Universiti Utara Malaysia

THE RELATIONSHIP BETWEEN JOB SAFETY, SAFETY PROGRAMME AND POLICIES AND MANAGEMENT SAFETY PRACTICES TOWARDS SAFETY BEHAVIOR AMONG ACADEMICIANS IN MANAGEMENT AND SCIENCE UNIVERSITY, SHAH ALAM, SELANGOR

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**MASTER OF SCIENCE (OCCUPATIONAL SAFETY & HEALTH MANAGEMENT)
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By

EDDY BIN ABDUL RAUB

**Thesis Submitted to
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Othman Yeop Abdullah
Graduate School of Business

Universiti Utara Malaysia

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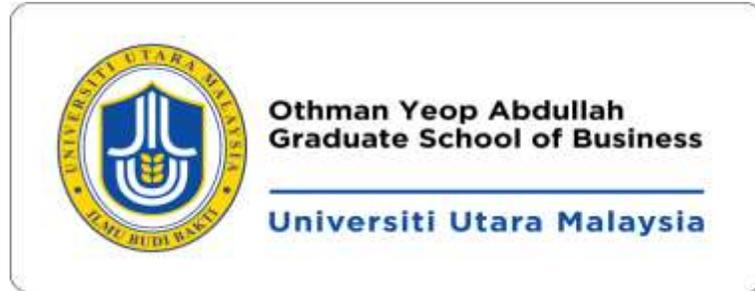*(has presented his/her research paper of the following title)*

THE RELATIONSHIP BETWEEN JOB SAFETY, SAFETY PROGRAM AND POLICIES AND MANAGEMENT SAFETY PRACTICES TOWARDS SAFETY BEHAVIOR AMONG ACADEMICIANS IN MANAGEMENT AND SCIENCE UNIVERSITY, SHAH ALAM, SELANGOR.

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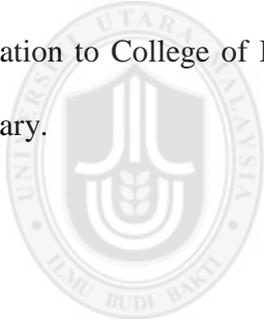
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ABSTRACT

This study examines the relationship between job safety, safety program and policies and management safety practices towards safety behavior among academicians in Management and Science University, Shah Alam, Selangor. A total of 230 questionnaires were distributed to participants who had agreed to participate in this study. The entire 230 questionnaire were returned and usable for further analyses. Hypotheses for direct effect were tested using multiple regression analyses. The major findings of the study have indicated that two independent variables, i.e. job safety and safety programmes policies influenced significantly the compliance safety behavior. On the other hand, management safety practices were not significantly related to compliance safety behavior of the academicians in Management and Science University. Implications of the findings, potential limitations, and directions for future research were discussed.

Keywords: Safety behavior; Safety programme, Safety policy, Academician.

ABSTRAK

Kajian ini mengkaji hubungan keselamatan kerja, program keselamatan dan dasar dan pengurusan amalan keselamatan terhadap tingkah laku keselamatan dikalangan ahli akademik di Management and Science University, Shah Alam, Selangor. Sebanyak 230 borang kaji selidik telah diedarkan kepada peserta yang telah bersetuju untuk mengambil bahagian dalam kajian ini. Semua 230 soal selidik telah dikembalikan dan digunakan untuk analisis lanjut. Hipotesis untuk kesan langsung diuji menggunakan analisis regresi berganda. Penemuan utama kajian ini menunjukkan bahawa dua pembolehubah bebas, iaitu keselamatan kerja dan program keselamatan dan dasar mempengaruhi secara signifikan terhadap tingkah laku keselamatan. Sebaliknya, pengurusan amalan keselamatan tidak mempengaruhi dengan pematuhan tingkah laku keselamatan bagi ahli akademik di Management and Science University. Implikasi dapatan kajian, limitasi dan cadangan kajian pada masa hadapan turut dibincangkan.

