence of barangay fire volunteers, they also observed limitations in practical readiness and available resources.

BFP uniformed personnel assessed the program as fairly implemented across the major areas. This suggests that from the perspective of professional fire personnel, the program was functioning but still needed improvement. Barangay volunteer firefighters, on the other hand, perceived the program as very much implemented in terms of organization and personnel, fairly implemented in training and capabilities, and poorly implemented in practice drills, facilities, and equipment or apparatus. These results imply that organization and personnel may already exist at the barangay level, but implementation becomes weaker when it comes to actual preparedness, regular drills, and availability of firefighting equipment. The Fire Code of the Philippines recognizes the importance of organized fire safety systems and the role of the Bureau of Fire Protection in enforcing fire prevention and fire protection measures (Republic Act No. 9514, 2008). Thus, the findings show the need to strengthen not only the structure of the volunteer brigade but also its operational capacity.

3.3 Problems Encountered in the Implementation of the Program

The findings revealed that the major problems encountered in the implementation of the program were related to limited training opportunities, insufficient practice drills, inadequate facilities, and lack of proper equipment or apparatus. These concerns may affect the ability of barangay fire volunteers to respond efficiently during actual fire incidents. Even if volunteers are willing to serve, their effectiveness may be limited when they do not have enough preparation, protective tools, and practical exposure to emergency situations. This shows that volunteer commitment alone is not enough; it must be supported by proper resources, continuous training, and clear coordination mechanisms.

This finding is supported by the National Volunteer Fire Council, which reported that volunteer fire departments often face challenges related to training flexibility, volunteer schedules, leadership, and department culture (NVFC, 2020). Similarly, the United States Fire Administration noted that volunteer emergency services commonly encounter problems involving time demands, training requirements, and leadership issues, all of which can affect recruitment, retention, and program effectiveness (USFA, 2023). Although these sources are based on broader volunteer fire service contexts, they support the present finding that barangay volunteer fire brigade programs require more than manpower. They need organized leadership, sustained training, functional equipment, and institutional support to remain effective and sustainable.

3.4 Relationship Between Participant Profile and Assessment of Program Implementation

The study found significant relationships between selected participant profile variables and their assessment of the implementation of the Barangay Volunteer Fire Brigade Program. In terms of organization and personnel, variables such as sex, occupation, employment status, and fire victim status influenced how participants assessed the program. This suggests that individuals from different backgrounds may view the program differently depending on their experience, exposure, and role in the community. For instance, participants who had experienced fire incidents may have higher expectations regarding the availability of trained volunteers, quick response, and functional firefighting resources.

In terms of training and capabilities, significant relationships were found with sex, occupation, employment status, place of residence, fire victim status, and training attended. This means that perceptions of training adequacy and response capability may differ depending on the participant's background and level of exposure to fire safety activities. For practice drills, facilities, and equipment or apparatus, significant relationships were also observed with sex, highest educational attainment, occupation, monthly income, place of residence, fire victim status, and training attended. These findings imply that community-based fire safety programs must consider the different experiences and capacities of stakeholders. The Sendai Framework stresses the importance of understanding disaster risk and strengthening disaster risk governance at all levels, including the local and community level (UNDRR, 2015). Therefore, improving the program should be based on the needs, risks, and experiences of the communities it serves.

3.5 Relationship Between Participant Profile and Problems Encountered

The results also showed significant relationships between selected participant profile variables and the problems encountered in the implementation of the program. Participants differed in how they perceived problems in organization and personnel, training and capabilities, and practice drills, facilities, and equipment or apparatus. Those with direct involvement in firefighting or previous training may have been more aware of technical and operational gaps, while community members may have focused more on visible issues such as lack of equipment, delayed response, or insufficient community awareness. This difference in perception is important because it shows that program problems are not experienced uniformly by all stakeholders.

The finding also highlights the importance of inclusive program planning. Since community members, BFP personnel, and volunteer firefighters view the program from different perspectives, improvement efforts should include consultation with all groups. Fahy and Petrillo (2022) reported that volunteer firefighters continue to represent a large portion of fire service personnel in many communities, especially in areas where professional fire services may be limited. This shows the continuing relevance of volunteer firefighters in local emergency response. However, for volunteer systems to remain effective, they must be supported by training, leadership, equipment, and policies that respond to actual field conditions.

