



**FACTORS INFLUENCING FIRE SAFETY AWARENESS
IN SHAH ALAM**

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DECLARATION OF ORIGINALITY

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ABSTRACT

Nowadays, there are too many cases of fire incidents happening all around in Malaysia. This type of incidents has shown that many citizens in Malaysia does not have any awareness on the fire safety. Therefore, the study is to determine the fire safety awareness in Shah Alam. Thus, in this research, convenience sampling method is chosen whereby researcher are select 380 respondent based on their availability and willingness to take part. Next, respondents that involved in this study were 380 respondents who had awareness on fire safety in Shah Alam. Data analysis was conducted using SPSS which stands for Statistical Package for the Social Sciences software. The analysis used descriptive statistics such as mean, frequency, percentage, and standard deviation, as well as inferential statistics (regression analysis) to facilitate meaningful analysis.

Keywords- Fire safety tools, self-awareness and electrical and technical

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LIST OF ABBREVIATIONS

TTDI	Taman Tun Dr Ismail	25
SPSS	Statistical Package for the Social Sciences	30
STPM	Sijil Tinggi Pelajaran Malaysia	33
PhD	Doctor of Philosophy	33
Sig.	Significant.....	38
N	Total Respondent	38
FS	Fire Safety Tools	38
TE	Technology and Electrical.....	38
SA	Self-Awareness	38
R Square	The proportion of the variance in the dependent variables	36
R	The correlation between the predicted values and the observed values....	39
ANOVA ^b	Analysis of variance	40
Coefficients ^a	Estimates of the unknown population parameters and describe the relationship between predictor variable and the response.	40
P	Probability.....	40
β	Beta	40
α	Alpha	41
D	Demographic	41
H	Hypothesis.....	43

CHAPTER 1

INTRODUCTION

1.1 PREAMBLE

This chapter presents an overview of the research, the Background to the Study, Research Problem, Research Objectives, Research Questions, Significance of the Study, Scope of study, Limitations of study, Operationalized Definitions.

1.2 BACKGROUND OF STUDY

Any occurrence of the fire incidents is a massive loss that any homeowners can ever occur where it can damage the contents in their houses. Based on a recording that been made by the Department of Statistics Malaysia (2000), landed residential properties are the most populated housing that are available in Malaysia. But sadly, in Malaysia itself have an average rate of fire incidents at around 1024.67 fires per million populations per year in between the year from 2006-2014. Each year, there are approximately 90 residential fires per million population per year. Based the accounting of the fire casualties, total number of victims in residential has increased about 30% in the three year-period. Although residential fires comprised less than 10% of the overall fires in the past three years, they took about 61% of the overall fire deaths per year and 48% of the overall fire injuries per year. (Fire Department Malaysia)

1.3 RESEARCH PROBLEM

Some of people in Malaysia does not have yet placed the importance of fire safety in our daily lives such as still doing things that can cause fire and can affect their property. Usually, all school students in Malaysia will be exposed to fire safety either in terms of how to save themselves from fire or how to use a fire extinguisher, sometimes firefighters also show various tools used by firefighters in controlling the blaze in the event of a fire by showing fire equipment that have in fire truck. However, students at this school will forget about fire safety after entering the world of working because not all companies provide fire safety training anymore and ways to reduce risk or control the risk of being forgotten day by day. This can lead them having a loss because they fail to control their property such as their private house from fire.

According to previous research by Azim Sulaiman (2016) awareness of fire safety in Malaysian public. This research can be inferred that most 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. This research cover solely on landed residential buildings of not more than two-storey height in Shah Alam at Section 2 and Section 17 where there will be three different types of housing ranging from low-cost housing, medium-cost housing and high-cost housing. . In conjunction to the previous scenario, this exploratory study will identify the level of fire safety awareness among the Malaysian public. Additionally, this previous study will offer methods to be considered in reducing fire incidents to raise the level of fire safety awareness among the Malaysian public.

1.4 RESEARCH OBJECTIVES

1.4.1 GENERAL OBJECTIVES

The following are the specific objectives of this study:

1. To examine the relationship between technology and electrical, fire safety tools and self-awareness
2. To examine the influence gender towards factors influencing fire safety awareness in Shah Alam

1.5 RESEARCH QUESTIONS

For the above problem and purpose, the study seeks to answer the following specific research questions:

1. Is there any significant of study between fire safety tools, technology and electrical towards self-awareness?
2. Which gender is more aware towards the fire safety awareness in Shah Alam?

1.6 SCOPE OF STUDY

The study will be cover in Shah Alam. This research is being conducted to investigate fire safety awareness in Shah Alam.

1.7 SIGNIFICANCE OF STUDY

Since the fire cases have set off losses in property and claimed many lives from one year to another (Berita Harian, March 2003), this study may assist in reducing those losses by identifying the level of fire safety awareness among the public. Apart from that, this study will outline appropriate proposals or approaches on how to educate the public on fire safety that could increase the level of awareness.

This study will also inculcate a sense of protection among the public. Protection in this phrase can be described as the protection of property and life. By understanding this phrase, it might raise the level of awareness. As for research purposes, this study will be a useful reference for obtaining information relating to fire safety awareness soon.

1.8 LIMITATIONS OF STUDY

The study will only focus on exploring the level of awareness in terms of fire safety among the Malaysian public. In terms of case study, it will only concentrate on fire cases in Shah Alam which recorded as one of the highest number of cases in Selangor involving residential buildings. Records also showed that most cases involved houses in Shah Alam (Selangor Fire and Rescue Department).

As well as students have time limitations for handing in their class papers, qualified scholars often must reach the deadline for sending a research paper to a publication. Therefore, the time available for researching a research problem and evaluating progress over time is limited by the research deadline by selecting a research problem that can solve long before the assignment deadline. If time constraints have adversely influenced the analysis in some way, recognise this effect by noting the need for a prospective study to address this research concern.

1.9 OPERATIONALIZED DEFINITIONS

In this study, the researcher wants to find out the factors influencing fire safety awareness in Shah Alam. The researcher will look for factors and awareness about fire safety in Shah Alam.

1.9.1 FIRE SAFETY TOOLS

Fire safety tools can be defined as types of fire safety equipment such as fire extinguisher, fire blankets, fire hose reels, signage, sprinklers, first aid kits, emergency & exits signs, and smoke alarm. (Jimfiresafety.com 2020)

1.9.2 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. Fire safety can be defined as a group of equipment or behavior designed to both reduces the risk of starting a fire and reduce the risk of injury in the event of a fire. (Demand Media, 2011)

1.9.3 ELECTRICAL

Electrical is everywhere, it lights our way, cooks our food. Electrical equipment can cause fires. Wires, switches, outlets, cords and plugs, fuse and circuit breaker boxes and lighting fixtures and lamps must all be in good condition or a fire might result.

