Fire response through Safety Management System from Bureau of Fire Protection's Perspective

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DOI: https://doi.org/10.51584/IJRIAS.2025.100700108

Received: 09 July 2025; Accepted: 15 July 2025; Published: 16 August 2025

ABSTRACT

This study was conducted to determine the fire response through safety management system from bureau of fire protection's perspective. Descriptive correlation design was used in this study. A total of 31 BFP personnel in Barangay Abar 1st , San Jose City, Nueva Ecija served as the respondents of the study. Frequency, percentage, means, standard deviation and Pearson-r were used to analyze the data to discuss the results. The respondents' age ranged from 31-35 years old, males, married, with a rank of Fire Officer 1 (FO1) and had a 6 to 10 years in service. In determining the fire safety management system of the respondents in terms of fire prevention and suppression, enforcement of fire safety laws, training and capacity building, community engagement and education, and emergency response and disaster management were described as "strongly agree". There was no significant relationship between the socio-demographic characteristics of the respondents and the fire safety management system.

Keywords: Fire response, Safety Management System, Bureau of Fire Protection, Emergrncy response, Fire prevention, Fire risk management

INTRODUCTION

The Bureau of Fire Protection (Filipino: Kawanihan ng Pagtatanggol sa Sunog) is an agency of the Department of the Interior and Local Government (DILG) responsible for implementing national policies related to firefighting and fire prevention as well as implementation of the Philippine Fire Code (Presidential Decree No. 1185) which has been repealed and replaced by the New Fire Code of the Philippines (Republic Act No. 9514) (Macaraig 2017).Acccording to Vilkancaite (2024), fires can have devastating effects. During a fire, flames and smoke can spread quickly and cause severe damage to people and property. Effective fire safety measures and procedures can reduce the risk of injury and save lives.

The Bureau of Fire Protection (BFP) is responsible for the prevention and suppression of all destructive fires in buildings, houses, and other structures, forest, land vehicles, and equipment, ships or vessels docked at piers or wharves or anchored in major seaports, petroleum industry, installations, plane crashes and other similar incidents. The BFP enforces the fire code and the other related laws and investigates all causes of fires, and, if necessary, files formal complaints with the city or provincial prosecutor who has jurisdiction over the case (Urizza, 2023).

According to Guevara (2025), fire safety refers to the set of precautions, minimize the risk of fire-related accidents and ensure the safety of individuals and property in the event of a fire. It involves a combination of awareness, preparedness, and proper safety practices to prevent fires from occurring and mitigate their impact if they do happen.

Fire safety management is a systematic approach to preventing fires and managing fire risks. It involves identifying potential fire hazards, assessing the risks, and implementing measures to prevent fires from

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VII July 2025

occurring or reduce the impact of a fire emergency. Fire safety management aims to ensure that buildings and facilities are designed, constructed, and maintained in a way that minimizes the risk of fire incidents and that people are trained to respond appropriately in case of a fire emergency. Fire safety management is crucial because fires can cause significant damage to property and can result in injuries or loss of life (Sysma, 2024)

Considering the above-mentioned discussion, the researcher tends to determine the different fire safety management strategies provided by the BFP to prevent the occurrence of various forms of fire incidents in the Philippines,mainly in San Jose City, Nueva Ecija.

METHODS AND PROCEDURE

Descriptive-correlational design was used in this study. A total of 31 BFP Personnel in Barangay Abar 1st , San Jose City, Nueva Ecija was served as respondents of this study. Data gathered were classified, tabulated, and analysed using descriptive statistics like frequency counts, percentages, weighted mean, and standard deviation was used to describe the socio-demographic characteristics of the respondents and the fire safety management system.

To test the relationship between two variables, Pearson Product Moment of Correlation Coefficient was used.

