

Volunteer Fire Brigades in Vigan City: An Assessment

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Abstract

The primary purpose of this study was to assess the organization and operation of Volunteer Fire Brigades (VFBs) in the City of Vigan. Specifically, it aimed to determine the level of attainment of the objectives of the organization of VFBs, level of awareness on the organization of VFBs, and degree of seriousness of the problems encountered in the organization and operation of VFBs as perceived by the respondents. In the light of the respondents' perceptions, it is concluded that the respondents all agreed that the objectives of the existing Volunteer Fire Brigades (VFBs) are satisfactorily attained; they are not completely aware of the mandatory organization of VFBs in the barangays; they all agreed that the encountered problems are not so much serious but they are united in claiming that insufficiency of fund is the primary hindrance to the organization and operation of VFBs; and generally, there is no significant difference on the perceptions of the respondents.

The following recommendations are designed to address the problems encountered in the organization and operation of VFBs in Vigan City: 1. Review by the legislative body of the law providing for the mandatory creation and organization of VFBs in the barangays and in business establishments for possible allocation of budgets to answer the insufficiency of funds; a. The government should distribute financial subsidy or at least provide financial assistance to the private entities and barangays who has existing VFBs; b. The government should also allocate contingency funds for the VFBs actively participating in fire prevention and fire protection activities; 2. The BFP should mobilize its personnel to disseminate information to the concerned individuals (barangay captains, managers of big establishments) about the mandatory creation of VFBs such as distribution of flyers, posting of banners and posters, giving out free stickers to motor vehicle owners, and visit to radio and television networks for public service announcement; 3. The BFP should also mobilize the existing VFB personnel to train other persons to join the VFB; 4. The BFP should institute regular award system to committed members of VFBs and committed barangay officials and business managers; 5. The BFP should solicit the assistance of big establishments particularly with wide open grounds for possible training ground; 6. The BFP should conduct quarterly or bi-annually competition on fire drills, fire fighting,

and disaster drills among the VFBS, the students, and employees of private and public establishments. This is to enhance the skills, abilities, and alertness of the community in dealing with destructive fires. This aims also to build camaraderie and unity among the people in the community; 7. There should be strict, impartial, and consistent enforcement of the Fire Code of the Philippines and other Fire Prevention-related ordinances to offset the temporary lack of VFBS; and finally, 8. Other researchers may conduct similar studies concerning Volunteer Fire Brigades as well as on the importance of preserving the international heritage structures in Vigan City.

Introduction

Background of the Study

The role played by the community in preventing and fighting destructive fires is further heightened by the choice of theme in this year's celebration of Fire Prevention Month. Stressing this year's Fire Prevention Month's theme "Pamayanan Samasama Laban sa Sunog," former Philippine National Police (PNP) Chief, Director-General Arturo Lomibao said, "It is a must that the whole community must be directly involved in fire prevention, fire suppression, and protection consciousness against destructive fires – residential and industrial or commercial – that have claimed too many lives and destroyed billions of pesos worth of property in the past". (Manila Bulletin, March 2006)

In Vigan City, the recognition of the city as one of the World's Heritage places makes the city as not only important to the country but also to the whole world as well. This fact all the more puts significance on programs that focus on preserving the entire city of Vigan against any forms of destructions.

Taking care of an old antique house is indeed very difficult. Vigan houses are, though concrete downstairs, are all wood upstairs. Wood is the common material used upstairs from the stairs, flooring, ceilings, dividers, windows down to the furniture. Woods are malleable and as such, easily gutted by fire. There are 200 houses like those mentioned above lining the whole stretch of the Crisologo Street at the heart of Vigan City. These structural components make the heritage buildings as fire traps or any structure susceptible to destructive fire. (Vigan City Master Plan, 1998)

The protection of Vigan City from destructive fires is the primordial concern of the Bureau of Fire Protection through the Vigan City Fire Station. However, the various fire prevention programs and fire suppression activities of the Bureau of Fire Protection in the city is doomed to fail unless the local people are willing to assist in the prevention and suppression of destructive fires. (BFP Reports, CY 2002-2004)

The protection of these heritage structures against destructive fires is not only the sole responsibility of the BFP but of the whole community of Vigan City which is the direct recipient of the fruits of the preservation of these structures. Currently, there are organized Volunteer Fire Brigades in the City of Vigan: the ITC Fire Brigade of ITC Super Mart; and the NTRCI Fire Protection Team of the Northern Tobacco Redrying Corporation Inc. They are not considered VFBS but a company Fire Brigade. BFP fire fighting capability may not be sufficient to in case a destructive fire occurs in the World Heritage area.