CHAPTER 2

LITERATURE REVIEW

2.1 PREAMBLE

This chapter provides a detail review of relevant literature on the tenets required to find responses, connect to the research questions, and justify the hypothesis. This chapter covers the biggest fire outbreaks, definition of fire, classification of fire, fire triangle and definition of fire system.

2.2 DEFINITION OF FIRE

The word fire has various meanings. In this context of study, it can be defined as a rapid, persistent chemical change that releases heat and light and is accompanied by flame, especially the exothermic oxidation of a combustible substance. In a simpler definition, it is the visible signs of combustion {www.answers.com}. Alternatively, according to Wikipedia Encyclopedia, fire can be defined as a form of combustion. linguistically, the word fire refers to the combination of the brilliant glow and large amount of heat released during a rapid, self-sustaining burning of combustible fuel. Technically, fire is not a state of matter; it is an exothermic oxidation process by which heat, and light energy are given out. While combustion on the other hand, is defined as the process of burning where there is a chemical change, especially oxidation, accompanied by the production of heat and light {Reader's Digest Word Power Dictionary}

2.3 CLASSIFICATION OF FIRE

There are a few types of fire which is Class A, Class B, Class C, Class D, Class E, Class F. Class A is ordinary combustibles that consist such as wood, paper, fabric, and most kinds of trash. They may be extinguished by water, wet chemical suppression, or dry chemical powder. Meanwhile Class B and C is flammable liquid and gas "Class B" having flash point less than 100 °C, while burning gases are separately designated "Class C". These fires follow the same basic fire tetrahedron (heat, fuel, oxygen, chemical reaction) as ordinary combustible fires, except that the fuel in question is a flammable liquid such as gasoline, or gas such as natural gas. A solid stream of water should never be used to extinguish this type because it can cause the fuel to scatter, spreading the flames. Then, Class D is flammable metals. Class D fires involve combustible metals especially alkali metals like lithium and potassium, alkaline earth metals such as magnesium, and group 4 elements such as titanium and zirconium. Next, Class E is electrical fire. Electrical fires are fires involving potentially energized electrical equipment. This sort of fire may be caused by short-circuiting machinery or overloaded electrical cables. These fires can be a severe hazard to firefighters using water or other conductive agents, as electricity may be conducted from the fire, through water, to the firefighter's body, and then earth. Electrical shocks have caused many firefighter deaths. Electrical fire may be fought in the same way as an ordinary combustible fire, but water, foam, and other conductive agents are not to be used. While the fire is or possibly could be electrically energized, it can be fought with any extinguishing agent rated for electrical fire. Lastly, Class F which is cooking oil and fats. Class F involve unsaturated cooking oils in well-insulated cooking appliances located in commercial kitchens. Though such fires are technically a subclass of the flammable liquid/gas class, the special characteristics of these types of fires, namely the higher flash point, are considered important enough to recognize separately. A special class K extinguisher will safely smother the fire by turning the oil into a foam. A water mist can also be used to extinguish such fires. (Wikipedia)

2.4 FIRE TRIANGLE

The fire triangle is used to show the rule that a fire needs three things to burn. These things are heat, fuel, and oxygen. If one of these three is removed, the fire will be put out. In the middle of the fire triangle there is also a chemical reaction. Without heat, a fire cannot begin. If fire becomes cool enough, it will not keep burning. Heat can be removed by using water. This only works on some types of fire. Separating burning fuels from each other can also reduce the heat. Turning off the electricity in an electrical fire removes the heat source, but other fuels may have caught fire. They will continue burning until the firefighters deal with them and their fire triangles. Without oxygen, a fire cannot start. Oxygen may be removed from a fire by covering it in some way. Some foams and heavy gases (for example, carbon dioxide) are often used for this. The fire can also be closed off away from a source of oxygen. Once all the oxygen in the closed off area is used by the fire, it will go out if it cannot get more oxygen because it needs oxygen. (Wikipedia)

2.5 DEFINITION OF FIRE SYSTEM

Fire safety is the set of practices intended to reduce the destruction caused by fire. Fire safety measures include those that are intended to prevent ignition of an uncontrolled fire, and those that are used to limit the development and effects of a fire after it starts. Fire safety measures include those that are planned during the construction of a building or implemented in structures that are already standing, and those that are taught to occupants of the building. Threats to fire safety are commonly referred to as fire hazards. A fire hazard may include a situation that increases the likelihood of a fire or may impede escape in the event a fire occurs.(Wikipedia)

2.6 RELATIONSHIP BETWEEN INDEPENDENT VARIABLE AND DEPENDENT VARIABLE

Independent variable is variable that is changed or controlled in a scientific experiment to test the effects on the dependent variable. A dependent variable is the variable being tested and measured in a scientific experiment. In this cases, dependent variable in fire safety awareness is self-awareness. Independent variable is fire safety tools and technology & electrical.

Fire safety is one of the most significant concerns in the built-environment domain, due to its vital role for the survival of human beings and protection of properties (Hamida Hassain, 2019). There are numerous incidences of fire accidents worldwide have taken place over the past few year property (Hamida Hassain, 2019). These incidences have led to major loses, in terms of life and property (Hamida Hassain, 2019). Another definition is fire safety can be defined as a group of equipment or behavior designed to both reduces the risk of starting a fire and reduce the risk of injury in the event of a fire (Azim Sulaiman, 2006)

Self-awareness is key variable in encouraging fire safety. Studies have shown that fire safety awareness and self-awareness had a close relationship (Azim Sulaiman, 2006). 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 (Azim Sulaiman, 2006)

2.6.1 FIRE SAFETY TOOLS AND SELF-AWARENESS

The fire safety tools dimension becomes intrinsic in fire safety, according to the tools such as fire extinguishers, sprinkler systems, fire alarm systems, and smoke/heat detection systems (Mohammad b. Hamida, Mohammad A. Hassanain 2019). According to (Mohammad b. Hamida, Mohammad A. Hassanain 2019), 2019; Fire extinguishers were distributed sufficiently in all typical floors according to the code requirements. Sprinkler systems were installed in the basement (Mohammad b. Hamida, Mohammad A. Hassanain 2019). Fire alarm systems were sufficiently distributed throughout the building, likewise fire detection systems (Mohammad b. Hamida, Mohammad A. Hassanain 2019). Smoke/heat detection systems were adequately provided in kitchens (Mohammad b. Hamida, Mohammad A. Hassanain 2019). The detection systems have contributed to the survival of occupants in fire accidents (Mohammad b. Hamida, Mohammad A. Hassanain 2019)

2.6.2 TECHNOLOGY AND ELECTRICAL AND SELF-AWARENESS

Electrical equipment can cause fires. Wires, switches, outlets, cords and plugs, fuse and circuit breaker boxes, and lighting fixtures and lamps must all be in good condition, or a fire might result. Electrical fires cause the deaths of approximately 485 people in the United States each year and result in an additional 2,305 injuries. Most electrical fires occur because of poor maintenance of electrical appliances, faulty wiring, and overloaded circuits. (© 2005 Wheeling Jesuit University and Center for Educational Technologies ®.). The walkthrough inspection indicated that all fire safety requirements as per the developed inspection checklist for electrical installation and distribution systems were satisfied. The walkthrough inspection also revealed the availability of a backup electrical supply to power the fire pump, the fire alarm system, and the exit signs. This backup electrical supply is a strong necessity since the power supply maybe cut off the building during the fire incident, and hence the operation of the fire protection systems will be hindered due to the lack of power supply. (Mohammad b. Hamida, Mohammad A. Hassanain 2019).