3.6 Proposed Program for Barangay Volunteer Fire Brigade

Based on the findings, a proposed program was formulated to strengthen the Barangay Volunteer Fire Brigade Program in Quezon, Palawan. The proposed program focused on improving fire safety and emergency response, strengthening volunteer organization, increasing fire awareness, enhancing training and capabilities, improving equipment and facilities, and promoting the welfare and recognition of barangay fire volunteers. These areas directly respond to the weaknesses identified in the study, particularly the poor implementation of practice drills, facilities, and equipment or apparatus.

The proposed program should prioritize regular training, scheduled fire drills, updated equipment inventories, clear response protocols, and stronger coordination between barangays, the Bureau of Fire Protection, and the local government unit. It should also include community education activities to strengthen fire prevention awareness among residents. The recommendations are aligned with the Fire Code of the Philippines, which supports fire prevention and protection measures, and with the Sendai Framework, which emphasizes preparedness for effective response and stronger local disaster risk governance (Republic Act No. 9514, 2008; UNDRR, 2015). Overall, the proposed program serves as a practical guide for improving the readiness, sustainability, and effectiveness of barangay volunteer fire brigades in Quezon, Palawan

4. Conclusion & Recommendations

The study concludes that the Barangay Volunteer Fire Brigade Program in Quezon, Palawan is implemented but still requires improvement, particularly in the areas of training and capabilities, practice drills, facilities, and firefighting equipment or apparatus. While the presence of organized personnel and active volunteer firefighters shows the commitment of the barangays to support fire prevention and emergency response, the findings indicate that limited resources, insufficient drills, and inadequate equipment may affect the readiness and effectiveness of the program. Therefore, it is recommended that the local government unit, barangay officials, and the Bureau of Fire Protection strengthen coordination in providing regular training, scheduled fire drills, proper equipment, and clear response protocols for volunteer firefighters. Recognition, welfare support, and sustained funding should also be provided to encourage volunteer participation and improve program sustainability. Future studies may further examine the long-term effectiveness of barangay volunteer fire brigades and explore ways to strengthen community-based fire safety programs in other municipalities.

Compliance with ethical standards

This study was conducted in accordance with ethical standards for research involving human participants. Prior to data collection, the researcher secured the necessary permissions from the concerned offices and informed the participants about the purpose, procedures, and voluntary nature of the study. Informed consent was obtained from all participants before they answered the survey questionnaire or participated in the interview. The confidentiality and anonymity of the respondents were strictly maintained, and no personal information was disclosed in the presentation and interpretation of data. All

responses were used solely for academic and research purposes and were reported in summarized form. The author declares that there is no conflict of interest in the conduct of this study.

REFERENCES

- Calderon, J. F., & Gonzales, E. C. (2017). *Methods of research and thesis writing*. National Book Store.
- Fahy, R. F., Evarts, B., & Stein, G. P. (2022). U.S. fire department profile. National Fire Protection Association. <https://www.nfpa.org/education-and-research/research/nfpa-research/fire-statistical-reports/us-fire-department-profile>
- Moirmai, N. (2018). The effect of interview recording on quality of data obtained: A methodological reflection. *Nurse Researcher*, 19(4), 31–35.
- National Volunteer Fire Council. (2020). Volunteer retention research report. <https://www.nvfc.org/wp-content/uploads/2020/08/20Aug-NVFC-Retention-Research-Report-FINAL.pdf>
- Noella, L. (2017). Value and motivation at the level of public administration from the perspective of an international-level comparative analysis. *International Economic Journal*, 137–145.
- Republic Act No. 9514. (2008). An act establishing a comprehensive Fire Code of the Philippines, repealing Presidential Decree No. 1185 and for other purposes. The Lawphil Project. https://lawphil.net/statutes/repacts/ra2008/ra_9514_2008.html
- United Nations Office for Disaster Risk Reduction. (2015). Sendai Framework for Disaster Risk Reduction 2015–2030. United Nations. <https://www.undrr.org/publication/sendai-framework-disaster-risk-reduction-2015-2030>
- United States Fire Administration. (2023). Resources for the volunteer fire service. Federal Emergency Management Agency. <https://www.usfa.fema.gov/a-z/volunteer-fire-service.html>
- Vinton, C. (2019). Integrating public service motivation and self-determination theory: A framework. *International Journal of Public Sector Management*, 29(3), 238–254.