

Exploring Fire Safety Awareness Among the Malaysian Public

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Abstract

As a global issue, fire incidents would cause severe implication(s) to victims. Fire incidents in Malaysia have increased rapidly over the years. Most cases of property loss involved residential buildings causing severe injuries, and in some cases death, to fire incident victims. This scenario is of concern in terms of national development because the prime purpose of owning a house is to provide shelter and security to the residents. In response to growing concerns, surveys were conducted over recent years, as shown in the media, that revealed that the main contribution towards the increase of fire cases in Malaysia is due to a low level of fire safety awareness among the public. Furthermore, there is still a lack of fire safety measures especially in regards to landed residential properties. The installation of smoke detectors and portable fire extinguishers in houses in Australia, the United Kingdom, and New Zealand, in comparison, significantly reduced the fire fatalities and losses. Over recent years, there have been campaigns, seminars and trainings on fire safety conducted by the National Fire and Rescue Department of Malaysia throughout the nation. However, these fire preventive measures failed to increase the level of fire safety awareness among the public. Perhaps we should kept in mind the significant importance of promoting fire safety awareness among the public. Does this responsibility solely rest with regulating authorities or with each individual?

Keywords

Fire safety awareness, Malaysian public

1. Introduction

In the case of fire incidents, fatal and serious injuries are the worst thing that could happen to the occupants of buildings in addition to direct material damage to the buildings and household possessions. Nevertheless, according to Ramachandran in Subramaniam (2004), fire incidents may cause indirect consequential losses, such as loss of production, unemployment and lowering of exports, although at the national level, these losses do not contribute significantly to the total fire loss. Generally speaking, any fire incidents would cause losses.

Landed residential properties are the most populated dwellings available in Malaysia as recorded by The Department of Statistics Malaysia (2000) and the relative numbers increased throughout subsequent years. Some research has been conducted in recent years regarding fire safety on landed residential. This study showed that there was minimal fire safety features found in landed residential in Malaysia. Furthermore, majority of the respondents are low in fire safety awareness. Today, the issue of low fire safety awareness among the public is still a major concern to the nation as mentioned by the director of National Fire and Rescue Department of Malaysia, Datuk Wan Mohd Nor Ibrahim (2010). Campaigns on raising awareness concerning fire safety were carried out for many years, but was unable to reduce fire related incidents to landed residential. In conjunction to the previous scenario, this exploratory study will

identify the level of fire safety awareness among the Malaysian public. Additionally, this study will offer methods to be considered in reducing fire incidents in order to raise the level of fire safety awareness among the Malaysian public.

2. Fire Safety Awareness among Malaysian Public

The term fire safety awareness may be considered cliché to the Malaysian public, but a majority of the Malaysian public are able to understand what is meant by fire safety awareness. Theoretically, I believe that the Malaysian public is also capable of understanding how to prevent fire incidents. However, based on my study, the Malaysian public has a different understanding of fire safety awareness. The measurement of fire safety awareness is measured via two factors: 1) Self-awareness, and 2) Occupation.

2.1 Self-Awareness

There is no fixed definition of fire safety awareness. However, it can be described as a combination of both *fire safety* and *awareness*. According to *Demand Media* (2011), fire safety can be defined as a group of equipment or behavior designed to both reduce the risk of starting a fire and reduce the risk of injury in the event of a fire. Additional fire safety measures are designed to protect private property and even structural integrity. The awareness in this context will further discussed in the dimension of self-awareness among Malaysian public towards the fire safety. I strongly believe that the human factor is the dominant contributor to fire incidents. This is also proven by Canter's (1980) study on fire safety awareness. Canter concluded that:

... there had a close relationship between fire safety awareness and human behavior towards fires. He stated that people still have very little understanding of the psychological and social concomitants of fire, although knowledge of how to control the physical effects of fire had been provided for centuries. It shows that there had been lack of awareness on fire safety among the people during the research being conducted. Furthermore, he also added that fire and its adverse effects cannot be mastered by engineering means (fire escape, smoke detectors, alarms, etc.) alone and many of the fatalities, and the damage caused by fires are more to human error than the engineering failure.

(Canter, D, 1980)

In relation to the above statement and conclusions of the study, there is a close relationship between fire safety and human behavior. These conclusions are shown in Figures 1 and 2 below.