RESULTS AND DISCUSSION

Profile of the Respondents

Age results show that 45.2 percent of the respondents were 31 to 35 years old, followed by 29.0 percent of the respondents came from the aged of 41 to 50 years old, then 16.1 percent of the respondents came from the aged of 36 to 40 and 9.7 percent of the respondents came from the aged of 25 to 30. In terms of sex, the findings shows that majority (67.7 percent) were males, while the remaining (32.3 percent) were females. In civil status out of 31 respondents, 83.9 percent were married, 16.1 percent were single and no widowed respondents. In terms of rank, the results shows that 29.0 percent of the respondents were Fire Officer 1 (FO1), 19.3 percent of the respondents were Fire Officer 2 (FO2) and Fire Officer 3 (FO3), 12.9 percent of the respondents were Senior Fire Officer 2 (SFO2) and 6.5 percent of the respondents were Senior Fire Officer 1 (SFO1), Senior Fire Officer 3 (SFO3) and Non-Uniformed Personnel (NUP). Out of 31 respondents 41.9 percent were employed 6 to 10 years, 22.6 percent were employed 11 to 15 years, 19.3 percent were employed 16 to 20 years, 9.7 percent were employed 21 to 25 years and 6.5 percent were employed 1 to 5 years.

Result showed that the overall mean of fire safety management system is 3.91 described as strongly agree. It indicates that the respondent's fire safety management system was effectively implemented.

Table 1. Fire Safety Management System

STATEMENT	MEAN	DESCRIPTION
FIRE PREVENTION AND SUPPRESSION The fire prevention measures implemented by BFP are effective in reducing fire incidents.	3.84	Strongly Agree
Regular fire safety inspections by BFP ensure compliance with the Fire Code of the Philippines.	3.97	Strongly Agree

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VII July 2025

BFP's fire suppression strategies are adequate for responding to various fire emergencies.	3.84	Strongly Agree
The availability of firefighting equipment in BFP-managed areas meets the required standards.	3.29	Agree
BFP effectively collaborates with local government units to enhance fire prevention efforts.	4.00	Strongly Agree
Pooled Mean	**3.788**	**Strongly Agree**
ENFORCEMENT OF FIRE SAFETY LAWS		
The Bureau of Fire Protection strictly enforces the Fire Code of the Philippines in all establishments.	4.00	Strongly Agree
Penalties for non-compliance with fire safety regulations are consistently applied by BFP.	4.00	Strongly Agree
BFP's investigation of fire incidents is thorough and leads to actionable outcomes.	4.00	Strongly Agree
The process for obtaining Fire Safety Inspection Certificates (FSIC) is clear and efficient.	4.00	Strongly Agree
BFP effectively addresses complaints regarding violations of fire safety laws.	4.00	Strongly Agree
Pooled Mean	**4.00**	**Strongly Agree**

Table 1, continued…

TRAINING AND CAPACITY BUILDING		
The training programs provided by BFP adequately prepare personnel for fire emergencies.	3.90	Strongly Agree
Community-based training initiatives by BFP improve public awareness of fire safety.	4.00	Strongly Agree
Fire volunteers receive sufficient support and resources from BFP for their roles.	3.94	Strongly Agree
BFP conducts regular drills to enhance readiness for emergency situations.	3.81	Strongly Agree
Training provided by BFP aligns with international standards for fire safety.	4.00	Strongly Agree
Pooled Mean	**3.93**	**Strongly Agree**

COMMUNITY ENGAGEMENT AND EDUCATION		
Monthly fire prevention campaigns conducted by BFP effectively raise public awareness.	4.00	Strongly Agree
BFP provides accessible resources to educate communities about fire hazards and prevention.	3.97	Strongly Agree
Partnerships between BFP and local organizations strengthen community resilience against fires.	4.00	Strongly Agree
Community-based fire brigades supported by BFP are well-prepared for emergencies.	4.00	Strongly Agree

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VII July 2025

Educational materials distributed by BFP are clear and easy to understand.	4.00	Strongly Agree
Pooled Mean	**3.994**	Strongly Agree
EMERGENCY RESPONSE AND DISASTER MANAGEMENT		
The Bureau of Fire Protection responds promptly to emergency calls in my area.	4.00	Strongly Agree
Specialized units, such as HAZMAT teams, are well-equipped to handle specific emergencies.	3.35	Agree
Coordination between BFP and other agencies during disasters is seamless and effective.	4.00	Strongly Agree
Table 1, continued…		
The disaster management strategies implemented by BFP minimize property damage and loss of life.	4.00	Strongly Agree
Emergency response plans developed by BFP are regularly updated to address emerging risks.	4.00	Strongly Agree
Pooled Mean	**3.87**	Strongly Agree

Legend : 3.68 – 5.00 Strongly Agree

2.34 – 3.67 Agree

1.00 – 2.33 Disagree

Fire Prevention and Suppression. It obtained the overall mean of 3.788 described as "strongly agree" which implies that it indicates awareness and preparedness among respondents and organization, which can lead to reduced fire risks and improved emergency response. According to the study of Schneid (2000) as cited by Mendoza (2023), it emphasizes that the BFP's capacity to prevent and suppress fires relies heavily on modern tools and community collaboration, noting that outdated resources continue to jeopardize firefighter safety and operational efficiency.