2.7 CONCEPTUAL FRAMEWORK

Based on the review of previous research, the following figure was generated.

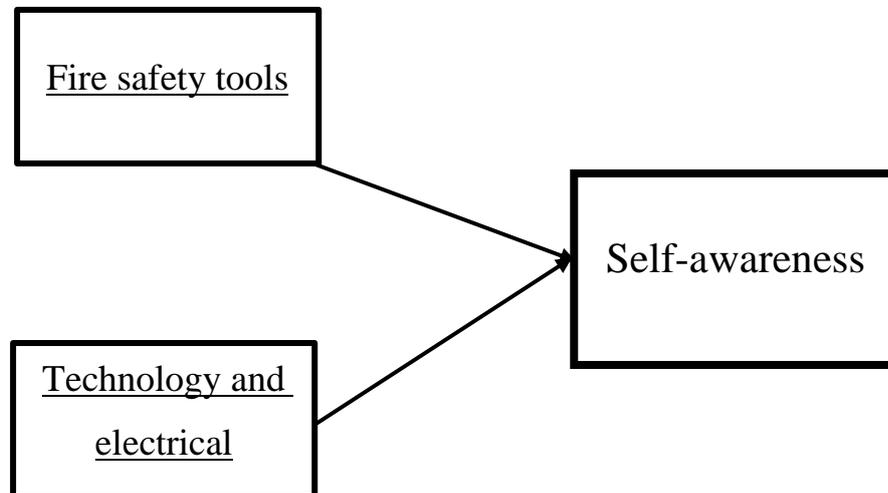


Figure 1.1: The effect of fire safety tools and technology and electrical on the self-awareness of the fire safety awareness in Shah Alam.

The figure above illustrates the purposed theoretical framework that serves as the basic of the study. It is to focus on the relationship among the two independent variables which consists of the fire safety tools and technology and electrical towards the self-awareness toward factors that influencing fire safety awareness

2.7.1 RESEARCH HYPOTHESIS

Hypothesis 1: The relationship between fire safety tools that has significant relationship with self-awareness toward the factors influencing the fire safety awareness in Shah Alam.

Hypothesis 2: The relationship between technology and electrical that has significant relationship with self-awareness toward the factors influencing the fire safety awareness in Shah Alam.

2.8 SUMMARY

As the result, this chapter covered the literature review on the fire safety tools and technology and electrical that effect the self-awareness of fire safety awareness in Shah Alam. Besides, fire safety tools and technology and electrical is the most important factors to create the self-awareness to the fire safety awareness. For the research methodology of the study will be discuss or be presented in the next chapter.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter presents the methodological concerns used in conducting this research and provide a justification for each step taken. It involves the General Research Design, Data Collection Method, Research Instrument, Sampling Techniques, Construct Management, Data Processing, Data Analysis Method and Summary.

3.2 RESEARCH DESIGN

Quantitative research method will be used in this study. The systematic empirical investigation of observable via statistical, mathematical, or computational techniques. Quantitative research is data based on quantities obtained using a quantifiable measurement process. This outline study the factors influencing fire safety in Shah Alam. Thus, it is appropriate to categorize this research as exploratory research and causal research.

Exploratory research can be define as a research conducted for a problem that has not been studied more clearly, develop operational, intend to provide priorities and improve the final research design.(Shields, Patricia and Rangarjan,2013). Exploratory research helps determine the best research design, data collection method and selection of subjects. Besides, casual research is conducted to assess impact of specific changes of exists norms, various processes, and others

This study focuses on investigating and examining the factors influencing fire safety awareness in Shah Alam. There are three basic categories of techniques for obtaining insights and gaining clearer picture of problem such as primary data analysis and questionnaire. Online survey is chosen to examine the factors influencing fire safety awareness in Shah Alam.

3.3 DATA COLLECTION METHOD

Data collection methods is a process of collecting information from all the relevant resources to find answers to the research problem, test the hypothesis and evaluate the outcomes data collection methods can be divided into two categories. Primary data have been used for this study. The information collected should be reliable and valid to the study because inaccurate data collection can impact the outcome of the study and ultimately lead to invalid results. Then, primary methods are used to analyze the data in order to provide a clearer and in depth understanding.

3.3.1 PRIMARY DATA

Primary data is data that is collected by a researcher from first-hand sources using methods like surveys, interviews, or experiments. It is collected with the research project in mind directly from primary sources. In this study, self-administrative questionnaire will be used to gather the primary data because it is the faster, effective, and reasonable way in obtaining and analyzing the data. However, the information of the responses will be kept private and confidential as stated in the survey questionnaire.

3.4 RESEARCH INSTRUMENT

For this study, self-administered questionnaires have been applied. Self-administered questionnaire defines the method in which the respondents answer the questionnaire by their own, either on the questionnaire papers or via Internet. However, extra caution must be taken in designing the questionnaires for better clarification of each question. Evaluation is done upon gathering of data from the questionnaires. Basically, the questions in the questionnaire were adopted from previous researchers and modified based upon the necessity to fit into this study.

Undeniably, the questionnaires certainly act as an enormously valuable instrument for this analysis. Questionnaire is quick to collect data and the answers can be used reliably to compare and measure. Besides, it can also be spread to a significant number of user respondents, speed and consistency improve, facilitating data processing.

The questionnaire form is performed in simple language for the best understanding explanations of questions that encourage analytical and reflective thought competent behavior. This encourages greater precision in the answers from the respondents because of the lack of misunderstanding in answering the questions. Brief introduction and study purpose are provided on the cover page of the questionnaire survey.

The questionnaires are usually divided into three categories, Section A for demographic profile, general information for Section B and Section C for general opinion.

In Section A, it is composed of the following questions closely related to the demographic data including gender, age, ethnicity, marital status, employment status, income and the level of education of the respondents. It is recorded to classify the group of residents in TTDI Jaya, Shah Alam.

In Section B, it consists of eight questions. This section prompts for the basic information regarding the public awareness of fire insurance from the respondents.

In Section C, the general opinion relates to the construct measurement of the study in the independent variables such as schedules, facilities. These variables are used to investigate the relationship between each of the independent variables with the dependent variable upon data collection from the answer given from the respondents.

