



CAPABILITIES OF THE BUREAU OF FIRE PROTECTION RESPONDING HUMAN-INDUCED AND NATURAL DISASTERS

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ABSTRACT

This study determined the capabilities of the Bureau of Fire Protection responding human-induced and natural disasters. It also looks into significant difference in the level of the BFP programs based on the profile of the BFP personnel. The study is a descriptive-correlational method involving the 47 BFP personnel 15 Business Owners and 15 Brgy Officials in selected municipalities of Laguna like, Paete, Pakil, Pangil, Siniloan, Famy, Mabitac and Sta. Maria. The number of respondents was taken through total enumeration. A questionnaire checklist adopted by the researcher based on the BFP Operational Manual of 2015 was the primary data-gathering tool used in the study. Frequency, percentage mean and one-way anova were used to treat and interpret the data needed in the study. The findings of the research revealed that a substantial percentage of the BFP respondents are 31-35 years old, males, graduates of Bachelor of Science in Nursing and completed the Fire Basic Recruit Course. The level of capabilities of the BFP responding human-induced and natural disasters is "very much capable". As to the program's implementation level, it has remark of "very much implemented". As to the challenges encountered, the BFP mainly experienced a lack of manpower of personnel. There is a significant difference in the implementation of the program and the demographic profile of the BFP, however there is no significant difference was recorded in how the BFP personnel implemented the programs based on the degree they had attained.

KEYWORDS: *Firefighter, Fire Operations, Fire Safety, Programs*

INTRODUCTION

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 strength of 32,892 officers and personnel, does not have adequate firefighting equipment, which puts the lives of the firefighters at risk every time they go out in the field.

The Bureau of Fire Protection (BFP) is responsible for the Prevention and suppression of all destructive fires in buildings, houses and other structures, forests, 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 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.

Fire departments respond to numerous cases to save lives and protect valued materials. At the same time, countless obstacles make the task difficult and dangerous for firefighters and those in need of rescue (Veszprémi & Pántya, 2021).

The cost of fire incidents is enormous. It results in the pain and death of victims, waste of time, money and materials and damage to equipment and structures (Adegoro & Ojoye, 2019).

As an elaboration, an electrical short circuit burned down the NCCC mall in Davao City on December 23, 2017, and claimed 38 lives (Antonio IV, 2018; Basa, 2017; Colina, 2018; Revita, 2018; Nawal & Lim, 2017; Villamor, 2017a; 2017b). Likewise, on May 13, 2015, a fire broke out at the Kentex Manufacturing factory in Valenzuela City and claimed 74 lives. The worst fire recorded in the Philippines was the 1996 Ozone Disco Club fire, which claimed 162 lives (Bautista, 2017; Mayuga 2018).

These are just a few examples of morbid fire incidents. All of these happened due to the fire code's poor or non-compliance.

OBJECTIVE OF THE STUDY

The lack of trained pre-hospital providers, modern equipment, and ambulance vehicles accounts for the challenges and short comings to provide quality emergency medical services. The BFP mission is to prevent and suppress destructive fires, investigate its causes, give emergency medical and rescue services, and enforce other fire related laws with the active involvement of the community. Its purpose is to ensure operational readiness of the EMS team on duty. (BFP Operational Procedures Manual, 2015).



This prompted the researcher to study the capabilities of the Bureau of Fire Protection (BFP). It also sought to evaluate the factors that trigger the challenges encountered by the BFP, what comes taken by the BFP personnel and how they provide solutions regarding the problems. Also, the researcher would like to determine the level of capabilities of the BFP personnel responding human-induced and natural disasters.

MATERIALS AND METHODS

This study utilized the Descriptive-Correlational Research Method to gather data from respondents using a questionnaire checklist adopted by the researcher based on the BFP Operational Procedures Manual of 2015. The Descriptive-Correlational Research method is a type of research that tries to explain the relationship between two or more variables without making any claims about cause and effect. It includes collecting and analyzing data the variables of interest and figure out how they relate. The main goal is to give a full account of the variables and how they are related without changing them or assuming that one thing causes another. In descriptive correlational research, researchers do not change any variables or try to find cause-and-effect connections. Instead, they just watch and measure the variables of interest and then look at the patterns and relationships that emerge from the data.

Population and Sampling Technique

This study aimed to statistically determine the level of capabilities of the Bureau of Fire Protection responding human-induced and natural disasters. The researcher used the purposive sampling technique because the participants were personnel who had knowledge regarding her topic and were directly affected and concerned with the capabilities of the BFP. The study was a non-probability sampling wherein the researcher consciously selected particular elements with specific characteristics that pertained to the study. It usually targeted a distinct group with a total of 77 participants, 10 BFP personnel at the Paete Fire Station, 2 BFP personnel at the Pakil Fire Prevention Office, 12 BFP personnel at the Pangil Fire Prevention Office, 3 BFP personnel at the Famy Fire Prevention Office, 10 Mabitac Fire Station and 12 BFP personnel at Sta. Maria Fire Station, 15 Business Establishments Owners and 15 Barangay Officials.

Data Collection Procedure

In this study, the researcher used a questionnaire checklist adopted by the researcher based on the BFP Operational Procedures Manual of 2015 to gather information and achieve the study's objectives. The questionnaire was divided into four sections. Section A gathered demographic information about the BFP. Section B assessed the BFP status regarding its implementation of the BFP Program. Section C assessed the BFP regarding the Capability of the BFP Laguna in responding human-induced and natural disasters. Section D assessed the BFP regarding the challenges encountered. The questionnaire utilized a five-point ratingscale, allowing participants to provide their responses and opinions on specific criteria or variables. The collected data was then analyzed using various statistical tools such as frequency, weighted mean, and one-way anova to establish significant difference among the data and obtain research results.

RESULTS AND DISCUSSION

Demographic Profile of the respondents

Table 1.: Frequency Distribution of BFP respondents according to their Age

Age in Years	<i>f</i>	%
21 - 25	2	4.26%
26 – 30	12	25.53%
31 – 35	16	34.04%
36 - 40	8	17.02%
41 - 45	3	6.38%
46 - 50	3	6.38%
51 –56	3	6.38%
Total	47	100%

Table 1 provides information on the demographic profile of the BFP. On the 47 BFP respondents almost one-third of the BFP personnel were still in their youth, aged 21 to 30 (29.79%), and the rest were in their middle adulthood (70.21%). It connotes that young firefighters are needed to implement the different programs effectively.

**Table 2.: Frequency Distribution of BFP respondents according to their Sex**

Sex	<i>f</i>	%
Male	30	63.83%
Female	17	36.17%
<i>Total</i>	47	100.00%

Out of 47 BFP personnel, a significant majority are males. There were 30 males (63.83%) and 17 females (36.17%). As the community sees it, men are more capable of responding to fire incidents and other emergencies; they have the aptitude to do their job as a fireman. According to Siniloan Fire Station, male firefighters are usually in the field of operations as fire truck drivers and those who carry heavy equipment. However, female firefighters are primarily designated in the Office, and some are assigned 24-hour duty. If there is an occurrence of fire, they will join the response team at the fire scene.

