CONTRIBUTING FACTORS TOWARDS WORKPLACE ACCIDENTS AMONG SMEs IN MALAYSIA

By

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CHAPTER 1

INTRODUCTION

1.1 Chapter Outline

The Small and Medium Enterprises ('SMEs') continues to demonstrate its economic importance to the country. In year 2012, 97.3 per cent of the companies in operation in the country are SMEs. Acknowledging the importance of SMEs to the economic growth as well as its contribution in creating job opportunities to the people, a series of SMEs development programmes were organised annually to provide training and to enhance necessary skills in order to expand and grow the businesses. Besides, the ease of financing access also allows SMEs to exploit this advantage to ensure continuity of the business. (Kee, Effendi, Talib and Rani, 2011 and the SME Economic Census 2013)

The stable increases in SMEs never stop the increase in workplace accidents over the years. Since year 2008, the number of workplace accidents has never slowed down; an escalating trend in workplace accidents could be witnessed over the years from 54,988 workplace accidents in 2008 to 60,590 workplace accidents in 2012. Such high number of workplace accidents could not be

neglected as it involves high number of fatalities recorded. (Kee, Effendi, Talib and Rani, 2011 and the SME Economic Census 2013)

Under this chapter of the research, the flow of this chapter will be discussed. This chapter comprises 6 subsections. Section 1.1 will explain the background of the study. Section 1.2 will discuss the problem statement while the research question will be presented under Section 1.3. The research objectives will be discussed in Section 1.4 while the significance of this research will be provided in Section 1.5. Last but not least, the limitation faced in conducting this study will be discussed in Section 1.6.

1.2 Background of the study

SMEs play a pivotal role in the growth of the gross domestic product ('GDP') of Malaysia. The SME Economic Census 2013 published by SME Corporation Berhad mentioned that SMEs are the backbone of the country's economy as SMEs in Malaysia has represented 97.3 per cent of the overall businesses established in the country, ie. 645,000 businesses. The annual growth rate of SMEs in the country for period 2006 to 2012 was 6.3 per cent, which is higher than the average growth rate of the overall economy growth of the country, ie. 4.7 per cent. According to New Sunday Times (2009) as cited by Kee, Effendi, Talib and Rani (2011) and the SME Economic Census 2013, the SME contribution to the national GDP has also increased from 29.4 per cent in calendar year 2005 to 32.7 per cent in calendar year 2012.

Besides the significant contribution to the nation's economy, the SMEs have created a lot of job opportunities in the workforce, lowering down the unemployment rate of the nation by providing 59 per cent of employment in the country (National SME Development Council, 2012 as cited by Surienty, 2012). The statistic published by the Department of Statistics Malaysia found in the SME Economic Census also shows that SMEs has created 4.9 million job opportunities in the total employment in year 2012 as compared to 4.6 million job opportunities in the total employment in year 2011.

Given the economic importance of SMEs to the growth of the country as well as to the employment and welfare of the people, the Government of Malaysia made a lot of commitments to enhance the development of SMEs in Malaysia. Varies ministries have come together to organise a series of SME development programmes every year to ensure a constant growth in SMEs in Malaysia. Supportive access to financing has encouraged SMEs to establish new companies and the long established companies have enough funding to expand and grow its businesses.

However, despite the fact that SMEs plays such a crucial part in the economic development of the country, the number of workplace accidents happened in the SMEs is at a worrying state. Based on the presentation of Dato' Dr Mohammed Azman bin Aziz Mohammed on the number of accidents reported to Social Security Organisation of Malaysia ('SOCSO'), the number of reported accidents has significantly decreased from 85,926 workplace accidents reported in year 2001 to 60,590 workplace accidents in year 2012. However, since year 2008 to 2012, the number of workplace accidents shows an escalating trend from 54,988 workplace accidents in 2008 to 60,590 workplace accidents in 2012. The steady increase in workplace accidents casts doubt on the effectiveness of the measures taken by the authority in reducing the number of workplace accidents. The high number of workplace accidents in SMEs is also an indication that the safety and the well-being of the workers are not being handled well by the SMEs in Malaysia.

According to the Director General of Department Occupational Safety and Health Malaysia ('DOSH'), Ir Tuan Haji Abu Bakar Che Man (2010), 80 to 90 percent of the workplace accidents reported to Social Security Organization ('SOCSO') are workplace accidents happened in SMEs. The work of Said, Said and Halim (2011) illustrated that manufacturing sector is the industry that recorded the highest number of workplace accidents. Although the total number of workplace accidents has slowed down in the period 2001 to 2008, the workplace accidents starts to increase after year 2008. The number of workplace accidents in Malaysia is much higher as compared to the number of workplace accidents recorded in the developed countries such as Japan, South Korea, Sweden and European countries (Hamid, Majid and Singh, 2008). Surienty, Khoo and Kee (2011) further stated that Malaysia recorded 6.7 workplace accidents for every 1,000 workers in year 2004 while developed countries only recorded 3 to 4 workplace accidents for every 1,000 workers.

Based on the statistic published by SOCSO in 2013, it is known that the increase in the reported workplace accidents is attributed by the increase in reported commuting accidents from 19,041 accidents in 2008 to 25,616 accidents in 2012 (SOCSO, 2013). The commuting accident rate per 1,000 workers in year 2008 was 3.36 accidents while commuting accident rate per 1,000 workers in year 2012 was 4.01 accidents.

In terms of fatal accidents and disablement accidents, significant increase could be witnessed from the total numbers of accidents from 1,135 fatal accidents recorded in 1998 to 1,301 fatal accidents recorded in 2008 and from 13,698 disablement accidents recorded in 1998 to 25,592 disablement accidents recorded in 2008 (Said, Said, Halim, 2012). Based on the statistic demonstrated by Said, Said and Halim (2012), manufacturing industry is the industry that records the most workplace accidents, followed by wholesale and retail trade, restaurant and hotel.

The high number of workplace accidents recorded could be disruptive for the operations of the SMEs. This is because the need to incur money whenever there is an accident that happened in the workplace. Workplace accidents could cost the companies a huge amount of money as the companies not only need to compensate the employee who is involved with the workplace accident, but may also need to incur a huge chunk of money if it is a court case and may need to invest in new technology to prevent such accidents from happening. Besides, since the increase in workplace accidents is largely attributed by the increase in commuting accidents, the need for maintenance or overhaul of the motor vehicles or the need to purchase a new motor vehicle would also be quite a high cost to the company.

This paper aims to critically analyse the contributing factors towards workplace accidents among SMEs in Malaysia. A better understanding of this

topic could help most of the businesses in Malaysia to identify the root cause of the problem, hence initiating actions to overcome or solve the problem or prevent them from future occurrence besides restructuring the safety and health work culture to reduce the rate of workplace accidents happening in Malaysia.

1.3 Problem Statement

The workplace accidents in SMEs in Malaysia has shown an increasing trend over the years from 54,988 workplace accidents in 2008 to 60,590 workplace accidents in 2012. The high number of workplace accidents is at an alarming state as the workplace accidents would cause a negative impact to the companies after each occurrence. According to Hamid, Majid and Singh (2008), comparison between workplace accidents in Malaysia and workplace accidents in other companies, such as United Kingdom and United States of America, shows that workplace accidents for every 1,000 employees in Malaysia is still high when being benchmarked against the statistics of developed countries. Malaysia has recorded 6.7 workplace accidents for every 1,000 workers in year 2004 while developed countries only recorded 3 to 4 workplace accidents for every 1,000 workers (Surienty, Khoo and Kee, 2011). This shows that Malaysia is still far behind the developed countries in terms of the ability to contain workplace accidents at a minimal level.

Besides, the occurrence of workplace accidents could also cause major impact on the SMEs operations in terms of monetary cost as well as the image of the company. When workplace accidents happen, the company does not only need to compensate the employee who is involved with the workplace accident, but may also face litigation for not providing a safe working environment for the employees to work in. The Company may also need to incur a huge chunk of money if there is a need to invest in new technology to prevent such accidents from happening and maintenance or overhaul of the asset after each incident. This may be disruptive to the operation of the company as a whole. As accidents may be caused by many different reasons, it is crucial to understand why and how the accident does takes place in order to prevent and solve the problem.

Other than that, there are also not many researchers conducted previously to investigate the factors that could cause workplace accidents in SMEs in Malaysia. When research is being conducted for this study, it is noted that there is an increase in terms of number of researches that were conducted revolving workplace accidents, however, most of them are empirical studies based in a specific industry in countries such as United Kingdom and United States of America. For empirical studies based in Malaysia, most of the studies revolve around issues of the establishment and implementation of Occupational Safety and Health Act instead of investigating causal factors that led to the occurrence of workplace accidents in SMEs in Malaysia.

Therefore, based on the problems identified earlier in this section, it is extremely important to conduct a study to examine the contributing factors towards workplace accidents of SMEs in Malaysia. Hence, this paper is drawn up with an aim to determine the causes of workplace accidents happening in the SMEs in Malaysia.

1.4 Research Questions

The main question of this study is:

i. What is the main contributing factor towards workplace accidents among SMEs in Malaysia?

ii. Is there any relationship between working environment and workplace accidents among SMEs in Malaysia?

iii. Is there any relationship between employee's behaviour and workplace accidents among SMEs in Malaysia?

iv. Is there any relationship between training and workplace accidents among SMEs in Malaysia?

1.5 Research Objectives

This study aims to investigate the contributing factors towards workplace accidents among SMEs in Malaysia and will focus on the following objectives:

i. To examine the relationship between working environment and workplace accidents among SMEs in Malaysia.

ii. To determine the relationship between employees behavior and workplace accidents among SMEs in Malaysia.

iii. To investigate the relationship between training and workplace accidents among SMEs in Malaysia.

1.6 Significance of Research

The study is aim to examine the reasons the high number of workplace accidents recorded in the SMEs in Malaysia if compared to a relatively lower number of workplace accidents reported by other developed countries. This study would be beneficial for the government to reassess the current organizational safety and health policy and procedures for businesses in Malaysia and make amendments as necessary to ensure that the acts or amendments that govern businesses in Malaysia in terms of operational safety and health, are up to date. After knowing the causes to the escalating trend in number of workplace accidents, solutions could then be proposed to adhere to

the worrying situation. Other than that, as the jeopardising extent of high number of workplace accidents are outlined in this study, the study may be a "wake-up call" for SMEs to finally take this scenario seriously and start to look into the ways to curb the devastating situation.

Secondly, this study is also aimed to provide a reference to the future scholars and researchers that are interested to conduct a more in-depth review to investigate the most significant contributing factors that could cause workplace accidents to happen. As this study has examined the work of previous researchers before the questionnaires were designed in Chapter 3, this research could be very useful for future researchers if they want to extend this study more detail.

As a whole, as this study is investigating for the contributing factors that could cause workplace accidents to occur, this study is useful for all researchers that would like to conduct a similar study or to delve into a specific industry in Malaysia. This study would provide a guideline as to what to avoid or implemented so that the workplace accidents could be minimized. Other than that, this research could also be beneficial to SMEs in other countries that also record a high number in workplace accidents as the similarity of the setting of study could be used as a benchmark against the study conducted by them. The factors identified in this study could also be used to examine whether such

factors are also the contributing factors that cause the occurrence of workplace accidents in other countries.

1.7 Limitations

This research only focuses on the factors for the occurrence of workplace accidents in SMEs in Malaysia. As such, the generalizability of the findings presented in this study do not zoom in to investigate reasons for occurrence of workplace accidents in each industry. The factors listed in this paper are general and may not be applicable for each and every industry or business settings.