Objective of the Study

This study assesses the Fire Volunteer Brigades in Vigan City based on Rule 9 on IRR of Presidential Decree 1185: Specifically, it answered the following:

- I. What is the level of attainment of the objectives of the Volunteer Fire Brigades in the City of Vigan as perceived by the three (3) groups of respondents, namely: the Bureau of Fire Protection personnel, Barangay Captains, and Barangay Councilors?
2. What is the level of awareness of the organization of Volunteer Fire Brigades in the City of Vigan as perceived by three (3) groups of respondents?
3. What is the degree of seriousness of problems encountered in the organization and operation of Volunteer Fire Brigades in the City of Vigan as perceived by the three (3) groups of respondents?
4. Are there significant differences in the perceptions of the three (3) groups of respondents concerning the attainment of the objectives of the Volunteer Fire Brigades in the City of Vigan? .
5. Are there significant differences in the perceptions of the three (3) groups of respondents concerning the level of awareness on the organization of Volunteer Fire Brigades in the City of Vigan?
6. Are there significant differences in the perceptions of the three (3) groups of respondents concerning the degree of seriousness of problems encountered in the organization and operation of Volunteer Fire Brigades in the City of Vigan?

Population and Locale of the Study

The study was focused on the assessment of the Volunteer Fire Brigades in the City of Vigan. Hence, as shown in Table I, the study covered all the personnel of the Bureau of Fire Protection assigned at Vigan City Fire Station, all the Barangay Captains and Councilors of the City's central business area (CBA). The data is gathered during the first quarter of year 2008.

Table 1. Population of the Study

Group	Number	Percentage
1. BFP Personnel	36	44.4
4. Barangay Captains (CBA)	5	6.2
5. Barangay Councilors (CBA)	40	49.4
<i>Total</i>	81	100

Research Methodology

This research work is guided and conducted by the following:

Research Design. This study used descriptive-survey research where questionnaire-checklist was utilized to reflect the specific problems namely the level of attainment of the objectives of the Volunteer Fire Brigades in the City of Vigan, level of awareness of the organization of Volunteer Fire Brigades (VFB) in the City of Vigan, and the degree of seriousness of problems encountered in the organization and operation of Fire Brigades in the City of Vigan. The null hypotheses were tested using the F-test through the Analysis of Variance.

Data Gathering Instrument. A questionnaire-checklist was designed to gather the data to answer the specific problems of this study. The questionnaire-checklist has six (6) parts. The first part elicited personal information of the respondents. The second part drew out data on the level of attainment of the objectives of the VFB. The third part elicited data on the level of awareness of the organization of VFB. The fourth part gathered data concerning the degree of seriousness of the problems encountered in the organization and operation of VFB. The fifth elicited information regarding any additional problems noted in the organization and operation of VFBs.

Treatment of Data. In determining the level of attainment of the objectives, the level of awareness of the organization, and the degree of seriousness of the problems encountered, the responses were given weight with the following corresponding scales:

On the level of attainment of the objectives of the Volunteer Fire Brigades in the City of Vigan.

Scale	Descriptive Rating
3.26–4.00	Much Attained (MA)
2.51–3.25	Attained (A)
	Very High
	High

1.76–2.50	Not Much Attained (NMA}	Average
1.01–1.75	Not Attained (NA)	Below Average

On the level of awareness of the organization of Volunteer Fire Brigades (VFB) in the City of Vigan.

Scale	Descriptive Rating	
3.26–4.00	Much Aware (MAw)	Very High
2.51–3.25	Aware (Aw)	High
1.76–2.50	Not Much Aware (NMAw)	Average
1.01–1.75	Not Aware (NAw)	Below Average

On the degree of seriousness of problems encountered in the organization and operation of Fire Brigades in the City of Vigan.

