
Community Preparedness on Fire Risk and Fire Safety

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ABSTRACT

For many years, fire disaster remains one of the major problems which cause the loss of life and destruction of properties in our society. It still continues to grow and spread of all over the country. Perhaps, it is seen as one of the most destructive man-made disaster that has a long-term impact. This study “Community Preparedness on Fire Risk and Fire Safety in Tangub City” was conducted to determine the level of preparedness of community in terms of fire risk and fire safety. It also sought to determine if there is significant relationship as well as significant difference between profile of the respondents and the level of preparedness in terms of fire risk and fire safety. A quantitative research design was utilized in this study with the modified checklist questionnaire used as a data gathering tool. There were one hundred (100) respondents who were conveniently selected respondents within Tangub City. The study was conducted during the 2nd semester of the A.Y. 2021 – 2022 at Tangub City, Misamis Occidental, Philippines. The results revealed that majority of the respondents were female whose ages range from 41 – 60 with college as their highest educational attainment. On the level of preparedness on fire risk and fire safety, majority of the respondents are prepared on fire risk and fire safety. On the other hand, the age and sex with the respondent’s level of preparedness has no significant relationship and differences. However, only the educational attainment has a significant relationship and difference on the level of preparedness. Thus, the higher the educational attainment, the higher the level of awareness of fire risk and fire safety.

KEYWORDS: *Community, BFP, Preparedness, Fire Risk, Fire Safety*

INTRODUCTION

For many years, fire disasters have been one of the most common causes of death and property destruction in our society. It is still growing and spreading over the country. It is perhaps one of the most damaging man-made disasters with long-term consequences. In densely populated places, fires can readily spread from one building to the next. There are several factors that have contributed to the rise in fire events in urban settings, one of which is urban settlers who ignore the high risk of fire. Preparedness is a key asset in terms of reducing and preventing fire occurrences, as well as contributing to a safer community.

Moreover, in the study of Kilila [1] stated that disaster preparedness, which includes community knowledge, readiness to respond appropriately, and speedy recovery, is one of the most important aspects of disaster risk reduction. Community capacity building, education, and disaster prevention methods can all help to improve disaster preparedness. Fires caused

by a lack of disaster preparedness will have devastating economic and societal consequences. As a result, preparedness becomes a critical component of long-term disaster management.

In Tangub City, Misamis Occidental, there have been 46 fire incidents in the last 5 years. Electrical ignition from overloading and loose connections, open flame from an unattended lighted candle, and many other factors contribute to these fires (BFP) [2]. It is regarded as widespread due to the high number of fire incidents each year. In Tangub City, this could be considered a serious issue. Many people were killed, and many homes were destroyed. The Local Government Unit, the BFP, and other government agencies must work together to prevent fires in Tangub.

Tangub City's Bureau of Fire Protection, in collaboration with the National Government Unit and the Local Government Unit, is implementing the "OPLAN LIGTAS PAMAYANAN" (OLP) program to ensure a high quality of life in fire-safe communities. Furthermore, the researchers hope to determine the community preparedness of urbanized community dwellers in terms of fire risk and fire safety in this study.

METHODS

The researchers used a quantitative method of research. The research was carried out in Tangub City. The researchers used convenience sampling method in this study. This study was participated by 100 respondents who live on their own household in Tangub City.

The survey questionnaire was based from the study of Bastida [3] entitled "A Survey on Level Awareness and Disaster Preparedness in the Sisters of Mary School – Boys Town Inc" and were modified by the researchers. Four likert scale surveys were used to determine the independent variables and their opinions on several topics concerning fire safety measures in their residential house: Strongly disagree (1), Disagree (2), Agree (3), Strongly Agree (4) (Nemoto & Beglar) [4].

The researchers first secured a letter of permission from the Research Director of Gov.Alfonso D. Tan College, the head of Bureau of Fire Protection and the President of the Association of Barangay Captains of Tangub City where the researchers conducted the study. All responders were required to sign informed consent forms to ensure their voluntary participation. The researchers assured that their participation was valuable and that they were safe. Before delivering the questionnaire, health regulations established by the local IATF were properly followed, including the donning of a face mask and face shield and keeping a two-meter distance.

The weighted mean and ANOVA test were used in data analysis.

RESULTS AND DISCUSSION

Table 1 shows that indicator 9 which is "cooking safely" got the highest mean of 3.40. This means that respondents strongly agree to the indicator. This also implies that they are very much prepared for fire safety. On contrary, indicator 8 which is "All bedrooms have two ways out" got the lowest mean of 1.90 which means that respondents disagree to the indicator. It also implies that they are less prepared.

Thus, it has a grand mean of 2.84 which means that the respondents agreed on the indicators of fire safety. This also implies that respondents were prepared in terms of fire safety.