Table 3.: Frequency Distribution of BFP respondents according to their Educational Attainment

<i>Educational Attainment</i>	<i>f</i>	%
B.S. Nursing	12	25.53%
BS Criminology	11	23.40%
BS Teacher	5	10.64%
Education		
BS Agriculture	1	2.13%
BS Psychology	2	4.26%
BS Accountancy	2	4.26%
BS Electrical	2	4.26%
Engineering		
BS Mechanical	4	8.51%
Engineering		
BS Secondary	1	2.13%
Education		
Others	7	14.89%
<i>Total</i> 47	100.00%	

Based on the results, most respondents had a bachelor's degree in Nursing, comprising 25.53 per centum or 12 of the sample. While 11 or 23.40 per centum had a Bachelor of Science in Criminology degree. Only 5 or 10.64 per centum earned a Bachelor of Science in Teacher Education degree. While 4 or 8.51 per centum had attained a Bachelor of Science in Mechanical Engineering. There were equal numbers of 2 or 4.26% of those who earned Bachelor of Science in Psychology, Accountancy and Electrical Engineering. While only 1 or 2.13 per centum earned a Bachelor of Science in Secondary Education degree, and others 7 or 14.89 per centum.

Table 4.: Frequency Distribution of BFP respondents according to their Years in Service

<i>Years in Service</i>	<i>f</i>	%
1 - 5 years	27	57.45%
6 - 10 years	8	17.02%
11 - 15 years	6	12.77%
16 - 20 years	5	10.64%
21 - 25 years	1	2.12%
<i>Total</i>	47	100.00%

Finally, when the years in service were put into consideration, it was observed that the majority of the respondents were 1-5 years in service or 57.45% per centum of the total sample; the majority of the respondents are new to the service as the reflected on their age, while 17.02% had rendered 6-10 years of service. Since they are neophytes in the fire service, they are eager to learn; therefore, they have undergone training and perform better in their responsibilities as firefighters.

**Table 5.: Frequency Distribution of BFP respondents according to their trainings attended**

Training Attended	<i>f</i>	%
Fire Basic Recruit Course	29	61.70%
Fire Junior Leadership Course	9	19.15%
Fire Senior Leadership Course	7	14.89%
Fire Officer Candidate Course	2	4.26%
Total	47	100.00%

Results implied that most respondents attended Fire Basic Recruit Course comprising 29 or 61.70 per centum. At the same time, 9 or 19.15 per centum were, attended Fire Junior Leadership Course. Only 7, or 14.89 per centum, attended Fire Senior Leadership Course. Only 2 or 4.26 per centum attended Fire Officer Candidate Course.

According to BFP Region4A, the region opened the field of public service for the aspiring firefighters of CALABARZON. Some aspirants from different provinces applied for the position of Fire Officer 1; however, a definite number of newly hired FO1s were considered, so most of the BFP personnel are beginners. For training attended, a significant majority (57.45%) of the BFP personnel had finished their Fire Basic Recruit Course (FBRC), a mandatory requirement for FO1. In comparison, one-half (19.15%) had undergone Fire Junior Leadership Course (FJLC), a mandatory training that is divided into the Academic phase (256 hrs) and Non-Academic Phase (64hrs). It supersedes the former Fire Arson Investigation and. Inspection Course (FAIC), now a particular course (BFP Rsix Maasin Fire Station, 2021).

Table 6 Level of Implementation of the BFP Program as to Community Fire Protection Plan

<i>Community Fire Protection Plan</i>	BFP Personnel			Brgy. Officials			Business Owners		
	Mean	SD	VI	Mean	SD	VI	Mean	SD	VI
1. The Barangay is installed with an individual Community Fire Protection Plan.	4.94	0.32	VMI	5	0	VMI	5	0	VMI
2. The Barangay is installed with individual Community Fire Hazard Maps.	4.89	0.43	VMI	5	0	VMI	5	0	VMI
3. The Bureau of Fire Protection installed municipal Fire Hazard Maps	4.94	0.32	VMI	5	0	VMI	5	0	VMI
4. The Bureau of Fire Protection conducts Community Simulation Drills.	4.87	0.61	VMI	5	0	VMI	5	0	VMI
Overall Mean	4.91		VMI	5		VMI	5		VMI

The BFP personnel, Barangay officials, and business owners shared the same views about the implementation of the community fire protection plan. They perceived that each barangay had installed a community fire protection plan and fire hazard maps. The BFP conducted community simulation drills, as stated by the three groups of respondents. The community fire protection plan was *very much implemented*, as perceived by the BFP personnel ($M=4.91$), the Barangay officials ($M=5.00$), and the business owners ($M=5.00$). It means that the BFP program was coordinated at the barangay and municipal levels.

A community fire protection plan is established to identify the hazard areas, and such a plan is laid out in case of fire incidents (Gail Momblan, 2019). Under this activity, every fire station nationwide shall mentor every community in formulating a Community Fire Protection Plan (CFPP). The CFPP is, in essence, the BFP's counterpart for the Barangay Disaster Resilience Preparedness Plan



mandated to be prepared by the various LGUs and Barangay councils; as the BDRPP is to disaster preparedness, the CFPP is to fire incident preparedness, only in a more specialized program (BFP “Oplan Ligtas na Pamayanan”, Guidebook).

Table 7. Level of Implementation of the BFP Program as to the BAYANIHAN Program

<i>BAYANIHAN Program</i>	BFP Personnel			Brgy. Officials			Business Owners		
	Mean	SD	VI	Mean	SD	VI	Mean	SD	VI
1. Community Fire Auxiliary Group (CFAG) was created and trained.	4.98	0.15	VMI	5	0	VMI	5	0	VMI
2. Community Fire Auxiliary Group (CFAG) was trained annually.	4.94	0.32	VMI	5	0	VMI	5	0	VMI
3. BAYANI ng Barangay as Fire Safety Advocacy Group in the social media.	4.91	0.35	VMI	5	0	VMI	5	0	VMI
4. The Barangay Fire Fighting contests/Fire Safety Contests at all levels.	4.94	0.32	VMI	5	0	VMI	5	0	VMI
Overall Mean	4.94		VMI	5.00		VMI	5.00		VMI

Table 7 presents the BFP program implementation level pertaining to the programs as the "BAYANIHAN" program, as perceived by the BFP personnel, business owners, and barangay officials. The BFP personnel, Barangay officials, and business owners shared the same views about implementing the BAYANIHAN Program. They perceived that each barangay had created and trained the Community Fire Auxiliary Group (CFAG) annually. The BFP conducted a fire safety advocacy group on social media, as stated by the three groups of respondents. The BAYANIHAN Program was *very much implemented*, as perceived by the BFP personnel ($M=4.94$), the Barangay officials ($M=5.00$), and the business owners ($M=5.00$).

It means that the BFP program was well coordinated with the barangay officials. The Bayanihan focuses on neighbourhood initiatives in creating fire plans (Gail Momblan, 2019).

Community Fire Auxiliary Group (CFAG) or "CFAG", the organization's primary responsibility is to respond to localized fire incidents as BFP responding teams are in transit and to promote community safety through guided activities by the BFP. The CFAG answers the need for a singular form regarding structure, duties and responsibility for the currently established barangay fire brigades (BFP “Oplan Ligtas na Pamayanan”, Guidebook).

Table 8. Level of Implementation of the BFP Program as to the LINGAP Program

<i>LINGAP Program</i>	BFP Personnel			Brgy. Officials			Business Owners		
	Mean	SD	VI	Mean	SD	VI	Mean	SD	VI
1. The BFP conducts inspections of households in high-hazard areas.	4.98	0.15	VMI	5	0	VMI	5	0	VMI
2. The BFP distribute fire safety informative materials to every household in high-hazard areas, medium and low-hazard areas.	4.96	0.2	VMI	5	0	VMI	5	0	VMI
Overall Mean	4.97		VMI	5.00		VMI	5.00		VMI

Table 8 presents the level of implementation of the BFP program as a “Lingap program”, as perceived by the BFP personnel, business owners, and barangay officials.