Scale	Descriptive Rating	
3.26–4.00	Much Serious (MS)	Very High
2.51–3.25	Serious (S)	High
1.76–2.50	Not Much Serious (NMS)	Average
1.01–1.75	Not Serious (NS)	Below Average

Review of Related Literature

Volunteer Fire Brigades, if properly organized and trained could effectively help in the reduction of loss of lives and properties in case destructive fires broke out. This has been proven when no casualty was reported during the infamous Cerro Grande fire in New Mexico in 2000.

According to Hess and Wroblewski (2006), "The Cerro Grande fire had the potential to cause mass casualties, but an effective and timely response by emergency service agencies resulted in no deaths or serious injuries, essential to this was the pattern of mutual planning and cooperation established long before the fire began".

It has been noted that Fire Protection is the primordial program of the Bureau of Fire Protection which is focused on the protection of lives and properties from destructive fires. This is in relation to the BFP's Mission which states, "To protect lives and properties through the prevention and suppression of destructive fires; investigation of their causes, and the provision of emergency medical and rescue services with the active support of the

public" (BFP FIRES, CY 2001). It is worthwhile to take note the last phrase of the BFP's mission statement, "with the active support of the public." This active support of the community certainly aids in the protection against destructive fires thereby assuring economic progress of the country.

In Vigan City, a major concern of the city government is the preservation of the city's inclusion of the World Heritage Sites. In addition, the promotion of fire safety and protection is also one of the primary concerns of the city government. All of these aims to promote an atmosphere conducive for business, a center of trade and tourism through the century's Spanish built structures (Acena, et al., 2006).

The economic growth of Vigan City primarily relies on the visiting local and foreign tourists because of the famous heritage buildings and establishments. The visit to these heritage places also increases the revenues of other businesses and places in and around the City of Vigan. Thus, effective protection of the heritage places and the City of Vigan against destructive fires relatively affects the booming of the city's economy.

To these ends, this study gave the researcher a clearer view on the significance of the Volunteer Fire Brigades in protecting the heritage places of Vigan City as well as the other important establishment within the central business district.

This study is hoped to benefit the community people of Vigan City in appreciating the role of VFBS. Eventually, the people of Vigan City will be stimulated to comply with the mandatory organization and operation of Volunteer Fire Brigades.

Results and Discussions

Table 2 reveals the overall mean in terms of the level of attainment of VFBS objectives as perceived by the respondents (N=81). Among the eight objectives listed below, objective 2 (*The VFB are organized to assist the Bureau of Fire Protection in case destructive fires broke out*) obtained the highest mean of 3.19 which is interpreted as "Attained". Most of the respondents (n=40) believed that the VFB objective 2 was "Attained" while none perceived to be "Not Attained". The data also revealed that objective 8 (*The VFB are organized to be equipped with portable fire extinguishers, hose and hose accessories, portable lighting equipment, portable water pumps and their related accessories, forcible entry tools, ladders, salvage equipment, rescue and first aid equipment, personnel protective equipment, and transportation facilities*) has the lowest over all mean (2.95) in terms of the level of attainment of VFBS objectives. However, when interpreted, it is "Attained". Taken as a whole, the overall mean (3.04) indicates that VFBS objectives were "Attained".

Table 2. Level of Attainment of the VFBs Objectives as Perceived by the Respondents

Objectives of the Organization of VFBs	Mean	Descriptive Rating	Rank
1. The Volunteer Fire Brigades (VFB) are organized to assist the Bureau of Fire Protection in the implementation of Fire Prevention Programs	3.12	Attained	2
2. The VFB are organized to assist the Bureau of Fire Protection in case destructive fires broke out	3.19	Attained	
3. The VFB are organized to promote community commitment in the prevention of occurrence of destructive fires and suppression of destructive fires	3.07	Attained	4
4. The VFB are organized to assist the BFP in handling emergency cases such as vehicular accidents, and occurrence of natural and man-made calamities	2.98	Attained	6
5. The VFB are organized to assist the Government Law Enforcement Agencies and the BFP in the rescue operation of victims of accidents and calamities	3.09	Attained	3
6. The VFB are organized to help in the distribution of relief goods to victims of calamities	2.95	Attained	7
7. The VFB are organized to be trained in the handling of fire rescue apparatus, basic fire fighting techniques, techniques in using fire fighting equipment, and performing rescue operations	3.04	Attained	5
8. The VFB are organized to be equipped with portable tire extinguishers, hose and hose accessories, portable lighting equipment, portable water pumps and their related accessories, forcible entry tools, ladders, salvage equipment, rescue and first aid equipment, personnel protective equipment, and transportation facilities	2.91	Attained	8
Overall	3.04	High	