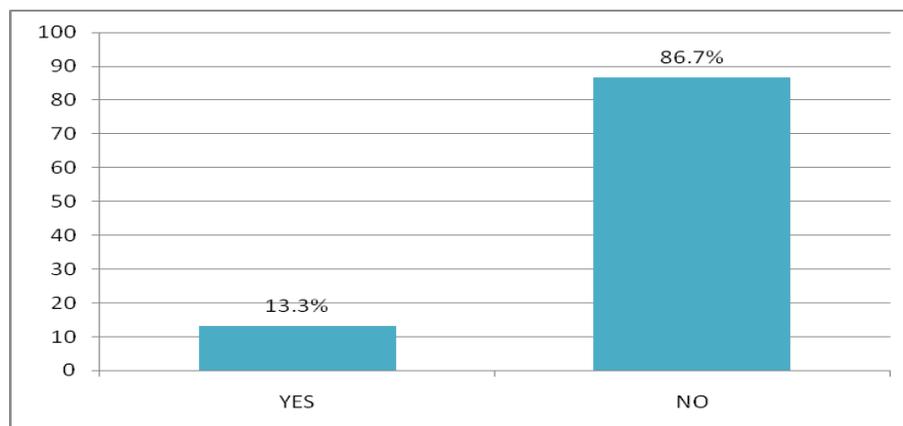


Figure 1: Possession of a Fire Safety Apparatus in the Home (%)

From the total participating respondents of 286, it was found that a majority of the respondents did not possess any fire safety apparatuses, such as 1) portable fire extinguisher, 2) smoke alarm or 3) fire blanket, in their respective homes. Only 13.3% of the total population of respondents had fire safety apparatuses in their homes. This situation can be regarded as critical since the gap between the groups of respondents is huge whereby it reached up to 73.4% of difference. From this figure, it can be concluded that most of the respondents are not aware of the importance of having fire safety apparatuses at their homes. It is probable that respondents lack a pre-cautionary mindset regarding fire safety, despite the fact that fire incidents could happen at any time.

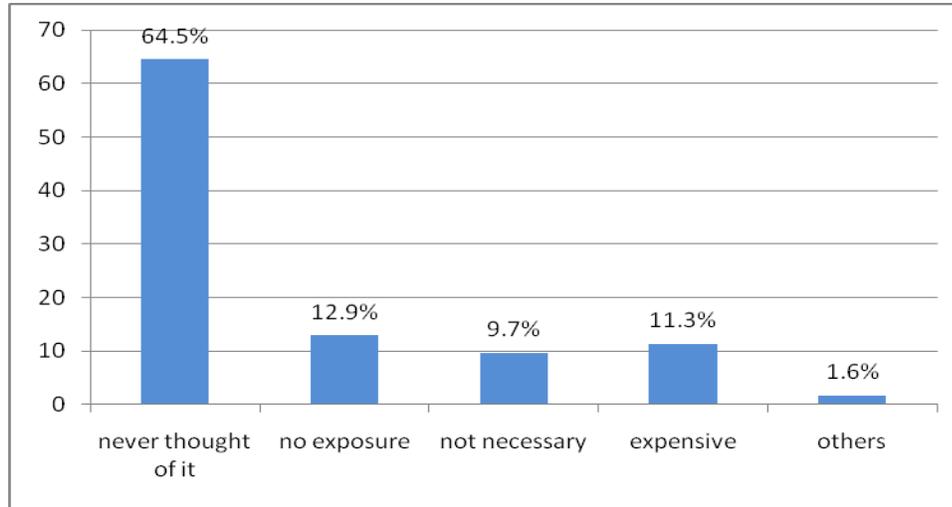


Figure 2: Reasons for not having a Fire Safety Apparatus in the Home (%)