The BFP personnel, Barangay officials, and business owners shared the same views about implementing the BAYANIHAN Program. They perceived that each BFP conducted an inspection and distributed fire safety informative materials to every household in high-hazard areas and medium and low-hazard areas. The LINGAP Program was *very much implemented*, as perceived by the BFP personnel ($M=4.97$), the Barangay officials ($M=5.00$), and the business owners ($M=5.00$). It means that the lingap program was well conducted.

According to Gumowang, ARDO, BFP R6, Lingap, on the other hand, will recognize villages that "conduct intensive house-to-house fire safety surveys in densely populated neighbourhood, resettlements, and fire-prone areas,”

**Table 9. Level of Implementation of the BFP Program as to the KAISA Program**

<i>KAISA Program</i>	BFP Personnel			Brgy. Officials			Business Owners		
	Mean	SD	VI	Mean	SD	VI	Mean	SD	VI
1. Proper and good housekeeping practice in the workplace and vicinity	4.98	0.15	VMI	5	0	VMI	4.94	0.25	VMI
2. Provide adequate fire safety information and reminders to co-workers through regular "after-office safety talks", adopting the seasonal fire safety theme published by the BFP.	4.94	0.25	VMI	4.94	0.25	VMI	4.94	0.25	VMI
3. Posts fire safety tips, posters or reminders in the workplace.	4.98	0.15	VMI	5	0	VMI	5	0	VMI
4. Coordinate with the BFP for annual fire safety seminars and drills.	4.98	0.15	VMI	4.98	0.15	VMI	4.98	0.15	VMI
5. Call the BFP and other authorities in case of fire and emergencies.	5	0	VMI	5	0	VMI	5	0	VMI
Overall Mean	4.97		VMI	4.98		VMI	4.97		VMI

Level of Operational Capabilities of the Bureau of Fire Protection

The operational capabilities of the Bureau of Fire Protection unit were measured in terms of their preparedness and ability to perform functions such as fire safety enforcement during the pre-construction phase and construction phase, firefighting operations during a fire in a high-rise building, fire/arson investigation in terms of fire scene documentation, submission of pertinent documents for investigation, collection and preservation of evidence, interview and questioning of witnesses, the conduct of fire cause determination procedure, response to medical emergencies, and response to typhoon and flood.

Table 10. Level of Operational Capabilities of the BFP in Terms of Fire Safety Enforcement during the Pre-Construction Phase

<i>Fire Safety Inspection (Pre-construction Phase)</i>	BFP Personnel			Brgy. Officials			Business Owners		
	Mean	SD	VI	Mean	SD	VI	Mean	SD	VI
1. The plan evaluator (PE), upon receipt of plans and specifications, determines whether an on-site inspection is required and, if so, prepares the inspection order (I.O.).	5.00	0.00	VMC	5.00	0.00	VMC	5.00	0.00	VMC
2. The PE then presents the prepared I.O. together with the plans to the Chief, Fire Safety Enforcement Section (FSES) for evaluation and signature of the I.O.	5.00	0.00	VMC	5.00	0.00	VMC	5.00	0.00	VMC
3. The Chief, FSES, forwards the I.O. and plans to the City/Municipal Fire Marshal (CMFM) for his/her approval.	5.00	0.00	VMC	5.00	0.00	VMC	5.00	0.00	VMC
4. The PE proceeds to the site and requests acknowledgment of the I.O. from any responsible person in the building, structure or facility	5.00	0.00	VMC	5.00	0.00	VMC	5.00	0.00	VMC
5. The PE conducts an ocular inspection of the building/structure/facility.	5.00	0.00	VMC	5.00	0.00	VMC	5.00	0.00	VMC
6. The PE prepares an After Inspection Report (AIR) within 24 hours after receipt of the I.O. as the basis for his/her evaluation of the submitted plans and specifications.	5.00	0.00	VMC	5.00	0.00	VMC	5.00	0.00	VMC
Overall Mean		5.00	VMC		5.00	VMC		5.00	VMC



Table 10 presents the level of operational capabilities of the BFP regarding Fire Safety Enforcement (pre-construction phase) as perceived by the BFP personnel, business owners, and barangay officials.

They agreed that Fire Safety Enforcement during Pre-Construction Phase was "Very Much Capable", as manifested by the overall mean of 5.00. The respondents answered that the plan evaluators "Always" conduct an ocular inspection of the building/ structure/ facility. It refers to the respondent's capability of enforcing fire safety by doing the fire safety inspection phase.

The National Building Code of the Philippines or Republic Act 6541 Section 1.01.02 promote the policy of the State to safeguard life, health, property, and public welfare, consistent with the principles of environmental management and control; and to this end, make it the purpose of this Code to provide for all buildings and structure, a framework of minimum standards and requirements by guiding, regulating, and controlling their location, siting, design, quality of materials, construction, use, occupancy, and maintenance, including their environment, utilities, fixtures, equipment, and mechanical electrical, and other systems and installations (The National Building Code of the Philippines).

Table 11. Level of Operational Capabilities of the BFP in Terms of Fire Safety Enforcement during the Construction Phase

<i>Fire Safety Inspection (Construction Phase)</i>	BFP Personnel			Brgy. Officials			Business Owners		
	Mean	SD	VI	Mean	SD	VI	Mean	SD	VI
1. By the issued Fire Safety Checklist (FSC) on the building plan, the P.E. prepares an I.O. and forwards it to the Chief, FSES, for his signature.	5	0	VMC	5	0	VMC	5	0	VMC
2. Chief, FSES countersigns the I.O. and forwards the same to the City/Municipal Fire Marshal for approval.	5	0	VMC	5	0	VMC	5	0	VMC
3. The City/Municipal Fire Marshal signs the I.O.	5	0	VMC	5	0	VMC	5	0	VMC
4. The PE proceeds to the site and requests acknowledgment of the I.O. from any responsible person in the building, structure or facility	5	0	VMC	5	0	VMC	5	0	VMC
5. The PE inspects the construction, renovation, modification or alteration and prepares the AIR in duplicate copies immediately after the inspection leaving a copy for the owner/project manager/contractor or any duly authorized representative.	5	0	VMC	5	0	VMC	5	0	VMC
6. Within three years of receipt of the I.O., a copy of the AIR is given to the Chief, FSES.	5	0	VMC	5	0	VMC	5	0	VMC
7. The Chief, FSES, evaluates the AIR and, in case of violations/deficiencies, prepares the written notice addressed to the owner/project manager/contractor or any duly authorized representative in the construction.	5	0	VMC	5	0	VMC	5	0	VMC
8. The C/MFM signs the notice and forwards the same to the P.E. or service of notice.	5	0	VMC	5	0	VMC	5	0	VMC
9. The PE serves the original copy of the notice to the owner/project manager/contractor or any duly authorized representative and another copy to the Office of the Building Official.	5	0	VMC	5	0	VMC	5	0	VMC
Overall Mean	5.00		VMC	5.00		VMC	5.00		VMC

Note: The computed mean is interpreted as follows: 4.20 - 5.00 Very Much Implemented (VMI), 3.40 - 4.19 Much Implemented (MI), 2.60 - 3.39 Implemented (I), 1.80 - 2.59 lightly Implemented (S.I.), 1.00 - 1.79 Not Implemented

Table 11 presents the operational capabilities of the BFP of Fire Safety Enforcement (construction phase) as perceived by the BFP personnel, business owners, and barangay officials.

On fire safety inspection (construction phase), the respondents also answered that the Chief, Fire Safety Enforcement Section (C, FSES) "Always" countersigns the I.O. and forwards the same to the City/Municipal Fire Marshal for approval and the City/Municipal Fire Marshal signs the I.O. ($M=5.00$) respectively.