Lastly, the 380 survey was distributed by using the Google Form to the targeted respondent. The respondents are asked on their willingness to participate in the survey prior to the survey.

The questionnaire link was distributed and collected in two weeks .The starting date was from 19th October 2020 until 1st November 2020. The online survey was carried out smoothly, thus researchers able to collect it on time.

3.5 SAMPLING TECHNIQUES

Sampling methods can be classified into two groups which are sampling with probability and non-probability. It is impossible for researchers to collect data from all residents, thus non-probability technique is chosen in which the respondents are selected from the population in some non-random manners.

Specifically, purposeful form of sampling is selected by the researcher interviewees that are appropriate and compliant with research purposes. In other words, it can be categorized using judgment and deliberate effort to acquire representative samples. In probability, it has simple random sampling, systematic sampling, stratified sampling, and cluster sampling. Next, for non-probability it has convenience sampling, quota sampling, judgmental sampling, and snowball sampling.

Mostly in research, the method of convenience sampling will be selected by choosing 380 respondents based on availability and willingness to participate. Useful outcomes may be collected, but the outcome is subject to substantial bias because those who volunteer to participate can differ from those who chose not to (volunteer bias). The survey may not be indicative of other traits like age or gender.

3.6 CONSTRUCT MEASUREMENT

RESULT OF REALIBILITY TEST OF RESPONDENT

VARIABLES	ITEMS	SOURCES
FIRE SAFETY TOOLS	F1 An automatic sprinkler is installed in the house F2 A good fire safety tools will be a good time to response to a fire. F3 Fire safety tools should have annual inception F4 Fire extinguisher is a must have in every house. F5 The storage space is isolated from heat sources.	Mohammad B. Hamida and Mohammad A. Hassanain (2019)

SELF- AWARENESS	<p>S1 Fire policy is important for resident area</p> <p>S2 Every resident should be trained in fire prevention of fire</p> <p>S3 Every resident should know about do's and don'ts in case of fire emergency</p> <p>S4 Our country needs more voluntary firefighter</p> <p>S5 Government and public authority must enforce regulations</p>	<p>Sravan Kumar Yeturu, Annapuri R, Chandrashekar Janakiram, Joe Joseph, Kalyana Chakravarthy Pentapati (2016)</p>
TECHNICAL AND ELECTRICAL	<p>T1 Latest resources through mass media are effective in prevention of fire.</p> <p>T2 The issue of fire respond should be emphasized.</p> <p>T3 Every household know any emergency number.</p> <p>T4 Technical competence has a positive impact on emergency preparedness.</p> <p>T5 Electrical outlets have plastic safety covers if there are small children in the home.</p>	<p>Wheeling Jesuit University and Center for Educational Technologies (2005)</p>

Table 3.1: Results of Pilot Test
Sources: Developed for the research

3.7 DATA PROCESSING

Before analyzed collected data, these data are needed to organize and generate into a useful way. In order analyzed, these data need to go through few processes which are data checking, editing, coding, transcribing, and cleaning.

3.7.1 DATA CHECKING

Data checking is the first and major step before researcher run and analyze collected data. It is important to check the completeness and accuracy of the data in order to minimize the error occur. Errors such as mistake during key in the data, or typo are crucial and need to take immediate action to correct it so that it would not affect the result.

3.7.2 DATA EDITING

When found any error in the data checking process, the data will be review and adjust to ensure the collected data are consistently and accurately key in and recorded.

3.7.3 DATA CODING

A set of data is necessarily included different codes as it represents data value and meaning, so that the set of data are clearer and more compact (“Data processing”,n.d.). In the questionnaire, respondents’ responses are coded accordingly, for example: male will be code as 1 while female coded as 2.

3.7.4 DATA TRANSCRIBING

In this process, data collected will be transferred and recorded in SPSS software in order to process and analyze.

3.7.5 DATA CLEANING

Data cleaning which also named as data cleansing or scrubbing. In this process, errors and inconsistencies that detected from data collected will be removed to improve data quality. Error such as duplicate information, invalid data and more should be detected and eliminated (Rahm & Do, 2000)

3.8 DATA ANALYSIS METHOD

Data analysis known as how researchers go from a mass of data to meaningful insights. There are many different data analysis methods, depending on the type of research. Here are a few methods you can use to analyze quantitative and qualitative data.

Qualitative data analysis is non-numeric information such as interview transcripts, notes, video and audio recording, images and text documents. It can be divided into the following five categories. Such as content analysis, narrative analysis, discourse analysis, framework analysis and grounded theory.

3.9 SUMMARY

In conclusion, research methodologies are used in collecting, analyzing, and interpreting data. Computer software, SPSS 26 will be used to assist in analysis and interpretation. Then, the primary data will be used self-administered questionnaire to obtain more accurate information from the large group of respondents. But secondary data, such as journals and reference books are used to help researchers to better understand the topic that is being investigated.

Besides, the sampling technique will be discussed in the earlier part. For the sampling technique researcher uses convenience sampling. Data analysis method that will be used is qualitative. This method is used depends on the research questions.

CHAPTER 4

DATA ANALYSIS AND FINDINGS

4.1 PREAMBLE

In this chapter 4, data collected from questionnaires will be analyzed and interpreted. The questionnaires are distributed through google form for 380 respondents. Next, the Statistical Package Society Science (SPSS) version 26.0 will be used to analyze data collected. Few elements will be discussed in this chapter include descriptive analysis, scale measurement, inferential analysis which consists of Pearson Correlation and last but not least the conclusion for this chapter by summarized on hypothesis findings. Results will be visually displayed as charts and tables.

4.2 DESCRIPTIVE ANALYSIS

4.2.1 CENTRAL TENDENCIES MEASUREMENT OF CONSTRUCT

VARIABLES	MEANS	STANDARD DEVIATION
FIRE SAFETY TOOLS		
F1 An automatic sprinkler is installed in the house	2.99	1.105
F2 A good fire safety tools will be a good time response to a fire	2.66	1.113
F3 Fire safety tools should have annual inspection	2.44	1.166
F4 Fire extinguisher is a must have in every house	2.80	0.999
F5 The storage space is isolated from heat sources	4.05	1.288
SELF-AWARENESS		

S1 Fire policy is important for resident area	4.11	0.863
S2 Every resident should be trained in fire prevention of fire	4.20	0.885
S3 Every resident should know about do's and don'ts in case of fire emergency	4.36	0.791
S4 Our country needs more voluntary firefighter	4.21	0.854
S5 Government and public authority must enforce regulations	4.28	0.881
TECHNOLOGY AND ELECTRICAL		
T1 Latest resources through mass media are effective in prevention of fire.	4.03	0.797
T2 The issue of fire respond should be emphasized.	4.21	0.802
T3 Every household know any emergency number	3.99	0.966
T4 Technical competence has a positive impact on emergency preparedness.	4.10	0.868
T5 Electrical outlets have plastic safety covers if there are small children in the home.	4.35	0.813

Table 4.1 The mean score result
Sources: Developed for the research

Table 4.3.1 shows the result of fire safety tools which F5 has the highest mean score at 4.05 with a standard deviation of 1.135 while F3 has the lowest mean value at 2.44 with a standard deviation of 1.666. Meanwhile self-awareness, where S3 recorded the highest mean value at 4.36 with a standard deviation of 0.791 while S1 recorded the lowest mean value at 4.11 with a standard deviation of 0.863. For the last dependent variable which were technology and electrical, it appeared that T5 has the highest mean score that consisted 4.35 with 0.813 of standard deviation while T3 has the lowest mean score that consisted 3.99 with 0.966 standard deviation.