1.8 Operational Definition

The contributing factors towards workplace accidents in SMEs in Malaysia, which will be discussed in this paper are working environment, employee's behaviour and training. All three of the contributing factors are identified as the independent variables of this study. The operational definitions of each of the variables are explained below:

i. **Working environment** – working characteristics or condition created for the employees to work in (Arifin, Aiyub, Razman, Jahi, Awang and Hussain, 2013)

ii. **Employees behaviour** – The permanent characteristic of the employees that causes him or her to be involved in an accident (Abdelhamid and Everette, 2000)

iii. **Training** – A program conducted to educate the employees in order to enhance the employees' knowledge and discipline (Hamid, Majid and Singh, 2008)

1.9 Chapter Summary

Chapter 1 briefly describes the overview of this research. This chapter starts with chapter outline with regards to SMEs. The important parts of this chapter cover background of study, problem discussion, research questions and objectives, significance of this research and also the limitation of this study.

Chapter 2 outlines the literature reviews related to this study. It explores true definition of many areas such as Small and Medium Enterprises (SMEs), employees' behaviour, working environment, training, other factors and workplace accidents among SMEs in Malaysia in a greater depth. At the end of this chapter, a research framework and hypotheses statement are developed based on the literature review.

Chapter 3 addresses a detailed discussion of research methodology adopted in this study. This chapter will highlight the research design, sampling methods,

questionnaire design, and measurement technique followed by proposed methodology to use in the study.

Chapter 4 focuses on the research findings. Each of the hypotheses is analysed using the data that have been obtained from the questionnaires and conclusions are drawn.

Chapter 5 presents the summary and conclusion of this study. This chapter will examine whether research objective is achieved or not. Also, this chapter discusses the implications of research. Final part of this chapter shares the limitations of study and recommendation for future research.

CHAPTER 2

LITERATURE REVIEW

2.1 Chapter Outline

Under this chapter, definitions and thoughts published by previous researchers on their view of contributing factors towards workplace accidents among SMEs in Malaysia will be elaborated.

2.2 Definitions of Small and Medium Enterprises (SMEs)

There is no universal interpretation for SMEs as SMEs could be interpreted in various ways in different jurisdictions (Senik, Isa, Scott-Ladd and Entrekin, 2010). SMEs refer to enterprises or firms that have less than 500 employees in the European Union as well as in the United States of America (Senik, Isa, Scott-Ladd and Entrekin, 2010; United States International Trade Commission, 2010).

However, SMEs could be defined differently in the Malaysia context. According to SME Corp Malaysia, as cited by Kee, Effendi, Talib and Rani (2011), SMEs are categorized based on some fixed quantitative criteria, which were pre-defined according to different industries. In Malaysia, two variables

are used to check whether the business falls under the SMEs categories and these variables are number of employees or the annual revenue of the business in a year. Basically, SMEs in Malaysia include all the enterprises below the annual revenue threshold of RM25 millions or enterprises that hires less than 150 full time employees (SMIDEC, 2002 as cited by Senik, Isa, Scott-Ladd and Entrekin, 2010).

In a more detailed explanation provided by Kee, Effendi, Talib and Rani (2011) with reference to SME Corp Malaysia, in the manufacturing and its related services as well as agro-based industry (hereinafter known as 'Industry 1'), SMEs refers to businesses with annual revenue less than RM25 million with 150 full time employees while in the services, information and technology and primary agriculture industry (hereinafter known as 'Industry 2'), SMEs refer to businesses with annual revenue threshold of less than RM5 million with less than 50 full time employees. However, according to SME Economic Census 2013, with effect from 1 January 2014, SMEs in Malaysia include all enterprise below annual revenue threshold of RM60 million or enterprise that hires less than 200 full time employees for manufacturing sector whereas for services and other sectors, SMEs are enterprise below the annual revenue threshold of RM20 million or enterprise that hires less than 75 full time employees.

According to Kee, Effendi, Talib and Rani (2011), SMEs could be divided into three categories, which are micro enterprise, small enterprise and medium enterprise. These categories are categorised based on the number of full time employees of the businesses and the annual revenues of the businesses, and it also varied between industries. Micro enterprise is a business with less than 5 full time employees and has annual revenue of less than RM250, 000 if it is in Industry 1, or RM200, 000 if it is in Industry 2. Small enterprise refers to businesses with 5 to 50 full time employees in Industry 1, or 5 to 19 full time employees in Industry 2 and annual revenue of RM250,000 to RM10 million if it is in Industry 1, or RM200,000 to RM1 million if it is in Industry 2. As for medium enterprise, medium enterprise refers to business with 51 to 150 employees in Industry 1 or 20 to 50 employees in Industry 2 and annual revenue of RM10 million to RM25 million in Industry 1 or RM1 million to RM5 million in Industry 2. However, according to SME Economic Census 2013, with effect from 1 January 2014, micro enterprise is businesses with less than 5 full time employees and has annual revenue of less than RM300, 000. Small enterprise refers to businesses with 5 to 75 full time employees or with annual revenue from RM300, 000 to less than RM15 million in manufacturing industries, or enterprise with 5 to 30 full time employees or with annual revenue from RM300, 000 to less than RM3 million in services and other sectors. As for medium enterprise, medium enterprise refers to businesses with 75 to 200 full time employees or with annual revenue of RM15 million to RM50 million in manufacturing industry, or business with 30 to 75 full time

employees or annual revenue of RM3 million to RM20 million in services and other sectors.

For businesses that fall under the categories of SMEs, the Government of Malaysia, acknowledging the economic importance of SMEs in the contribution of GDP of the country, has allocated extensive funding to ensure that SMEs could develop and improve despite the ever changing and turbulent business environment (Kee, Effendi, Talib and Rani, 2011).

SMEs, which are the backbone of the economy of Malaysia, constitutes 97.3 per cent or 645,000 businesses to the total business establishment in Malaysia (SME Economic Census, 2013). As witnessed in the statistics published, SMEs play a pivotal role in ensuring the development of the country in terms of economic aspect. The annual growth rate of SMEs in the country for period 2006 to 2012 was 6.3 per cent, which is higher than the average growth rate of the overall economy growth of the country, i.e. 4.7 per cent. According to New Sunday Times (2009) as cited by Kee, Effendi, Talib and Rani (2011) and the SME Economic Census 2013, the SME contribution to the national GDP has also increased from 29.4 per cent in calendar year 2005 to 32.7 per cent in calendar year 2012.

2.3 Workplace Accidents

Heinrich et al (1980) defined accident as unplanned and uncontrolled situations whereby either the reaction or action of an object, substance, person or radiations lead to the personal injury. It is said that human factors related to individual, nature of the job and organisational may be the best reasons leading to this problem on number of levels (Male, 2003). It is almost impossible to reach a zero accidents goal in an organisation. Gyekye (2010) stated that there are two essential causes for occupational or workplace accidents to happen namely internal causal factor i.e. dispositional characteristics of the worker and external causal factors i.e. characteristics of the work environment.

According to Zakaria, Mansor and Abdullah (2012) , there are number of reasons for the occurrence of accidents in the workplace which resulting in either minor or major (death) injury. It is advisable for the employees to stay alert and aware at all times in order to avoid accidents. Meanwhile, the most common causes for workplace accidents should be determined by the managers so that they can identify possible risk factors early as prevention. The Malaysian government has taking an appropriate actions and efforts on implementing safety and health policies through several programs such as the guidelines enforcement, conducting site safety seminars and certifications.

However, the current Occupational Safety and Health (OSH) situation in the workplace is still below expectation and unfavourable.

The issue of occupational safety and health need to be quickly addressed as it has becomes extremely pressing issue especially when SMEs keep growing in terms of size and employees. This is because the operation of an SME is easily disrupted when accidents happen in the workplace leading employees to take prolonged sick leaves. However, the lack of capability and capacity in creating and implementing an effective system for the employees' safety is the problem facing by the SMEs today. The awareness of OSH issues have been increased since the past few years. This is due to the acknowledgement of OSH by SMEs as a core determinant of competitiveness by reducing safety and health risks leading to higher productivity and profitability at the end.

It is said that workplace accidents in Malaysia are declining in Year 2011. This new finding has been announced by Tan Sri Lee Lam Thye, the Chairman of the National Institute of Occupational Safety and Health (NIOSH). The numbers of accidents were reduced due to the concerted efforts taken by Department of Occupational Safety and Health (DOSH) and NIOSH. In reference to SOCSO report, Lee explained that the number of workplace incidents has decreases from 133, 293 in years 1993 to 55,208 in year 2009. In contrast, there was a significant increase in term of commuting accidents from 11, 700 in years 1993 to 20,814 in year 2009. He further quoted that 40 per

cent of the accidents occurred in industry sector. The rise in commuting accidents made Lee quite worried- leading the authorities to find a solution with the help of SOCSO.

2.4 Working Environment

According to Tay (2014), workplace accidents mostly happen when the working condition or the work processes are unsafe. The Malaysian Occupational Safety and Health Act ('OSHA') was enacted in the year 1994, and this act should be complied by all organizations regardless of its size and status (Tay, 2014). However, even though the act is fully enforced in more than a decade ago, many of the SMEs are still yet to observe the law. Tay (2014) further stated that most of the SMEs that have yet to comply with the Act often gave economic factors and ignorance as the main reasons for the organization for not observing the OSHA 1994. According to Surienty, Khoo and Kee (2011), management commitment to ensure effective implementation of OSHA 1994 is important to ensure that the working environment is safe for the employees. The ignorance of higher management and their reluctance to commit time and money to implement safety rules would make the working environment an unsafe place to work at. By ignoring the OSHA 1994, the organization puts the employees in danger in the day-to-day operations.

As for those SMEs that have implemented the safety rules, some of the safety rules are yet to be updated in accordance to the change in technology used in its operation (Tay, 2014). Due to the lack of update in the safety rules, there may be some weaknesses in the safety and health management system of the organization that have yet to be discovered (Arifin, Aiyub, Razman, Jahi, Awang and Hussain, 2013). Hence, even though there are safety rules implemented within the organization, the safety rules may no longer be relevant to protect the employees from engaging themselves with dangerous activities without any pre-cautious steps being undertaken to prevent it from happening. Kanten (2013) also stated that a safe working environment is a tool to ensure good safety performance as it is crucial in minimizing the workplace accidents. The working environment is a predictor of workplace accidents. Workplace accidents are less likely to take place in a workplace equipped with updated safety rules. Gyekye (2006) also supported that the poor management attitude towards the implementation of occupational safety rules and procedures is the main cause for the occurrence of workplace accidents.

On top of implementation of occupational safety rules and procedures, according to Surienty, Khoo and Kee (2011), negative reinforcement enforced by the management in penalising employees who failed to follow safety measures could also enhance a safe working environment for the employees to work in. If penalty system is enforced together with the implementation of safety rules and procedures, workplace accidents could then be minimized as

the employees and management will work hand-in-hand to ensure that the working environment is safe, thereby reducing the likelihood of occurrence of workplace accidents.

Abdelhamid and Everette (2000) as cited by Hamid, Majid and Singh (2008) also illustrated some examples of unsafe working environment, such as dress or apparel hazard, environment hazard, inadequacy of restriction of physical access, fire hazard or public hazard that may cause unnecessary occurrence of workplace accidents, which could be avoided if such hazards are cleared. For example, pathways that were not cleared may cause the employees to trip and injured themselves. If management and employees work hand-in-hand to ensure that the pathways are cleared at all time, such accident could have been avoided.