Kata kunci: Tingkahlaku selamat, Program keselamatan, Polisi keselamatan, Ahli akademik.

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Eddy Abdul Raub
15 December 2017
Universiti Utara Kuala Lumpur

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LIST OF ABBREVIATION

BBS	Behavior Based Safety
CFS	Centre of Foundation Studies
EFA	Exploratory Factor Analysis
FBMP	Faculty of Business Management and Professional Studies
FHLS	Faculty of Health and Life Sciences
FISE	Faculty of Information Sciences and Engineering
HIRARC	Hazards Identification, Risk Assessment and Risk Control
IMS	International Medical School
MSU	Management and Science University
NADOPOD	Notification of Accident, Dangerous Occurance, Occupational Poisoning and Occupational Disease
NIOSH	National Institute of Occupational Safety and Health
OSH	Occupational Safety and Health
OSHA	Occupational Safety and Health
RO	Research Objectives
RQ	Research Questions
SESS	School of Education and Social Sciences
SGS	School of Graduate Studies
SHCA	School of Hospitality and Creative Art
SOCSO	Social Security Organization
SPH	School of Pharmacy
SPSS	Statistical Package for Social Science
USM	Universiti Sains Malaysia

UUM   Universiti Utara Malaysia

WSS   Work Safety Scale

CHAPTER 1

INTRODUCTION

1.1   Introduction

The background of the study, problem statement, research questions, research objectives and significance of the study will be presented in this chapter, which also represents the outline of the perceptions of academicians in Management and Science University (MSU) on safety behavior.

1.2   Background of the Study

The Occupational Safety and Health (OSH) management concerned with the safety, health as well as the welfare of people working in an organization. The crucial aspect of reducing risk in the workplace is OHS which is a discipline that preserves and protect human and facility resources in the workplace. Globally, many organizations have begun to focus and include the OSH as one of the determinants of improving productivity and efficiency as part of emphasizing on quality for sustaining continuous existence (Burton J., 2010). Effective safety management can reduce accident cases at a workplace (Suraji et al., 2001).

Thousands of people in a workplace, including academicians and students who were injured did not expect it to happen to them. According to Eakin. J (2010) through his research on worker's perspective on safety and health did mention, although the ultimate goal of OSH is to protect workers' well-being, the workers themselves are not always occupied into the best of OSH practices. From just small office injury like paper cut injury, slip trip and fall and to any fatal situation, many of them took it as a negligence matter rather than a concern which showed a poor safety behavior. There are many types of machines on campus that are used as part of the research. Many of them can be hazardous, including lathes, milling machines, table saws and drill presses and cause serious injury if they were not used safely. These people expose to a number of hazards which have been categorized as 5 types of hazards in Table 15 of Notification of Accident, Dangerous Occurrence, Occupational Poisoning and Occupational Disease (NADOPOD) which includes psychosocial hazards, physical hazards, chemical hazards, ergonomic andbiological hazards. These hazards may lead to an incident that involves injuries and fatalities, damage to properties and the environment. Therefore, staff and students are encouraged to report any unsafe work practices or safety hazards found in the campus area.

In order to increase OSH awareness among academician staff, they have to perceive good safety behavior and embedded safety culture in the organization. This idea follows a resolution proposed by psychologists since the early twentieth century, moved from studying the context of mind to studying over behavior.

Behaviorism is the school of psychological thought that focuses on describing and measuring only behavior – which is observable directly through assessment instrument. The human behavior is facilitated by the integration of numerous processes within the body. The integration is provided by the nervous system, which includes the brain, with the help of the endocrine system (Recto, Mejico & Añonuevo, 2004). Job completion can be achieved through the lead of behaviors as they are the 'ingredients' that pulls everything together. The 'unsafe' behavior would be compensated if a job goes well regardless the fact that the people are behaving unsafely and this behavior will be repeated in the future. On the other hand, the unsafe behavior would be considered as punishing if the job cannot be done and things went badly and caused unwanted injuries. However, the unsafe behaviors are being reinforced since most of the time, people do not get hurt when behaving unsafely, yet they most likely to get hurt by the very behaviors, (Jogi Safetech Solution, 2011). Behavioral assessment and coaching skills are very important or somewhat important to their career growth. Acero et al. (2004) stated that apart from genes, an environment is the overall conditions which included the inside and outside of an organism which affected it's development, growth, or life processes.