4.2.2 DEMOGRAPHIC PROFILE

The demographic profile of the respondents has been identified in Section C of the questionnaire. A total of six questions were asked to collect data regarding to the respondents such as gender, age, ethnicity, highest education, marital status, and employment status. The researchers have been distributed 380 sets of survey questionnaire to the respondents and utilized the remaining 380 sets of survey questionnaire to make data analysis. Data collected are shown table form so that it is easier to understand.

NO	DEMOGRAPHIC PROFILES	FREQUENCY	PERCENTAGE (%)
1	Gender		
	Male	156	41.1
	Female	224	58.9
2	Age		
	Below 20 years old	90	23.7
	21 – 30 years old	153	40.3
	31 – 40 years old	77	20.3
	41 – 50 years old	60	15.8
3	Ethnicity		
	Malay	284	74.7
	Chinese	60	15.8
	Indian	32	8.4
	Others	4	1.1
4	Education		
	STPM	162	42.6
	Diploma	210	55.3
	Bachelor's degree	6	1.6
	Master	1	0.3
	PhD	1	0.3
5	Marital status		
	Single	219	57.6
	Married	161	42.2
6	Employment status		
	Student	91	23.9
	Government employee	148	38.9
	Private employee	91	23.9
	Others	50	13.2

Table 4.2: Demographic profiles results

Sources: Developed for the research.

Based on table 4.1, it shows that female respondents 58.9% are slightly more compare to male respondents 41.1%. The age group of 21 – 30 years has the majority proposition, which consists of 40.3% or 153 respondents. Meanwhile the minority proportion age group among 380 respondents is 41 – 50 years old which is 15.8% or 60 respondents. Next, age group which is below 20 years consist 23.7% or 90 respondents and also 31 – 40 years consist 20.3% or 77 respondents. Besides, most of respondents are Malay which consist 74.7% and the balance of respondents to Indian consist 8.4%, Chinese respondents comprised for 15.8% and Other respondents are less than others race which is 1.1%. Majority of respondents are Diploma which is 55.3% or 210 respondents. Meanwhile, minority of the respondents are Master and PHD which consist of 0.3% or 1 respondents Then, STPM which consist 42.6% or 162 respondents. Lastly, Bachelor's Degree consist 1.6% or 6 respondents the single status has the majority proposition, which consists of 57.6% or 219 respondents. Which of married status is consist 42.2% or 161 respondents. In the entire 380 respondents, there are 91 student respondents or 23.9%, 50 other respondents or 23.9%, 91 private employee respondents 23.9% and 148 government employee respondents or 38.9% took part in the research.

4.2.3 GENERAL QUESTIONS

The general questions of the respondents have been identified in Section A of the questionnaire. A total of five questions were asked to collect data regarding to the respondents such as how do you about fire safety, what is the cause of fire, when is the suitable time to use fire extinguisher and what will you do when you hear the evacuation alarm,. The researchers have been distributed 380 sets of survey questionnaire to the respondents and utilized the remaining 380 sets of survey questionnaire to make data analysis. Data collected are shown table form so that it is easier to understand.

NO	GENERAL QUESTIONS	FREQUENCY	PERCENTAGE (%)
1	How do you know about fire safety?		
	Company insurance	248	65.3
	Advertisement	67	17.6
	Campaign	51	13.4
	Others	14	3.7
2	When do you experience on fire related loss?		
	Once a year	213	56.1
	< 5 years	139	36.6
	< 10 years	8	2.1
	Others	20	5.3
3	What is the cause of fire?		
	Electrical fault	81	21.3
	Lightning	159	41.8
	Carelessness	111	29.2
	Others	29	7.6
4	When is the suitable time to use fire extinguisher?		
	The fire only small	133	35.0
	Has been instructed to use	65	17.1
	Fire begin to spread	132	34.7
	Others	50	13.2
5	What will you do when you hear the evacuation alarm?		
	Stop to get belongings	74	19.5
	Call family members	98	25.8
	Immediately go to emergency assembly point	166	43.7
	Others	42	11.1

Table 4.3: General Questions

Sources: Developed for the research.

Based on the table 4.2, it shown that the respondents who know about fire safety through insurance company is 65.3% or 248 respondents are slightly more compare to advertisement which is 17.6% or 67 respondents. Next, the respondents know through others is 3.7% or 14 respondents lower than campaign which is 13.4% or 51 respondents. Furthermore, most of the respondents had an experience on fire related loss once a year which is 56.1% or 213 respondents are more than had loss < 5 years which is 36.6% or 139 respondents follow with <10 years 2.1% or 8 respondents and others is 5.3% or 20 respondents. Other than that, respondents that think what cause of fire by lightning consist 41.8% or 159 respondents which is higher than carelessness 29.3% or 111 respondents, electrical fault which is 21.3% or 81 respondents and the most least is others which is 7.6% or 29 respondents. The suitable time to use fire extinguisher when the fire only small which is 35% or 133 respondents and follow by use when the fire begin to spread 34.7% or 132 respondents, has been instructed how to use one 17.1% or 65 respondents and others 13.2% or 50 respondents. What will respondents do when you hear the evacuation alarm, immediately go to the emergency assembly location which consist 43.7% or 166 respondents are slightly more than call your member which consist 25.8% or 98 respondents. Stop to get your belongings consist 19.5% which is 74 respondents and others consist 11.1% or 42 respondents.

4.3 SCALE OF MEASUREMENTS

4.3.1 RELIABILITY TEST

VARIABLES	CRONBACH'S ALPHA	NUMBER OF ITEMS
FIRE SAFETY TOOLS	0.664	4
TECHNOLOGY	0.850	5
SELF AWARENESS	0.866	5

Table 4.4 Result of reliability test.

Sources: Developed for the research.

The rule of thumb for the reliability test is that 0.7 or higher suggests good reliability and may be acceptable if between 0.6 and 0.7. Based on the results in Table 4.3, fire safety tools, self-awareness and technology recorded excellent reliability with Cronbach's Alpha of 0.664, 0.866 and 0.850 respectively.