The finding implies that following the protocol in their operations, such as planning and forwarding signed orders, ensures quality public service delivery. It means that the BFP personnel always conduct an ocular inspection in the pre-construction phase because it is a requirement for having a building permit. As stated by the community, they usually visit the construction site to ensure the safety of the residents and the labourer. It has implied that the quality of service of the Bureau of Fire Protection when it comes to Fire Safety Enforcement is reliable.

Section 5 (h) RA 9514 Fire Code of the Philippines of 2008 states that the BFP may "inspect at a reasonable time, any building, structure, installation or premises for dangerous or hazardous conditions or materials."

Table 12. Shows the Level of Operational Capabilities of the BFP in terms of Firefighting Operations

Firefighting Operations (Fire in High-Rise Building)	BFP Personnel			Brgy. Officials			Business Owners		
	Mean	SD	VI	Mean	SD	VI	Mean	SD	VI
1. All responding personnel wear appropriate Personal Protective Equipment (PPE).	5.00	0.00	VMC	5.00	0.00	VMC	5.00	0.00	VMC
2. The Incident Commander (IC) coordinates with the management of the building for the initial gathering of information and initiates the transfer of command.	4.91	0.35	VMC	4.94	0.32	VMC	4.89	0.43	VMC
3. The I.C. coordinates with the management of the building for the initial gathering of information and initiates the transfer of command.	4.94	0.32	VMC	4.89	0.43	VMC	5.00	0.00	VMC
4. The I.C. conducts Damage Assessment and Need Analysis (DANA) and reports the same to the next higher Office.	4.96	0.20	VMC	4.94	0.32	VMC	4.96	0.20	VMC
5. The I.C. directs fire operations by the phases of firefighting, whenever applicable.	4.96	0.29	VMC	4.91	0.35	VMC	4.91	0.35	VMC
6. The I.C. declares "fire under control" when there is no probability for the fire to escalate.	5.00	0.00	VMC	5.00	0.00	VMC	4.32	0.65	VMC
7. Responding personnel performs overhauling until the fire is fully extinguished.	4.98	0.15	VMC	5.00	0.00	VMC	4.23	0.67	VMC
8. The I.C. declares "fire out" after the determination of total extinguishment.	5.00	0.00	VMC	4.23	0.68	VMC	4.15	0.71	VMC
9. The I.C. directs the BFP investigators to continue the conduct of the investigation.	4.96	0.29	VMC	4.23	0.67	VMC	4.96	0.20	VMC
10. The responding unit returns to the station after demobilization only.	4.98	0.15	VMC	4.96	0.20	VMC	4.25	0.70	VMC
11. The Fire Marshal, together with the firefighting unit, conducts post-fire analysis.	4.98	0.15	VMC	4.89	0.43	VMC	4.89	0.43	VMC
12. The Station's Chief Operations submits After Fire Operations Report to the Fire Marshal for subsequent submission to the next higher Office.	5.00	0.00	VMC	5.00	0.00	VMC	5.00	0.00	VMC
Overall Mean	4.97		VMC	4.83		VMC	4.71		VMC

Table 12 presents the level of operational capabilities of the BFP in Firefighting operations, as perceived by the BFP personnel, business owners, and barangay officials. The respondents have a "Very Much Capable" level in operational capabilities in responding to emergencies regarding firefighting operations as indicated with the overall mean of 4.97 for BFP personnel, $M=4.83$ for brgy officials and $M=4.71$ for business owners. It refers to the personnel's ability to respond in firefighting operations because the Bureau of Fire Protection personnel are on duty 24/7. Fire is one of the calamities that we cannot simply predict, and it may happen at any time of the day or even late at night, which is why we have the BFP. However, before they take any course of action, many preparations must be first addressed: preparing the equipment needed to fight a fire.

High-rise buildings are also a significant problem for firefighters during operations. Since they cannot reach the top floors with their firefighting equipment, they are bound to use the building's installed firefighting equipment before reaching the highest floor affected by the fire. They also need to take the stairs since elevators may be inaccessible, and after they reach their target floor, the flames might spread everywhere and cause a disaster (Zadeh, Abdulwakil, Amar, Durante, & Santos, 2021).

The firefighting capacity of any fire station should conform to national and international standards. The fire station's location and service area are essential issues in reducing fire risk. Along with these spatial requirements, several non-spatial issues, such as staff, equipment, vehicle, function organization and technology, are also related to efficient fire services (Tishi & Islam, 2019).

**Table 13 Level of Operational Capabilities of the BFP in Terms of Fire/ Arson Investigation**

<i>Fire Scene Documentation</i>	BFP Personnel			Brgy. Officials			Business Owners		
	Mean	SD	VI	Mean	SD	VI	Mean	SD	VI
1. Fire Scene Sketch Preparer and Fire Scene Photographer ensure the availability of all tools and equipment they need for the investigation.	4.98	0.15	VMC	4.98	0.15	VMC	4.98	0.15	VMC
2. The fire Scene Sketch Preparer prepares a detailed illustration of the interior and exterior portion of the fire scene, the Area of Fire Origin and the Point of Fire Origin, the Fire Spread Pattern, and affected and unaffected areas at the fire scene.	4.98	0.15	VMC	4.98	0.15	VMC	4.98	0.15	VMC
3. Fire Scene Photographer photographs the fire scene in large and close-up angles for detailed and sequential presentation.	4.96	0.20	VMC	4.96	0.20	VMC	4.96	0.20	VMC
Overall Mean	4.97	VMC		4.97	VMC		4.97	VMC	
<i>Submission of Pertinent Documents for Investigation</i>									
1. FAI prepares the LIST OF DOCUMENTS needed to be accomplished/ submitted by the fire victim/s, building occupant/s and other parties affected by the fire, which varies based on the TYPE OF OCCUPANCY or the INVOLVED STRUCTURE gutted by fire.	5.00	0.00	VMC	4.98	0.15	VMC	4.96	0.20	VMC
2. FAI prepares and submits the mandatory reports within the reglementary period of submission.	4.98	0.15	VMC	4.96	0.20	VMC	4.96	0.20	VMC
Overall Mean	4.99	VMC		4.97	VMC		4.96	VMC	
<i>Collection and Preservation of Evidence</i>									
1. FAI prepares the apparatus used for the collection of evidence.	4.96	0.29	VMC	4.25	0.70	VMC	4.98	0.15	VMC
2. FAI identifies the collected physical evidence found that has Evidentiary Value.	4.94	0.32	VMC	5.00	0.00	VMC	4.94	0.32	VMC
3. Evidence Recovery Personnel and Custodian coordinate with Fire Scene Sketch Prepare re: the position and location of all evidence collected.	4.98	0.15	VMC	5.00	0.00	VMC	4.94	0.32	VMC
4. FAI photographs the evidence to be collected before lifting in the presence of a witness independent from the FAI Team.	5.00	0.00	VMC	5.00	0.00	VMC	4.94	0.32	VMC
5. FAI properly documents, packs, seals and labels the pieces of evidence recovered before transportation and submission to Arson Laboratory Section BP-NHQ within 72 hours upon lifting from the fire scene for laboratory examination.	4.96	0.29	VMC	4.15	0.68	VMC	4.12	0.76	VMC
6. FAI records/documents collect and itemize all the recovered evidence in a detailed format using the Evidence Collection and Recovery Record (ECRR).	4.96	0.20	VMC	5.00	0.00	VMC	4.96	0.20	VMC
7. FAI attaches a copy of the Evidence Collection and Recovery Record (ECRR) to the Evidence Chain of Custody (ECC) form.	4.98	0.15	VMC	5.00	0.00	VMC	5.00	0.00	VMC
Overall Mean	4.97	VMC		4.77	VMC		4.84	VMC	

Table 13 presents the level of operational capabilities of the BFP of Fire/ Arson Investigation, as perceived by the BFP personnel, business owners, and barangay officials of $M=97$ as supported as "very much capable". It means that the respondents can conduct fire/arson investigations like fire scene documentation, submit pertinent documents for investigation, and collect and preserve evidence.

