

**THE RELATIONSHIP BETWEEN SAFETY MANAGEMENT
PRACTICE AND SAFETY BEHAVIOUR AMONG EMPLOYEES
OF ONE AUTOMOTIVE COMPANY IN MALAYSIA**

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OF ONE AUTOMOTIVE COMPANY IN MALAYSIA**

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**Project Paper Submitted to
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Health Management**



**Pusat Pengajian Pengurusan
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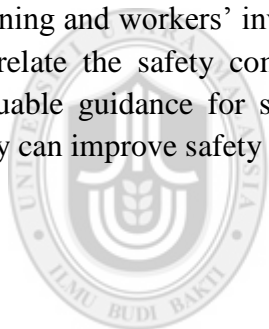


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ABSTRACT

There are limited research and studies been carried out involving Safety Management Practices and Safety Behaviour. Safety awareness programs have been actively conducted to inspire employees' involvement and commitment toward safety, however there are still many accidents and incidents reported involving manufacturing firms. Safety management practices improve working conditions, employees' safety motivation and behavior which in turn will reduce the accidents in workplace. This study measured employee perception on six safety management practices; management commitment, safety training, worker's involvement in safety, safety communication and feedback, safety rules and procedures and safety promotion and policies as the independent as the independent variables and its relationship towards safety behavior; safety compliances and safety participation as dependent variables by conducting a survey using questionnaire among 360 employees of one automotive company in Malaysia. The analysis using SPSS Version 19 software showed that some of the safety management practices have a strong relationship with the safety behavior. Management commitment, safety training and workers' involvement were the safety management practices that highly correlate the safety compliances and safety participation. These results provided valuable guidance for scholars and practitioners in identifying the method where they can improve safety at the workplace.



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ABSTRAK

Terdapatnya kajian yang terhad terhadap amalan-amalan pengurusan keselamatan dan kelakuan keselamatan pekerjaan. Program-program kesedaran keselamatan telah dilakukan secara aktif bagi menggalakkan komitmen kepada keselamatan pekerjaan, walaubagaimanapun kemalangan dan insiden yang tidak diingini yang dilaporkan masih berlaku dengan banyaknya terutama di sector perkilangan. Amalan pengurusan keselamatan pekerjaan yang baik dapat memberi kesan kepada keadaan pekerjaan, motivasi serta kelakuan keselamatan pekerjaan dan seterusnya mengurangkan kemalangan dan insiden yang tidak diingini daripada berlaku. Kajian ini telah mengambil kira enam amalan keselamatan pekerjaan; komitmen pihak pengurusan, latihan keselamatan pekerjaan, penglibatan para pekerja, komunikasi keselamatan dan maklum balas, peraturan dan prosedur keselamatan serta polisi dan promosi keselamatan sebagai pemboleh ubah bebas dan hubungannya ke atas pematuhan keselamatan pekerjaan dan penyertaan keselamatan pekerjaan sebagai pemboleh ubah bersandar dengan menjalankan kaji selidik menggunakan soal-selidik antara 360 kakitangan sebuah syarikat automotif di Malaysia. Analisis telah dilakukan dengan menggunakan SPSS versi 19 menghasilkan keputusan bahawa amalan-amalan pengurusan keselamatan pekerjaan mempunyai kaitan yang kuat dan sederhana dengan kelakuan keselamatan. Komitmen pengurusan, latihan keselamatan pekerjaan dan penglibatan para pekerja adalah amalan pengurusan yang paling penting dan memberi hubungan ke atas pematuhan dan penyertaan pekerja terhadap keselamatan pekerjaan. Dapatan ini akan dapat memberi panduan yang baik untuk para pengkaji dan pengamal keselamatan pekerjaan dalam mengenalpasti metod atau cara-cara yang dapat meningkatkan keselamatan pekerjaan di tempat kerja.

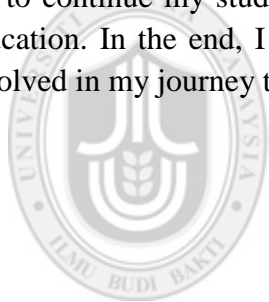
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I dedicate this study to my beloved Father and Mother who are very patient in my further studies. Although the duration of the study has taken the time to settle, they have been there for me throughout my journey both financially and emotionally. I am really honoured and grateful for all the advices given to excel in the worldly life and also hereafter.

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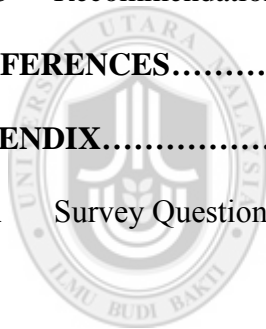
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LIST OF ABBREVIATIONS

DOSH	Department of Occupational Safety and Health
IA	Industrial Accidents
ISO	International Organization for Standardization
ISO/ TS	International Organization for Standardization/ Technical Specification
MC	Medical Certificate
NIOSH	National Institute for Occupational Safety and Health
NPD	Non-Permanent Disability
OHSAS	Occupational Health and Safety Management System
OSH	Occupational Safety and Health
OSHMS	Occupational Safety and Health Management System
PD	Permanent Disability
PPE	Personal Protective Equipment
SHE	Safety, Health and Environment
SMS	Short Messaging System
SOP	Standard Operating Procedures
SPSS	Statistical Package for Social Sciences



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CHAPTER ONE

INTRODUCTION

1.1 INTRODUCTION

Employees who are in the mining, construction, transport and manufacturing are the people most vulnerable to the risk of serious accidents and injuries (Ivancevich, 1995). Vredenburg (2002) in his study revealed that a mere 10 percent of the rate of accidents in the workplace is caused by machinery and physical conditions of the workplace. Meanwhile, other issues are due to the unsafe acts of employees and employee interaction with the systems in the organization (Wilpert, 1994). In addition, workplace injury or occupational injuries also commonly to occur as a result of employee unsafe behaviour, the organization factor and ascending risks of the work environment. Thus, occupational safety and health management provides the legislative framework to secure the safety, health and welfare among all workforces and to protect others against risks to safety or health in connection with the activities of persons at work (Dessler, 2011).

Malaysia, in the field of occupational safety and health is being governed by the Department of Occupational Safety and Health (DOSH). It is a department under the Ministry of Human Resources responsible for ensuring the safety, health and welfare of people at work as well as protecting other people from the safety and health hazards arising from the activities sectors which include manufacturing, mining and quarrying, construction, hotels and restaurant, agriculture, forestry and fishing, transport, storage and communication, public services and statutory authorities, utilities - gas, electricity, water and sanitary services, finance, insurance, real estate

and business services and also wholesale and retail trades. As a government agency, the department is responsible for the administration and enforcement of legislations related to occupational safety and health of the country and creating a safe and healthy work culture that contributes towards enhancing the quality of working life. Whereas the National Institute for Occupational Safety and Health (NIOSH) is responsible for organizing training, consultation services, examinations and certificates and other safety and health matters.

According to the Occupational Accidents Statistics by Sector until August 2015 by the Department of Occupational Safety and Health (DOSH) (2015) the manufacturing sector had recorded the highest occupational accidents for Non-Permanent Disability (NPD) bearing a total of 1,189 cases. It further indicated 57 cases of Permanent Disability (PD) and 19 deaths. The statistics further conclude that the manufacturing sector is the highest occurrences of accidents in Malaysia.

A safe and healthy workplace is one of the factors to business success. By establishing good safety practices in the workplace, employees will be more motivated and productive with lower absenteeism rates, fewer business interruptions, and cutbacks in the costs of sick pay and temporary auxiliary staff. Safety management practices not only improve working conditions but also positively influence employees' attitudes and behaviors with regard to safety, thereby reducing accidents in workplace (Vinodkumar & Bhasi, 2010). It further improves the reputation both in the business world and as an employer of choice.

1.2 BACKGROUND OF THE STUDY

Studies on safety had increasingly been discussed since 1992 when the National Institute of Occupational Safety and Health (NIOSH) was established. The objective of the studies on safety is to look into the impact on the compliance and non-compliance factors of safety in the workplace. The institute is a government supported company with the objective in conducting certified training programs; information collection and distribution; research and development in occupational safety and health. In addition, it provides guidance to all parties to improve safety in the workplace.

In any automotive industry, the issue of safety is very pertinent. Safety behavior is closely related to productivity, quality of work and discipline. Safety behavior when practiced by the workers is an asset to the automotive industry because it has connection with productivity. From one research finding (Lamm, Massey, Perry, 2006) there is an increasing and convincing indication that providing a healthy and safe working environment has the potential to increase labour productivity and in turn increase business profits. Findings of an alternative study (De Greef & Van den Broek, 2004a) validate that health and safety processes have a positive influence not only on safety and health behaviour, but also on company productivity. So it is important for the research on safety behaviour to be initiated so that the realization in this aspect to quality performance can be traced.

One way to improve safety in the workplace is to apply safe behavior in the workplace. Workplace accidents are possibly caused by applications of unsafe behaviour in the workplace. Other than that is the non-compliance with safety policies and safety management practices that is not robust.

Neal and Griffin (1997 & 2000) had identified two types of safe behavior which are safety compliance and safety participation. Safety compliance is defined as performing all safety procedures as per instructed. While safety participation is defined as a safety behaviour based on involving individual participation in safety meetings, safety goal settings and preparation of recommendations to the organization in order to increase the level of safety in the workplace (Neal et al., 2000).