4.4 INFERETIAL ANALYSIS

4.4.1 PEARSON CORRELATION ANALYSIS

		MEANFS	MEANTE	MEANSA
MEANFS	Pearson	1	.162**	.122*
	Correlation			
	Sig. (2-tailed)		.002	.017
	N	380	380	380
MEANTE	Pearson	.162**	1	.757**
	Correlation			
	Sig. (2-tailed)	.002		.000
	N	380	380	380
MEANSA	Pearson	.122*	.757**	1
	Correlation			
	Sig. (2-tailed)	.017	.000	
	N	380	380	380

Table 4.3.1 The results of Pearson Correlation

Sources: Developed for the research

Table 4.31 shows the result of Pearson correlation between the independent variables fire safety tools and technology and electrical dependent variable self-awareness of fire safety awareness among public in Shah Alam. The Pearson correlation among independent variable is below 0.900 and between 0.122 and 0.757.

The table shows fire safety tools and fire safety awareness among public in Shah Alam relationship significantly. The result in table shows p-value equal to 0.017 while less than alpha 0.05. Furthermore, the correlation coefficient value is 0.122, this shows the fire safety tools is weakly influence fire safety awareness among public in Shah Alam. The table shows technology and electrical and fire safety awareness among public in Shah Alam relationship significantly. The result in table shows p-value equal to 0.000 while less than alpha 0.05. In addition, the correlation coefficient value is 0.757, this shows the fire safety tools is weakly influence fire safety awareness among public in Shah Alam.

4.4.2 MULTIPLE REGRESSION

Table 4. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistic			Sig. F change
						F Change	df1	df2	
1	.757 ^a	.574	.571	.45164	.574	253.693	2	377	.000

a. Predictors: (Constant), MEANTE,MEANFS

Table 4.3.2 Result on the modal summary
Sources: Developed for the research.

According to Table 4.3.2, the R value = 0.757, R Square = 0.574 and Adjusted R Square = 0.571. R Square shows that 57.4 percent of the self- awareness influence by technology and electrical and fire safety tools. This also indicates that the relationship between the dependent variable and independent variables are moderate. However, there are 42.6 percent of the variation in self-awareness is explain by other factors. Therefore, researcher can conclude that even though the relation is moderate, but fire safety tools will still effect self-awareness in fire safety in Shah Alam.

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	103.495	2	51.747	253.693	.000 ^b
	Residual	76.899	377	.204		
	Total	180.394	379			

a. Dependent Variable: MEANSA

b. Predictors: (Constant), MEANTE, MEAN FS

Table 4.3.3 result of the ANOVA
Sources: Developed for the research

The Table 4.3.3 above presented the significant value is at 0.000 ($p < 0.05$). The independent variables which is technology and electrical are significantly contributes to self-awareness in fire safety Shah Alam.

Coefficients ^a		Unstandardized		Standardized		
		Coefficients		Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.1020	.156		6.536	.000
	MEANFS	.000	.030	.000	-.004	.997
	MEANTE	.777	.035	.757	22.229	.000

a. Dependent Variable: MEANSA

Table 4.3.4 Table of the coefficients

Sources: Developed for the research

From Table 4.3.4, coefficients show the higher the beta the most important factors of influence self-awareness of fire safety in Shah Alam. The result shows technology and electrical is the most important factors that influence self-awareness of fire safety in Shah Alam because of carries beta of 0.757. While, fire safety tools is the second highest factors that influence self-awareness of fire safety in Shah Alam with the beta of 0.000. The result of table 4.3.4 coefficient shows the importance of factors influence self-awareness of fire safety in Shah Alam is accordingly with technology and electrical and fire safety tools.

The multiple regression equation can be formed as below:

$$SA = A + B1 + B2$$

SA = Self Awareness

A = As constant

B1 = MEANTE (technology and electrical)

B2 = MEANFS (fire safety tools)

Therefore, the multiple regression equation can be formed as:

$$SA = 1.020 + 0.77 + 0.000$$

4.4.3 HYPOTHESES TESTING

Hypotheses I

H₀: Fire safety tools has no relationship towards self-awareness of fire safety in Shah Alam.

H₁: Fire safety tools has positively relationship towards self-awareness of fire safety in Shah Alam.

Based on Table 4.34, fire safety tools ($p = 0.997$) p-value is higher than significant level of 0.05. Therefore, since the p-value is higher than 0.05, H₀ is accepted and H₁ is rejected. In this case, fire safety tools have no significant relationship towards self-awareness of fire safety in Shah Alam.

Hypotheses II

H₀: Technology and electrical has no relationship towards self-awareness of fire safety in Shah Alam.

H₁: Technology and electrical has positively relationship towards self-awareness of fire safety in Shah Alam.

Based on Table 4.34, technology and electrical ($p = 0.000$) p-value is lower than significant level of 0.05. Therefore, since the p-value is lower than 0.05, H₀ is rejected and H₁ is accepted. In this case, Technology and electrical has significantly relationship towards self-awareness of fire safety in Shah Alam.

4.4.4 INDEPENDENT SAMPLES T-TESTS

GROUP STATISTICS

	D1 Gender	N	Mean	Std. Deviation	t cal	$\alpha=0.05$ t tab
MEANFS	Male	156	2.6106	.67873	-2.349	.024
	Female	224	2.7991	.82719		
MEANS A	Male	156	4.3038	.54641	1.721	.059
	Female	224	4.1804	.77145		
MEANTE	Male	156	4.1859	.55654	1.225	.040
	Female	224	4.1000	.74256		

Table 4.3.5 Difference factors influencing fire safety awareness between male and female towards fire safety tools, self-awareness, and technology and electrical.

The table above showed the difference factors influencing fire safety awareness between male and female towards fire safety tools, self-awareness, and technology and electrical. The independent t-test was used. The calculated value t for factors influencing fire safety awareness between male and female towards fire safety tools, self-awareness, and technology and electrical is -2.349, 1.721 and 1.225.

For the first variable since the vertical values of 0.024 at α level of 0.05 and 3.355 at α level of 0.01 are lower than the calculated value. There has significant difference between factors influencing fire safety awareness between male and female by fire safety tools. For the second variable since the vertical values of 0.059 at α level of 0.05 and 3.355 at α level of 0.01 are greater than the calculated value. There has no significant difference between factors influencing fire safety awareness between male and female by self-awareness. For third variable since the vertical value of 0.040 at α level of 0.05 and 3.355 at α level of 0.01 are lower than the calculated value. There has significant difference between factors influencing fire safety awareness between male and female by technology and electrical.

4.5 SUMMARY

In summary, this chapter serves to present the results and findings obtained from data gathering for this study. Furthermore, inferential analyses are also conducted and are demonstrated in this chapter to answer the research questions, as well as to determine the significance of the hypotheses for this research. The subsequent chapter contains discussion on major findings as well as a conclusion to this research.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

In chapter 5, it provides the overall of conclusion and discussion of the research. It summarized the discussion of major finding from chapter 4, highlights the implications of the study, stated the limitations of the study, provide recommendations for the future research, and provide conclusion of the entire research.