Other than physical environment, it is also important for organizations to ensure that their employees do not work under a constantly stressful environment (Zakaria, Mansor and Abdullah, 2012). Dobson et al (1999) as cited by Zakaria, Mansor and Abdullah (2012) noted that the rate of workplace accidents is higher when the employees felt rushed under a stressful working condition. When the employees are working under a stressful environment, they are most likely lack of sleep, which makes them difficult to stay alert and this may cause the employees to engage in a dangerous situation especially when they are driving (Hakkamen and Summala, 2000 as cited by Zakaria,

Mansor and Abdullah, 2012). As discussed in Section 2.2 on the statistic published by SOCSO in regards to the increase in number of commuting accidents, it is known that the workplace accident is largely contributed by the number of commuting accidents. The commuting accident rate per 1,000 workers in year 2012 was 4.01 accidents per 1,000 employees. If the employees are sleep deprived or rushed through a highly stressful environment, the likelihood of employees engage in a commuting accident is much higher.

2.5 Employees Behaviour

One of the contributing factors towards the occurrence of workplace accident in SMEs in Malaysia is due to the behaviour or working attitudes of the employees (Clarke, 2006; Dessler, 2010; Neal & Griffin, 2006 as cited by Tay, 2014). In most of the cases, employees are often arrogant, careless, negligence, ignorant or disobedient, which led to the occurrence of workplace accident or occupational injuries. According to Hamid, Majid and Singh (2008), accidents do not just happen, but accidents are caused mainly by human factors such as negligence when handling the equipment.

Most of the organizations in Malaysia are implemented with occupational safety and health policy and procedures, which if strictly followed, could keep number of workplace accidents at bay. However, due to the reluctance of

employees to comply with occupational safety and health rules and procedures set by the organizations, the employees are exposed to the risk of making mistakes, leading to the occurrence of workplace accident and work related injuries (Tay, 2014).

Besides, the leniency in the penalty system for not adhering to the safety rules and regulation, as explained in Section 2.3, could also cause employees refuse to comply strictly on the occupational safety rules and regulations. The ignorance of employees in regards to the compliance of safety rules could lead the employees to takes thing for granted and engaged in dangerous activity, which may lead to occurrence of workplace accidents. Under the penalty system, the employees will ensure that they adhere to all the safety rules and procedures strictly to avoid paying for the penalty of non-compliance. Besides, the employees will also be more proactive towards their own safety and the likelihood of becoming a victim of workplace accidents could also be lowered. Straub (2005) also proposed a whistle blower program to be implemented in all SMEs meant for the employees to report unsafe behaviours of other employees to the management. Under the whistle blower program, any employee could report another employee if they feel that the said employee is operating the equipment recklessly or engaging in any unsafe act. The employee who blows the whistle will stay anonymous while the reported employee will be called for a meeting to discuss the unsafe acts committed. Penalty could also be slapped on the employee who acts recklessly in the

working environment. By having such program, every employee will then have a safer environment as everyone is accountable for his or her own actions and behaviours.

Abdelhamid and Everette (2000) as cited by Hamid, Majid and Singh (2008) also illustrated some examples of unsafe acts committed by employees due to ignorance to the safety rules, which are not wearing safety helmet or safety glasses, operating at unsafe speed, took unsafe position or posture, operating equipment without authority, working under the influence of alcohol or drug or working with insufficient sleep. Should the employees are acting in accordance with the safety rules and procedures, workplace accidents could be reduced significantly. For example, if the employees are not driving under the influence of alcohol or driving with insufficient sleep, the likelihood of the employees to engage in the workplace commuting accidents could be significantly lowered.

There are several cases of workplace accidents that were happened in the past associated with drugs usage. According to Rountree (n.d.), examples of workplace accidents that occurred due to impaired workers under influence of drug are the 1981 crash of an EA-6B Prowler on the USS Nimitz, the wreck of Conrail/ Amtrak train in Maryland that happened in year 1987 and the Exxon Valdez incident in year 1989. These accidents, although happened outside Malaysia, were all caused by influence of drug. The drivers who have positive drug tests result are also likely to be intoxicated with alcohol. Hence, the drug

and alcohol use coupled with reckless driving, will significantly increase the workplace accident rate. Therefore, to combat these episodes from happening, many of the companies in the United States of America have implemented drug and alcohol tests within the workplace. Workplace drug and alcohol screening programs, although would cause the company to incur a huge cost, could definitely lower the likelihood of the occurrence of workplace accidents such as accidents caused by employees working under the influence of drug and alcohol.

According to Zakaria, Mansor and Abdullah (2012), the safety attitudes of an employee could influence directly on the frequency of the occurrence of workplace accidents. The recklessness of an employee or the ignorance to adhere to the safety rules may contributes to the occurrence of workplace accidents. Heinrich (1959) as cited by Zakaria, Mansor and Abdullah (2012) stated that 88 percent of workplace accidents are often caused by unsafe acts of the employees. DuPont (1991) as cited by Zakaria, Mansor and Abdullah (2012) also supported that unsafe act is one of the cause that contributes to most of the occupational injuries and workplace accidents.

2.6 Training

Workplace accidents could create disruptions in the daily operation of the company as whenever an accident happened in the workplace, the injured

employee is likely to be sent home to rest (Waehrer and Miller, 2009). If the employee suffers a severe injury, the employee may need a long period to rest and recover. As the work of the injured employee left unattended, the management may need to hire replacement workers to replace the injured employee until the injured employee is fit enough to return to work. Hence, not only the productivity of the company could be affected, the company may even need to incur a significant cost to hire a new employee and to train the new employee.

Therefore, it is vital for the management to invest in training in order to reduce likelihood of occurrence of workplace accidents. In order to create a safe working environment, it is important for the organization to educate its employees in relation to the safety rules, policies and procedures of the organization to ensure that the employees strictly adhere to it, consequently reducing the number of workplace accidents (Coyle et al, 1995; Dedobbeleer and Beland, 1991 as cited by Zakaria, Mansor and Abdullah, 2012). According to Waehrer and Miller (2009), the safety and health training is also a requirement of OSHA. Safety and health training could be provided through two channels, which are structured formal training organized in a classroom environment and informal training of educating the employees on the job-related skills. Classroom training is held with an aim to educate the employees in relation to the general safety rules, policies and procedures as well as to introduce the safety committee to the training participants to ensure that they

know who they should turn to when there is doubt on what they should do when an accident occur. For informal training, skills relevant to the work will be taught from an experienced worker to less experienced worker.

There are a lot of cases of workplace accidents that were associated with poor training conducted in the workplace. When an employee joins an organization, induction should be given to them to educate them on how to operate the machines as well as the safety rules that should be followed. Steemson (2000) as cited by Zakaria, Mansor and Abdullah (2012) stated that workplace accidents could be reduced if adequate training is provided to the employees. It is important to educate the employees the right way to operate heavy duty machines and also the precaution steps that could be undertaken by the employees to reduce the likelihood of workplace accidents occurrence. By teaching or training a worker on the production-related skill, such as the way to operate heavy duty machines, the worker productivity could also be enhanced as they would not spend time on exploring the way to handle or operate the machines.

As discussed in previous section, most of the workplace accidents are caused by unsafe acts. If constant training is given to remind the employees of the correct approach to deal with the heavy duty machines, the employees will be more alert when they are around the machines, hence the likelihood of workplace accidents to happen would decrease. Shanon et al (1997) as cited

by Zakaria, Mansor and Abdullah (2012) also supported that if safety training is conducted on a more regular interval of time, the result of work safety could then be upheld. According to Waehrer and Miller (2009), the training activities are also very important to educate and instruct the employees of the company to avoid known hazards and avoid creating hazards to other employees. The proper use and the proper way to handle the equipment, interval of maintenance to be conducted should also be taught in the training to ensure that the employees know how to handle and operate the equipment, thereby lowering the likelihood of occurrence of workplace accidents.

Besides, the lack of training in relation to safety rules of the organization could also expose the employees to hazards (Zakaria, Mansor and Abdullah, 2012). According to Joel (1997) as cited by Zakaria, Mansor and Abdullah (2012), when the employees are not trained or informed, they may create hazards without knowing, which may in turns caused other employees to be involved in workplace accidents. For example, the employee may not know that small value assets such as tools must be kept immediately after use. If the employees leave the tools scattered around the workplace, it would create hazard to other employees who are not alert. This will in turns cause workplace accidents to happen. Adequate training should be conducted in order to educate and highlight the hazard control activities to the employees to ensure that the employees know how to avoid hazardous activities.

Training on the language to be used in the daily operation could also be conducted to educate the employees who have lower education levels (Waehrer and Miller, 2009). By doing so, the employees could then overcome the language barrier and avoid accidents that occur due to miscommunication among the employees or misinterpretation of instruction given by the superior of the employees. According to Waehrer and Miller (2009), by enhancing the language skill of the employees, the productivity of the operation could also be enhanced as the workers will spend lesser time in understanding instruction and can work independently when there is any paperwork that is involved. Besides, whenever there is an introduction of new technology or update in the safety rules and regulations, the employees who are equipped with good language skill could also understand the requirement easily, thereby enhancing the productivity of the company. Other than that, communication could also be enhanced within the employees if all employees are equipped with good language skill. Therefore, it is very important for the company to conduct training on the language skill to ensure smooth communication and avoid miscommunications that may occur.

Last but not least, according to Waehrer and Miller (2009), the knowledge and safety behaviour of the employees are also vital in reducing the likelihood of occurrence of workplace accidents. Therefore, training should be conducted in a regular interval to allow employees to register themselves for training when they feel there is a need to update their knowledge on the safety activities. In

those companies that expose their employees to toxic, the employees should be constantly reminded on the safe toxic exposure levels to ensure that they are not exposing themselves to dangerous level of toxic exposure. Training should also be provided on not only the prevention measures, but the aftermath of any workplace accident that occur. Most of the time, companies tend to ignore the aftermath as they deemed prevention training as more important as compared to education on the aftermath of occurrence of workplace accidents. As the employees are not educated on how to handle the situation after the occurrence of workplace accidents, employees are often panicked when the said event happened to them or any employees around them (Waehrer and Miller, 2009). Therefore, it is very important for the company to educate its employees on what they should do whenever a workplace accident occurred in front of them.

2.7 Other factors

Other than the three main factors that were discussed previously under Section 2.4 to Section 2.6, there are also other factors that could contribute to the occurrence of workplace accidents in SMEs in Malaysia. According to Hussin et al. (2008), the awareness of the OSH practices at the workplace could also attributes to the occurrence of workplace accidence. When the employees are unaware of the OSH practices and unaware of the danger of the machineries, workplace accidents may happen if they do not stay alert.

Hamid, Majid and Singh (2008) further added that a lack of coordination activities based on the employees' knowledge, abilities and attitudes could also increase the likelihood of occurrence of workplace accidents. When there is a detailed coordination plan in place and adequate monitoring is provided, the organisation could decrease the chances of workplace accidents to happen. Industrial accident prevention program, according to Abdelhamid and Everett (2000) as cited by Hamid, Majid and Singh (2008), which incorporates a series of coordination activities, could help the organization to prevent workplace accidents from happening. When they have anticipated workplace accidents to happen, all possible scenario have been thought of and prevention steps would be drawn to ensure such scenario does not happen. Under the program, the management would also provide safety facilities to its employees in order to prevent them from being involved in workplace accidents.

Kartam and Bouz (1998) as cited by Hamid, Majid and Singh (2008) further detailed on a list of causes of workplace accidents are improper cleaning and unusable materials, low tool maintenance and misplacing objects. Abdelhamid and Everett (2000) as cited by Hamid, Majid and Singth (2008) then added operating equipment without authority, operating equipment at an unsafe speed, improper assignment of personnel and unsafe position or body posture. The lack of teamwork spirit, lack of protective equipment, lack of certified skilled employees, lack of advanced technology, poor information flow,

excessive overtime work and low education level of employees were also identified by Tam et al (2004) as cited by Hamid, Majid and Singh (2008) as contributing factors towards workplace accidents in SMEs in Malaysia.