Table 1. Respondents Level of Preparedness as to Safety

Indicators	Mean	Description
1. Turn off the switch and all wires that are connected to current when leaving home.	3.31	Very Much Prepared
2. Know what to do when there is fire.	2.81	Prepared
3. Teach kids to never play with matches and lighters.	3.32	Very Much Prepared
4. Talk with all family members about fire escape plan and practice plan twice a year.	2.32	Less Prepared
5. I recognize the importance of making conversation about fire safety with family members, relatives, neighbours, friends and colleagues.	2.41	Less Prepared
6. I am prepared all the time whenever there is occurrence of fire.	2.50	Less Prepared
7. Actively participating on disaster awareness campaign focuses on fire incidents conducted by Bureau of Fire Protection.	2.47	Less Prepared
8. All bedrooms have two ways out.	1.90	Less Prepared
9. Cooking safely.	3.40	Very Much Prepared
10. Unplugged unnecessary appliances.	2.92	Prepared
11. Teach children to never hide during fire, and how to escape on their own you can't help them.	3.01	Prepared
12. Know how to stop, drop, and roll if your clothes catch on fire.	3.08	Prepared
13. Institute a no smoking policy in the house.	2.85	Prepared
14. Have an emergency and evacuation plans to prevent further damages or issues if there's fire.	2.99	Prepared
15. Turn lamps off when leaving the room.	3.38	Very Much Prepared
Overall Weighted Mean	2.84	Prepared

Table 2 reveals that the highest mean is 3.38 which mean that the respondents strongly agree to the indicator 22 which is “lamps are on level surfaces away from things that can be burn”. This also implies that the respondents are very much prepared in terms of fire risk.

On the other hand, indicator 12 which is “matches and lighters are stored in a secure cabinet away from the reach of the children” got the lowest mean of 2.77 which implies that the respondents agreed to the indicator. This also indicates that the respondents are prepared for any fire risk it brings.

Furthermore, it has a grand mean of 3.08 which implies that the respondents are prepared to the indicators. This also implies that the respondents are prepared as to fire risk.

Table 2. Respondents Level of Preparedness as to Fire Risk

Indicators	Mean	Description
1. I throw left-over cigarettes in proper places to prevent fire incidents.	3.30	Very Much Prepared
2. I do not charge my gadgets during night time to avoid fire incidents.	2.80	Prepared
3. I do not leave lit candles behind in order to prevent fire incidents.	3.17	Prepared
4. I make sure that electrical outlets will not be overloaded to avoid short circuit that may cause fire incidents.	2.90	Prepared
5. I always make sure that I already finish cooking before I leave the kitchen to prevent fire incidents.	3.16	Prepared
6. I always check if there is faulty wiring and scratched wires in the house to prevent fire incidents.	2.85	Prepared
7. I place lit mosquito killer in safe place in order to prevent fire incidents.	3.23	Prepared
8. I stored combustible materials and flammable liquids safely to prevent fire incidents.	3.01	Prepared
9. I am conscious of on cigarettes and other that evolve fire.	3.07	Prepared
10. Flammable liquids, if stored in the home are limited in quantity.	2.95	Prepared
11. My workplace is free of rubbish and combustible waste materials.	2.99	Prepared
12. My cooking equipment kept only in separate eating areas.	2.77	Prepared
13. Matches and lighters are stored in a secure cabinet away from the reach of the children.	2.99	Prepared
14. Lit candles are not left unattended.	3.37	Very Much Prepared
15. The home is not cluttered with clothes, magazines, newspapers and other items that can burn.	3.34	Very Much Prepared
16. Things that can burn are removed from the stove.	3.33	Very Much Prepared
17. There is no rubbish, trash, brush or tree trimmings accumulation on the property.	3.27	Very Much Prepared
18. Barbecue grill is only used outdoors and avoid near the combustible materials.	3.23	Prepared
19. There are no loose or frayed cords on electrical devices.	2.98	Prepared
20. There are no extension cords running across doorways or under a combustible material.	2.85	Prepared
21. Other devices that allow the connection of multiple appliances into a single receptacle are not used on a regular basis.	2.89	Prepared
22. Lamps are on level surfaces away from things that can be burn.	3.38	Very Much Prepared
Overall Weighted Mean	3.08	Prepared

Table 3. *Significant Relationship between Profile of the Respondents and the Level of Preparedness as to Risk and Fire Safety*

Variables	Correlation Coefficient	Interpretation	p-value	Interpretation
Sex and Fire Safety	-0.19	Very Low Correlation	0.06	Not Significant
Sex and Fire Risk	-0.14	Very Low Correlation	0.18	Not Significant
Age and Fire Safety	-0.01	Very Low Correlation	0.92	Not Significant
Age and Fire Risk	-0.11	Very Low Correlation	0.28	Not Significant
Education and Fire Safety	0.29	Low Correlation	0.00	Significant
Education and Fire Risk	0.25	Low Correlation	0.01	Significant