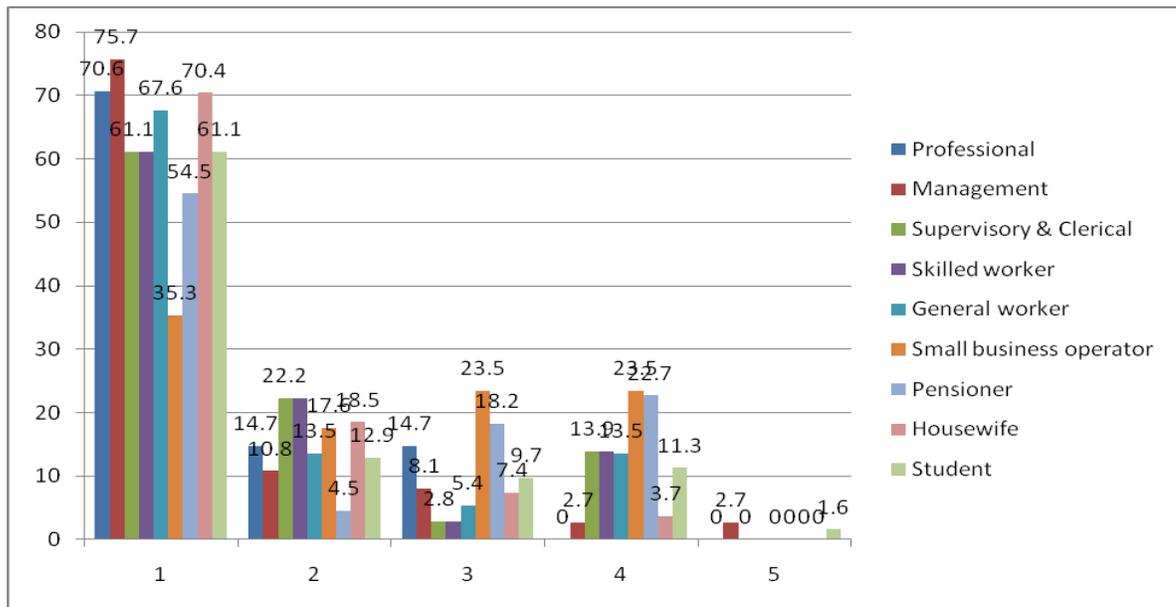
Figure 2 shows that the self-awareness among respondent should be of concern, because 64.5% of 248 participating respondents never considered having fire safety apparatuses installed in their homes. The increased number of _____ is due to the lack of awareness of the importance of fire safety among Malaysian public (Ong Ka Ting ,2004).

An Enforcement Officer of Fire and Rescue Department of Malaysia, Shazlean Mohd Hanafiah (2010), pointed out that campaigns on fire safety awareness have been implemented regularly throughout the years by the state branches. Ironically, there are 12.9% respondents who claimed they were never exposed to any such fire safety awareness campaign. This group of people was either ignored by the fire awareness campaigns or the campaign was ineffective. Interestingly, 9.7% of respondents also claimed that it is unnecessary to have fire safety apparatuses in the home. This is the most ignorant reason given by respondents and it also reflects respondent attitudes according to Ong Ka Ting (2004) who urged that every home needed to be equipped with some sort of fire safety apparatus. Of the remaining respondents, 11.3% stated that the cost of a fire safety apparatus was beyond their financial ability and 1.6% gave other reasons.

Based on the respondents' feedback, it can be assumed that the need for fire safety apparatuses in the home is less important in comparison to other household appliances.

2.2 Occupation

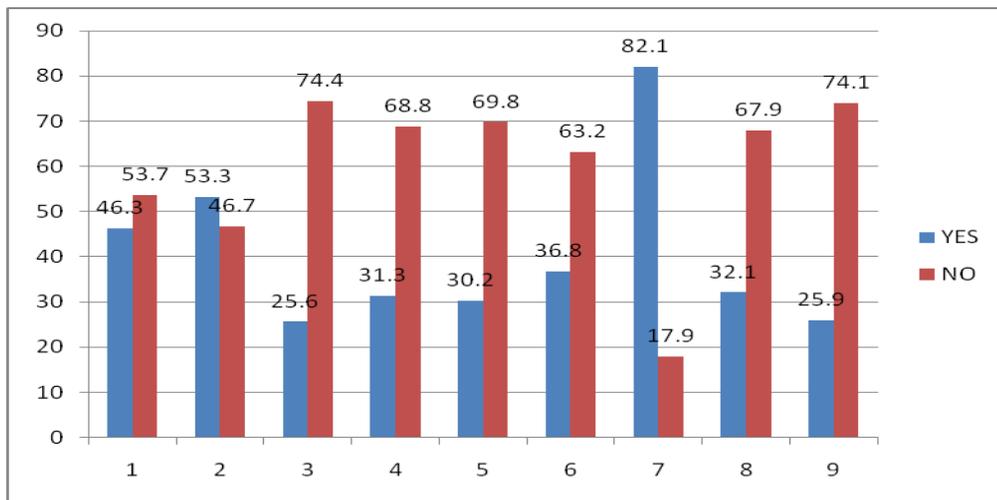
The levels of awareness among the public varies. This may depend on an individual's background, including their type of occupation or educational level. An individual's education level often correlates to their level of occupation. In this study, various occupations are placed into nine groups: 1) Professional – Architect, Engineer, Actuary, Lecturer, Lawyer, Pilot, Quantity Surveyor, and Doctor, 2) Management – Managing Director, Manager, and Executive, 3) Supervisory and Clerical – Supervisor and Clerk, 4) Skilled worker – Welder, Technician, Mechanic, and Wireman, 5) General worker – Factory Operator, Dispatch, Waiter, and Sales Assistant, 6) Small business operator – Merchant and Petty Trader, 7) Pensioner – not working, 8) Housewife – not working, and 9) Student – not working.