Table 3 shows the comparison of the respondents' perceived level of attainment of the objectives of the VFBs in Vigan City.

Table 3. Perceived Level of Attainment of the Objectives of the Volunteer Fire Brigades (VFBs) According to Group

Objectives of the Organization of VFBs	BFP Personnel	Barangay Councilors	Barangay Captains
	Mean/ Descriptive Rating	Mean/ Descriptive Rating	Mean/ Descriptive Rating
1. The Volunteer Fire Brigades (VFB) are organized to assist the Bureau of Fire Protection in the implementation of Fire Prevention Programs	3.14 Attained	3.10 Attained	3.20 Attained
2. The VFB are organized to assist the Bureau of Fire Protection in case destructive fires broke out	3.33 Much Attained	3.08 Attained	3.00 Attained
3. The VFB are organized to promote community commitment in the prevention of occurrence of destructive fires and suppression of destructive fires	3.08 Attained	3.10 Attained	2.80 Attained
4. The VFB are organized to assist the BFP in handling emergency cases such as vehicular accidents, and occurrence of natural and man-made calamities	2.89 Attained	3.05 Attained	3.00 Attained
5. The VFB are organized to assist the Government Law Enforcement Agencies and the BFP in the rescue operation of victims of accidents and calamities	3.11 Attained	3.13 Attained	2.60 Attained
6. The VFB are organized to help in the distribution of relief goods to victims of calamities	2.81 Attained	3.13 Attained	2.60 Attained
7. The VFB are organized to be trained in the handling of fire rescue apparatus, basic fire fighting techniques, techniques in using fire fighting equipment, and performing rescue operations	3.11 Attained	3.00 Attained	2.80 Attained
8. The VFB are organized to be equipped with portable fire extinguishers, hose and hose accessories, portable lighting equipment, portable water pumps and their related accessories, forcible entry tools, ladders, salvage equipment, rescue and first aid equipment, personnel protective equipment, and transportation facilities	2.97 Attained	2.88 Attained	2.80 Attained
Overall Mean	3.06 High	3.06 High	2.85 high

The BFP personnel and Brgy Councilors manifested the highest level of attainment with a mean of 3.06, interpreted as "Attained". The Brgy Captains closely followed with a

mean of 2.85, also interpreted as "Attained". The BFP personnel as the direct implementers of VFB activities and the Bgry. Councilors as the prime mover of VFB programs could be the reason of their claim of satisfactory attainment of the objectives of VFB.

Table 4 reveals the overall mean in terms of the level of attainment of VFBs objectives as perceived by the respondents (N=81). Among the eight objectives listed below, objective I (*Every establishment is to organize a Volunteer Fire Brigade (VFB) to deal with fires and related emergencies*) obtained the highest mean of 3.11 which is interpreted as "Aware". Most of the respondents (n=37) has moderate awareness on objective I while one perceived to be "Not Aware". The data also revealed that objective 8 (*VFB members undergo at least once a month training session*) has the lowest over all mean (2.81) in terms of the level of awareness of VFBs objectives which is also means a "Moderate Awareness". Taken as a whole, the overall mean (2.95) indicates a level of awareness as perceived by the respondents (N=81)

Table 4. Level of Awareness of the VFBs Objectives as Perceived by the Respondents