Straub (2005) also states that the lack of the implementation of behaviour-based program could also cause workplace accidents to occur. In the paper, Straub (2005) detailed the advantages of having a behaviour-based safety program, which could help in decreasing the occurrence of workplace accidents. For example, positive reinforcement should be given for employees who demonstrate constant good behaviour towards their work. For employees who are very good in their work, reward should be given. This will encourage the employees to be more responsible over their work behaviour as well as their own safety. Besides, the behaviour-based safety program would also taught the employees on the stewardship of the company property, thereby ensuring quality checks to be conducted on a frequent basis to ensure safe working environment. Other than that, the behaviour-based safety program also requires the company to investigate on the causes of all workplace accidents and propose ways to rectify the flaws identified. Most of the time, after each accident, the management tend to blame it on the recklessness of the employees and do not investigate further on how does the workplace accident occur and if there is any measures that could be taken to ensure no future occurrence of such event. The behaviour-based safety program is beneficial to the company as a whole to ensure that workplace accidents are kept at bay.

However, due to the lack of implementation of such program, the company is exposed to the risk of occurrence of workplace accidents.

2.8 Research Framework

A research framework is developed based on the literature review conducted in the earlier section with the aim to demonstrate the connection between dependent variable (workplace accidents among SMEs in Malaysia) and independent variables (working environment, employees' behaviour and training) as below:

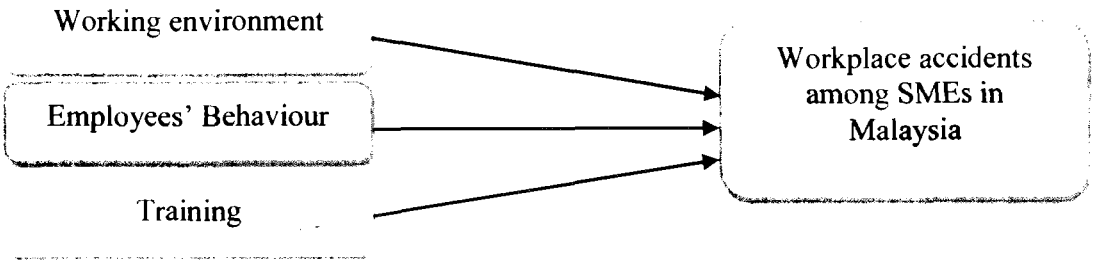

Figure 2.1: Research Framework

Hypotheses Development

H_1: The unsafe and poor working environment has caused workplace accidents to happen among the SMEs in Malaysia (Tay, 2014).

There is a positive relationship between working environment and the occurrence of workplace accidents in SMEs in Malaysia

H_2: The recklessness of employees, lack of awareness and inability to stay alert has caused workplace accidents to happen among the SMEs in Malaysia employees (Clarke, 2006; Dessler, 2010; Neal & Griffin, 2006 as cited by Tay, 2014).

There is a positive relationship between employees' behavior and the occurrence of workplace accidents in SMEs in Malaysia.

H_3: The lack of training conducted by the organization has caused workplace accidents to happen among the SMEs in Malaysia (Coyle et al, 1995; Dedobbeleer and Beland, 1991 as cited by Zakaria, Mansor and Abdullah, 2012). .

There is a positive relationship between training and the occurrence of workplace accidents in SMEs in Malaysia.

2.9 Chapter Summary

This chapter discussed relevant literature with regards to Small and Medium Enterprises (SMEs), workplace accidents, working environment, employees' behaviour, training, and other relevant factors of occurrence of workplace accidents. Then, the research framework has been developed and hypotheses statement has been drawn based on the literature review. Next chapter will

discover the relevant methodologies in order to achieve the objectives of this study.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Chapter Outline

According to Kumar, Abdul Talib and Ramayah (2013), a business research method is well defined as the skills and knowledge obtains to solve the problems in every aspect of business activities in order to meet the challenges of a fast-paced decision making environment. Therefore, the methodology adopted in carrying out this study will be illustrated in this Chapter 3. This study intends to find the main contributing factor towards workplace accidents among SMEs in Malaysia by referring to the proposed research framework and relevant hypotheses development in Chapter 2. Continuing from there, research designs, research procedures and sampling methods and time frame will be elaborated. After that, the data collection method, questionnaire design and statistical analysis method will be discussed further in this chapter.

3.2 Research Design

Referring to the research objectives, this study intends to identify the main contribution factors that cause workplace accidents among SMEs in Malaysia. Based on McDaniel and Gates (1999), a research design is described as an

organized study and exploration that is stated in such a way which enable the research method accessible. Furthermore, de Vaus (2005) stated that a research design is an instrument to reduce uncertainty and to aid with decision making process. Research design explains how a study will be conducted and the process of how the data is collected and analysed. In this study, a quantitative research design which consists of descriptive and causal will be adopted. Descriptive research will be used in describing the factor variables and causal research will be adopted to investigate the cause and effect relationship between variables in a study. Causal research is also known as explanatory research where the main purpose of this approach is to attain evidence or testing the hypothesis (Malhotra et.al, 2002) and make inferences in relation to the cause and effect among the variables (Allen and Rao, 2000).

3.2.1 Descriptive Research

Descriptive research is described as a research that uses scientific method for raw data collection and to outline data structure showing the current features of the defined population target (Hair, Bush & Ortinau, 2006). Additionally, descriptive research fits if the researcher has adequate knowledge and experience on the matter discussed and the scope of study is specific to certain area, often involving one way of data collection (Patel & Davidson, 2003). Besides that, Yin (1994) claims that descriptive research is mainly used to explain accurately, and diagnose the between two or more variables.

3.2.2 Time Horizons

In carrying out a research, there are two (2) types of time perspective namely cross-sectional and longitudinal. Cross-sectional design is proposed when data is collected just once for the purpose of particular research (Sekaran, 2000). Meanwhile, longitudinal research is proposed where data is collected more than once for research purpose.

Cross-sectional research requires lesser cost and time compared to longitudinal research. Therefore, cross-sectional research is adopted in this study due to time constraint where it is used here to assess the feedback of respondents.

3.2.3 Causal Research

On the other hand, causal research is explained as a research that collects raw data and forms data structure and information that permits it to model the cause and effect relationship between two or more variables (Hair, Bush & Ortinau, 2006). This type of research concentrates on explaining the causality between market factors to form framework that helps in decision making by attempting to answer the 'what if' questions and determining the relationship between the independent and dependent variables (Blumberg, *et al.*,2013).

This research design is used by researcher for prediction and hypotheses testing because it involves data collection techniques that gives precise information and are only linked to the specific hypotheses being studied (Patel & Davidson, 2003).

3.3 Population of the Study

By definition, population is referred to the whole group of people, events or things of interests that researchers aim to investigate (Kumar, Abdul Talib and Ramayah, 2013). For instance, this study will focus on employees working at SMEs in Malaysia.

3.3.1 Stratified Sampling

When the population is divided into different subgroups known as strata based on some criteria, this is called stratified sampling (Kumar, Abdul Talib and Ramayah, 2013). For this study, services are divided into few groups as shown below:

Table 3.1: Service Sectors

Service Sectors	**No. of elements**	**Proportionate Sampling (50%)**
Transport, Storage and Communication	N1= 200	N1= 100
Construction	N2= 304	N2= 152
Restaurant and Hotel	N3= 264	N3= 132
Total	N= 768	N= 384

3.3.2 Sampling of the Study

The definition of sampling is the selection of some part of population on the basis of which an inference or judgment in relation to the population is made (Kumar, Abdul Talib and Ramayah, 2013).

Based on Aris (2007), there was approximately 3.6 million workers were generated by SMEs from three (3) main sectors namely services, manufacturing and agriculture. However, due to time constraint and cost involved in conducting this research, this study will only focus on services sector comprising transport, storage and communication, construction and restaurant and hotel. According to Department of Occupational Safety and Health, Malaysia (2014), the number of accidents that lead to death, permanent disability (PD) and non-permanent disability (NPD) usually

occurred among construction and transport, storage and communication employees. Meanwhile, non-permanent disability (NPD) usually happened among restaurant and hotel employees. There are many formulas that can be used to define the sample size. However, this study will use Krejcie & Morgan (1970) formula. They came up with a table that suggests the optimal sample size given a population size, a specific margin of error, and a desired confidence interval for an easy reference which eventually help the researchers.

Required Sample Size

Population Size	Confidence = 95% Margin of error 5.0%	3.5%	2.5%	1.0%	Confidence = 99% Margin of Error 5.0%	3.5%	2.5%	1.0%
10	10	10	10	10	10	10	10	10
20	19	20	20	20	19	20	20	20
30	28	29	29	30	29	29	30	30
50	44	47	48	50	47	48	49	50
75	63	69	72	74	67	71	73	75
100	80	89	94	99	87	94	96	99
150	108	126	137	146	122	135	142	149
200	132	160	177	196	154	174	186	198
250	152	190	215	244	182	211	229	246
300	169	217	251	291	207	246	270	295
400	146	265	318	384	250	309	348	391
500	217	306	377	475	285	365	421	485
600	234	340	432	565	315	416	490	579
700	248	370	481	653	341	462	554	672
800	260	396	526	739	363	503	615	763
1,000	278	440	606	906	399	575	727	943
1,200	291	474	674	1,067	427	636	827	1,119
1,500	306	515	759	1,297	460	712	959	1,376
2,000	322	563	869	1,655	498	808	1,141	1,785
2,500	334	597	952	1,984	524	879	1,288	2,173
3,500	346	641	1,066	2,565	558	977	1,510	2,890
5,000	357	678	1,176	3,285	586	1,066	1,734	3,842
7,500	365	710	1,275	4,211	610	1,147	1,960	5,165
10,000	370	727	1,332	4,899	622	1,193	2,098	6,239
25,000	378	760	1,448	6,939	646	1,285	2,399	9,972
50,000	381	772	1,491	8,056	655	1,318	2,520	12,455
75,000	382	776	1,506	8,514	659	1,330	2,563	13,583
100,000	383	778	1,513	8,762	659	1,336	2,585	14,227
250,000	384	782	1,527	9,248	662	1,347	2,626	15,555
500,000	384	783	1,532	9,423	663	1,350	2,640	16,055
1,000,000	384	783	1,534	9,512	664	1,352	2,647	16,317
2,500,000	384	783	1,536	9,567	663	1,353	2,651	16,478
10,000,000	384	784	1,536	9,594	663	1,354	2,653	16,560
100,000,000	384	784	1,537	9,603	663	1,354	2,654	16,584
300,000,000	384	784	1,537	9,603	663	1,354	2,654	16,586

Figure 3.1: Sample Size Table based on Krejcie & Morgan (1970) formula.

Using Krejcie & Morgan (1970) formula, the sampling size should be 384 respondents mainly from employees of SMEs in Malaysia. For the purpose of this study, the questionnaire was distributed to four hundred (400) of SMEs employees in Klang Valley, however, only three hundred and fifty (350) responded to it. Malaysia is chosen as the subject of this study due to high number of workplace accidents recorded in the SMEs compared to a relatively lower number of workplace accidents reported by other developed countries (Hamid, Majid and Singth, 2008). Klang Valley is the main focus area due to the time constraint, thus concludes the population polar to be used for this research.

3.4 Instruments

For the purpose of this study, quantitative research will be adopted as large representative of population which is able to illustrate using questionnaire or structure interviews as it generates statistics from large number of participants. Yeung (2006) stated that questionnaires offer a low cost means of collecting data from a potentially large group of respondents. Additionally, there is no question when they need to complete the survey as it can be done anonymously at their convenience. Hence, this study will deploy data collection method in the form of questionnaire because it translates the

research objectives into specific questions that the respondents can answer (Malhotra, 2007).