Lack of knowledge of laws and regulations on safety and health at work greatly influenced the rate of accidents at work. Safety management practices should be implemented efficiently and effectively so that the statistics of these accidents can be minimized. It will not only contribute to a conducive workplace, but it can also produce workers who are disciplined and always aware of the importance of working in a safe behavior (Cooper & Philip, 2004).

1.3 COMPANY BACKGROUND

The automotive company in this study is currently situated in Shah Alam. It is one of the main automobile company in Malaysia that produces high quality cars for Malaysians and abroad. From the company's internal information database, it has operations in more than 20 countries of which the common are in Asia. In Malaysia alone, the automotive company has sold over 3,500,000 cars between 1985 and 2013. For export, 400,000 cars had been delivered from 1986 to 2013.

Further to the information provided, its business models include manufacturing, assembly and selling of motor vehicles and its derived products such as spare-parts, accessories and other components. The company's vision is to become a successful

Malaysian automotive manufacturer globally. In addition, its company objective is to lead the automotive industrialization process and manufacturing industries, to acquire and upgrade the technology and industrial skills within the automotive manufacturing industry and also to strengthen the international competitiveness of Malaysia's industrial capability.

As for the company's mission statement, the company's history is one of the remarkable achievements to be proud of. The pride of the company is in the dynamic force that drives forward to take on new challenges. Furthermore, the company is committed to lead the acquisition of intellectual ability in the design and technology that will drive the nation to achieve the status of an industrialized country.

As for the company's latest Safety, Health and Environment (SHE) policy statement stated in the company's local intranet, focuses on the commitment to protect the safety, health and environment of the employees, visitors, contractors, vendors and the public by ensuring compliance with all applicable SHE legal and other requirements and internal SHE rules and regulations, to prevent SHE impacts associated with the company's activities, product and services to minimize natural resources consumption, prevent pollutions and industrial accident, and protect human health, helping to improve the SHE performance on a continual basis and to improve the environment for the community. Thus, everyone in the company has the individual responsibility, authority and accountability for the safety of themselves and others, and an obligation to actively participate in promoting an effective SHE culture and achieving the SHE objectives and targets set on a regular basis.

1.4 PROBLEM STATEMENT

Based on the industrial accident report statistics given by the SHE department in study, from April to June 2015 indicates that there were a total of 12 case involving employees of the company. Five (5) cases were identified as major accidents which involved medical attention of more than 4 days. These cases involved two (2) cases occurred of 'hit by part' accidents which caused arm wound and also thumb wound respectively. Meanwhile, two (2) cases of 'finger caught in between machine or parts' occurred which had resulted of both having index finger injury and one (1) industrial accident case of 'trip and fall' which lead to a head injury. In addition, seven (7) minor industrial accident cases were also reported in the company during the period whereby majority of the reports (4 cases) were due to 'hit by part' namely scratch on finger due to scrap chute fell off, laceration of left hand middle finger tip while lifting a block using crane, index finger injured due to broken drill and also hand injury when hit by a swinging pendulum.

Narrowing down to the most possible root causes of the reported cases, SHE department revealed that more than 50% of the cases were due to lack of explanation in Standard Operating Procedures (SOP) (6 cases), inconsistent management monitoring on the regular usage of Personal Protective Equipment (PPE) (1 case) and also due to poor housekeeping (1 case). This is an increase as compared to the same period (April – June) in 2014 as summarized in the Figure 1.1.

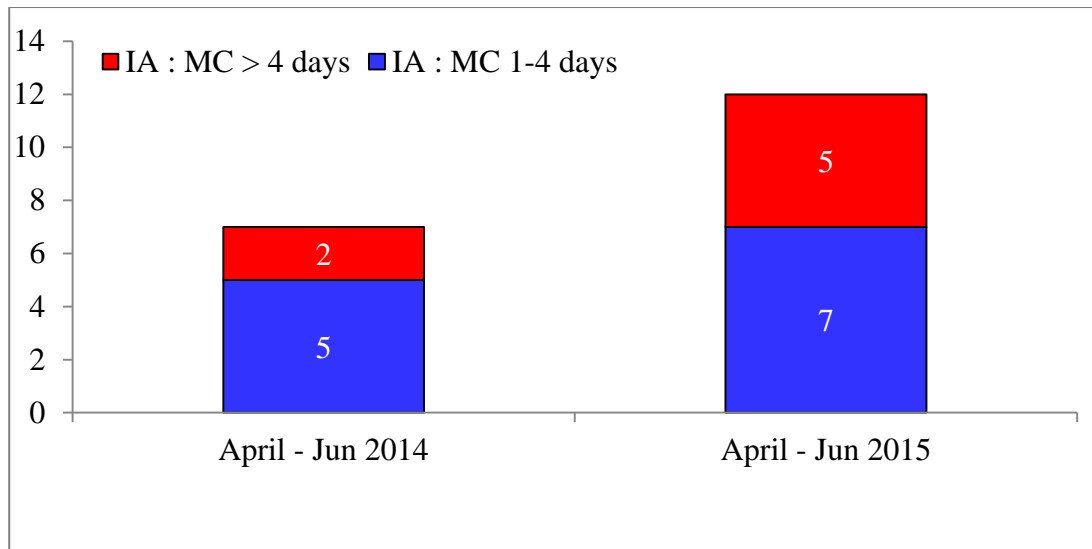


Figure 1.1 – Comparison of Industrial Accidents (IA) Cases in 2014 and 2015

Thus, this shows that issues of good safety management practice are important to be addressed. It gives impact not only to the issues of productivity, awareness and also discipline if no precaution taken, safety behaviour will become a problem in the work setting. A quantitative research engaging with the strategic respondents needs to be conducted so that the data from the respondents with proper analysis can offer some solution to the automobile industry. In addition, the study will determine the actual employees' perception on the safety management practices of the company and to determine the items that can be improved to further reduce the accident rates and enhance the overall safety behaviour of the employees.

1.5 RESEARCH OBJECTIVE

The main objective of this research is to study the safety management practices in this one automotive company in Malaysia and its correlations towards safety behaviour of the employees. Thus, the following research objectives were formulated:

- 1.5.1 To analyze the safety management practices in one automotive company in Malaysia.
- 1.5.2 To analyze the safety behavior in one automotive company in Malaysia.
- 1.5.3 To identify the relationship between safety management practice and safety behavior at one automotive company in Malaysia.

1.6 RESEARCH QUESTIONS

The research questions are meant to give a richer view on the correlation of the safety management practices towards safety behavior in one automotive company in Malaysia. From the independent variables and dependent variables, the research questions (RQ) that have been highlighted in this study is:

RQ1 : What is the level of safety management practices at this automotive company?

RQ2 : What is the level of safety behavior in this automotive company?

RQ3 : Is there a strong correlation between safety management practices and safety behavior in this automotive company?

1.7 SIGNIFICANCE OF THE STUDY

This study is intended to collect viable data from the related respondents so that we know the root causes related to safety management practices and safety behaviour. Some industries are very particular related to the issues of safety, for instance Petroliam Nasional Berhad (PETRONAS) in their website profile mentions that the safety of PETRONAS staff, contractors and communities living in the vicinity of PETRONAS operations are paramount, and PETRONAS is proactively improving

our safety measures. The staffs in the organization are given the awareness to realize the importance of safety. A Third Party Process Safety Assessment was conducted in 2011 on the safety and health implementation across the PETRONAS Group, recognised that process safety standards and requirements have been adequately established at PETRONAS Group level and translated into site-specific systems and documents at operating units. Thus, with this example, the issues of safety are closely related to quality and productivity. This automotive company as another example would also need to have a good quality control correlated to the safety behaviour. Thus, through this quantitative study, problems of safety management practices and safety behaviour can be identified whether they are contributive to the industry or not. So, the quality level related to safety behavior will be made the forecast in this study and it may help the organization to improve the safety behavior of the staff as a whole.

The results and findings from this study which consists of six safety management practices will aid the organization in order to comprehend the employees' views with regards to the management commitment, safety training, workers' involvement in safety, safety communication and feedback, safety rules and procedures and safety promotion policies which are currently applied in the company. The results of the study will also provide practical information with regards to safety management related issues among employees and areas of improvement and actions plans required for the continuous improvement, increase progress and further development of safety management of this automotive company as a whole. The safety behavior findings from this study will help to guide the management to reduce the accident rates, the personal injuries and material loss and also improving the work condition

which in turn improves the employees' participation and compliance towards safety in the organization.

In addition, the safety and health department of this automotive company can utilize the results and findings of this study as a reference to improve the current safety management practices in the company and enhance the safety behavior amongst the employees in the next years to come. Management can also evaluate the management support and commitment towards the safety related activities and further plan for the betterment of safety in the company.

The outcomes and findings of this study will then provide valued information related to safety management practices and safety behavior of this company and it can further be used as a benchmark for future safety program development and action for improvement so that the company can further increase the efficacy of employees by reducing incidents, accidents and also medical implications.

In summary, this study will provide significant references and facts for future researchers on safety management practices and safety behavior. Further comparable research is also possible to be conducted in a different industry such as oil and gas, electrical and electronic manufacturing, construction or even the health services to improve the reliability of the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This literature review deliberates about the safety management practices, safety behaviours and other empirical research that elaborates the correlation of safety management practices towards safety behaviour.