Organization	Mean	Descriptive Ratio	Rank
1. Every establishment is to organize a Volunteer Fire Brigade (VFB) to deal with fires and related emergencies	3.11	Aware	
2. The VFB is consist of the head of the establishment assisted by selected personnel	3.01	Aware	3
3. Every Barangay provide an organization such as Volunteer Fire Brigades (VFB) to deal with	2.94	Aware	5
4. Every VFB in the Barangays is consist of the Barangay captain or chairman and assisted by selected personnel	3.05	Aware	2
5. Every VFB is equipped with portable fire extinguishers, hose and hose accessories, portable lighting equipment, portable water pumps and their related accessories, forcible entry tools, ladders, salvage equipment, rescue and first aid equipment, personnel protective equipment, and transportation facilities	2.83	Aware	7
6. The VFB composition shall be filled up on a voluntary basis who should be available to answer alarms and to attend required training session	2.84	Aware	6
7. The members of the VFB is consist of persons who have met qualifications appropriate for the fire brigade work	2.98	Aware	4
8. VFB members undergo at least once a month training session	2.81	Aware	8
Mean	2.95	High	

Table 5 revealed the comparison of the perceived level of awareness by group. The Barangay Councilors are ranked number one in the area of awareness on the

organization of VFB with a mean of 2.96 which is interpreted as "Aware". They are followed closely at second by the BFP personnel with a mean of 2.94 which is also interpreted as "Aware". The Barangay Captains are third with similar means of 2.88 which are also interpreted as "Aware".

Table S. Level of Awareness of the Objectives of the Volunteer Fire Brigades (VFBs) According to Group (N=81)

ORGANIZATION	BFP	Barangay	Barangay
	Personnel	Councilors	Captains
	Mean/ Descriptive Rating	Mea/ Descriptive Rating	Mean/ Descriptive Rating
t. Every establishment is to organize a Volunteer Fire Brigade (VFB) to deal with fires and related emergencies	3.17 Aware	3.08 Aware	3.00 Aware
2. The VFB is consist of the head of the establishment assisted by selected personnel	3.06 Aware	2.98 Aware	3.00 Aware
3. Every Barangay provide an organization such as Volunteer Fire Brigades (VFB) to deal with	2.89 Much Aware	2.95 Much Aware	3.20 Much Aware
4. Every VFB in the Barangays is consist of the Barangay captain or chairman and assisted by selected personnel	2.97 Aware	3.1 Aware	3.20 Aware
5. Every VFB is equipped with portable fire extinguishers, hose and hose accessories, portable lighting equipment, portable water pwnps and their related accessories, forcible entry tools, ladders, salvage equipment, rescue and first aid equipment, personnel protective equipment, and transportation facilities	2.81 Aware	2.90 Aware	2.40 Not Much Aware
6. The VFB composition shall be filled up on a voluntary basis who should be available to answer alarms and to attend required training session	2.92 Aware	2.75 Aware	3.00 Aware
7. The members of the VFB is consist of persons who have met qualifications appropriate for the fire brigade work	2.94 Aware	3.00 Much Aware	3.00 Aware
8. VFB members undergo at least once a month training session	2.75 Aware	2.95 Aware	2.20 Not Much Aware
Overall	2.94 High	2.96 High	2.88 High

Table 6 reveals the over all mean in terms of the degree of seriousness of the problems encountered of VFB in Vigan as perceived by the respondents (N=81). Among the ten (10) problems listed below, problem 2 (*There is insufficiency of fund to support the organization of VFB*) obtained the highest mean of 3.22 which is interpreted as "Serious". However, most of the respondents (n=35) perceived a "Serious" degree on objective 1 while one perceived that it is "Not serious". The data also revealed that objective 4 (*Lack of qualified personnel to compose the Volunteer Fire Brigade*) has the lowest overall mean (2.77) in terms of the degree of seriousness of the problems encountered by VFB in Vigan City which also means "Serious". Taken as a whole, the overall mean (2.88) indicates a seriousness of problem as perceived by the respondents (N=81)

Table 6. Degree of Seriousness of the Problems Encountered in the Organization of VFB in Vigan City as Perceived by the Respondents (N=81)