3.4.1 Questionnaire Design

The questionnaire was drafted based on the literature review, where factors comprising employee's behaviour, working environment, training and workplace accidents among SMEs in Malaysia, were all incorporated into the questionnaires. Questions were adopted from Tay (2014) as listed below:

Part A: Working Environment

Question 1: My organization has a set of safety rules and regulations.

Question 2: The safety rules and regulations in my company are up-to-date.

Question 7: I feel that the unsafe working environment is the main cause for workplace accidents to happen.

Part B: Employees Behaviour

Question 9: I do not feel that safety rules and regulations are important to follow.

Question 10: I am unaware of the safety rules and regulations.

Question 12: I think that unsafe acts are the main cause of occurrence of workplace accidents.

Part D: Workplace Accidents among SMEs in Malaysia

Question 22: Unsafe working environment is the main reason for workplace accident to happen.

Question 23: Unsafe acts committed by employees are the main reason for workplace accidents to happen.

Meanwhile, all questions in **Part C, Training** were adopted from Waehrar & Miller (2009). Some of the questions for each part were adopted from other scholars such as Straub (2005), Zakaria, Mansor& Abdullah (2012) and Hamid, Majid & Singh (2008).

3.4.2 Data Collection Methods

Once the research design and sampling methods have been set out for this study in hand, the task of data collection starts with the help of data collection methods. In order to collect information about the objects under this study in a systematic way, data collection methods are vital. This is because it becomes difficult to answer the research questions in conclusive way if the data is collected unsystematically.

The data collection started from 1st June 2014 to 30th June 2014. Due to time constraint, four hundred (400) sets of the questionnaire were given out to

SMEs employees in Klang Valley and only three hundred and fifty (350) has responded to it. The objectives of this research and the usage of the data collected which are solely for academic purposes are explained by the researcher to the respondents.

3.5 Pre- testing Questionnaire (Pilot Test)

Based on Kumar, Abdul Talib and Ramayah (2013), this is a crucial step before completing a questionnaire. This pre-test or "pilot test,, is conducted in "small scale,, of respondents. However, the respondents from "pilot test,, should not be included in the main study. The objectives of the pre-testing questionnaire are listed below:

i. Ensuring the wording of each question is correct.
ii. Ensuring the right sequence of the questions.
iii. Ensuring each question is well understood by the respondents.
iv. Determining whether to add more questions or remove some questions.
v. Ensuring the instructions each question is clear.

3.6 Measurement Technique

While measuring the variables, the level of measurement is vital. It is said that the more statistical techniques can be used to analyse the variable when the level of measurement of a variable is higher. The scaling techniques used in a

research can be categorised into two (2) categories namely (1) comparative scales and (2) non-comparative scales. Comparative scales allow respondents to evaluate a certain brand, item or product in comparison to the other brands, items or products. In contrast, non-comparative scales allow respondents to evaluate particular brand, item or product independently without the urge to compare between the brands, items or products (Kumar, Abdul Talib and Ramayah, 2013). Therefore, this study will use non-comparative scales, specifically Likert scale.

3.6.1 Likert Scale

This type of non-comparative scale is very popular as a scaling technique especially in management research. Following this scale, respondents will indicate their level of agreement or disagreement based on the series of statements related to the variables of the study (Kumar, Abdul Talib and Ramayah, 2013). In relation to this study, the questionnaire designed contains three (3) independent variables (i.e. working environment, employees' behaviour and training) and one (1) dependent variable (i.e. workplace accidents in SMEs) as stated in Figure 2.1 Research Framework. The questionnaire options for the respondents to choose from include the following measurement ranges:

1	2	3	4	5
Strongly Disagree (SD)	Disagree (D)	Neutral (N)	Agree (A)	Strongly Agree (SA)

3.7 Proposed Statistical Analysis Methods

Once the entire questionnaires are collected from the respondents, the data collected will be entered into the Statistical Package for Social Science ('SPSS') software for further analysis. Data will first be validated and outcome generated by the SPSS software will eventually be used to test the hypotheses developed in the previous section to find out the co-relation between the tested variables. After the result generated by the SPSS software, a few main analyses, such as descriptive analysis, statistical distribution, validity test, reliability test and regression analysis, would be performed.

3.7.1 Descriptive Analysis

Descriptive analysis is also known as descriptive statistics, which could be used for this study to describe the basic features of the data including the respondents' characteristics. Under this analysis, frequency distribution was processed by the SPSS to analyse the gender, age, state, working sectors and position for all respondents. Measures of central tendency and dispersion, such as the mean, range, variance, standard deviation, maximum and minimum values, range and standard error, as well as distribution of variables would be conducted. All these analyses would give an overall picture on the characteristics of all respondents besides showing giving an indication about the variability of responses from the respondents. However, for this study,

only standard deviation and variance would be discussed as these are the crucial ones to be included in the study.

3.7.2 Statistical distribution

The statistical distribution would illustrates the frequency of occurrence for each variables tested by using the probability analysis through a normal distribution curve. The normal distribution curve is drawn to measure the asymmetry of distribution, which could also be known as the skewness of the curve besides observing the cluster around the apex of the graph, which could also be known as the kurtosis.

3.7.3 Reliability Test

The supervisor in-charge would validate the reliability of the questionnaire designed for this study. The questions of the questionnaire are designed based on the literature review previously conducted by other scholars. Some of the questions of the questionnaire were extracted from past questionnaire designed by previous scholars, but being tailored in order to suit the research framework of this study as discussed in Figure 2.1 previously. This reliability test would enable the researcher of this study to calculate a number of commonly used

measured of scale reliability besides providing information regarding the relationship between individual items in the scale reliability.

Cronbach's Alpha Internal Consistency Method will be adopted to measure the internal correlation and consistency of the variable group and ranges in value from 0 to 1. Items with high correlation value indicate high reliability, while items with low correlation value indicate low reliability, which will lead to elimination from the test. Value greater than 0.7 is acceptable, while value lesser than 0.7 would be rejected (Hair et al, 2006 as cited by Belbin, 2011).

3.7.4 Bivariate Statistical Techniques

According to (Kumar, Abdul Talib and Ramayah, 2013), bivariate statistical technique can be used to analyse the strength of the relationship between two variables. It can be measured using Pearson correlation coefficient. The positive correlation mentions a tendency of high value in one variable with a high value of another variable. In contrast, negative correlation explains a tendency of low value between one variable with a low value of another.

3.7.5 Multiple Linear Regression Analysis

Multiple linear regression analysis is known as a statistical technique that is used to examine the relationship between a single dependent variable with

multiple independent variables (Kumar, Abdul Talib and Ramayah, 2013). Predictor variable is referred to independent variable while criterion variable is referred to dependent. By using the multiple linear regression analysis, the researcher can evaluate which factors that contributes to workplace accidents among SMEs in Malaysia. In this study, there are three predictor variables i.e. working environment, employees behaviour and training and one criterion variable i.e. workplace accidents among SMEs in Malaysia.

3.8 Summary

As a conclusion for this chapter, this chapter revolves around the discussion of methodology or method that will be used in this study to collect data and analyse data collected. Before discussing about the data collection and data analysis, research design, sampling methods and research procedure were discussed in order to show a clearer picture on the reason for conducting this study and who would be the respondents of the questionnaire distributed. After that, data collection method that is used in this study, which is the questionnaire, will be discussed together with the design of the questionnaire. Last but not least, methodologies and data analysis method would be discussed. Under the data analysis section, descriptive analysis, statistical distribution, reliability test, as well as regression analysis will be explained.

CHAPTER 4

DATA ANALYSIS

4.1 Introduction

In this chapter, the outcomes achieved from the questionnaires will be discussed. The results of this study will be tested upon the research framework as stated in Chapter 2 so that the association between Working Environment (WE), Employees Behavior (EB), Training (TR) and Workplace Accidents among SMEs in Malaysia (WA) can be determined.

4.2 Results of Pre-Testing Questionnaire (Pilot Test)

Pilot testing has been conducted in a small scale as suggested by Kumar, Abdul Talib and Ramayah (2013). For the purpose of this study, only 25 respondents were invited for this test. Based on the Frequency Table shown in Table 4.1, 84 percent of the respondents were male and the rest were female. Most of the respondents were aged 21 to 30 years with 48 percent, followed by aged 31 to 40 years with 44 percent and both below 20 and aged 41 to 50 with 4 percent each respectively. In addition, 72 percent of respondents were from Klang Valley and 28 percent were from other states which were not mentioned by the respondents. Most of the respondents were from Transport,

Storage and Communication service sector with 72 percent, followed by construction with 20 percents and only 8 percent were from restaurant and hotel. Meanwhile, 48 percent of the respondents hold Executive position, 36 percent holds Senior Executive position and both entry level and first level position shared 8 percent each respectively. Nonetheless, 56 percent of respondents stated that they had experiencing accidents at a workplace.

Table 4.1: Frequency Table on Demographic Profile for Pilot Test

Demographic	Characteristics	Frequency	Percentage (%)
Gender	Male	21	84.0
	Female	4	16.0
Age	Below 20	1	4.0
	21 to 30	12	48.0
	31 to 40	11	44.0
	41 to 50	1	4.0
State	Klang Valley	18	72.0
	Others	7	28.0
Sectors	Transport, Storage and Communication	18	72.0
	Construction	5	20.0
		2	8.0

	Restaurant and Hotel		
Position	Entry Level	2	8.0
	Executive	12	48.0
	Senior Executive	9	36.0
	First Level	2	8.0
Experiencing Accidents	Yes	14	56.0
	No	11	44.0

Furthermore, reliability test has been conducted to see the internal correlation and consistency between variables using Cronbach Alpha. By this way, the reliability of the questions can be identified.

Table 4.2: Reliability Tests for the Questions

Reliability Test	**Section**	**Value**	**Number of Items (N)**
Cronbach's Alpha	Working	0.865	7
	Environment	0.837	7
	Employees Behavior	0.774	7
	Training	0.781	5
	Workplace Accidents		

As stated in 3.7.4, the variable is said to have high reliability when the correlation value (Cronbach Alpha) is more than 0.7 and below that that is considered low reliability.Table 4.2 shown that all variables have high correlation values. The value for Working Environment is 0.865, Employees Behavior is 0.837, Training is 0.774 and Workplace Accidents is 0.781. Therefore, this concludes that all pre-testing Questionnaires can be used as a final questionnaire.

4.3 Final Questionnaire

4.3.1 Respondents Profile

Based on Krejcie & Morgan (1970), the recommended number of respondents is 384. 400 sets of questionnaire have been distributed using several medium i.e. email, face-to face and social network like Facebook. However, only 350 responded. This means that the response rate is 87.5 percent. All of the respondents were SMEs employees working in service, manufacture or agriculture sector. The data collected for gender, age, state, working sector, position and a question "Have you experienced any accidents in the workplace?,, were listed as a demographic range as shown below.

4.3.2 Demographics of Sample

Table 4.3 shows that 69.1 percent (N=242) of respondents were male and 30.9 percent (N=108) were female. The demographic profile showed that there was uneven distribution between the male and female working at SMEs in Malaysia. The number of male respondents are higher could be due to the fact that there could be better opportunities for men in SMEs especially in service, manufacture and agriculture sector than women.

Meanwhile, 57.7 percent (N=202) of respondents participated in this study were aged between 31 to 40 years, followed by 20.6 percent (N= 72) of respondents aged 41 to 50 years, and 20.3 percent (N=71) of respondents aged

21 to 30 years. The least number of participation is belong to age group below 20 years with 1.4 percent (N=5). This implied a distribution skewed towards middle aged SMEs employees in the age group of 31-40 years old.

Moreover, this study intends to focus on SMES employees who are working in Klang Valley; however, participation from other states is highly encouraged. Hence, the number of respondents from Klang Valley were 54.6 percent (N=191) and 46.4 percent (N=159) of respondents were from other place which is not exactly stated in this study.