2.2 SAFETY MANAGEMENT PRACTICES

Safety management relates to the actual practices, roles and functions associated with remaining safe (Kirwan, 1998). According Labodová (2004), the safety management practice is a management approach that is used in an organization to control hazards in the workplace. Safety management practices are the policies, strategies, procedures and activities implemented and followed by the management of an organization to ensure the safety of their employees (Vinodkumar & Bhasi, 2010). It is usually regarded as a sub-system of the total organizational management and is carried out via the organization's safety management system with the help of various safety management practices. An excellent safety management practice in place will guarantee and benefit the organization to attain and improve robust procedures for promotion and job assignments, best practices of safety communication amongst employees, workers participation, higher importance for safety matters in meetings, systematic accident investigations, regular safety inspections and others. Safety management practices can further cultivate the important role in safety environment and embeds the practices into the lives of the employees.

In this study, the safety management practices have six components namely; management commitment, safety training, worker's involvement in safety, safety communication and feedback, safety rules and procedures and safety promotion policies.

2.2.1 Management commitment

Management commitment in an organization is very important in determining their success. One study found commitment to safety management environment is a key factor in determining the success of a safety program (Zohar, 1980). According to Griffin and Neal (2000), the perception of an employee will influence their confidence in the safety management system in an organization. Therefore, the responsibility of the management is to ensure that all issues relating to safety and health are handled with care. It is important to demonstrate to employees that management is very concerned on this issue. Management involves the highest role in the achievements of a good safety activity or programme. Based on the continuous improvement model elaborated by the Department of Occupational Safety and Health (2014) on the Guidelines on Occupational Safety and Health Systems, occupational safety and health (OSH), including compliance with the OSH requirements pursuant to national laws and regulations, and practice, is the responsibility and duty of the employer. The employer will need to show strong leadership and commitment to OSH activities in the organization, and make appropriate arrangements for the establishment of an Occupational Safety and Health Management System (OSHMS). The system shall contain the main elements of policy, organizing, planning and implementation, evaluation and action for improvement. The policy includes activities related to the development of the

organization's OSH policy statement and structures and practices that ensure active and meaningful worker participation in OSH arrangement. Management must also organize and address the establishment of OSH responsibilities and accountabilities structures, a safety training system, employee competency definitions, safety documentation practices and an effective communication system. Further to the continuous improvement model by DOSH, the management coordinate and arrange those activities associated with the fulfillment of the principles expressed in the OSH policy statement. These activities include the initial assessment of the OSH arrangement that then support the actual system planning, development and implementation functions. The management must then evaluate the implementation by managing those functions associated with measuring the management system's performance. This involves the development of performance monitoring and measurement protocols, investigation practices for accidents, auditing methods and management review arrangement. Lastly in the concept model of continuous improvement is the action of improvement which address issues associated with preventive or corrective actions and continual improvement. With the information obtained from performance monitoring and measurement, investigations, audits, and management review, appropriate prevention/corrective and continual improvement actions can be taken.

2.2.2 Safety training

Safety training benefits employees to improve safety behavior. According to Vinodkumar and Bhasi (2010), effective safety training is the key elements in any successful accident prevention programme and also occupational safety and health programme. Safety trainings are making accidents more foreseeable to improve

safety and health of employees at the workplace. Thus, it is the responsibility of the management to organize a systematic and comprehensive safety and health training programme for employees (Vrendenburg, 2002). Wachter and Yorio (2014) had developed a theoretical framework on safety training. The mechanism works by increasing knowledge and awareness of safety and health in the workplace. Furthermore, it is explained that it is considerable variation in the ways that safety training is designed and delivered. For example, some organizations may elect to train employees to minimum compliance objectives in one 10 hour session per year. A different company might train employees 20 h per year in 2 h increments and go beyond compliance requirements to incorporate content addressing the art and science of hazard recognition, evaluation, and control. Thus, the implementation of effective safety training will impact on the safe behavior of an employee and reducing accidents. Othman (2013) had conducted a study on the performance of safety training towards the impact on safety behaviour revealed that safety training program did give a significant impact to the safety behavior among employees at workplace. The finding of the study had proven that employee safety behavior is influenced by safety training programs held at workplace.

2.2.3 Workers' involvement

Worker's engagement is a behavioural-oriented technique which involves individuals or groups within the flow of communication and decision making in the organization (Vinodkumar & Bhasi, 2010). The total workers' involvement depends on the trust of management to the employees. The involvement of workers, their views and opinions are needed because they are the people who carry out the tasks and for a better understanding on the actual situation of the tasks given.

According to Vredenburg (2002), employees at workplace are the most qualified personnel to make suggestions for making improvements and they are dependable to deliberate on safety and health matters that affect the workers in the organization. This empowers workers with the authority, responsibility and accountability for required decisions and ensures that both employees and management are involved in setting goals and objectives (Cohen & Cleveland, 1983). This approach is seen to be encouraging workers to engage more actively with safety management practices in their organizations. Garret and Perry (1996) also noted that the involvement of workers in a particular manner in the workplace is the most important element in the success of accident prevention in an organization.

In a study conducted by Cox and Cheyne (2000), the involvement of workers in the context of safety is measured in terms of the level of their involvement in decision-making, management's commitment to the issue of safety, worker involvement in identifying safety issues in the workplace as well as discussions on the issues of safety amongst the colleagues. The results of this study showed that workers' or employees' engagement is important to prevent the occurrence of accidents at the workplace.

2.2.4 Safety communication and feedback

The effectiveness on the delivery of information in an organization can be judged from the diversity of communication channels used. One form of communication that can be applied is a two-way communication. Two-way communication will be a more effective practice by the active involvement of both workers and employers in

giving opinions. It will also be able to control and influence the behaviour of an employee when performing their work (Vredenburg, 2002).

Cohen (1977), Cox and Cheyne (2000), Vredenburg (2002) and Mearns, Whitaker, & Flin (2003) have combined communication and feedback as the factor in their study and the results show that the safety behaviour in an organization is influenced by the level of communication that has been implemented.

Consistent communication between management and workers on issues of safety and health at work will increase awareness among them. The study conducted by Mearns, Whitakers and Flin (2003) shows that communication and feedback regarding safety and health at work will improve the effectiveness of safety management practices.

According to Pidgeon (1998), constant and direct communication is an important characteristic of any working environment. Efficient communication on safety related matters leads to the trust of employees. To gain effect on safety management practices, feedback must be provided to the employees. It needs to be delivered to the target employees whom the behaviour can influence the consequences. Vinodkumar and Bhasi (2010) describes that regular communication about safety issues between management, supervisors and workforce is an effective management practice in order to improve safety in the workplace.

In addition, a study conducted by Williams and Geller (2001) showed that most of the management had mistaken on individual's willingness to accept feedback on

safety. The results of this study indicated that more than half of the respondents are willing to accept feedback regarding the safety of their colleagues. Pidgeon (1991) in his study also concluded that the near-miss accidents must be notified and used as lessons learn amongst the employees. It is important to ensure that employees are always alert in everything that they do.

2.2.5 Safety rules and procedure

Vinodkumar and Bhasi (2010) explains that the safety rules and procedures that are well established and well documented by an organization and its enforcement towards safety management practices improves the safety behavior of employees at the workplace.

In the context of safety management practices, safety rules and procedures are based on the frequent safety checks, the enforcement level of safety implementation by the management and the effectiveness of the occupational safety and health procedures and rules in the workplace in order to prevent accident from occurring. Cox and Cheyne (2000) and Mearns et al. (2003) in their study have incorporated safety rules and procedures as a factor in their case studies. The findings show that there is a significant correlation between safety regulations and procedures toward the occurrence of accidents at work.

2.2.6 Safety promotion policies

Hagan (2001) explains that safety promotion policies of management such as recreational activities, rewards and incentives motivate employees to perform safely in the workplace.

Cohen (1977) said safety promotion policies can encourage employees to contribute to the hazard control programme of the organization and motivate employee to take self-protection action towards safety management. Vredenburg (2002) states that a well-designed reward system should be elevated in the organization into offering recognition to employees that will further encourage the behaviour modifications. Issues related to safety promotion policies such as rewards and incentives, creating awareness among workers, safety week celebration, encouraging employees to report safety matters and safe conduct are positive factors that contribute to a good safety management practice.

Incentives and appreciations are among the most effective reward system that is widely used by employers. According to a study conducted by Hinze (2002), the monetary incentives will also be able to reduce accidents in the workplace. Whereas a system based on penalties and fines is seen to be ineffective in reducing accidents at work statistics.

2.3 SAFETY BEHAVIOUR

According to Neal and Griffin (1997), they have categorized two important dimensions of safety behaviours which are the safety compliance and safety participation. Safety compliance is the core safety activities needed to be carried out by the individuals to maintain and enhance workplace safety (Neal, Griffin, Hart, 2000). As for example, the usage of personal protective equipment (PPE) that is mandatory for every employee. In the safety compliance, it reflects to the individual personality in motivating himself or herself to always abide to the rules and also

conducting his or her work based on the safety procedures or standard operation procedures that are documented by the management.

Whereas, for safety participation, it is define as the employee behaviour in supporting safety issues in the workplace together with other colleagues (Hagan, Montgomery & O'Reilly, 2001). It explains the necessary actions taken by the employee which indirectly contribute to the safety of the individual and it is also done for the sake of a better and safer working environment. For instance, employee active participation in discussions of safety and health at the workplace which in turn will encourage the employees to give good suggestions pertaining to the matters rose.

Safety behaviour that is practiced by individual is important in an organization. According to Goodrum and Gangwar (2004), one of the ways to reduce the accidents in the workplace is to put the reward factor in the evaluation of safety behaviour in the workplace. As for example, the employee will attain rewards if there should be no accidents happening at the workplace in a stipulated time frame. However, the downside of the rewards mechanism is that no one will report accidents cases in the workplace due to that reward. (Mattson & Hellgren, 2014).