Never thought of it	1
No exposure	2
Not necessary	3
Expensive	4
Others	5

Figure 3: Reasons for not having a Fire Safety Apparatus in the Home by Occupation (%)

According to Figure 3, despite respondent occupation, the majority of respondents had never considered having a fire safety apparatus in the home. Surprisingly, of all occupations, the Management and Professional groups topped the chart with 75.7% and 70.6%, respectively. Generally, it can be assumed that these two occupation groups have the highest level of education compared to the other occupations. Besides that, there had been minor difference of percentage (0.2%) between the professional and the housewife. This situation strongly supports the fact that a high level of education alone is not enough to make an individual aware on the importance of having fire safety apparatus at home. One of the most effective fire safety apparatuses is the smoke alarm. Installation of this apparatus alone led to a 50% reduction in number of fire fatalities and losses involving residential buildings as mentioned by the New South Wales Fire Brigade (NSWFB) (2010). Nor Azman Sukri in 2005, stated that most of fire incidents regarding residential property happened during night time while the occupants were asleep. As a result, by installing smoke alarms in the home gives early warning to the occupant in the case of fire.



Professional	1	Small business operator	6
Management supervisory & Clerical	2	Pensioner	7
Skilled worker	4	Housewife	8
General worker	5	Student	9

Figure 4: Discussion with Family/ House Members on Fire Safety Precaution in the Home (%)

The escalating number of fire cases involving residential buildings throughout the years brings into question the effectiveness of fire campaigns and the awareness of pre-cautionary measures taken by the occupants in deterring fire incidents in the home. Figure 4 shows that the majority of working occupants had never discussed fire safety precaution at home with family or household members. An escape plan is considered one of the fire safety measures that would help minimize the risk of fire related injury or death. Figure 4 also shows that Pensioners did discuss fire safety measures, include escape plans with the house members. From this scenario, it can be assumed that age may relate to the level of fire safety awareness. In addition, this group of people had vast experience in life which might lead them aware on the importance of fire safety at home.

3. Uplifting Fire Safety Awareness

Generally, the findings of the study show that the overall level of awareness of the Malaysian public is still poor. Since the level of the awareness has been measured, it is wise to draw appropriate recommendations on educating the Malaysian public on the importance of fire safety especially at home in order to raise the level of awareness and with hope be able to reduce the number of fire cases over the years that had claimed loss in terms of property and human's life. Recommendations are grouped into two categories which include: 1) Social activities, and 2) Enforcement by governing authorities.

3.1 Social Activities

According to the Fire and Rescue Department of Malaysia (2010), campaigns on fire safety were carried out throughout the years. However, the response and feedbacks given by the public was disappointing. Perhaps it is time for the organizers to reconsider what the best approaches are for promoting fire safety awareness among the Malaysian public.. There are six recommendations that can be used in educating the public on the significance of fire safety which might help to raise the level of public awareness.

3.1.1 Comprehensive Campaigns

Comprehensive month-to-month fire safety campaigns should be conducted in order to maintain the level of awareness. Throughout the campaigns there should be posters, banners, stickers, and buntings for making the public aware of the campaign. (As can be seen in the '*Tak Nak*' campaign against tobacco products). It is also recommended that campaign participants answer questionnaires on fire safety awareness at the end of the campaign in order to measure their level of understanding on the subject matter..

3.1.2 Appointment of Spoke Person

For each campaign, a *spokesperson* or *ambassador* of the fire safety campaign is recommended who will promote the campaign objectives and convey information that needs to be shared with the public. The spokesperson should be a well known figure because they may have the ability to better persuade the public to follow them. Lectures on fire safety would be more effective if presented by this well known spokesperson.

3.1.3 Media Advertisement

Media can be regarded as the best medium for delivering information. Therefore, I strongly suggest that there should be a continuous advertisement of fire safety on television and radio as had been implemented here in Malaysia during the end of the 80s'. I believe that most of the public either watches television or listens to the radio regularly and advertisements via these mediums possibly creates the sense of awareness among the public indirectly. It is also recommended that the advertisements be on-air during primetime and on popular television channels.