When taken singly, on fire scene investigation, the Fire Arson Investigator "Always" prepares the documents needed to be accomplished/ submitted by the fire victim/s, building occupant/s and other parties affected by the fire. The required documents are listed in form FAI-02: Required Documents for Investigation. Documents to be obtained from the fire victim vary based on the type of occupancy or the complicated structure gutted by fire ($M=4.99/ M=4.97/ M=4.96$). It means that the personnel should see to it that all the required documents and checklists for investigation should be filled up correctly and accurately to have a basis for declaring the



cause of the fire.

Further, on collection and preservation of evidence, the respondents answered that "Always", the evidence recovery personnel and custodian coordinate with Fire Scene Sketch Prepare for the illustrations of the position and location of all pieces of evidence collected, FAI entirely records/documents and collect and itemize in a detailed format all the recovered pieces of evidence using the Evidence Collection and Recovery Record ($M=4.97$, $M=4.77$ and 4.84). It means that the person must collect enough accurate and valid data as their basis in deciding the result of the investigation.

According to the National Institute of Justice (U.S. government DOJ), Fire and arson investigators examine the physical attributes of a fire scene and identify and collect physical evidence from the scene. This evidence is then analyzed to help determine if the cause of the fire was accidental or deliberate. During the scene examination, investigators may find evidence indicating criminal activity, such as accelerants, tampered utilities, and specific burn patterns.

Table 14 Level of Operational Capabilities of the BFP in Terms of Fire/ Arson Investigation

<i>Fire Scene Documentation</i>	BFP Personnel			Brgy. Officials			Business Owners		
	Mean	SD	VI	Mean	SD	VI	Mean	SD	VI
4. Fire Scene Sketch Preparer and Fire Scene Photographer ensure the availability of all tools and equipment they need for the investigation.	4.98	0.15	VMC	4.98	0.15	VMC	4.98	0.15	VMC
5. The fire Scene Sketch Preparer prepares a detailed illustration of the interior and exterior portion of the fire scene, the Area of Fire Origin and the Point of Fire Origin, the Fire Spread Pattern, and affected and unaffected areas at the fire scene.	4.98	0.15	VMC	4.98	0.15	VMC	4.98	0.15	VMC
6. Fire Scene Photographer photographs the fire scene in large and close-up angles for detailed and sequential presentation.	4.96	0.20	VMC	4.96	0.20	VMC	4.96	0.20	VMC
Overall Mean	4.97		VMC	4.97		VMC	4.97		VMC
<i>Submission of Pertinent Documents for Investigation</i>									
3. FAI prepares the LIST OF DOCUMENTS needed to be accomplished/ submitted by the fire victim/s, building occupant/s and other parties affected by the fire, which varies based on the TYPE OF OCCUPANCY or the INVOLVED STRUCTURE gutted by fire.	5.00	0.00	VMC	4.98	0.15	VMC	4.96	0.20	VMC
4. FAI prepares and submits the mandatory reports within the reglementary period of submission.	4.98	0.15	VMC	4.96	0.20	VMC	4.96	0.20	VMC
Overall Mean	4.99		VMC	4.97		VMC	4.96		VMC
<i>Collection and Preservation of Evidence</i>									
8. FAI prepares the apparatus used for the collection of evidence.	4.96	0.29	VMC	4.25	0.70	VMC	4.98	0.15	VMC
9. FAI identifies the collected physical evidence found that has Evidentiary Value.	4.94	0.32	VMC	5.00	0.00	VMC	4.94	0.32	VMC
10. Evidence Recovery Personnel and Custodian coordinate with Fire Scene Sketch Prepare re: the position and location of all evidence collected.	4.98	0.15	VMC	5.00	0.00	VMC	4.94	0.32	VMC
11. FAI photographs the evidence to be collected before lifting in the presence	5.00	0.00	VMC	5.00	0.00	VMC	4.94	0.32	VMC



of a witness independent from the FAI Team.										
12. FAI properly documents, packs, seals and labels the pieces of evidence recovered before transportation and submission to Arson Laboratory Section BP-NHQ within 72 hours upon lifting from the fire scene for laboratory examination.	4.96	0.29	VMC	4.15	0.68	VMC	4.12	0.76	VMC	
13. FAI records/documents collect and itemize all the recovered evidence in a detailed format using the Evidence Collection and Recovery Record (ECRR).	4.96	0.20	VMC	5.00	0.00	VMC	4.96	0.20	VMC	
14. FAI attaches a copy of the Evidence Collection and Recovery Record (ECRR) to the Evidence Chain of Custody (ECC) form.	4.98	0.15	VMC	5.00	0.00	VMC	5.00	0.00	VMC	
Overall Mean	4.97		VMC	4.77		VMC	4.84		VMC	

Note: The computed mean is interpreted as follows: 4.20 - 5.00 Very Much Implemented (VMI), 3.40 - 4.19 Much Implemented (MI), 2.60 - 3.39 Implemented (I), 1.80 - 2.59 lightly Implemented (S.I.), 1.00 - 1.79 Not Implemented (N.I.).

Table 14 presents the level of operational capabilities of the BFP of Fire/ Arson Investigation, as perceived by the BFP personnel, business owners, and barangay officials of $M=97$ as supported as "very much capable". It means that the respondents can conduct fire/arson investigations like fire scene documentation, submit pertinent documents for investigation, and collect and preserve evidence.

When taken singly, on fire scene investigation, the Fire Arson Investigator "Always" prepares the documents needed to be accomplished/ submitted by the fire victim/s, building occupant/s and other parties affected by the fire. The required documents are listed in form FAI-02: Required Documents for Investigation. Documents to be obtained from the fire victim vary based on the type of occupancy or the complicated structure gutted by fire ($M=4.99/ M=4.97/ M=4.96$). It means that the personnel should see to it that all the required documents and checklists for investigation should be filled up correctly and accurately to have a basis for declaring the cause of the fire.

Further, on collection and preservation of evidence, the respondents answered that "Always", the evidence recovery personnel and custodian coordinate with Fire Scene Sketch Prepare for the illustrations of the position and location of all pieces of evidence collected, FAI entirely records/documents and collect and itemize in a detailed format all the recovered pieces of evidence using the Evidence Collection and Recovery Record ($M=4.97, M=4.77$ and 4.84). It means that the person must collect enough accurate and valid data as their basis in deciding the result of the investigation.