2.4 EMPIRICAL STUDIES ON SAFETY MANAGEMENT PRACTICES TOWARDS SAFETY BEHAVIOUR

There are various studies that examine the effectiveness of safety management practices in the workplace. Safety management practices, supported by employees will form a good safe environment in the workplace (Vinodkumar & Bhasi, 2010). DePasquale and Geller (1999) have revealed in their study that the organization

which had a low rate of workplace accidents is due to several factors. Among them are the involvement of management in safety activities, safety training for new employees, ongoing safety training to workers, the efficacy of daily safety poster and daily communication between employees and managers in the workplace. Vredenburgh (2002) in his study also divides the involvement of employees, safety training, hiring practices, reward systems, management's commitment and communication and feedback as safety management practices in hospital environments.

In addition, the study conducted by Vinodkumar and Bhasi (2010) on 1566 workers from eight Petrochemical industry's highest-risk hazards in Kerala, India indicated that safety management practices are directly related to safety behaviour of an employee (safety compliance and safety participation). The study also stressed that safety training is a key factor and the most important of which will determine the safety behavior of an employee.

2.5 THEORY

The relationship between safety management practices and safety behavior have been elaborated in theories related to the concept of behavior and changes in the behavior are seen most appropriate to the study. According to the Cambridge Dictionaries Online (2015), behaviour refers to the way that someone or something behaves in a particular situation. Changes in behavior also explain the cause and effect of the behavior difference of an individual. In the theory of behaviour change, there are three main factors that contribute; change of environment, personal and behavioral characteristics of the individual itself.

Theory of Planned Behaviour (TRB) is one of the theories that discuss the changes in individual behavior. This theory has been introduced by Icek Azjen in 1985 and is an improvement model from the Theory of Reasoned Action (TRA) developed by Fishbein and Ajzen (1975) which is seen fragile. According to TRA, if people evaluate the suggested behavior as positive (attitude), and if they think their significant others want them to perform the behavior (subjective norm), this results in a higher intention (motivations) and they are more likely to do so. Thus, there is a high correlation of attitudes and subjective norms to behavioral intention.

As in the TRA, TRB theory has focused primarily on the level of perceived behavioural control that drives the behavior (Ajzen, 1991). Until now, Ajzen model (1991) was used so widely in psychological theories to explain and predict human behavior (Dyer 1994; Kolvereid 1996; Krueger & Carsrud 1993; Krueger, 2000). The establishment of human behaviour is determined by the level of perceived behaviour and behaviour change to a certain target which depends on the specific situation in a timely manner (Fishbein & Ajzen, 1975). Studies from Krueger and Carsrud (1993) found that the level of perceived behavior is the best determinant of human behavior which is derived from their attitude towards something. In addition, the perceived behaviour and behavioural intentions can have variations of its own and relies on objects, situations and time (circumstantial situations) (Krueger & Casey, 2000).

2.6 SUMMARY

Thus, in the context of this study, the perceived behavioural controls for safety commitment from management, adequate training, employee participation in

decision-making when related to safety, regulations and policies and good communication related safety issues will shape either a positive; higher productivity with safety compliances practices, or a negative behavior; increase of number of safety occurrences of an employee in one automotive company in Malaysia.



CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter will describe the conceptual framework, hypothesis, research design, instrument and measurement, sampling procedure, data collection, pilot data sampling and techniques of analysis.

3.2 CONCEPTUAL FRAMEWORK

Based on the discussion in the problem statement in chapter one, the research has focused on two variables, namely safety management practices (independent variables) and the safety behaviour (the dependent variable) among workers on one automotive company in Malaysia.

In developing the conceptual framework of this study, the study of Vinodkumar and Bhasi (2010) was used as the basis for development. Vinodkumar and Bhasi (2010) have developed a conceptual framework that contains three variables, namely safety management practices (independent variables), determines the safety performance (mediator) and component safety performance (the dependent variable). However, Vinodkumar and Bhasi view of safety management practices on the safety performance of an individual employee. Figure 3.1 describes the conceptual framework developed by Vinodkumar and Bhasi (2010).

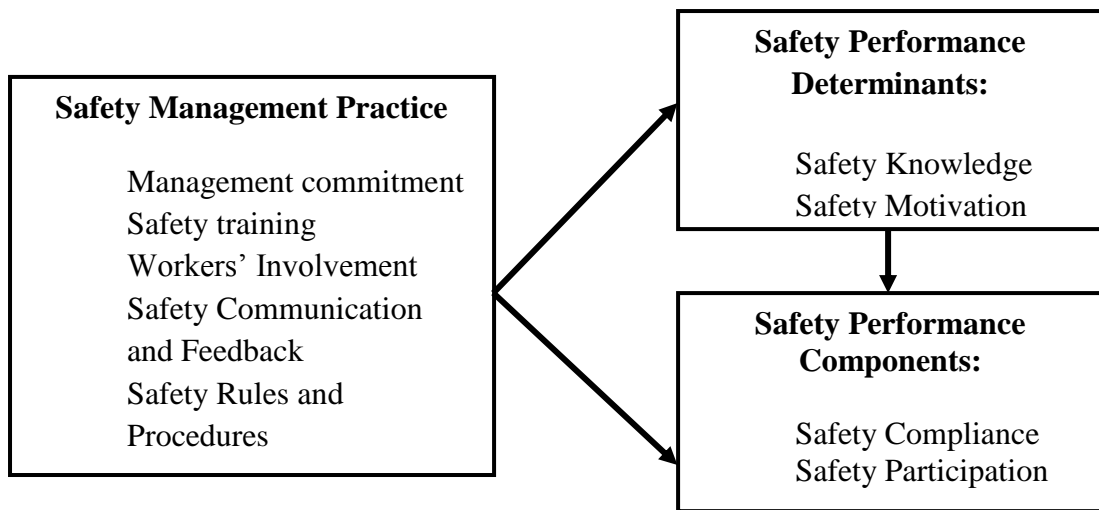


Figure 3.1 : Hypothesis Model (Vinodkumar & Bhasi,2010)

However, in this study, the researcher has developed a conceptual framework that has two variables, namely safety management practices as independent variables and the safety behaviour as the dependent variable. The conceptual framework for this study visualized in Figure 3.2 below:

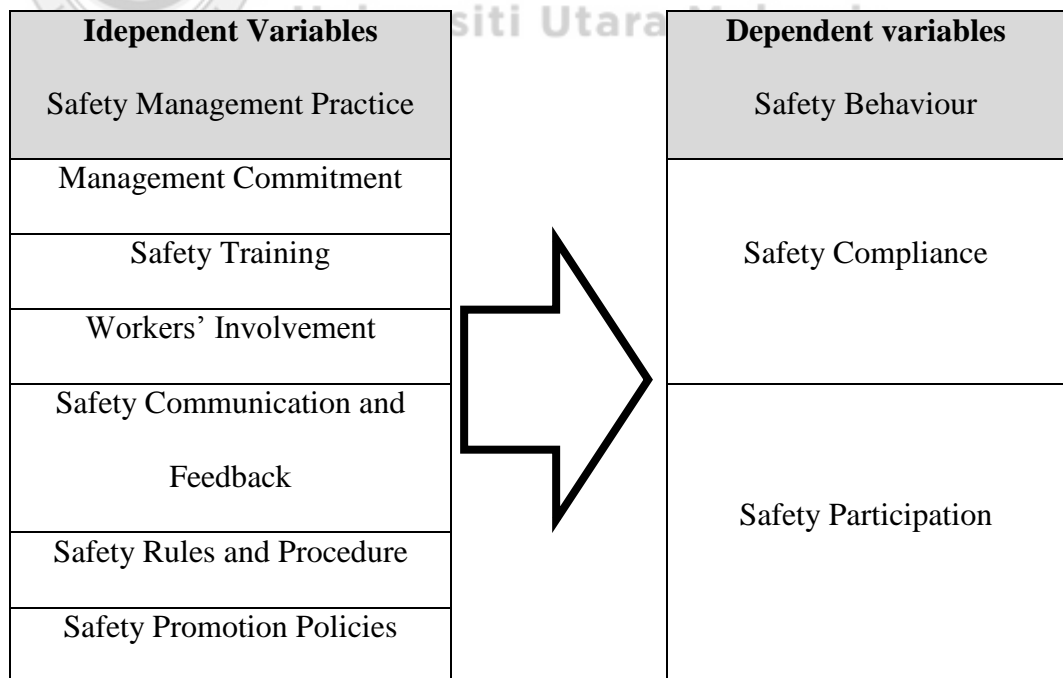


Figure 3.2 : Research Conceptual Framework

3.3 HYPOTHESIS

Based on the literature review discussed and the conceptual framework developed, the following hypothesis was developed:

Hypothesis, H₁: The safety management practice has strong correlations with safety behavior in an automotive company in Malaysia.

3.4 RESEARCH DESIGN

The purpose of this study is to measure the employee perception on safety management practices and its correlations towards safety behavior in one automotive company in Malaysia. Therefore, the safety management practices as the independent variables were used to measure the degree of correlation towards safety behavior as dependent variables in this automotive company. This study has been conducted using quantitative method which is using self-administered questionnaires to obtain the necessary data. The questionnaires were developed from the adaptation of previous studies on the similar topics.

The data collection begins by establishing a survey form on the employee perception on safety management practices and its correlations towards safety behavior in one automotive company in Malaysia. Next, pilot test was conducted among 40 samples from the total samples of this study. A total of 482 questionnaires were distributed among the respondents of this automotive company. Employees were proposed to complete the survey in a quiet setting on the work site during rest time.