PROBLEMS ENCOUNTERED	Descriptive		
	Mean	Rating	Rank
1. Lack of information dissemination concerning the mandatory organization of Volunteer Fire Brigades (VFB) in every barangay or business establishment	2.91	Serious	3
2. There is insufficiency of fund to support the organization of VFB	3.22	Serious	
3. Lack of BFP trained personnel to handle the training of VFB	2.80	Serious	8.S
4. Lack of qualified personnel to compose the Volunteer Fire Brigade	2.77	Serious	10
5. Lack of commitment of the members of the barangay or personnel of the establishment to voluntarily join the VFB	2.80	Serious	8.S
6. Lack of training facilities to accommodate the training of the VFB	2.94	Serious	2
7. Lack of time to organize a VFB	2.84	Serious	S.S
8. There is no proper coordination between the BFP personnel and the Barangay Captains and/or owners or managers of business establishments	2.81	Serious	7
9. Lack of commitment and concern on the part of Barangay Captains or owners or heads of establishments	2.88	Serious	4
10. Lack of remuneration for the members of Fire Brigades	2.84	Serious	S.S
Overall Mean	2.88	High	

Table 7 presents the comparison of groups in the perceived degree of seriousness of the problems encountered in the organization and operation of VFBS.

Table 7. Perceived Degree of Seriousness of the Problems Encountered of the Volunteer Fire Brigades (VFBS) According to Group (N=81)

PROBLEMS ENCOUNTERED	BFP Personnel	Barangay Councilors	Barangay Captains
	Mean/ Descriptive Rating	Mean/ Descriptive Rating	Mean/ Descriptive Rating
1. Lack of information dissemination concerning the mandatory organization of Volunteer Fire Brigades (VFB) in every barangay or business establishment	2.64 Serious	3.23 Serious	2.40 Not Much Serious
2. There is insufficiency of fund to support the organization of VFB	3.00 Serious	3.40 Much Serious	3.40 Much Serious
3. Lack of BFP trained personnel to handle the training of VFB	2.44 Not Much Serious	3.20 Serious	2.20 Not Much Serious
4. Lack of qualified personnel to compose the Volunteer Fire Brigade	2.53 Serious	3.10 Serious	1.80 Not Much Serious
5. Lack of commitment of the members of the barangay or personnel of the establishment to voluntarily join the VFB	2.67 Serious	3.00 Serious	2.20 Not Much Serious
6. Lack of training facilities to accommodate the training of the VFB	2.58 Serious	3.33 Much Serious	2.40 Not Much Serious
7. Lack of time to organize a VFB	2.53 Serious	3.18 Serious	2.40 Not Much Serious
8. There is no proper coordination between the BFP personnel and the Barangay Captains and/or owners or managers of business establishments	2.53 Much Serious	3.13 Much Serious	2.40 Not Much Serious
9. Lack of commitment and concern on the part of Barangay Captains or owners or heads of establishments	2.67 Serious	3.18 Serious	2.00 Not Much Serious
10. Lack of remuneration for the members of Fire Brigades	2.56 Serious	3.18 Serious	2.20 Not Much Serious
Overall	2.62 High	3.19 Hi !	2.34 Average

The Barangay Councilors with a mean of 3.19, interpreted as "Serious", ranked first as to the perceived seriousness of the problems encountered. They identified insufficiency of fund as the number one hindrance to the effective organization of VFBS. Sufficient funds are necessary for the implementation of programs and activities. It can be inferred from the findings that the barangay captains as the chief executive in their barangays, see the problem of insufficiency of fund in a clearer and closer view.

The Bureau of Fire Protection came in second with a mean of 2.62 interpreted as "Serious" and third is the Barangay Captains with a mean 2.34 interpreted as "Not Much Serious".

Table 8 shows that at 5 percent level of significance, the computed F-ratio (1.294) is less than critical F-ratio (2.66), therefore do not reject H_0 . There is no significant difference on the perception of the three groups namely BFP Personnel, Barangay Councilors and Barangay Captains on the level of attainment of the objectives of BFP. This means that the three groups of respondents are more or less the same on their perception on the level of attainment of the objectives of the VFB. The three groups have more or less the same thinking on what level are the objectives of VFBS are attained.