5.2 SUMMARY OF STATISTIC ANALYSIS

5.2.1 SUMMARY OF DESCRIPTIVE ANALYSIS

5.2.1.1 SUMMARY OF CENTRAL TENDECIES MEASUREMENT OF CONSTRUCT

FS5 has the highest mean score at 4.05 with a standard deviation of 1.135 while FS3 has the lowest mean value at 2.441 with a standard deviation of 1.666. TE5 recorded the highest mean score that consisted 4.35 with 0.813 of standard deviation while TE3 recorded the lowest mean score that consisted 3.99 with 0.966 standard deviation. SA3 has the highest mean value at 4.36 and SA1 has the lowest mean value at 4.11 with the standard deviation for with a standard deviation for both of them are of 0.791 and 0.863 respectively.

5.2.1.2 DEMOGRAPHIC PROFILE OF RESPONDENTS

Based on the descriptive analysis in chapter 4, out of 380 respondents there are 224 (41.1%) female, and the remaining 156 (58.9%) are male. From the data collected, most of the respondents are age around 21 to 30 years which consists of 153 respondents (40.3%), the next age group which is the second highest which is the age group below 20 years that include of 90 respondents (23.7%). Next, it is followed with 31 to 40 years old age group which consists of 77 respondents (20.3%). Lastly, the least age group are 41 to 50 years which have 60 respondents in total (15.3%).

The highest respondent for respondent's ethnicity is Malay which massively conquered 284 respondents in total (74.7%). Furthermore, the lowest in the ethnicity group is the others ethnicity which consists 4 respondents (1.1%). Next, is the second highest among the ethnicity which is Chinese that consists of 60 respondents in total (15.8%). Last for this ethnicity demographic is Indian which consists 32 respondents overall (8.4%).

Majority for the marital status for the respondents are single as it consists of 219 respondents (57.6%). Next, it is followed by how many respondents married and it resulted with 161 respondents (42.4%). Next demographic group is the highest which the most respondent's education level is Diploma which had 210 respondents (55.3%). The second highest among the highest education is STPM which consists of 162 respondents (42.6%). The third highest is bachelor's degree that consists of 6 respondents (1.6%) and last but not least for the least frequency are both Master and PhD which both of them have 1 respondent (0.3%) respectively.

Most of the respondent's employment status is government employee which consists of 148 respondents (38.9%). Meanwhile, for the minority respondent's employment status is other type of employment status which managed to get 50 respondents (13.2%). Next, it is followed with private employees and students with both of them have gave the same result of total respondent which is 91 respondents, and the percentage is 23.9% for both of them respectively.

5.2.1.3 SUMMARY OF SCALE MEASUREMENT

For the reliability test, questions for the dependent variable which consists of these Two variables which are fire safety tools and technology and electrical which by using the rule of thumb for the reliability test is that 0.7 or higher suggests good reliability and may be acceptable if between 0.6 and 0.7. Thus, all the variables stated (fire safety tools, and technology and electrical) are indeed variable.

5.2.2 SUMMARY OF INFERENTIAL ANALYSIS

The result of Pearson correlation between the independent variables fire safety tools and technology and electrical and dependent variable self-awareness of fire safety in Shah Alam. The Pearson correlation among independent variable is below 0.900 and between 0.122 and 0.757.

5.2.2.1 PEARSON CORRELATION

The Pearson correlation among independent variable is below 0.900 and between 0.122 and 0.757. Pearson correlation test also used to measure the relationship between each individual independent variables and dependent variable. The technology and electrical and fire safety awareness among public in Shah Alam relationship significantly. The result in table shows p-value equal to 0.000 while less than alpha 0.05. In addition, the correlation coefficient value is 0.757, this shows the fire safety tools is weakly influence fire safety awareness among public in Shah Alam. However, fire safety tools have no relationship toward the fire safety awareness among public in Shah Alam.

5.2.2.2 MULTIPLE REGRESSION

From the multiple regression analysis, the $R^2 = 0.574$ implies that 57.4% of the variation in the effect of fire safety tools and technology and electrical on self-awareness of fire safety awareness in Shah Alam. It can be explained that technology and electrical significant positive with self-awareness, while fire safety tools has no relationship self-awareness. Meanwhile, multiple regression analysis also concluded that technology and electrical has the strongest influence towards self-awareness of fire safety awareness in Shah Alam.

The multiple regression equation can be formed as below:

$$SA = A + B1 + B2$$

SA = Self Awareness

A = As constant

B1 = MEANTE (technology and electrical)

B2 = MEANFS (fire safety tools)

Therefore, the multiple regression equation can be formed as:

$$SA = 1.020 + 0.77 + 0.000$$

5.3 DISCUSSIONS OF MAJOR FINDINGS

While the previous section of this chapter focuses more onto the summary description of the entire descriptive and inferential analyses, this section is more onto the discussion on major findings in order to validate the research objectives and hypotheses.

Hypothesis	Significant	Conclusion
H ₁ : Fire safety tools has relationship towards self-awareness of fire safety awareness in Shah Alam	0.997	Rejected
H ₂ : Technology and electrical has relationship towards self-awareness of fire safety awareness in Shah Alam	0.000	Accepted

Table 5.1: Summary of Statistical Analysis

5.3.1 RELATIONSHIP BETWEEN FIRE SAFETY TOOLS AND SELF-AWARENESS OF FIRE SAFETY AWARENESS IN SHAH ALAM

H₁: Fire safety tools has no relationship towards self-awareness of fire safety awareness in Shah Alam

According to the Table 4.3.4 shown in Chapter 4, the significant level of fire safety tools is at 0.997 which higher than alpha value 0.05. This shows that there has no relationship between fire safety tools and self-awareness of fire safety fire awareness in Shah Alam. Besides, β -value is 0.000 which express that H₁ is rejected.

5.3.2 RELATIONSHIP BETWEEN TECHNOLOGY AND ELECTRICAL AND SELF-AWARENESS OF FIRE SAFETY AWARENESS IN SHAH ALAM

H2: Technology and electrical has relationship towards self-awareness of fire safety awareness in Shah Alam.

According to the Table 4. shown in Chapter 4, the significant level of technology and electrical is at 0.000 which lower than alpha value 0.05. This shows that there has positively relationship between technology and electrical and self-awareness of fire safety in Shah Alam. Besides, β -value is 0.757 which express that H2 is supported. The result is contrast with the studies that conducted by Wheeling Jesuit University and Center for Educational Technology (2005) Most electrical fires occur because of poor maintenance of electrical appliances, faulty wiring, and overloaded circuits.