3.5 INSTRUMENTATION AND MEASUREMENT

This study uses questionnaire method to collect the data. Twelve (12) pages which were divided into three main sections being used for data collection purposes. The questionnaires were conducted dual languages which are English and Bahasa Malaysia and the questions were self-administrative. Questionnaire used for this study is attached as per Appendix A.

The first section of the questionnaire contains the demographic characteristics of the respondents. The characteristics of the employees consists of the departments, current designation, qualifications, age, gender, number of years of experience, accident history experienced but not reported and the number of accidents experienced.

Thus, the second section which is the safety management practices, the researcher have used six different instruments according to the different dimensions of management commitment, safety training, employee involvement, communication and feedback systems, rules and safety procedures and safety promotion policies.

To study the first dimension of management commitment, the instrument from Cheyne, Cox, Oliver and Thomas (1998) was adopted. As for the dimensions of safety training, researcher have used the instrument of Cox and Cheyne (2000). As for the involvement of employees in safety, the instruments of Coyle, Sleeman & Adams (1995) was adapted; communication and feedback have used the instrument from Flin, Mearns, O'Connor and Bryden (2000). In addition, researcher has used the instrument of Glendon and Litherland (2001) to measure the dimensions of

safety rules and procedures. Finally the safety promotion dimensions, researcher has adapted the instrument of Neal, Griffin and Hart (2000).

These instruments have also been used by Vinodkumar and Bhasi (2010) in their studies in the review of an organization's safety management practices of employees in the petrochemical industry. Thus, this section contains:

1. Management commitment (9 items)
2. Safety training (6 items)
3. Worker's involvement (5 items)
4. Safety communication and feedback (5 items)
5. Safety rules and procedures (5 items)
6. Safety promotion policies (5 items)

For the dependent variable which is safety behavior, researcher has used two main dimensions which were safety compliance and safety participation. The instrument was adapted from Williamson, Feyer, Cairns and Biancotti (1997) that was used to measure the dimensions of safety compliance. In addition, the dimension of safety participation, researcher has adapted the instrument of Neal and Griffin (2002). Vinodkumar and Bhasi (2010) also adopted both of these instruments in their study of safety management practices. This section consists of:

1. Safety compliance (7 items)
2. Safety participation (5 items)

All the above variables were measured using the five-point Likert Rating Scale as shown in following table 3.1. The respondents were to mark their level of agreement of disagreement on each questionnaire items.

Table 3.1: Five-point Likert Scale

Jugdment	Scale
Strongly Disagree	1
Disagree	2
Disagree Nor Agree	3
Agree	4
Strongly Agree	5

3.6 SAMPLING PROCEDURE AND DATA COLLECTION

The population for this study is to involve employees in the automotive company consisting of 4,768 employees. According to the schedule Krejcie and Morgan (1970), the minimum number of samples required by the researchers in this study is 357 people. Table 3.2 shows the number of questionnaires that have been distributed and the number of recoveries questionnaires received by the researcher. The response rate received was 74.7%. The researcher faced some issues with 19.1% unreturned questionnaires due to lack of support by the respondents. While 6.8% of the questionnaire distributed were left blank due to the same reason.

Table 3.2 Number questionnaires circulated and returned

ITEM	Quantity
Questionnaires circulated	482
Questionnaires returned	360

3.7 PILOT STUDIES

A pilot study was conducted by the researcher before the exact data distribution. In order to ensure the reliability of the study, the questionnaire response had undergone pilot testing. Pilot study aids as a guide for a bigger scale study. It is done to determine the degree of clarity of questions and to identify problem areas that need attention (Borg & Gall, 1979).

The pilot study involved 40 respondents who are employees at the company. The raw data obtained from this pilot study were analyzed using Statistical Package for Social Sciences (SPSS) version 19.0. The aim of this pilot study was to analyze the reliability of the instruments used in this survey form. Moreover, the purpose of this pilot study was to evaluate and see whether respondents can understand clearly each of the questions.

Instrument reliability refers to the ability of the instrument to obtain a consistent and stable measurement. These measurements can be made as a result of internal consistency measured using Cronbach's alpha. Cronbach's alpha showed a strong relationship for both item. Reliability is described by the coefficient of reliability (alpha) between values of 0.00 to 1.00. Thus if the coefficient alpha is higher, then

the reliability of the test is better. Through referring Table 3.3, the tested Cronbach Alpha values of the pilot study are listed according to each variable group. All the independent variables and dependent variables show the value of above 0.6 as also suggested by Hair, Anderson, Babin and Black (2009).

Table 3.3: Tested Alpha for Pilot Study

Item	Type of Variable	Cronbach's Alpha
Management Commitment	Independent	0.867
Safety Training	Independent	0.939
Workers' Involvement	Independent	0.888
Safety Communication and Feedback	Independent	0.880
Safety Rules and Procedure	Independent	0.701
Safety Promotion Policies	Independent	0.846
Safety Compliance	Dependent	0.886
Safety Participation	Dependent	0.892

3.8 SUMMARY

The study was based on 360 questionnaire samples collected from respondents that verify the employee perception of safety management practices and its effects towards safety behaviour in one automotive company in Malaysia. The SPSS

software version 19 is used to analyze the assessment data, reliability test, Cronbach's alpha, mean and correlation reports in order to conclude the findings.



CHAPTER FOUR

RESULTS AND ANALYSIS

4.1 INTRODUCTION

This chapter will reveal the results and finding from the research conducted by automotive company. The questionnaires were disseminated and collected from the automotive company employees. The data were then analyzed using the Statistical Package for Social Science (SPSS) version 19.0 in conducting the statistical analysis. The data gathered were then examined with descriptive frequency analysis for demographic details of the respondent. The analysis then concludes the reliability analysis, descriptive statistics of variables, correlation analysis and coefficient.

4.2 DATA ANALYSIS

The demographic material of respondents was firstly examined. The descriptive statistics of frequency analysis was used to analyze demographic facts of respondents. The data analysis process begins with the reliability analysis. This is to measure the reliability of variables which are the safety management practice and safety behaviour. Further to the analysis, descriptive statistics of variables, correlation analysis, and coefficient.

4.3 RESPONSE RATE

There were a total of 482 questionnaires distributed to staffs of the automotive company. A total of 360 questionnaires were returned from the respondents. Thus,

the response rate is 74.7%. The researcher faced some issues of employees not wanting to participate to the survey and some not returning back the questionnaires.

4.4 DISTRIBUTION OF FREQUENCY ANALYSIS

Based on the demographic items listed in the questionnaires such as job position category, qualification or education level, age, gender, number of years of experience, accident history experienced but not reported and number of accidents experienced were analyzed using descriptive frequency analysis.

4.4.1 Profile of respondents

Using the descriptive frequency analysis, the respondents' profile was examined. The total respondents were from the employees of the automotive company. The first data analyzed is the job position category shown in Figure 4.1 whereby it was separated into two types namely Non-Executives whom consists of production workers, technicians and clerks and the other type was categorized as Executives whom comprise of Executives, Engineers, Managers and all its senior positions up to the top management. Based on the survey, the biggest piece of the pie chart belonged to Non-Executives representing 63.6% out of the total respondents. Due to the company in study is an automotive manufacturing company, thus more workers are required in the production line, field work verification and other administrative jobs. Thus, they are more easily to be interacted and accessed rather than the 36.4% Executive respondents which tend to have insufficient time to feedback the questionnaires.

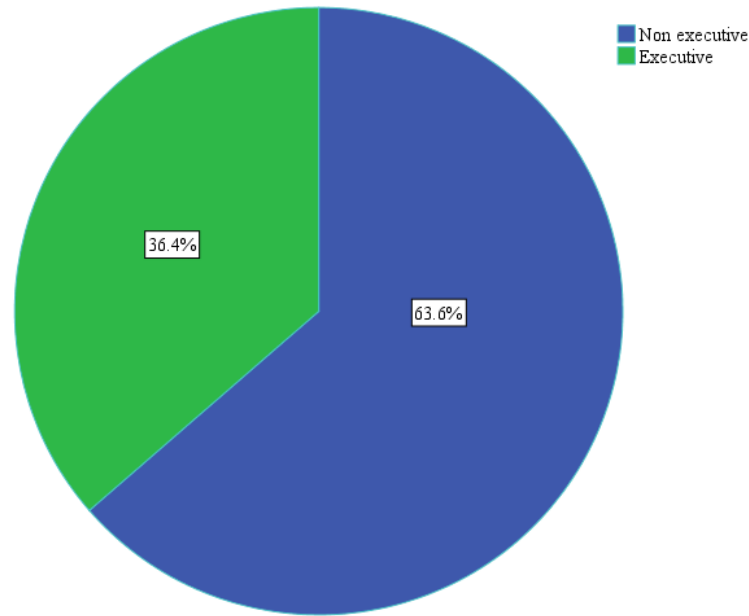


Figure 4.1: Job Position Category of Survey Respondents

By referring to the job position category data, thus it is expected that the majority of qualifications or education level of the respondents as displayed in Figure 4.2 comprises of Sijil Pelajaran Malaysia (SPM) level at 50.3% while Degree holders mark at 23.9%. Sijil (Certificate) or Diploma holders contributed to 22.5% out of the total respondents and a mere 3.3% feedback was attained from Masters level respondents. This shows that the questionnaires were accepted and understandable by the majority group.