According to the National Institute of Justice (U.S. government DOJ), Fire and arson investigators examine the physical attributes of a fire scene and identify and collect physical evidence from the scene. This evidence is then analyzed to help determine if the cause of the fire was accidental or deliberate. During the scene examination, investigators may find evidence indicating criminal activity, such as accelerants, tampered utilities, and specific burn patterns

Table 15. Level of Operational Capabilities of the BFP in Terms of Emergency and Medical Services

Response to Medical Emergencies	BFP Personnel			Brgy. Officials			Business Owners		
	Mean	SD	VI	Mean	SD	VI	Mean	SD	VI
1. The team leader or assigned crew gathers all initial information from dispatch.	4.91	0.41	VMC	4.87	0.49	VMC	4.96	0.2	VMC
1.1 exact location/address to include a reference as to landmarks.	4.91	0.41	VMC	5	0	VMC	5	0	VMC
1.2 nature and severity of injury, illness or accident	4.91	0.41	VMC	5	0	VMC	5	0	VMC
1.3 information on possible victims/patients, status and number	4.98	0.15	VMC	5	0	VMC	4.87	0.49	VMC



2. The team leader or crew reports to dispatch, confirms the response and notes the time.	4.98	0.15	VMC	5	0	VMC	5	0	VMC
3. The ambulance crew wears EMS vests and proper PPE	4.83	0.52	VMC	5	0	VMC	5	0	VMC
4. The ambulance crew readies additional equipment to be carried (scoop stretcher, C-collar, splints, portable oxygen tank.	4.96	0.2	VMC	5	0	VMC	5	0	VMC
5. The team leader or crew member prepares a patient care report (PCR)	4.94	0.32	VMC	5	0	VMC	5	0	VMC
6. The team leader introduces himself and asks for consent before engaging with the patient.	4.98	0.15	VMC	5	0	VMC	4.98	0.15	VMC
7. The team leader or assigned crew conducts proper assessment and initiates treatment or medical management within the scope of the level of training and standard of care.	5	0	VMC	5	0	VMC	5	0	VMC
8. The ambulance crew documents all interventions given in the PCR.	4.83	0.52	VMC	5	0	VMC	5	0	VMC
9. The team transports the patient if necessary.	4.81	0.5	VMC	5	0	VMC	5	0	VMC
10. The team leader of the crew coordinates with the DOH Operation Center for hospital transport.	4.91	0.35	VMC	5	0	VMC	5	0	VMC
11. The EMS team endorses the patient and PCR to emergency room personnel (if transported) and asks permission to leave.	4.87	0.34	VMC	4.87	0.49	VMC	4.91	0.35	VMC
12. The ambulance crew airs out the ambulance by leaving the doors open for 5-10 minutes before returning to base.	4.85	0.55	VMC	5	0	VMC	5	0	VMC
13. Any member of the EMS team notifies dispatch about leaving the hospital.	4.87	0.49	VMC	5	0	VMC	5	0	VMC
14. Any member of the EMS team notifies dispatch of the arrival at the EMS base.	4.85	0.36	VMC	5	0	VMC	5	0	VMC
15. The ambulance crew cleans, disinfects the ambulance and equipment and discards all soiled supplies.	4.91	0.28	VMC	5	0	VMC	5	0	VMC



16. The assigned ambulance crew makes an inventory and restock supplies.	4.94	0.25	VMC	5	0	VMC	5	0	VMC
17. The team leader or crew member completes and files any additional reports.	4.96	0.2	VMC	5	0	VMC	5	0	VMC
18. The team leader conducts defusing/debriefing or post-run evaluation as needed.	4.94	0.25	VMC	4.94	0.25	VMC	4.94	0.25	VMC
Overall Mean	4.91		VMC	4.98		VMC	4.98		VMC

Note: The computed mean is interpreted as follows: 4.20 - 5.00 Very Much Implemented (VMI), 3.40 - 4.19 Much Implemented (MI), 2.60 - 3.39 Implemented (I), 1.80 - 2.59 lightly Implemented (S.I.), 1.00 - 1.79 Not Implemented (N.I.).

Table 15 presents the level of operational capabilities of the BFP regarding Emergency and Medical Services, as perceived by the BFP personnel, business owners, and barangay officials. The respondents have "Very Much Capable" operational capabilities regarding emergency medical services, as manifested by the overall $M=4.91$ for BFP respondents and $M=4.98$ for business owners and barangay officials. It means that the respondents can respond to emergency medical cases. It is because the personnel assigned to emergency medical services are registered nurses or graduates of allied health courses and have undergone training on basic first aid, basic and advanced life support and basic rescue techniques.

The Philippine government and organizations are taking steps to make emergency medical services become better and more efficient. It has been a progressive move, making the Philippine EMS team attain and practice worldwide standards (EMSPEDIA 2018).

Maurtua, 2017) stated that a person in charge must implement a new strategy to reinforce the BFP to act as a first responder to fire alarms and other medical emergency calls. A bill proposed by House leaders calls for fire stations to have trained paramedics added on duty at all times to be a requirement. The bill was intended to make the BFP's staff better trained and equipped when responding to accidents, medical emergency calls, or even terror attacks. It would offer selective training for the nation's next generation of firefighters as certified paramedics or emergency medical technicians. Negros Daily Bulletin, 2016 reports that the BFP has evolved from firefighters to emergency medical responders to rescue teams after twenty-five years. From its original mandate of just being mere fire prevention and fire suppression, the BFP is now a multi-faceted bureau whose functions other than fire prevention and fire suppression include emergency medical service and fire rescue.

Table 16. Level of Operational Capabilities of the BFP in Terms of Disaster Management

Response to Typhoon and Flood <i>The Fire Marshal or his representative</i>	BFP Personnel			Brgy. Officials			Business Owners		
	Mean	SD	VI	Mean	SD	VI	Mean	SD	VI
1. formulates Contingency Plan and orient personnel	4.98	0.15	VMC	4.07	0.76	VMC	4.03	0.74	VMC
2. advises the D.R. team with its equipment to stand by.	4.98	0.15	VMC	4.91	0.58	VMC	4.91	0.58	VMC
3. attends the LDRRMC meeting.	4.98	0.15	VMC	4.98	0.15	VMC	4.98	0.15	VMC
4. coordinates with other government agencies	4.98	0.15	VMC	4.98	0.15	VMC	4.98	0.15	VMC
5. activate the SRR teams	4.91	0.58	VMC	4.98	0.15	VMC	5.00	0.00	VMC
6. updates the Mayor/ LDRRMC / IC on the availability of resources	4.98	0.15	VMC	5.00	0.00	VMC	5.00	0.00	VMC
7. raises the alert based on the prevailing situation	4.98	0.15	VMC	5.00	0.00	VMC	5.00	0.00	VMC
8. FAI takes photos in the presence of a witness	4.98	0.15	VMC	5.00	0.00	VMC	5.00	0.00	VMC
9. issues recall orders to all on leave or on off duty	4.98	0.15	VMC	4.27	0.76	VMC	5.00	0.00	VMC
10. accounts all personnel who reported to the station.	4.98	0.15	VMC	5.00	0.00	VMC	5.00	0.00	VMC
11. mobilizes volunteer fire brigades and other force multipliers.	5.00	0.00	VMC	4.98	0.15	VMC	4.98	0.15	VMC
12. designates personnel who will assist in the medical, clearing, evacuation, and information dissemination operations.	5.00	0.00	VMC	4.98	0.15	VMC	4.98	0.15	VMC
13. directs operation officer to assist in providing vehicular and personnel support	5.00	0.00	VMC	4.07	0.76	VMC	4.07	0.76	VMC
14. pre-positions personnel to assist in the clearing, evacuation, and information dissemination.	5.00	0.00	VMC	5.00	0.00	VMC	5.00	0.00	VMC
15. directs duty personnel to assist in water delivery to the evacuation centres.	5.00	0.00	VMC	5.00	0.00	VMC	5.00	0.00	VMC