Scale: 0.00- ± 0.19 = Very Low Correlation
±0.20 - ±0.39 = Low Correlation
±0.40 - ± 0.59 = Moderate Correlation
±0.60- ± 0.79 = High Correlation
±0.80 - ±1.00 = Very High Correlation

The p values are 0.06 and 0.18 for gender paired with fire safety and fire risk which are greater than 0.05. This indicates that there is no significant relationship between the sex and level of preparedness of the respondents both for fire safety and fire risk. The p values are 0.92 and 0.28 for age paired with fire safety and fire risk which are also greater than 0.05. This entails that there is no significant relationship between the age and level of preparedness of the respondents both for fire safety and fire risk. However, the p values are 0.00 and 0.01 for education paired with fire safety and fire risk. Thus, there is a significant relationship between the educational attainment and level of preparedness of the respondents both for fire safety and fire risk. Although the correlations are low ($r=0.29$ and $r=0.25$), positive correlations imply that the higher the educational attainment, the higher the level of preparedness both for fire safety and fire risk.

Table 4. *Significant Difference between the Level of Preparedness and Gender*

Level of Preparedness	T (98)	p-value	Remarks
Fire Safety	-1.30	.20	Not Significant
Fire Risk	-1.28	.20	Not Significant

($p < .05$ significant) ($p > .05$ not significant)

Table 4 presents the significant difference between the level of preparedness as to gender. It shows that for both fire risk and fire safety, p is greater than 0.05 which implies that there is no significant difference between the respondent's level of preparedness for male and female. Therefore, we accept the null hypothesis between age and the level of preparedness for fire risk and fire safety.

In the study of Valentine [5] & Bolaji [6] of fire disaster preparedness among residents in a high-income community, their finding revealed that there was no significant relationship on the level of disaster preparedness as to sex of the respondents.

Table 5. *Significant Difference between the Level of Preparedness and Age*

Level of Preparedness	t (98)	p-value	Remarks
Fire Safety	1.06	.38	Not Significant
Fire Risk	1.50	.21	Not Significant

Table 5 presents the significant difference between the respondent's levels of preparedness as to age. It shows that for both fire risk and fire safety, p is greater than 0.05 which implies that there is no significant difference between respondents' level of preparedness and age. Therefore, we accept the null hypothesis between age and the level of preparedness for fire risk and fire safety.

In the study of Valentine [5] & Bolaji [6] of fire disaster preparedness among residents in a high-income community, their findings revealed that there was no significant relationship between the level of disaster preparedness and the age of the respondents.

Table 6. *Significant Difference between the Level of Preparedness and Educational Attainment*

Level of Preparedness	t(98)	p-value	Remarks
Fire Safety	3.27	.02	Significant
Fire Risk	2.78	.04	Significant

Table 6 presents the significant difference between respondents' level of preparedness and their educational attainment. It shows that p-value for fire risk is .02 and p-value for fire safety is .04, for which both are less than 0.05 which implies that there is significant difference between respondents' level of preparedness as group according to educational attainment indicated above. Therefore, we reject the null hypothesis that there is no significant difference between educational background and the level of preparedness for fire risk and fire safety. In the study of Satyen [7] Huseyin [8], added that fire safety education is significant for improving people's fire safety preparedness and response in the case of a fire, which could lead to fewer fire casualties.

CONCLUSION AND RECOMMENDATIONS

The researchers believe that the respondents are prepared in terms of fire risk and fire safety. These also indicate that the program of the Bureau of Fire Protection which is the Oplan Ligtas Pamayanan is effective. However, the researchers also believe that there is a need to enhance the level of preparedness and knowledge of the community in terms of fire risk and fire safety through the implementation of various programs and symposiums. These could serve as the foundation for the Community Extension Program being developed by Gov. Alfonso D. Tan College's Institute of Criminal Justice Education in response to the Bureau of Fire Protection program Oplan Ligtas Pamayanan.

Bureau of Fire Protection. They must continue in serving the community through conducting symposium and educational campaigns as stated in the action plan for fire risk and fire safety to educate the community especially to those illiterate members of the community towards the destructive causes of fire.

Community. They must always actively participate in every drill and symposium conducted by the Bureau of Fire Protection in partnership with the Local Government Units. It also recommended that every household must practice the standard fire safety protocols and precautionary measures mandated by the Bureau of Fire Protection.

Gov. Alfonso D. Tan College. The institution must conduct basic training in relation to fire prevention and preparedness in cooperation campaigns as stated in the action plan with the Bureau of Fire Protection to enhance the knowledge and to the level of preparedness of the students.

Household Occupants. They must secure that all bedrooms have to ways out since it is the lowest among all the indicators and for the safety of the household occupants. During fire incidents it is very easy to escape if have an escape plan, having two ways out of every room in the event of fire when the main way is blocked by fire or smoke you always have another way to escape from the fire.

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