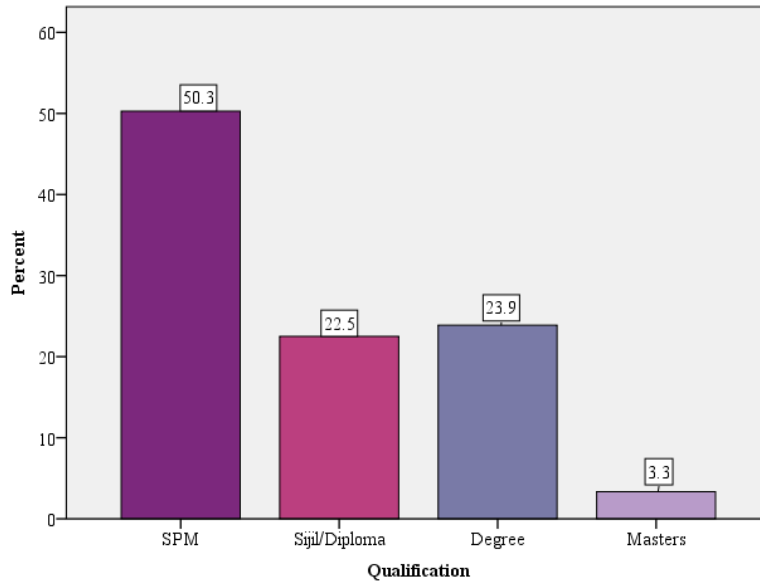


Figure 4.2: Education Level of Survey Respondents

Besides that, most of the respondents in the company are at the age group of 39 years old and above consisting of 205 respondents followed by age group of 32 – 38 years old which recorded 83 respondents or 23.1%, a total 63 respondents belonged to the 25 – 31 years old age group and the least respondents were represented by the 18 – 24 years old group displaying 2.5% out of the total respondents. The following Figure 4.3 shows the age group of the respondents.

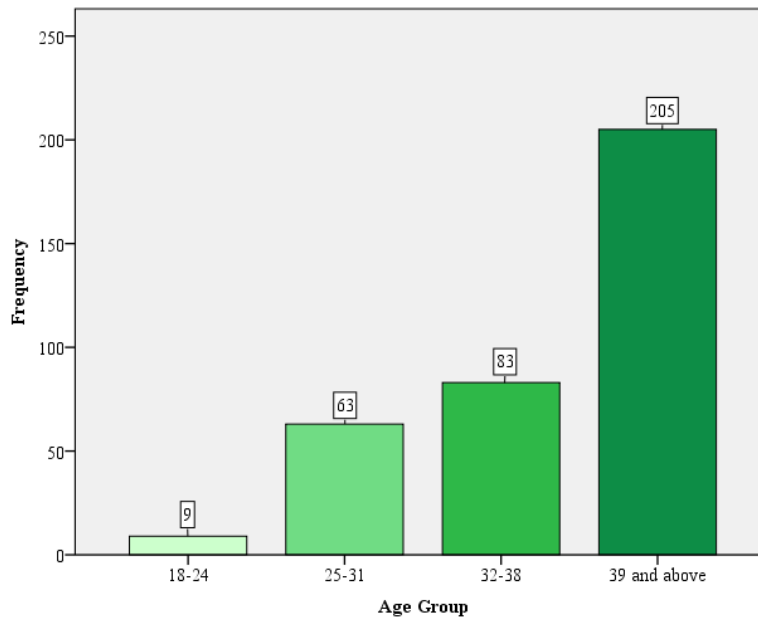


Figure 4.3: Age Group of Survey Respondents

Furthermore the data showed that 82.2% of the total respondents are male. Thus, the majority of the employees are male workers due to the company's nature of work. The manufacturing line prefers lots of male workers due to the intense energy needed to assemble heavy automotive components. Though, 17.8% of the female respondents are equally important due to their attention to details and being considered into finished jobs such as the quality check of vehicle assembly, clerical and others. The following Figure 4.4 shows the separation of gender who participated in the survey.

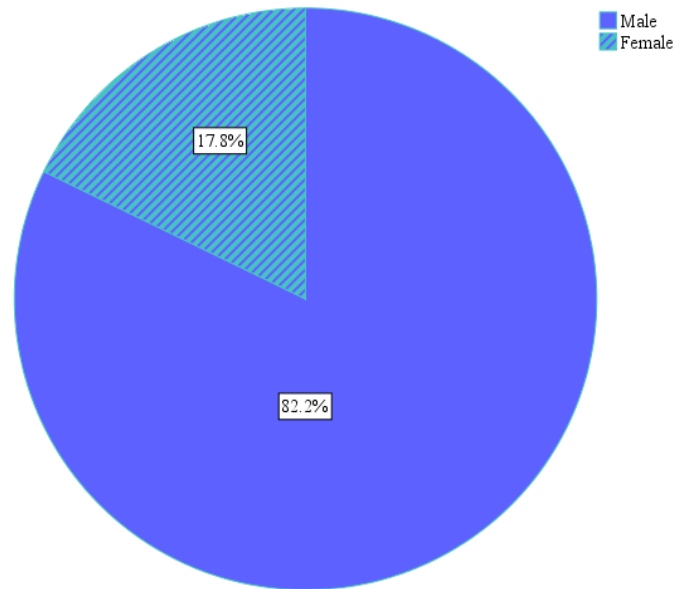


Figure 4.4: Gender of Survey Respondents

According to the data of respondents in Figure 4.5 on the years of experience, the following pie chart reveals the highest respondents for this questionnaire consists of 155 of respondents or 43.1% who have been working in the company exceeding 21 years. Thus, this means that very experienced employees were present at the time when the questionnaires were distributed. It further notes that they majority of the respondents have progressed with the company and who loyally observed the safety management practices from the beginning. Another section representing 26.4% or 95 respondents is also expected to be matured enough with the current safety management system. Thus, it is expected that these groups of respondents will give significant results to the study. Whereas the second largest piece of respondents is currently embedding themselves to the system.

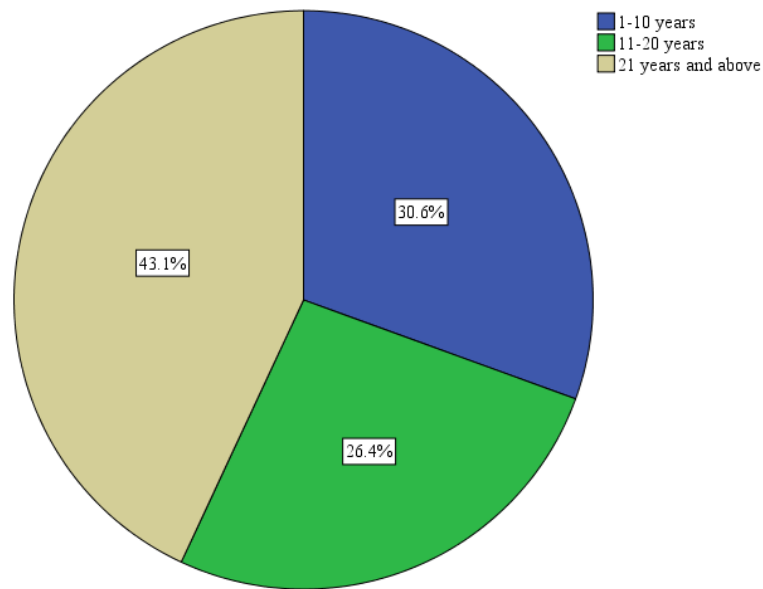


Figure 4.5: Years of Experience of Survey Respondents

Other than that, it seen in Figure 4.6, during the respondents' duration of employment in this organization, the majority of 333 respondents have no accidents cases that go unreported, while 26 respondents have experienced occupational accidents which are not reported although the frequency is at the maximum of three (3) cases due to minor injuries attained. While one (1) of the respondent had experiences more than three (3) occupational or industrial accidents that are unreported. Thus, this data proves that the safety behaviour of the majority of respondents within the organization is positive and in the right path.

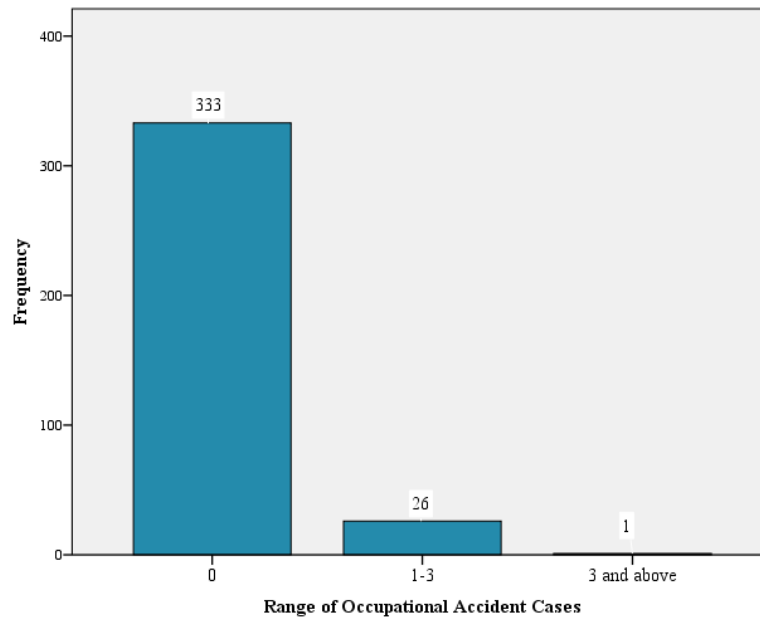


Figure 4.6: Unreported Occupational Accidents of Survey Respondents

The final data on the demography profile of the respondents display their total occupational accident history which occurred during their employment in the organization. It shows that majority of the respondents representing 86.7% have no occupational accident cases experienced which reflects a very safe work environment and possibly good safety behaviour. While 44 respondents have experienced up to a maximum of three (3) occupational accident cases which needs to be further investigated by the management of the organization on what may be the root causes of the accident occurrence and come out ways of preventing future occurrence. This also represents to the remaining four (4) respondents which have more than three (3) occupational accidents experienced. The explanation is summarized in the Figure 4.7.