As shown by above, the respondents were from three (3) different service sectors. 28.6 percent (N=100) of respondents were from transport, storage and communication, 43.4 percent (N=152) of respondents were from construction and 28 percent (N=98) of respondents were from restaurant and hotel. The percentage gap between each service sector is beyond our control as questionnaire has been answered using various medium. Additionally, 48.9 percent (N=171) of respondents hold entry level position, followed by 34 percent (N=119) of respondents hold executive level, 14.3 percent (N= 50) of respondents hold senior executive position and only 2.9 percent (N=10) of respondents hold first level position.

Nevertheless, above table also shows the feedback obtained from the employees who whether they have experiencing workplace accidents or not.

62 percent (N=217) of respondents stated "yes, they have experienced accidents in their workplace,, where as 38 percent (N=133) of respondents stated the opposite which is "no, they have not experiencing any accidents in their workplace,,. It is believed that respondents who had experiencing accidents in their workplace were from entry level. They might need to involve in outdoor physical activities that required more safety. Lack of safety might harm them and lead them to face any injuries. This shows that they have blend in with the position and working environment very well. In contract, those who higher position is less likely experiencing workplace accidents as most of them are doing indoor job.

Table 4.3: Frequency Table on Demographic Profile

Demographic	Characteristics	Frequency	Percentage (%)
Gender	Male	242	69.1
	Female	108	30.9
Age	Below 20	5	1.4
	21 to 30	71	20.3
	31 to 40	202	57.7
	41 to 50	72	20.6
State	Klang Valley	191	54.6
	Others	159	45.4
Sectors	Transport, Storage and Communication	100	28.6
		152	43.4
	Construction	98	28

	Restaurant and Hotel		
Position	Entry Level	171	48.9
	Executive	119	34.0
	Senior Executive	50	14.3
	First Level	10	2.9
Experiencing Accidents	Yes	217	62.0
	No	133	38.0

4.4 Reliability Test

Table 4.4: Reliability Test

Reliability Test	Section	Value	Number of Items (N)
Cronbach's Alpha	All section	0.917	26

Table 4.4 shows that the alpha coefficient for 26 items in this study is 0.917 which indicates the existence of relatively high internal consistency among 26 of the items mentioned. This is in accordance with Institute for Digital Research and Education (2013) where a reliability coefficient with 0.70 or higher is acceptable used on most social science research situation. For the purpose of this study, Cronbach Alpha is adopted in order to measure the closeness of a set of working environment, employees behaviour, training and workplace accidents among SMEs in Malaysia.

4.5 Hypotheses testing

This section will determine the earlier defined variables in the relationship as compiled by three hypotheses. The method of multivariate analysis will be used to test all hypotheses using the SPSS as it is part of the multiple regression analysis. Additionally, the bivariate correlations are used to test each hypothesis so that the level of significance between the variables can be determined. Moreover, the value generated by Pearson's Correlation Coefficient & sig (2-tailed) will indicate the strength of relationship between concerned areas.

4.5.1 Testing Hypothesis 1

The first hypothesis implies that there is a positive relationship between working environment (WE) and the occurrence of workplace accidents (WA) among SMEs in Malaysia. According to Table 4.5.1, all paired wise correlations are positive hence indicating the existence of a positive relationship between working environment and workplace accidents among SMEs. In addition, 25 out of 35 p- values are below 0.05. This shows that most of the time, workplace accidents usually occur due to unsafe and poor working environment. Therefore, Hypothesis 1 is proven to be true, reject the H0. There is a significant relationship between working environment and the occurrence of workplace accidents among SMEs in Malaysia.

Table 4.5.1: Regression Weights on Hypothesis 1

		WE 1	WE 2	WE 3	WE 4	WE 5	WE 6	WE 7
WA 1	Pearson Correlation	.332**	.289**	.258**	.281**	.350**	.340**	.356**
	Sig. (2-tailed)	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
	N	350	350	350	350	350	350	350
WA 2	Pearson Correlation	.336**	.277**	.320**	.292**	.350**	.300**	.313**
	Sig. (2-tailed)	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
	N	350	350	350	350	350	350	350
WA 3	Pearson Correlation	.059	.075	.054	.034	.066	.037	.161**
	Sig. (2-tailed)	.272	.160	.316	.528	.216	.487	**.003**
	N	350	350	350	350	350	350	350
WA 4	Pearson Correlation	.278**	.226**	.256**	.275**	.195**	.268**	.281**
	Sig. (2-tailed)	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
	N	350	350	350	350	350	350	350
WA 5	Pearson Correlation	.003	.099	.126*	.159**	.165**	.022	.012
	Sig. (2-tailed)	.950	.064	**.019**	**.003**	**.002**	.678	.829
	N	350	350	350	350	350	350	350

4.5.2 Testing Hypothesis 2

The second hypothesis defines the existence of positive relationship between employees' behavior (EB) and the occurrence of workplace accidents in SMEs

in Malaysia (WA). Table 4.5.2 shows that all paired wise correlations are positive, explaining that there is a positive relationship between employees' behavior and workplace accidents among SMEs. In addition, 33 out of 35 p-values are below 0.05, meaning that workplace accidents happen among SMEs in Malaysia are because of the recklessness of employees, lack of awareness and inability to stay alert most of the time, workplace accidents usually occur due to unsafe and poor working environment. Therefore, reject the H0 as Hypothesis 2 is acceptable. There is a significant relationship between employees' behavior and the occurrence of workplace accidents among SMEs in Malaysia.

Table 4.5.2: Regression Weights on Hypothesis 2

		EB 1	EB 2	EB 3	EB 4	EB 5	EB 6	EB 7
WA 1	Pearson Correlation	.422**	.378**	.373**	.452**	.333**	.409**	.362**
	Sig. (2-tailed)	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
	N	350	350	350	350	350	350	350
WA 2	Pearson Correlation	.431**	.372**	.380**	.504**	.409**	.452**	.377**
	Sig. (2-tailed)	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
	N	350	350	350	350	350	350	350
WA 3	Pearson Correlation	.098	.100	.175**	.226**	.196**	.272**	.181**
	Sig. (2-tailed)	.066	.063	**.001**	**.000**	**.000**	**.000**	**.001**

	N	350	350	350	350	350	350	350
WA 4	Pearson Correlation	.258**	.285**	.283**	.392**	.357**	.321**	.273**
	Sig. (2-tailed)	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
	N	350	350	350	350	350	350	350
WA 5	Pearson Correlation	.172**	.165**	.135*	.258**	.261**	.296**	.301**
	Sig. (2-tailed)	**.001**	**.002**	**.011**	**.000**	**.000**	**.000**	**.000**
	N	350	350	350	350	350	350	350

4.5.3 Testing Hypothesis 3

The third hypothesis explains that positive relationship between training (TR) and the occurrence of workplace accidents in SMEs in Malaysia (WA) does exist. Referring to Table 4.5.3, all paired wise correlations are positive and indicating that there is a positive relationship between training and workplace accidents among SMEs. In addition, all of the p- values are below 0.05, explaining that lack of training might lead to workplace accidents among SMEs in Malaysia. Hence, accept the Hypothesis 3 while reject the H0. There is a significant relationship between training and the occurrence of workplace accidents among SMEs in Malaysia.

Table 4.5.3: Regression Weights on Hypothesis 3

		TR 1	TR 2	TR 3	TR 4	TR 5	TR 6	TR 7
WA 1	Pearson Correlation	.411**	.269**	.136*	.185**	.161**	.136*	.611**
	Sig. (2-tailed)	**.000**	**.000**	**.011**	**.000**	**.003**	**.011**	**.000**
	N	350	350	350	350	350	350	350
WA 2	Pearson Correlation	.465**	.264**	.143**	.127*	.138**	.194**	.489**
	Sig. (2-tailed)	**.000**	**.000**	**.007**	**.017**	**.010**	**.000**	**.000**
	N	350	350	350	350	350	350	350
WA 3	Pearson Correlation	.192**	.312**	.380**	.411**	.408**	.425**	.257**
	Sig. (2-tailed)	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
	N	350	350	350	350	350	350	350
WA 4	Pearson Correlation	.370**	.147**	.097	.137*	.155**	.217**	.367**
	Sig. (2-tailed)	**.000**	**.006**	**.069**	**.010**	**.004**	**.000**	**.000**
	N	350	350	350	350	350	350	350
WA 5	Pearson Correlation	.274**	.259**	.496**	.516**	.700**	.926**	.196**
	Sig. (2-tailed)	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
	N	350	350	350	350	350	350	350

4.6 Regression Analysis

Table 4.6.1: Multiple Regression Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	**.451**[a]	**.203**	.196	.897

Based on Table 4.6.1, the value of R is 0.451 which explains the correlation between workplace accidents with working environment, employees' behaviour and training. Additionally, the value for R-Square is 0.203, explaining that 20.3 per cent of the change in Workplace Accidents among SMEs in Malaysia is due to a change caused by Working Environment, Employees' Behaviour and Training (Predictor Variables).

Referring to the above table, the value of R- Square is considered very low. However, there are several reasons that could direct to low R-Squares as listed below by Nau (1981):

i. The sample size is not sufficient or too small.

ii. The variables are defectively measured due to the omission of some imperative variables.

iii. The model of the study is summarized incorrectly.

Furthermore, measuring R-Square might be the less preferred in this study as it is not compulsory to have high or significant particularly if the study is to find the relationship between variables (Martin, 2012). Therefore, the low R-Square in this study is still sensible and rational as Workplace Accidents among SMEs could be affected by many further factors than Working Environment, Employees' Behavior and Training. Nevertheless, other variables that might affect Workplace Accidents could be the usage of high risk machineries and tools or the design of the workplace. However, no one could anticipate either these variables will show either high or low percentage of the variation in Workplace Accidents among SMEs. Thus, these two variables might be considered to be included in the future research under same topic.

Table 4.6.2: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	71.144	3	23.715	29.442	**.000[a]**
	Residual	278.696	346	.805		
	Total	349.840	349			

a. Predictors: (Constant), SumTR, SumWE, SumEB

b. Dependent Variable: SumWA

From the ANOVA table above, the p-value is less than 0.05, meaning that at least one of the three predictor variables can be used to model Workplace Accidents among SMEs.

Table 4.6.3: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	**1.416**	.268		5.282	.000
	Sum WE	**.092**	.061	.083	1.495	**.036**
	SumEB	**.228**	.054	.233	4.204	**.000**
	SumTR	**.318**	.062	.266	5.150	**.000**

a.Dependent Variable: SumWA

$Y = \alpha + \beta x1 + \beta x2 + \beta x3$

Workplace Accidents (Sum WA) = 1.416 + 0.92 (Working Environment, Sum WE) + 0.228 (Employees Behavior, SumEB) + 0.318 (Training, SumTR)

Interpretation:

1. Working Environment

   The p-value is 0.036 which is less than 0.05. This indicates that working environment can be used to predict the workplace accidents among SMEs. Hence, the H0 is rejected while H1 is accepted. There is a positive relationship between working environment and workplace accidents among SMEs in Malaysia.

2. Employees Behavior

   As shown in above table, the p-value is 0.000 which is less than 0.05, explaining that employees' behavior can be used to predict the workplace accidents among SMEs. Therefore, reject the H0 and accept the H2. There is a positive relationship between employees' behavior and workplace accidents among SMEs in Malaysia.

3. Training

   Table 4.6.3 shows that the p-value for training is 0.000 which is less than 0.05. This mentions that training can be used to predict the workplace accidents among SMEs. Thus, accept the H3 while reject the H0. There is a positive relationship between training and workplace accidents among SMEs in Malaysia.