Table 8. Analysis of Variance on the Level of Attainment of the Objectives of the BFP

Source of Variation	Degrees of Freedom (df)	Sum of Squares (SS)	Mean Squares (MS)	F-Ratio
Between Population	7	0.30	0.0429	1.294
Within Population	16	0.53	0.0331	
Total	23	0.83		

Table 9 provides the analysis of variance of the perceived level of awareness of the three groups of respondents. At 5% level of significance, the computed F-ratio (2.44) is less than critical F-ratio (2.66), therefore do not reject H_0 . There is no significant difference on the perception of the three groups namely BFP Personnel, Barangay Councilors and Barangay Captains on the level of awareness of the objectives of BFP. This means that the three groups of respondents do not differ on their perception on the level of awareness of the objectives of the VFB. The three groups have more or less the same level of awareness on the objectives of VFB.

Table 9. Analysis of Variance on the Level of Awareness

Source of Variation	Degrees of Freedom (df)	Sum of Squares (SS)	Mean Squares MS	F-Ratio
Between Population	7	0.618	0.088	
Within Population	16	0.579	0.036	2.44
Total	23	1.197		

Table 10 shows that at 5% level of significance, the computed F-ratio (0.589) is less than critical F-ratio (2.40), therefore do not reject H_0 . There is no significant difference on the perception of the three groups namely BFP Personnel, Barangay Councilors and Barangay Captains on the degree of seriousness of the problems encountered by VFB. This means that the three groups of respondents do not differ on their perception on the degree of seriousness of the problems encountered by the VFB. The three groups have more or less similar opinion on how serious the problems encountered by the VFB in Vigan.

Table 10. Analysis of Variance (ANOVA Table)

Source of Variation	Degrees of Freedom (df)	Sum of Squares (SS)	Mean Squares MS	F-Ratio
Between Population	9	1.199	0.133	
Within Population	20	4.5206	0.226	0.589
Total	29	5.720		

Conclusions

Based from the findings, the following conclusions are drawn:

1. The respondents all agreed that the objectives of the existing Volunteer Fire Brigades (VFBs) are attained.
2. They are not fully aware of the mandatory organization of VFBs in the barangays and big establishments.
3. They all agreed that the encountered problems are serious and they are united in claiming that insufficiency of fund is the primary hindrance to the organization and operation of VFBs
4. Generally, there is no significant difference on the perceptions of the different group of respondents.

Recommendations

In connection with the foregoing conclusions, the following are recommended for the stated problems of this study: the BFP leadership of Vigan City should review their implementation procedures for the organization and operation of VFBS to ensure adequate compliance on the mandatory creation of VFBS in Barangays and big establishments; the BFP in Vigan City should review and or possibly revise their information campaign regarding the mandatory organization of VFBS to increase the level of awareness of the concerned community people; and the BFP in Vigan City should examine the problems encountered in the organization and operation of VFBS to lessen the hindrances for the effective creation of VFBS.

Specifically, the following recommendations are designed to address the problems encountered in the organization and operation of VFBS in Vigan City:

- I. Review by the legislative body of the law providing for the mandatory creation and organization of VFBS in the barangays and in business establishments for possible allocation of budgets to answer the insufficiency of funds;
 - a. The government should distribute financial subsidy or at least provide financial assistance to the private entities and barangays that have existing VFBS.
 - b. The government should also allocate contingency funds for the VFBS actively participating in fire prevention and fire protection activities.
2. The BFP should mobilize its personnel to disseminate information to the concerned individuals (barangay captains, managers of big establishments) about the mandatory creation of VFBS such as distribution of flyers, posting of banners and posters, giving out free stickers to motor vehicle owners, and visit to radio and television networks for public service announcement;
3. The BFP should also mobilize the existing VFB personnel to train other persons to join the VFB;
4. The BFP should institute regular award system to committed members of VFBS and committed barangay officials and business managers;
5. The BFP should solicit the assistance of big establishments particularly with wide open grounds for possible training ground;
6. The BFP should conduct quarterly or bi-annually competition on fire drills, fire fighting, and disaster drills among the VFBS, the students, and employees of private and public establishments. This is to enhance the skills, abilities, and alertness of the community in dealing with destructive fires. This aims also to build camaraderie and unity among the people in the community;

7. There should be strict, impartial, and consistent enforcement of the Fire Code of the Philippines and other Fire Prevention-related ordinances to offset the temporary lack of VFBS; and finally

8. Finally, other researchers may conduct similar studies concerning Volunteer Fire Brigades as well as on the importance of preserving the international heritage structures in Vigan City.

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