16. direct duty personnel to assist in clearing routes to ensure faster delivery of relief goods/ supplies	5.00	0.00	VMC	5.00	0.00	VMC	5.00	0.00	VMC
17. assists in assessing other structures or places as additional to the pre-identified evacuation centres.	4.96	0.20	VMC	5.00	0.00	VMC	5.00	0.00	VMC
18. notifies the HHQ through Situation Report.	5.00	0.00	VMC	5.00	0.00	VMC	5.00	0.00	VMC
19. alerts Disaster Response Team (DRT)	5.00	0.00	VMC	5.00	0.00	VMC	5.00	0.00	VMC
20. advises DRT to secure themselves from the clear and present danger	5.00	0.00	VMC	5.00	0.00	VMC	5.00	0.00	VMC
21. withdraws operating teams upon imminent danger and directs them on standby at EOC	4.94	0.44	VMC	5.00	0.00	VMC	5.00	0.00	VMC
22. directs the SRR team to conduct SRR and evacuation procedures	5.00	0.00	VMC	5.00	0.00	VMC	5.00	0.00	VMC
23. notifies HHQ through Situation Report.	4.98	0.15	VMC	5.00	0.00	VMC	5.00	0.00	VMC
24. continues to provide HHQ with updates through Situation Report.	5.00	0.00	VMC	5.00	0.00	VMC	5.00	0.00	VMC
25. continues to mobilize volunteer fire brigades and other force multipliers.	5.00	0.00	VMC	5.00	0.00	VMC	5.00	0.00	VMC
26. mobilizes the SRR Team.	5.00	0.00	VMC	5.00	0.00	VMC	5.00	0.00	VMC
27. directs duty personnel to assist in water delivery to the evacuation centre.	5.00	0.00	VMC	5.00	0.00	VMC	5.00	0.00	VMC
28. direct duty to personnel to assist in cutting uprooted trees causing road obstruction.	5.00	0.00	VMC	5.00	0.00	VMC	5.00	0.00	VMC
29. direct duty personnel to assist in clearing roads.	5.00	0.00	VMC	5.00	0.00	VMC	5.00	0.00	VMC
30. directs the operation officer to report to the electric and water cooperatives for the repair of damaged water and power lines.	5.00	0.00	VMC	5.00	0.00	VMC	5.00	0.00	VMC
31. coordinates with the Mayor/LDRRMO/IC on the availability of BFP personnel for possible deployment.	4.98	0.15	VMC	5.00	0.00	VMC	5.00	0.00	VMC
32. Direct operation officers to check the serviceability of lifelines in the evacuation centres for subsequent reporting to the officers concerned.	5.00	0.00	VMC	5.00	0.00	VMC	5.00	0.00	VMC
33. submits the After Operation Report to the HHQ by accomplishing Annexes "A," "B," and "C."	4.98	0.15	VMC	5.00	0.00	VMC	5.00	0.00	VMC
Overall Mean	4.99	VMC		4.91	VMC		4.78	VMC	

Note: The computed mean is interpreted as follows: 4.20 - 5.00 Very Much Implemented (VMI), 3.40 - 4.19 Much Implemented (MI), 2.60 - 3.39 Implemented (I), 1.80 - 2.59 lightly Implemented (S.I.), 1.00 - 1.79 Not Implemented (N.I.)

Table 16 presents the level of operational capabilities of the BFP regarding Disaster Management, as perceived by the BFP personnel, business owners, and barangay officials.

The respondents have a "Very Much Capable" level of operational capabilities in responding to emergencies along disaster management as indicative to the overall $M=4.99$ for BFP respondents and an overall mean of 4.78 as perceived by the barangay officials and $M=4.91$ for business owners. It implies that the BFP can conduct disaster management activities before, during and after disasters, and they must perform this obligation because they are active members of the Disaster Risk Reduction and Management Council of the City or Municipalities.

Felipe, 2011 stated that preparedness is the key. Lawmakers urged households, communities, and local and national authorities to ensure preparedness for natural and man-made calamities at all levels. It is supported by the response of the people that were interviewed that most of the time, they can see or observe BFP personnel going to the barangay before the typhoon to warn people and to be prepared for the coming of the typhoon. The BFP personnel conduct rescue and evacuations to flood-prone areas. They usually disseminate fire safety and disaster preparedness information, especially in July, as Disaster Preparedness/ Awareness Month.

Differences in the Level of Implementation of the BFP Program based on the Demographic Profiles of the BFP Personnel

The test of difference in the level of implementation of the BFP program based on the demographic profiles of the BFP personnel is presented in Table 17.

Significant differences were noted in the level of implementation of the Community Fire Protection Plan, based on the profile of the personnel as to sex ($F=1738.44$, $p=0.000$), age ($F=43.694$, $p=0.000$), years in service ($F=313.360$, $p=0.000$), and training attended ($F=61.157$, $p=0.000$). However, no significant difference was recorded in how the BFP personnel implemented the Community Fire Protection Plan based on the degree they had attained.

There were significant differences in the level of how the BAYANIHAN program was implemented based on the profile of personnel as to sex ($F=2072.047$, $p=0.000$), age ($F=46.511$, $p=0.000$), years in service ($F=331.418$, $p=0.000$), and training attended ($F=64.259$, $p=0.000$). However, no significant difference was noted in how the BFP personnel implemented the BAYANIHAN program based on the degree they had attained.

In terms of the level of implementation of the LINGAP program, significant differences were noted how the BFP personnel



implemented it as to their sex ($F=2332.906, p=0.000$), age ($F=48.721, p=0.000$), years in service ($F=334.327, p=0.000$), and training attended ($F=66.660, p=0.000$). However, no significant difference was recorded in how the BFP personnel implemented the LINGAP program based on the degree they had attained.

There were *significant* differences in the level of how the KAISA program was implemented based on the profile of personnel as to sex ($F=2445.195.047, p=0.000$), age ($F=49.353, p=0.000$), years in service ($F=348.620, p=0.000$), and training attended ($F=67.347, p=0.000$). However, no significant difference was noted in how the BFP personnel implemented the KAISA program based on their degree. It means that regardless of the degree attained by the BFP personnel, they are qualified as long as they meet the minimum qualifications of the BFP.

It means that the respondents, especially the newly hired, are more capable of responding to emergencies, specifically on fire operations. Since they are new in the service, they are eager to learn and have undergone training. They perform better in their responsibilities as fire rescuers. It is because they want to remain capable in their job, especially during fire operations, in order for them to be maintained and promoted to a higher rank. It also depicts that the other variables did not show a significant relationship with the capability of the BFP in responding to emergencies, which implies that the respondents have the same capability in responding to emergencies whether they are young or old, graduates, with permanent status of appointment and with or without training.

Under the Republic Act 9263 Sec 4. Professionalization and Upgrading of Qualification Standards in the Appointment of Uniformed Personnel to the BFP and BJMP, shall possess a baccalaureate degree from recognized institution of learning, A citizen of the Republic of the Philippines, A person of good moral character; possess the appropriate civil service eligibility, Must have passed the psychiatric/psychological, drug and physical test for the purpose of determining his/her physical and mental health, not have been dishonorably discharged of dismissal for cause from previous employment, not have been convicted by final judgment of an offense or crime involving moral turpitude and at least one meter and sixty-two centimeters (1.62 m.) in height for male, and one meter and fifty-seven centimeters (1.57 m.) for female: Provided, That a waiver for height and age requirement \s shall be automatically granted to applicants belonging to the cultural communities; and Must weight not more or less than five kilograms (5 kgs.) from the standard weight corresponding to his/her height, age and sex.

Carandang, 2014 stated in his report that Fire Officer I has a salary grade of 10 or equivalent to a monthly base pay of Php 29,668.00. When one decides to become a firefighter, it is not just because they are only looking for a job but is willing and committed to becoming a firefighter because it is a tough and challenging job that requires focus and determination to serve the protection the people.