4.7 Summary

With regards to pre-testing questionnaire (pilot test), all of the questions extracted and modified based on previous literature can be used as the reliability for each section exceeded the Cronbach Coefficient Value of 0.7. Hence, this set of questionnaire is used for the final study.

400 sets of questionnaire were distributed to three (3) SMEs sectors namely service, manufacture and agriculture through several medium such as social networking and email. The response rate is 87.5 percent. Additionally, there is a high external consistency of 26 items mentioned in reliability test when conducted among 350 respondents.

Based on the Pearson Correlation and Multiple Regression Analysis, training has the strongest relationship with workplace accidents among SMEs in Malaysia, followed by employees' behavior and working environment. The outcome for each hypothesis can be summarized below:

No.	Hypothesis	Result
1.	**Hypothesis 1** (Working environment and workplace accidents among SMEs in Malaysia)	The p-value is less than 0.05, **H0** is rejected.
2.	**Hypothesis 2** (Employees behavior and workplace accidents among SMEs in Malaysia)	The p-value is less than 0.05, **H0** is rejected.
3.	**Hypothesis 3** (Training and workplace accidents among SMEs in Malaysia)	The p-value is less than 0.05, **H0** is rejected.

CHAPTER 5

CONCLUSION

5.1 Introduction

Under Chapter 5 of this study, a summary will be prepared to wrap up the empirical findings presented earlier in Chapter 4 of this study. A comparison of the empirical findings of this study against the previous studies conducted by other scholars that were presented in the literature review in Chapter 2 earlier will also be prepared. Next, a discussion will be prepared to discuss on the contribution of this research being conducted and limitation faced when conducting this research. After that, the implications of the findings gathered in this study will also be discussed while recommendations will be made to provide suggestion and advice to the future researchers. Last but not least, a conclusion will be drawn to put an end to this study.

5.2 Recapitulations of Present Study

The high number of workplace accidents recorded could be disruptive for the operations of the SMEs due to the need to incur money whenever there is an accident that happened in the workplace. Workplace accidents could cost the companies a huge amount of money as the companies not only need to

compensate the employee who is involved with the workplace accident, but may also need to incur a huge chunk of money if it is a court case and may need to invest in new technology to prevent such accidents from happening. Besides, since the increase in workplace accidents is largely attributed by the increase in commuting accidents, the need for maintenance or overhaul of the motor vehicles or the need to purchase a new motor vehicle would also be quite a high cost to the company. Therefore, it is crucial for this research to be conducted to investigate the contributing factors towards workplace accidents among SMEs in Malaysia.

The SMEs was chosen as the setting of this research. This research was conducted with an aim to critically analyse the contributing factors towards workplace accidents among SMEs in Malaysia. By gaining a thorough understanding on this topic, it could help most of the businesses in Malaysia to identify the root cause of the problem, consequently initiates necessary actions to overcome or curb the problem or prevent them from occurring again in the future besides giving the businesses an opportunity to restructure the safety and health work culture in order to reduce the rate of workplace accidents happening in Malaysia. To achieve the objective of this research, questionnaires method has been used. To ensure that the result of the research is objective, the questionnaires have been designed and distributed to four hundred (400) SMEs employees in the Klang Valley, however, only three hundred and fifty (350) responded to it. A research framework is developed

based on the literature review conducted in Chapter 2 to demonstrate the connection between the dependent variable, which is the workplace accidents among SMEs in Malaysia, and the independent variables, namely the working environment, employees' behavior and training. The questionnaire is composed of 26 questions, excluding the questions found in the demographic profile section. The Likert Scale comprised from 1 - Strongly Disagree to 5 - Strongly Agree. After questionnaires are answered and collected, the results were then being processed and analysed using the SPSS Software. Various tests, such as validity test and reliability test will then be conducted to test the data and to identify the contributing factors of workplace accidents among SMEs in Malaysia. The findings in Chapter 4 indicates that all three independent variables, namely working environment, employees behaviour and training, demonstrate significant positive relationship with the dependent variables, which is the workplace accidents among SMEs in Malaysia.

The objective of this chapter is to reinforce the understanding of the subject which is the contribution factors of workplace accidents among SMEs in Malaysia based on the linked questions below:

i. Is there any relationship between working environment and workplace accidents among SMEs in Malaysia?
ii. Is there any relationship between employees' behavior and workplace accidents among SMEs in Malaysia?

iii. Is there any relationship between training and workplace accidents among SMEs in Malaysia?

Three hypotheses were developed based on the literature review in order to examine the contribution factors of workplace accidents in Malaysia. The aspects of the workplace accidents among SMEs in Malaysia were categorised into three namely working environment, employees behaviour and training. These hypotheses were tested based on the survey conducted among SMEs mainly in Klang Valley. The data obtained from the questionnaire were used to provide feedback to the previous drafted hypotheses. Finally, the discussions, implications, limitations, recommendations and conclusions are formulated in order to help future researchers to have a better understanding regarding this topic in the context of SMEs in Malaysia.

Data were gathered by using the questionnaire method. After designing the questionnaires, 400 questionnaires were given out to SMEs employees in Klang Valley but only 350 has responded to it. The data and result of the 350 questionnaires received were then being analysed and processed by the SPSS Software in order to identify the contributing factors of occurrence of workplace accidents among SMEs in Malaysia.

5.3 Discussion

The research begun with Chapter 2, which is a literature review that was conducted in order to review the work of previous scholars and gain a better understanding on the topic and identify independent variables that could be the cause of workplace accidents among SMEs in Malaysia. Three variables have been identified namely working environment, employees' behaviour and training. Based on previous studies, below hypotheses were developed:

Hypothesis 1: The unsafe and poor working environment has caused workplace accidents to happen among the SMEs in Malaysia (Tay, 2014).

There is a positive relationship between working environment and the occurrence of workplace accidents in SMEs in Malaysia.

Hypothesis 2: The recklessness of employees, lack of awareness and inability to stay alert has caused workplace accidents to happen among the SMEs in Malaysia employees (Clark, 2006; Dessler, 2010; Neal & Griffin, 2006 as cited by Tay, 2014).

There is a positive relationship between employees' behavior and the occurrence of workplace accidents in SMEs in Malaysia.

Hypothesis 3: The lack of training conducted by the organization has caused workplace accidents to happen among the SMEs in Malaysia

(Coyle et al, 1995; Dedobbeleer and Beland, 1991 as cited by Zakaria, Mansor and Abdullah, 2012).

There is a positive relationship between training and the occurrence of workplace accidents in SMEs in Malaysia.

In order to test the three hypothesis developed, data were gathered by using the questionnaire method. After designing the questionnaires, 400 questionnaires were given out to SMEs employees in Klang Valley but only 350 has responded to it. The data and result of the 350 questionnaires received were then being analysed and processed by the SPSS Software in order to identify the contributing factors of occurrence of workplace accidents among SMEs in Malaysia. The finding in Chapter 4 shows that all three factors identified were the causes of workplace accidents among SMEs in Malaysia.

5.3.1 Working Environment

Working environment, according to Tay (2014), could cause workplace accidents to happen when the condition or work processes are unsafe. To ensure that the workers are work in a safe environment, the OSHA was enacted in year 1994. All organisations, regardless of size and status, must comply with this act. In order to ensure effective implementation of OSHA 1994, management commitment is crucial to ensure that the working environment is safe for the employees.

Moreover, the empirical results of working environment show that the p-value is 0.036, which is lesser than 0.05. Hence, the null hypothesis (H0) was rejected and H1 was accepted. This indicates that the working environment can be used to predict workplace accidents among SMEs in Malaysia and a significant positive relationship exist between working environment and workplace accidents among SMEs in Malaysia.

The result of the research is in line with the literature review in Chapter 2.2. Under the literature review, it was suggested that a working environment that comply with updated safety rules, could ensure that the workers work in a safe working environment, which is a crucial setting to enhance productivity besides minimizing the occurrence of workplace accidents (Kanten, 2013). The working environment is a predictor of workplace accidents and workplace accidents are less likely to take place in a workplace equipped with updated safety rules. Other than physical environment, organisations also need to ensure that their employees are not working under a constantly stressful environment (Zakaria, Mansor and Abdullah, 2012). When employees are not rushed through a task, the employees will be mindful of the safety rules, hence minimizing the likelihood of workplace accidents to happen.

5.3.2 Employees Behaviour

Employees' behaviour is also identified as one of the contributing factors that contribute towards the occurrence of workplace accidents in SMEs in Malaysia. Most of the workplace accidents happened because employees are arrogant, careless, negligence, ignorant or disobedient. Most of the times, accidents are caused by human factors such as negligence when handling the equipment (Hamid, Majid and Singh, 2008). This is evidenced by the work of Heinrich (1959) as cited by Zakaria, Mansor and Abdullah (2012), which stated that 88 percent of the workplace accidents are often caused by unsafe acts of the employees. Should the employees are acting in accordance with the safety rules and procedures, workplace accidents could be reduced significantly. For example, if the employees are not driving under the influence of alcohol or driving with insufficient sleep, the likelihood of the employees to engage in the workplace commuting accidents could be significantly lowered.

In addition, the empirical results for employees behaviour show that the p-value is 0.000, which is lesser than 0.05. Therefore, the Hypothesis 2 was accepted while rejected the null hypothesis (H0). This indicates that the employee behaviour can be used to predict workplace accidents among SMEs in Malaysia and a significant positive relationship exist between employee behaviour and workplace accidents among SMEs in Malaysia.

The result of the research is in tandem with the literature review in Chapter 2.5. Under subtitle 2.5, it is suggested that the way the employees behave would affect the likelihood of occurrence of workplace accidents. Several examples of workplace accidents were illustrated under Chapter 2.5, such as the 1981 crash of an EA-6B Prowler on the USS Nitmitz, the wreck of Conrail/ Amtrak train in Maryland that happened in year 1987 and the Exxon Valdez incident in year 1989. These accidents occurred because the employees failed to adhere to the safety rules and associated with drugs and alcohol usage during office hour. Besides, unsafe acts committed by employees, such as ignoring the safety rules when they are operating near heavy machineries, could cause accidents to happen.

5.3.3 Training

It is important for the management to invest in training in order to reduce the likelihood of occurrence of workplace accidents. In order to create a safe working environment, it is crucial that the employees of the organisations were educated in relation to the safety rules, policies and procedures of the organization. By ensuring that the employees strictly adhere to it, the number of workplace accidents could be reduced (Coyle et al, 1995; Dedobbeleer and Beland, 1991 as cited by Zakaria, Mansor and Abdullah, 2012). On the job training as well as classroom training could conducted on an interval of time

to ensure that the employees are always mindful of the safety rules, policies and procedures. Safety committee should also be introduced to the participants of the classroom training to ensure that the employees know who to turn to when there is any doubt on what they should do when an accident occurs. In terms of on the job training, the skill sets should also be taught from an experienced worker to a less experienced worker to ensure knowledge is transferred in relation to handling of heavy equipment.

On the other hand, the empirical results for training show that the p-value is 0.000, which is lesser than 0.05. Thus, Hypothesis 3 is acceptable and indicating that the training can be used to predict workplace accidents among SMEs in Malaysia and a significant positive relationship exist between training and workplace accidents among SMEs in Malaysia.