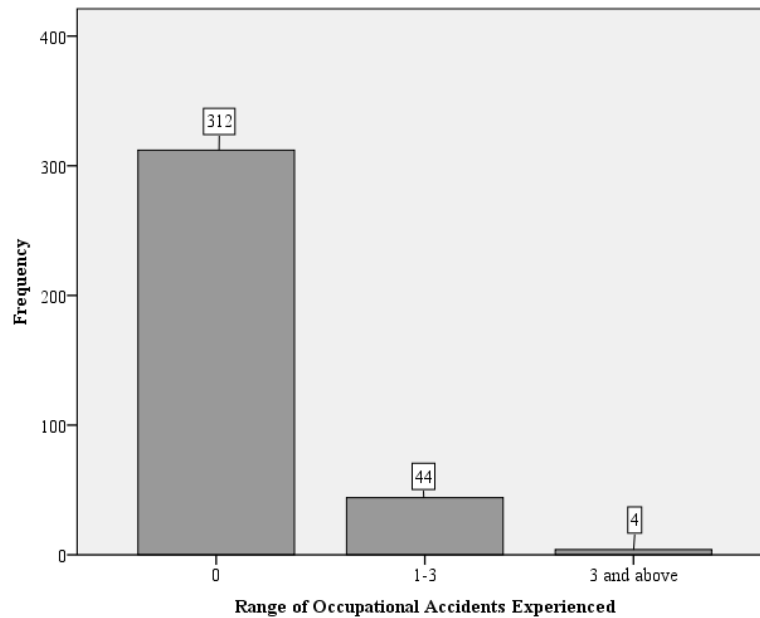


Figure 4.7: Total Occupational Accidents of Survey Respondents

4.5 RELIABILITY TEST OF QUESTIONNAIRE ITEMS

In principal, a measurement procedure that is stable should produce the results which same of nearly the same if the same individuals and conditions are used. Reliability is the amount observed in the variance score against the actual variance score. Internal consistency reliability used in SPSS is a measure of how well the items on the test measure the same construct or idea. Thus, in this study as per pilot samples done, we will examine the reliability coefficient called the Cronbach's alpha (α) (Cronbach, 1951). It is considered that with a Cronbach alpha value of 0.70 and above shows the strong internal consistency of the defined scale (Nunnally, 1978 & DeVellis, 2003). However, Hair, Black, Babin, & Anderson (2009) explain that the value of alpha α above 0.60 is considered significant. Thus, the table 4.1 explains the reliability test of two components in study which are the safety management practice and safety behaviour. It shows a value of 0.919 which has a good internal consistency on the data reliability.

Table 4.1: The Reliability Test of All Variables

Cronbach's Alpha	N of Items
0.919	47

Further to the reliability check, the variables in study were further tested to the six safety management practices and two safety behaviour dimensions. Thus, the table 4.2 shows the individual reliability of the each variable dimensions.

Table 4.2: The Reliability Test of Each Variable

No.	Safety Dimensions	No. of items	Cronbach's Alpha (α)
1	Management commitment	9	0.766
2	Safety training	6	0.856
3	Workers' involvement	5	0.750
4	Safety communication and feedback	5	0.713
5	Safety rules and procedures	5	0.782
6	Safety promotion policies	5	0.703
7	Safety compliance	7	0.828
8	Safety participation	5	0.675

The findings of the Cronbach's Alpha in Table 4.2 published by SPSS reveal that the highest value achieved was on the safety training ($\alpha = 0.856$) and the lowest was safety participation ($\alpha = 0.675$). Based on the above table 4.2, the overall individual Cronbach's value in this research is proven significant as it displays good internal consistency reliability which benchmarked the alpha value of above 0.60 (Hair et. al, 2009)

4.6 TO ANSWER RESEARCH QUESTION

To answer the research question number one (1) on what is the level of safety management practices at this automotive company, the T-Test was employed to answer this question. The data was analyzed by using SPSS programme version 19.

Table 4.3: Classification of Mean

Range of Mean	Description
1.00 – 1.80	Very low
1.81 – 2.60	Low
2.61 – 3.40	Moderate
3.41 – 4.20	High
4.21 – 5.00	Very High

Source: Veloo & Rahman, 2012

The table 4.4 is explains on the mean statistics of the independent and dependent variables as a comparison. The data shows that the mean values of the safety management practices and safety behaviour is between 3.4430 – 3.7597. Thus, safety behaviour scored higher mean value at 3.7597 as compared to 3.4430 for

safety management practices. Whereas the standard deviation score recorded for safety management practice is 0.57451 and safety behaviour is 0.56156.

Table 4.4 - Safety Management Practices and Safety Behaviour - Mean Statistics

Dimensions	N	Mean	Std.
			Deviation
Safety Management Practice	360	3.4430	0.57451
Safety Behaviour	360	3.7597	0.56156

The table 4.5 displays the results of the T-test for the six dimensions of safety management practices. The data for safety management practices ranges from 3.1017 - 3.5858. The results shows that management commitment gained the highest mean with 3.5858 score (high) while safety promotion policies obtaining the lowest mean score of 3.1017 (moderate). The standard deviation outcome shows that safety promotion policies obtained the highest value of 0.73572 while management commitment received the lowest score of 0.57245.

Table 4.5 - Safety Management Practices - Mean Statistics

Dimensions	N	Mean	Std.	Std. Error
			Deviation	Mean
Management commitment	360	3.5858	0.57245	0.03017
Safety training	360	3.5852	0.73458	0.03872
Workers' involvement	360	3.4939	0.66940	0.03528
Safety communication and feedback	360	3.4167	0.62764	0.03308

Table 4.5 (Cont...)

Dimensions	N	Mean	Std.	Std. Error
			Deviation	Mean
Safety Rules and procedure	360	3.4750	0.66024	0.03480
Safety promotion policies	360	3.1017	0.73572	0.03878

In order to answer the research question number two (2) on the level of safety behavior in this automotive company. Thus, the Table 4.6 displays the results of the T-test for the two dimensions of safety behaviour.

Table 4.6 - Safety Behaviour - Mean Statistics

Dimensions	N	Mean	Std.	Std. Error
			Deviation	Mean
Safety Compliance	360	3.6933	.69501	.03663
Safety Participation	360	3.8261	.61485	.03241

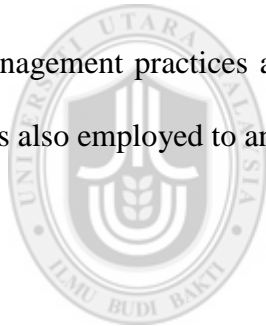
Based on the rule of thumb by Veloo & Rahman (2012), the safety behaviour contains two dimensions which are safety compliance and safety participation. The results show in Table 4.6 that safety participation has the highest mean value of 3.8261 (high). This proves that the respondents have an excellent voluntary and proactive behaviour towards pertaining safety in the workplace. Meanwhile, safety compliance had the lowest mean score of 3.6933 (high). Most of the respondent show the agreement that they have high tendency to practice their work in a safe manner, using the required equipment, follow the exact safety rules and procedure,

ensure the maximum levels of safety and do not move away from the correct work procedures.

Overall, the highest standard deviation of 0.03663 scored for safety compliance and safety participation scored the lowest at 0.03241. Thus, both data does have high relativity among the respondents towards safety compliance and safety participation which develop the safety behaviour.

4.7 CORRELATIONS

To answer the research question number three (3) on the correlation between safety management practices and safety behavior in this automotive company, the T-Test was also employed to answer this question.



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Table 4.7: Table of Correlation

Range of Correlation	Description
0.91 – 1.00	Very strong
0.71 – 0.90	Strong
0.51 – 0.70	Moderate
0.31 – 0.50	Weak
0.01 – 0.30	Very weak
0	No correlation

Source: Chua, 2006

Based on the Table 4.7 from Chua (2006), the analysis results of the Pearson correlation between safety management practices (management commitment, safety training, workers' involvement, safety communication and feedback, safety rules and procedures, safety promotion policies), and safety behaviour (safety compliance, safety participation) are revealed in Table 4.8. It shows a strong correlation at $r = 0.713$.

Table 4.8 – Correlation Analysis of Safety Management Practice and Safety Behaviour

	Safety Management Practices	Safety Behaviour
Safety Management Practices	1	0.713
Safety Behaviour	0.713**	1
N	360	360

** . Correlation is significant at the 0.01 level (2-tailed).

4.8 SUMMARY OF HYPOTHESIS TEST RESULT AND TEST METHOD

Table 4.9: Summary of Hypothesis Test Result and Test Method

	Hypothesis	Results	Test Method
H ₁	The safety management practice has strong correlations with safety behavior in an automotive company in Malaysia	Accepted/ Strong	Pearson Correlation Analysis Result

The table 4.9 indicates the test result and test method for the hypothesis. The hypothesis which mentions that the safety management practice has a strong correlation with safety behavior in an automotive company in Malaysia is accepted. The level of correlation of safety management practices towards safety behaviour was at a strong level with $r = 0.713$. This demonstrates that the safety management practices when applied will have a strong implication to the safety behaviour in the company.