Table 17. Test of Difference in the Level of Implementation of the BFP Program based on the Demographic Profiles of the BFP Personnel

Program	Sex	Age	Degree Program	Years in Service	Training Attended	
C FP P	F-value	1738.44	43.694	0.22	313.36	61.157
	p-value	0	0	0.64	0	0
	Analysis	<i>Significant</i>	<i>Significant</i>	Not significant	<i>Significant</i>	<i>Significant</i>
BAYANIH AN	F-value	2071.047	46.511	0.28	331.418	64.259
	p-value	0	0	0.598	0	0
	Analysis	<i>Significant</i>	<i>Significant</i>	Not significant	<i>Significant</i>	<i>Significant</i>
LINGAP	F-value	2332.906	48.721	0.336	344.327	66.66
	p-value	0	0	0.563	0	0
	Analysis	<i>Significant</i>	<i>Significant</i>	Not significant	<i>Significant</i>	<i>Significant</i>
KAISA	F-value	2445.195	49.353	0.351	348.62	67.347
	p-value	0	0	0.555	0	0
	Analysis	<i>Significant</i>	<i>Significant</i>	Not significant	<i>Significant</i>	<i>Significant</i>

Challenges Encountered by the Bureau of Fire Protection

The BFP personnel were asked about the challenges faced during implementing the different programs and during operations. Their responses are reflected in Table 13. It revealed that the most challenges encountered by the BFP personnel were the following:(1) Lack of needed workforce for personnel (2) Lack of fire hydrants present near or during fire incidents Dolot (2007), in his study entitled "Fire Suppression Capability and Performance of the Bureau of Fire Protection in Legaspi City". Time is a consideration in response, and it recommends the installation of at least five (5) hydrants within Legaspi City to minimize the time for water refilling during fire



incidents. The support groups and the BFP should review the MOA to iron out lapses and encourage further contributions to better fire protection services in the City of Legaspi. The BFP should focus on improving its present capability (3) Poor planning with regards to responding to emergencies, (4) Firefighters are unable to communicate appropriately through radio communication, and (5) Lack of incentives regarding hazard pay.

Table 18. Challenges Encountered by the Bureau of Fire Protection in the selected Municipal Fire Stations of Laguna

Response to Medical Emergencies	BFP Personnel			Brgy. Officials			Business Owners		
	Mean	SD	VI	Mean	SD	VI	Mean	SD	VI
1. The team leader or assigned crew gathers all initial information from dispatch.	4.91	0.41	VMC	4.87	0.49	VMC	4.96	0.20	VMC
1.1 exact location/address to include a reference as to landmarks.	4.91	0.41	VMC	5.00	0.00	VMC	5.00	0.00	VMC
1.2 nature and severity of injury, illness or accident	4.91	0.41	VMC	5.00	0.00	VMC	5.00	0.00	VMC
1.3 information on possible victims/patients, status and number	4.98	0.15	VMC	5.00	0.00	VMC	4.87	0.49	VMC
2. The team leader or crew reports to dispatch, confirms the response and notes the time.	4.98	0.15	VMC	5.00	0.00	VMC	5.00	0.00	VMC
3. The ambulance crew wears EMS vests and proper PPE	4.83	0.52	VMC	5.00	0.00	VMC	5.00	0.00	VMC
4. The ambulance crew readies additional equipment to be carried (scoop stretcher, C-collar, splints, portable oxygen tank.	4.96	0.20	VMC	5.00	0.00	VMC	5.00	0.00	VMC
5. The team leader or crew member prepares a patient care report (PCR)	4.94	0.32	VMC	5.00	0.00	VMC	5.00	0.00	VMC
6. The team leader introduces himself and asks for consent before engaging with the patient.	4.98	0.15	VMC	5.00	0.00	VMC	4.98	0.15	VMC
7. The team leader or assigned crew conducts proper assessment and initiates treatment or medical management within the scope of the level of training and standard of care.	5.00	0.00	VMC	5.00	0.00	VMC	5.00	0.00	VMC
8. The ambulance crew documents all interventions given in the PCR.	4.83	0.52	VMC	5.00	0.00	VMC	5.00	0.00	VMC
9. The team transports the patient if necessary.	4.81	0.50	VMC	5.00	0.00	VMC	5.00	0.00	VMC
10. The team leader of the crew coordinates with the DOH Operation Center for hospital transport.	4.91	0.35	VMC	5.00	0.00	VMC	5.00	0.00	VMC
11. The EMS team endorses the patient and PCR to emergency room personnel (if transported) and asks permission to leave.	4.87	0.34	VMC	4.87	0.49	VMC	4.91	0.35	VMC
12. The ambulance crew airs out the ambulance by leaving the doors open for 5-10 minutes before returning to base.	4.85	0.55	VMC	5.00	0.00	VMC	5.00	0.00	VMC
13. Any member of the EMS team notifies dispatch about leaving the hospital.	4.87	0.49	VMC	5.00	0.00	VMC	5.00	0.00	VMC
14. Any member of the EMS team notifies dispatch of the arrival at the EMS base.	4.85	0.36	VMC	5.00	0.00	VMC	5.00	0.00	VMC
15. The ambulance crew cleans, disinfects the ambulance and equipment and discards all soiled supplies.	4.91	0.28	VMC	5.00	0.00	VMC	5.00	0.00	VMC
16. The assigned ambulance crew makes an inventory and re-stock supplies.	4.94	0.25	VMC	5.00	0.00	VMC	5.00	0.00	VMC
17. The team leader or crew member completes and files any additional reports.	4.96	0.20	VMC	5.00	0.00	VMC	5.00	0.00	VMC
18. The team leader conducts defusing/debriefing or post-run evaluation as needed.	4.94	0.25	VMC	4.94	0.25	VMC	4.94	0.25	VMC
Overall Mean	4.91	VMC		4.98	VMC		4.98	VMC	

Note: The computed mean is interpreted as follows: 4.20 - 5.00 Very Much Implemented (VMI), 3.40 - 4.19 Much Implemented (MI), 2.60 - 3.39 Implemented (I), 1.80 - 2.59 lightly Implemented (S.I.), 1.00 - 1.79 Not Implemented (N.I.).



CONCLUSION AND RECOMMENDATION

The findings of the research revealed that a substantial percentage of the BFP respondents are 31-35 years old, males, graduates of Bachelor of Science in Nursing, and completed the Fire Basic Recruit Course with 1-5 years in service.

The level of operational capabilities in responding to human-induced and natural Disasters in terms of Fire Safety Enforcement, Firefighting Operations, Fire/Arson Investigation, Emergency and Medical Services and Disaster Management is "Very much Capable." As to the program's implementation level, it has a remark of "very much implemented" interpreted as high. As to the challenges encountered, the BFP mainly experienced a "lack of manpower for personnel."

After a thorough analysis, the researcher concluded that there is a significant difference in the implementation of the program and the demographic Profile of the BFP, and there is no significant difference was recorded in how the BFP personnel implemented the programs based on the Degree they had attained.

The main problem that the Bureau of Fire Protection faces today is the need for a workforce. The ideal fireman-to-population ratio is 1:2000.

Additionally, the perfect workforce in every Fire Truck is seven (7) per shift; there are two (2) shifts daily. The estimated force in a day for operations divisions is twelve (12) per Fire Truck; if there is a three (3) Fire Trucks, then the ideal number of human resources is thirty-six (36), which is necessary to fill in the missing number of firefighters due to the expanded powers of the bureau, aside from the ideal fireman-to-population ratio.

The BFP must push to expand the capabilities and functions of the Bureau of Fire Protection (BFP) considering the agency's crucial role in saving lives and properties in times of fire and various disasters. Additional personnel to be assigned in every Station are advised to strengthen further the operational capabilities in responding to human-induced and natural disasters and implementing the programs and to achieve the ideal fireman-to-population ratio, which will further ensure public safety.

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