The result of the research is in tandem with the literature review in Chapter 2.7. Subtitle 2.7 mentioned that it is crucial for the management to ensure that the employees are well educated on the safety rules and policies and the correct way in handling the heavy duty machineries. Injured employees due to workplace accident will be sent home to rest (Waehrer and Miller, 2009). The work of the injured employee will then left unattended and the management may see it as a need to hire replacement workers to ensure that the daily operation is not disrupted. The organisation will then need to incur a huge cost to hire a new employee and to train the new employee. Besides, frequent on

the job training and classroom trainings could educate the employees on the job-related skills as well as the general safety rules, policies and procedures. If constant training is given to remind the employees of the correct approach to deal with the heavy duty machineries, the employees will be more alert when they are around the machines, hence the likelihood of workplace accidents to happen would decrease. The lack of training in relation to safety rules of the organization could also expose the employees to hazards (Zakaria, Mansor and Abdullah, 2012) besides letting accidents to happen due to miscommunication among the employees or misinterpretation of instruction given by the superior of the employees caused by poor grasps of language.

5.3.4 Comparison between Working Environment, Employees Behaviour and Training

Based on the Pearson correlation, all of the p-value for training was less than 0.05, meaning that lack of training has the strongest relationship with the workplace accidents among SMEs in Malaysia. On the other hand, working environment has the weakest relationship with the dependent variable. The multiple regression analysis supported this finding as training has the most significant value (p-value = 0.000) compared to other variables namely employees' behaviour (p-value = 0.000) and working environment (p-value= 0.036).

5.4 Contributions of the Research

The study was prepared with an aim to examine the reasons the high number of workplace accidents recorded in the SMEs in Malaysia if compared to a relatively lower number of workplace accidents reported by other developed countries. This study would be beneficial for the government to reassess the current organizational safety and health policy and procedures for businesses in Malaysia and make amendments as necessary to ensure that the acts or amendments that govern businesses in Malaysia in terms of operational safety and health, are up to date. Besides, this study could be used by the SMEs in Malaysia to identify the contributing factors that contribute towards workplace accidents in SMEs in Malaysia. After contributing factors are identified, the companies could then propose plausible solutions that could be made to tackle or curb the alarming state of the said problem.

Secondly, this study is also aimed to provide a reference to the future scholars and researchers that are interested to conduct a more in-depth review to investigate the most significant contributing factors that could cause workplace accidents to happen. As the data published in this study are adequately supported by the work of other scholars, this study could be a useful reference for future scholars to conduct their review in the future.

As a whole, as this study is investigating for the contributing factors that could cause workplace accidents to occur, this study is useful for all researchers that would like to conduct a similar study or to delve into a specific industry in Malaysia. This study would provide a guideline as to what to avoid or implemented so that the workplace accidents could be minimized.

5.5 Limitations

The study was conducted with an aim to investigate the contributing factors towards workplace accidents among SMEs in Malaysia. To obtain more objective results on the findings, questionnaire method was deployed to gather sample opinions from the population. However, the findings are still subject to certain limitations.

This research only focuses on the contributing factors for the occurrence of workplace accidents in SMEs in Malaysia. As such, the generalization of the findings presented in this study does not zoom in to investigate reasons for occurrence of workplace accidents in each industry. The factors listed in this paper are general and may not be applicable for each and every industry or business settings.

The questionnaires were only distributed to 400 SMEs employees within the Klang Valley, in which 350 questionnaires were answered and returned. The

finding of this study is based on a restricted geographical location, which is the Klang Valley. Should the research being conducted using a larger samples of respondents or a sample of more dispersed geographical location; the finding may be different from those found in this paper. Due to financial constraints as well as time constraints, the data could only be gathered from SMEs employees within the Klang Valley.

5.6 Recommendations

5.6.1 Working Environment

As suggested in the finding of the study as well as the literature review under Chapter 2, a safe working environment could ensure that the employees are not exposed to risk of workplace accidents to happen. Hence, it is crucial for the management to implement safety rules and timely update the rules. Besides, it is also important for management to work hand-in-hand existing safety with the employees to ensure that the employees are not exposed to a highly stressful working environment, which could expose the employees to risk of workplace accidents.

5.6.2 Employees Behaviour

To decrease the likelihood of occurrence of workplace accidents caused by unsafe acts committed by employees or irresponsible employees' behaviour,

management could initiate a penalty system so that the employees will be more proactive towards his or her own safety. The management could also consider implementing a whistle blower program to provide a channel for the employees to blow the whistle when they feel that other employee is operating the equipment recklessly or engage in any unsafe acts. However, the identity of the whistle blower must be kept confidential to protect the employees who report unsafe acts committed by other colleagues. Drug and alcohol screening programs could also be initiated to lower the likelihood of the occurrence of workplace accidents such as commuting accidents caused by employees working under the influence of drug and alcohol.

5.6.3 Training

Management should look into ways to increase the frequency of training to be conducted to ensure that employees are aware of the safety rules. Experienced employees should be encouraged to teach the inexperienced workers on the skill sets required to perform their duty. Besides, management should also invest in training to ensure that their employees have a good grasps of language necessary for them to understand each other to avoid miscommunication among the employees or misinterpretation of instruction given by the superior of the employees. Other than that, feedback should be gathered by the management from the employees on the suggested trainings

that they feel necessary to provide a chance to the employees to grow with the organisation and enhance themselves.

5.7 Suggestion for Future Research

The future researchers could look into the option of extending its samples to obtain a more objective result. Larger sample of survey respondents with different geographical area could provide a more extensive result, which could be used for other researchers in other states besides Klang Valley.

Besides, other method such as interview could also be deployed to get the opinion of the survey respondents. A hybrid approach would allow the survey respondents to also voice out their concerns and opinions. Open-ended questionnaires could also be considered to understand how the survey respondents actually feel and not just rush through the whole questionnaires.

5.8 Conclusion

The purpose of this research was to investigate the contributing factors towards workplace accidents among SMEs in Malaysia. The research objectives outlined under Chapter 1.5 were achieved using the aid of SPSS Software to analyse the data collected from the distribution of questionnaires to 350 SMEs employees in the Klang Valley.

Based on the summary of empirical findings, all three independent variables identified in Chapter 2 after performing a literature review to review the work of other scholars, were all proven to be the contributing factors towards workplace accidents among SMEs in Malaysia. The results of the research were all in tandem with the literature review conducted in Chapter 2.

As workplace accidents are at a worrying state and SMEs are the backbones to support the economic development of the country, it is very important that factors identified in this paper are looked into and solutions to the problems suggested in this paper are all considered. By adopting the proposed solutions in this paper, the management is likely to decrease the likelihood of occurrence of workplace accidents in SMEs in Malaysia.

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APPENDIXES

A. Questionnaire

UNIVERSITI UTARA MALAYSIA
OTHMAN YEOP ABDULLAH
GRADUATE SCHOOL OF BUSINESS

CONFIDENTIAL

Dear Respondent,

Appreciate if you could spend some time to complete this survey.

This survey is part of my research on **"Workplace Accidents among SMEs in Malaysia".** This study is written with the aim to examine the reasons the high number of workplace accidents recorded in the SMEs in Malaysia if compared to a relatively lower number of workplace accidents reported by other developed countries. This study would be beneficial for the government to reassess the current organizational safety and health policy and procedures for businesses in Malaysia and make amendments as necessary to ensure that the acts or amendments that govern businesses in Malaysia in terms of

operational safety and health, are up to date. After knowing the causes to the escalating trend in number of workplace accidents, solutions could then be proposed to adhere to the worrying situation.

All information provided will be kept anonymous and strictly confidential and will only be used for the purpose of this academic research.

Thank you.

With best regards,

Nadia Bt Mohd Azam Na'ir

nadia_nair55@yahoo.com

Part A: Working Environment

Here are a number of characteristics that may or may not apply to you. You may use any of the numbers to show how strong your levels of agreement. There are no right or wrong answers - all we are interested in is a number that best shows your levels of agreement about the characteristics that applies to you.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

1.	My company has a set of safety rules and regulations.	1	2	3	4	5
2.	The safety rules and regulations in my company is up-to-date.	1	2	3	4	5
3.	The management will inform all the employees	1	2	3	4	5

	whenever there is an update in the safety rules and regulation.	
4.	Penalty will be imposed on employees who failed to follow safety measures.	1 2 3 4 5
5.	I often feel stress working in the company.	1 2 3 4 5
6.	It is difficult for me to stay alert as I feel I'm lack of sleep.	1 2 3 4 5
7.	I feel that the unsafe working environment is the main cause for workplace accidents to happen.	1 2 3 4 5

Part B: Employees Behaviour

Here are a number of characteristics that may or may not apply to you. You may use any of the numbers to show how strong your levels of agreement. There are no right or wrong answers - all we are interested in is a number that best shows your levels of agreement about the characteristics that applies to you.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

1.	I feel that accidents do not just happen; accidents are caused by human factors such as negligence and recklessness.	1 2 3 4 5
2.	I do not feel that safety rules and regulations are important to follow.	1 2 3 4 5
3.	I am unaware of the safety rules and regulations.	1 2 3 4 5

4.	I know some employees who are working under the influence of alcohol or drug.	1	2	3	4	5
5.	I think that unsafe acts are the main cause of occurrence of workplace accidents.	1	2	3	4	5
6.	The Company allows me to report any unsafe acts observed.	1	2	3	4	5
7.	I am not afraid to report any unsafe acts committed by other employees.	1	2	3	4	5

Part C: Training

Here are a number of characteristics that may or may not apply to you. You may use any of the numbers to show how strong your levels of agreement. There are no right or wrong answers - all we are interested in is a number that best shows your levels of agreement about the characteristics that applies to you.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

1.	I have attended training on safety rules and regulations before.	1	2	3	4	5
2.	My superior showed me all the safety measures.	1	2	3	4	5
3.	I am taught how to operate machines and what to be when I am around heavy duty machineries.	1	2	3	4	5
4.	I attended training on how to avoid hazards.	1	2	3	4	5

5.	I have no problem in communicating with my colleagues and superiors.	1 2 3 4 5
6.	I am allowed to attend training annually.	1 2 3 4 5
7.	I know exactly what to do if workplace accidents occurred.	1 2 3 4 5

Part D : Workplace Accidents in SMEs

Here are a number of characteristics that may or may not apply to you. You may use any of the numbers to show how strong your levels of agreement. There are no right or wrong answers – all we are interested in is a number that best shows your levels of agreement about the characteristics that applies to you.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

1.	Unsafe working environment is the main reason for workplace accident to happen.	1 2 3 4 5
2.	Unsafe acts committed by employees are the main reason for workplace accidents to happen.	1 2 3 4 5
3	Lack of training is the main reason for workplace accidents to happen.	1 2 3 4 5
4	Lack of awareness on OSH practices is the main reason for workplace accidents to happen.	1 2 3 4 5
5	Lack of coordination activities is the main reason for workplace accidents to happen.	1 2 3 4 5

Part E: Demographic Information

The following questions are for statistical purpose only. They are to assist us in analysing the survey data:

a) Gender □ Male □ Female

b) Age
□ Below 20
□ 21-30
□ 31-40
□ 41-50
□ 51-60
□Other: _____

c) State
□ Klang Valley
□ Others: _____

d) Service Sector
□Transport, Storage, and Communication
□ Construction
□ Restaurant and Hotel
□ Others: _____

e) Position
□ Entry level employees
□ Executive
□ Senior Executive
□ First Level Manager
□ Mid-Level Manager
□ High Level Manager
□ Directors
□ Owner

f) Have you experienced any accidents in the workplace? □ Yes □ No

B. SPSS Output

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.451[a]	.203	.196	.897

a. Predictors: (Constant), SumTR, SumWE, SumEB

b. Dependent Variable: SumWA

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	71.144	3	23.715	29.442	.000[a]
	Residual	278.696	346	.805		
	Total	349.840	349			

a. Predictors: (Constant), SumTR, SumWE, SumEB

b. Dependent Variable: SumWA

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.416	.268		5.282	.000
	SumWE	.092	.061	.083	1.495	.036
	SumEB	.228	.054	.233	4.204	.000
	SumTR	.318	.062	.266	5.150	.000

a. Dependent Variable: SumWA