4.9 SUMMARY

The research was conducted among 360 respondents of one automotive company in Malaysia and achieved the response rate of 74.7%, The Cronbach's Alpha results for the total 47 questionnaire items displayed $\alpha = 0.919$. Thus, the Cronbach's Alpha score in this research is acceptable and shows good internal consistency reliability as per reference value of above 0.60. Furthermore, it is concluded that there is a strong relationship between the independent variable (safety management practices) and dependent variable (safety behaviour) with a score of $r = 0.713$. In summary based on the outcomes, there is a strong relationship between safety management practices and safety behaviour.

CHAPTER FIVE

DISCUSSION AND RECOMMENDATION

5.1 INTRODUCTION

This chapter will discuss on the summary of study that was conducted and the data obtained from the survey. As a recap, the purpose of the research is to study the relationship or correlations between safety management practices (management committee, safety training, workers' involvement, safety communication and feedback, safety rules and procedure, safety promotion policies) towards safety behaviour (safety compliance, safety participation) in one automotive company in Malaysia. The results and findings of the study may assist the automotive company and other researchers on the inside view in order to improve the safety management practice and safety behaviour of their organization. In the end, the sum up of all limitations and also the summary of the study will end the chapter.

5.2 DISCUSSION OF RESEARCH QUESTIONS

The outcomes of the research are to answer the research questions. For question number one (1), the study was to determine the level of safety management practices in this automotive company. In this research, the results showed that the safety management practices in the automotive company have a mean value of 3.4430 which indicates a high level of data consistency. Thus, the automotive company in study has been in the industry for more than three decades thus have acquired many experienced and skilled workers. This has been proven further by the certification of ISO 9001:2008 and other quality accreditations like United Kingdom's Vehicle Certification Agency (VCA) which provides quality, environmental and health and

safety management system certification for ISO9001, ISO14001, ISO/TS16949 and OHSAS18001. This is further confirmed in the study by Vinodkumar and Bhasi (2010) that ISO 9001 certified organizations were found to have higher levels in safety behaviour and all safety management practices except safety promotion policies in comparison with non-certified organizations.

From the safety management practices dimensions, management commitment was proven to have the highest mean value which is 3.5858 which is considered as high. This shows that the respondents' notion towards the management commitment is high. This is a good sign for the employees to appreciate management effort towards the employees' well-being and safety at the workplace. Vinodkumar and Bhasi (2010) added the management commitment with regards to safety will influence the safety behaviour of an employee and it will protect the employees from accidents.

As for the safety training, the mean value is also at a high internal consistency with a value of 3.5852. The researcher was also informed by the organization's training center that a minimum requirement of 40 hours of training was to be fulfilled every year by each employee in service. Thus, these requirements had set high standards in the effort to well-educate the employees in safety and well-being of the workers. It also proves that the safety training as well as other trainings is sufficiently organized by the management. Othman (2013) also verifies that safety training program did give a significant impact to the safety behavior among employees at workplace.

Other than that, workers' involvement in this study shows also a high mean value of 3.4939. Due to the majority (56.9%) of the skilled and experienced respondents in

service, thus the knowledge and skills in the aspect of safety and health have also developed into the years. Thus, this gives a good example to other employees and further encourages their involvement to the decision making of safety related matters. It will further affect the positive safety behaviour among the employees.

Through active synergy between the labour union within the company and Safety, Health and Environment (SHE) department, issues can firmly be raised and have highly been taken into consideration of future corrective actions. The statement is also been confirmed by Fidderman and McDonnell (2010) in their report on Highland Spring United Kingdom case study that worker involvement has significantly increased the number of issues raised which in turn contributed to a high rate of completion of actions once an issue has been raised. This had further increase in workers' awareness of health and safety and its relationship to the business.

Further to the positive results in safety management practices, the dimension of safety communication and feedback had also established a high mean value of 3.4167 from the respondents. Thus, this further confirms that there is a good safety interaction between the management and employees. The management of the automotive organization goals is clearly defined to the employees and an 'open door' policy is practiced within the organization's safety and health administration. Newsletters in an electronic format is printed out and placed on notice boards to allow workers without PCs to read it. While, company emails remind managers to ensure that those without PCs also access information. The data is also justified as in the study by Cohen (1977).

In addition to the data collected, safety rules and procedures feedback gave a mean value of 3.4750 which is also relatively high. This is a supporting dimension to the management commitment whereby with the certification of ISO9001:2008 to the company in study, it gave a high impact to the perception and understanding on the safety and health rules and procedure amongst the respondents. Mearns, Whitakers dan Flin (2003) found in their study that there is a significant correlation between the safety rules and procedure to the rate of accidents at the workplace.

A mean value 3.1017 was measured for safety promotion policies. This is the least value recorded among the dimensions of safety management practice. Thus, the moderate value shows that the safety promotion policies of the company are unclear to a few of the respondents. Some employees may not know the proper channel to report even the slightest near-miss accidents. Some employees also do not understand clearly on the goals and objectives of the system. Furthermore, this is possibly due to reward system is not seen implemented in order to motivate the employees in the organization. The study done by Hagan, Montgomery and O'Reilly (2001) mentioned that incentives or rewards, appreciation and recognition to the employees will increase the motivation of employees towards doing their jobs in a safe manner as what the management requires.

Overall in this study, it is indicated in the research question number two (2) to study the level of safety behavior in this automotive company. Thus, as per the above safety management practices measurements, safety behaviour mean value of the respondents is relatively high which marked 3.7597 in total. Thus the objective of the study is successful to determine the level of safety behaviour amongst the

respondents of the automotive company. Based on further analysis, the two dimensions of safety behaviour, which are the safety compliance and safety participation, are also taken into account.

Safety compliance shows the least mean value out of the two which measured 3.6933. Based on Veloo and Rahman (2012), the mean value is relatively high. Thus, most of the respondent show the agreement that they have high tendency to practice their work in a safe manner, using the necessary equipment, follow the correct safety rules and procedure, ensure the highest levels of safety and do not deviate from the correct work procedures by taking 'short-cuts'. This is due to the company involves manufacturing and assembly of vehicles which entails for the highest workmanship and quality of the finished product.

Besides that, safety participation tracks a mean value of 3.8261 which shows the highest value amongst the two safety behaviour dimensions. This proves that the respondents have a excellent voluntary behaviour towards pertaining safety at the workplace.

As for the research question number three (3) which require studying the intensity of the correlation between safety management practices and safety behavior in this automotive company, the correlation value of 0.713 had been tabulated. Hence, from the Chua (2006), the correlation value between safety management practices have a strong relationship (within the range of 0.710 – 0.90) with safety behaviour. This proves that the safety management practices when applied will have a strong significance to the safety behaviour in the company.

5.3 IMPLICATIONS

This section of study will reveal the implications of the findings in both theoretical and practical perspective.

5.3.1 Theoretical implication

This research was conducted in order to find out the relationship between safety management practices and safety behaviour among the employees of one automotive company in Malaysia. Similar studies have been conducted by other researchers and this had help to give reliable outcome from this study. It is expected that with the study of safety management practices and safety behaviour, it can enhance a better reliability of the subject in the future. However, not many researches was conducted in the automotive industry in Malaysia thus providing space and opportunity for other researchers to analyze the total industry average as benchmark it best practices.

5.3.2 Practical implication

The research on the relationship of safety management practices and safety behaviour will provide very good reference for the employer of the automotive company to better appreciate the safety management practices and safety behaviour in the automotive manufacturing organizations. Good safety management practice is important to be delivered. It gives affect not only to the issues of productivity, awareness and also discipline if no precaution taken, safety behaviour will become a problem in the work setting. This quantitative research engaging with the strategic respondents have been conducted so that the data from the respondents with proper analysis can offer some solution to the automobile industry. In addition, the study will determine the actual employees' perception on the safety management practices

of the company and to determine the items that can be improved to further reduce the accident rates and enhance the overall safety behaviour of the employees.

5.4 LIMITATION

The research was conducted in one automotive company in Malaysia; it can target larger groups within the automotive industry. This will give a better and true comparison between the best practices and the developing companies.

Besides that, the survey of employees was conducted during the peak production planning of the company. Thus, employees could not commit to spare their time due in filling up the questionnaires due to the hectic work schedule. This represents almost 19.1% of the total questionnaires distributed that were not returned although a few reminders notified to their supervisor in charge. Financially, it gave financial impact on the researcher to produce more questionnaires in order to fulfill the minimum recommended sample size.

5.5 RECOMMENDATION OF FUTURE STUDIES

The research was conducted in order to study on the relationship of safety management practices and safety behaviour of one automotive company in Malaysia. Thus from the studies, it should further target the groups with highest occurrence of accidents within the company. This will give a better focus and a higher impact to that specific work setting of the safety management practices against the safety behaviour and its corrective actions.

Other than that, the cooperation amongst the employees is the most important in order to avoid misconception especially on the questionnaire details as well as not to

contain privacy matters. Thus, a better and structured communication framework will need to be established for the higher efficiency data collection and employee participation i.e. electronic surveys; emails, survey websites, short messaging system (SMS), etc. within a certain timeframe.

Finally, future studies can also include the correlation analysis between the dimensions of each variable of safety management practice and safety behaviours for a better insight of the issues that can be further improved by the management and employees as a whole.



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