Enforcement of Fire Safety Laws. Had the overall mean of 4.00, described as "strongly agree" which implies that the regulations, inspections, and compliance measures are being properly enforced, leading to a safer environment. According to Arena and Pingol (2022), this action research aims to implement an enhanced program for fire safety enforcement in Surigao del Sur. It assesses current fire safety enforcement practices, identifies best practices, and recommends improvements through training, inspections, awareness campaigns, and related initiatives.

Training and Capacity Building. It obtained an overall mean of 3.93, described as "strongly agree". It implies that the respondents feel more valued and motivated in their roles, leading to higher job satisfaction and engagement. According to the study of Hassanain et al. (2022), for the BFP which is responsible for enforcing fire safety inspections and drills in establishments, integrating these findings could enhance its training framework for both personnel and the public.

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VII July 2025

Community Engagement and Education. Got an overall mean of 3.994, described as "strongly agree", which implies that the community is actively involved in fire prevention efforts, fostering a culture of safety and cooperation in mitigating fire risks. According to the study of Ong et al. (2023) The BFP's role in educating the public through seminars, drills, and media outreach was highlighted as a key driver of preparedness and emphasizing the importance of sustained community engagement.

Emergency Response and Disaster Management. It obtained the overall mean of 3.87, described as "strongly agree". It implies that the preparedness plans, response protocols, and coordination among agencies and communities are functioning efficiently. The country's firefighters deal with daily challenges, responding to fire incidents and natural and artificial calamities. However, aside from external challenges, the men and women of the Bureau of Fire Protection (BFP) also need help with their organization. The BFP, with the strength of 32,892 officers and personnel, does not have adequate firefighting equipment, which puts the lives of firefighters at risk every time they go out in the field (Sabalosa, 2024).

Table 2. Relationship between Socio-Demographic Characteristics of the respondents and Fire Safety Management System

SOCIO-DEMOGRAPHIC CHARACTERISTICS	SAFETY MANAGEMENT SYSTEM
Age	0.120
Sex	0.085
Civil Status	0.138
Rank	0.118
Years in service	0.119

*Significant at 0.05 level (2 – tailed)

**Significant at 0.01 level (2 – tailed)

The results in this study show that all of these variables of socio-demographic characteristics of the respondents was correlated to fire safety management system. This implies that the respondents have no significant effect on how they interact with fire safety management system. According to the study of Mercado et al., (2025), a study titled "Implementation of Fire Safety Awareness of Boarding Houses in Southern Bukidnon" examined the relationship between BFP officers' demographic profiles—such as sex, rank, and years of service—and the effectiveness of fire safety awareness programs. The findings indicated that these demographic factors did not significantly influence the level of fire safety awareness, suggesting that BFP officers maintain a consistent understanding and implementation of fire safety measures regardless of their demographic differences. ?

CONCLUSIONS

Based on the findings of the study, the following were the conclusions: the respondents' ages ranged from 31 to 35 years, with the majority being male, married, holding the rank of FO1, and having 6 to 10 years of service experience. The fire safety management system, in terms of fire prevention and suppression, enforcement of fire safety laws, training and capacity building, community engagement and education, as well as emergency response and disaster management, was generally described as "strongly agree" by the respondents. Furthermore, the study found no significant relationship between the socio-demographic characteristics of the respondents and their perceptions of the fire safety management system.

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VII July 2025

RECOMMENDATIONS

Based on the findings of this study, the following recommendations were given by the researchers: it is recommended to enhance the availability and maintenance of Bureau of Fire Protection (BFP) personnel equipment to ensure they meet the required standards. Additionally, introducing more specialized training programs aligned with international fire safety standards would further strengthen the capabilities of fire personnel. Expanding fire prevention campaigns to reach more vulnerable communities, particularly those in high-risk areas, is also crucial. Improving the equipment and operational readiness of specialized units such as HAZMAT teams should be prioritized to effectively respond to hazardous situations. For future researchers, it is suggested to conduct similar studies involving different groups of respondents to gain broader insights and perspectives.

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ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume X Issue VII July 2025

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