5.4 LIMITATION OF THE STUDY

There are several limitations in this research. The result may not be generalized for the managerial because the samples only collection one of Malaysia, which is in Shah Alam, Selangor. It cannot represent whole population in Malaysia. Besides, Selangor has shown one of state from four other state that Fire and Rescue Department of Malaysia receive a call about fire. This shown other state from Shah Alam such as Wilayah Persekutuan Kuala Lumpur, Sabah, Sarawak, Johor people may lack of awareness of fire safety too. This may cause that people in difference demographic will have difference level of awareness about fire safety.

In addition, there are no independent variables in this research and there might have other factors which did not included in this research be influential predicts about fire safety awareness among public in Shah Alam. Lastly, another limitation for the research will be the only used of questionnaire survey. Minority of respondents could not spend much time and effort in contribution the survey. Questionnaire survey is also very judge mental and different people would have different views based on their understandings. All of these could reduce the accuracy and preciseness of the results.

5.5 RECOMMENDATION

According to the limitations, future researchers are suggested to broaden the awareness of fire safety with different geographical which including Wilayah Persekutuan Kuala Lumpur, Sabah, Sarawak, Johor. These may help in better and more accurate understanding towards awareness of fire safety in Malaysia. Moreover, different geographical may help in providing a more reliable result because people in difference demographic will have difference level of awareness about fire safety. Besides, future researchers can also collaborate with Fire and Rescue Department of Malaysia to carry out related study about fire safety. As researchers able to get more information regarding people from Wilayah Persekutuan Kuala Lumpur, Sabah, Sarawak, Johor database and perspectives, at the same time, benefit to the researchers as they will more understand towards awareness of fire safety.

5.6 SUMMARY

The research basically studies about the fire safety awareness in Shah Alam, Selangor. The research investigates the factors (fire safety tool, self-awareness, technology and electrical) which affecting factor influencing fire safety awareness in Shah Alam, Selangor. A total number of 380 questionnaires was being distributed through online survey and the data collected was processed and analyzed using SPSS 21.0 in which outcome generated included both descriptive and inferential analysis. After the analysis, fire safety tools and technology and electrical have a significant positive relationship between male and female towards factor influencing fire safety awareness in Shah Alam. Meanwhile, self-awareness has no significant relationship between male and female towards factor influencing fire safety awareness in Shah Alam, Selangor.

In conclusions, the research had met its main objectives by validating the fire safety tools and technology and electrical were significantly influenced the fire safety awareness while self-awareness is having a less impact on this study. Future research may fully use the knowledge in this research to make an amendment of for the reference purpose. Thus, this research gives a clearer picture of exploring the factor influencing fire safety awareness in Shah Alam.

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APPENDICES



FACTORS INFLUENCING FIRE SAFETY AWARENESS IN SHAH ALAM

Dear Sir/Madam,

We are Diploma of Insurance students from Politeknik Sultan Salahuddin Abdul Aziz Shah (PSSAAS) who are currently involving in Business Project (DPB 6043). We are seeking your kind assistance in giving your best answer on our research survey paper concerning fire safety awareness in Shah Alam. Please provide your answer on all the questions based on your best knowledge. Kindly be informed that there are no wrong responses to any of the statements in this survey paper. Thank you very much for your time and co-operation.

Yours Sincerely,

Nur Iffah Nasuha Binti Mohammed Sani	08DIN18F1009
Nur Azwa Adha Binti Rosli	08DIN18F1001
Syasya Syakirah Binti Zurkanain	08DIN18F1014
Athiera Wardina Binti Azlie Saufi	08DIN18F1026
Farah Nazirah Binti Ahmad Rizal	08DIN18F1021

INSTRUCTIONS:

- 1) There are **THREE (3)** sections in this questionnaire. Please answer **ALL** questions in **ALL** sections
- 2) The content of the questionnaire will be kept **strictly confidential**
- 3) Completion of this form shall take you approximately 5–10 minutes.

SECTION A – GENERAL QUESTION

Please tick (/) in the appropriate answer regarding your opinion about fire safety awareness.

G1. How do you know about fire safety awareness?

Company Insurance	
Advertisement	
Campaign	
Social Media	

G2. Have you ever had experiences a fire-related loss?

Once a year	
< 5 years	
< 10 years	
< 20 years	

G3. What is the cause of fire?

Electrical fault	
Lightning	
Carelessness	
Improper use of Liquefied petroleum gas (LPG)	

G4. What is the suitable time to use fire extinguisher?

The fire only small	
Has been instructed how to use one	
The fire is beginning to spread	
When people are in danger	

G5. What will you do when you hear the evacuation alarm?

Stop to get your belongings	
Call your family members	
Wait for instruction	
Immediately go to the emergency assembly location	

SECTION B – MAIN SECTION

Please **CIRCLE (O)** in the appropriate number regarding your opinion about fire safety awareness.

FIRE SAFETY TOOL

No	Statement	Strongly Disagree	Disagree	Neither disagree nor agree	Agree	Strongly Agree
F1	An automatic sprinkler is installed in the house.	1	2	3	4	5
F2	A good fire safety tools will be a good time response to a fire.	1	2	3	4	5
F3	Fire safety tools should have annual inception.	1	2	3	4	5
F4	Fire extinguisher is a must have in every house.	1	2	3	4	5
F5	The storage space is isolated from heat sources.	1	2	3	4	5

SELF-AWARENESS

No	Statement	Strongly Disagree	Disagree	Neither disagree nor agree	Agree	Strongly Agree
S1	Fire policy is important for resident area.	1	2	3	4	5
S2	Every resident should be trained in fire prevention control.	1	2	3	4	5
S3	Every resident should know about do's and don'ts in case of fire emergency	1	2	3	4	5
S4	Our country needs more voluntary firefighter.	1	2	3	4	5
S5	Government and public authority must enforce regulations.	1	2	3	4	5

TECHNOLOGY AND ELECTRICAL

No	Statement	Strongly Disagree	Disagree	Neither disagree nor agree	Agree	Strongly Agree
TE1	Latest resources through mass media are effective in prevention of fire.	1	2	3	4	5
TE2	The issue of fire reported should be emphasized.	1	2	3	4	5
TE3	Every household know any emergency number.	1	2	3	4	5
TE4	Technical competence has a positive impact on emergency preparedness.	1	2	3	4	5
TE5	Electrical outlets have plastic safety covers if there are small children in the home.	1	2	3	4	5

SECTION C – DEMOGRAPHIC PROFILE

Please tick (/) in the box which represent your response :

D1. Gender

Male	
Female	

D2. Age

Below 20 years	
21 - 30 years	
31 – 40 years	
41 – 50 years	

D3. Ethnicity

Malay	
Chinese	
Indian	
Others	

D4. Marital status

Single	
Married	

D5. The highest education

STPM	
Diploma	
Bachelor's degree	
Master	
PHD	

D6. Employment status

Student	
Government employee	
Private employee	
Others	

Thank you for your cooperation