3.1.4 Information Sharing with Public

The Fire and Rescue Department needs to work together with the Ministry of Housing and Local Government in distributing any write ups (such as booklet, pamphlet, etc) published by them on fire safety to the public instead of keeping it inside the fire station. The distribution may be done through direct contact to the public.

3.1.5 Fire Safety Website

In the era of science and technology, internet plays a significant role in providing information to the public. Therefore, it would be more beneficial for the public if the current *The Fire and Rescue Department of Malaysia* was more interactive and informative. In other words, more fire safety content should be added to the website. Perhaps there should be a local website on fire safety that can be found via the internet from other countries' websites (Australia, United States, United Kingdom).

3.1.6 Education

In order to raise the public awareness on fire safety, a fire safety awareness campaign needs to begin as early as possible. Generally, in the Malaysian education system fire safety is not addressed specifically or at length. The subject matter only appears once a while through fire drills at schools. Besides that, not all schools conduct fire drill. Fire safety needs to be addressed in all school syllabi and introduced as early as preschool.

3.2 Enforcement by Governing Authorities

Recent studies show that fire safety precautions implemented in the home has increased. It is also stated that there is not enough fire safety measures taken at home. With the increase number of fire cases throughout the years which involved residential buildings, the government had suggested in 2004 that all new development of housing needs to be equipped with fire extinguishers and smoke alarms. On the other hand, the legislation used for fire safety guidelines for residential building in general is focused on passive fire protection rather than active fire protection.

3.2.1 Installation of Fire Safety Apparatus at Home

The government's suggestion to install fire safety apparatuses in the home is a sensible suggestion considering there is installation enforcement in countries such as Australia, New Zealand, United States, and United Kingdom. As a result, this enforcement has significantly reduced fire cases which involve residential buildings.

Specifically, in New South Wales(NSW) Australia legislation requires that all NSW residents must have at least one working smoke alarm installed on each level of their home. This includes owner occupied, rental properties, relocatable homes or any other residential building where people sleep. In addition, according to New South Wales Fire Brigade (NSWFB), a person who does not comply with the legislation is guilty of an offence with a maximum of penalty AUD\$550.00. The installation of smoke alarms in the home has led to a 50% reduction in the number of fire fatalities and losses involving residential buildings. However, the scenario in Malaysia is different. Although the suggestion of installing these apparatus has been proposed, until recently, the implementation has yet to be done. With regard to this situation, perhaps a question needs to be asked about whether the fire safety of a house lies with governing authorities or with individuals.

3.2.2 Amendment of Legislation

In the context of Malaysia, all building works need to comply the guidelines stipulated in the Uniform Building By-Laws(UBBL) of Malaysia. In UBBL, there are procedures and guidelines to be complied with for initiating the construction. In general, fire safety regulations in UBBL that relate to residential buildings are more passively approach, as confirmed by Adli Hadi (2010), one of the architects in Malaysia. Perhaps there shall be an amendment to the clause in the UBBL which is to include the installation of smoke alarms and portable fire extinguisher as pre-requisites before the building is approved to be occupied.

4. Conclusion

The main purpose of conducting this study is to explore the level of fire safety awareness among the Malaysian public. This scenario is being revealed in the media and articles throughout the nation while the main reason behind this scenario is due to the lack of awareness on fire safety among the public which had caused loss of property and life. In this study, the exploration of the fire safety awareness among the Malaysian public is measured through the self-awareness of the respondents concerning fire safety in relation to the type of occupation possessed by the respondents.

From the findings, it can be assumed that the majority of respondents are not aware of the benefit of having fire safety apparatus installed in the home. Since fire incidents normally happen at night while the occupants are asleep, it is best to have smoke alarms installed on each floor level of the home. According to the fire safety handbook published by the Fire and Rescue Department of Malaysia (2004) the recommended places to install the detectors are on the ceiling, staircase enclosure, bedrooms and the living room.

Apart from smoke alarm, the installation of portable fire extinguisher at home may be useful since it can be used by the occupants to extinguish fires before they cause excess damage.. It is recommended by the Fire and Rescue Department of Malaysia that each home have at least one unit of portable fire extinguisher. However, based on the findings of this study the majority of respondent, regardless of their occupation and education level, have minimal fire safety awareness, consequently, most of them do not equipped their homes with fire safety apparatuses and there there is lack of discussion among the household members concerning fire safety measures. In conclusion, since the level of awareness among the Malaysian public is low, perhaps the recommendations mentioned earlier may help raise the level of fire safety awareness and reduce the incidence of fire damage and loss in our country. Remember, *a fire doesn't have to kill.*

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