However, An organization that does not practice safety culture cannot apply OSH. A clear explanation of the appropriate behavior, generally shared and internally consistent are the characteristics of a strong culture. Hence, having a vision that can be understood by everyone is considered as an organization with a strong

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culture. As the employees understand the goals and the way the organization runs, they can work in unison, hence it can be said that the culture can indirectly become a hidden mechanism of coordination. Datuk Lee Lam Thye who is the chairman of the National Institute of Occupational Safety and Health emphasized in 2009 that OSH work culture should be efficiently implemented at every level in the organization. It is the culture where the right of having a safe and healthy working condition is equally achieved for all the workers and the management should give a full commitment towards this culture by providing a preventive safety and health culture. The management should not compromise on safety and health noncompliance and to follow the principles of prevention, to conduct regular hazard identification, risk assessment, and control as well as to give training and adequate personal protective equipment to workers. Latest speech on media by Datuk Lee Lam Thye (2017) also urged everyone to be responsible for promoting good OSH at the workplace including schools and higher institution. As NIOSH chairman, he also suggested that the safety audits towards building and surroundings of the institution should be carried out periodically.

A culture where every individual is responsible and aware of the composite risk management process would be the end goal. It would be a very difficult step yet it is also the best rewards for securing the huge organization. The step and the effort should not stop at one level only in order to achieve a culture that practices safety. Based on this, this study focuses on safety culture in job safety, safety program

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and policies, management safety practices and the perceptions of safety behaviors among the academicians.

1.3   Problem Statement

The intention of this paper is to understand the adaptability of safety behavior among academician in Management and Science University through the job safety, safety program and policies, and safety management practices. These three variables are selected as it is believed that they can help to foresee the way academicians at Management and Science University act towards occupational safety and health. The apprehension arises when there are many disregards toward OSH in schools and higher learning intuitions which resulted in major accidents that take lives of students and staff, property damage as well as bad image and reputation.

In his speech on 20th March 2017, Tan Sri Lee Lam Thye did encourage the used of Behavior Based Safety (BBS) approach because it promotes awareness among all workers to consider working towards an accident-free environment. Although schools and higher learning institutions were not categorized under industries listed in Schedule 1 Occupational Safety and Health Act (OSHA) 1994, however, there is the necessity to set up an OSH committee to the workplace with 40 workers or more which also applies to schools and higher learning institutions. This committee will facilitate management in reducing the risk of an accident by

hazard control management and take action to prevent accidents. This can be achieved by having a good safety culture and safety behavior among academicians.

The workers' attitude towards the safety itself would be the basic component in safety culture, according to Lee (1995, cited in Cheyne et. al, 1998). Lee then clarified that the significant level of safety climate and safety culture implemented in an organization is shown through the workers' perceptions of hazard within the organization. Reber, Wallin, & Duhon (1989) stated that the most suitable indicators of current safety performance would be the observed percent safe score which resulted from the behavioral safety. Primary accident prevention model proposed by Heinrich (1930) suggested 88% of accident cases due to 'unsafe act' 12% of accident cases due to 'unsafe condition' and the rest 2% caused by unpreventable causes. The Heinrich's theory claimed to be the basis for the study of safety behavior.

Enhancement of the learning condition and increment of the efficiency of the university would also be the results of having a safe and a healthy university environment apart from the increase in the level of job satisfaction among the academicians. Rosenblatt & Ruvio (1996) also studied the effect of job insecurity on work attitudes of employees. Results revealed that job insecurity had an adverse effect whereby the unsafe job condition will demotivate them at their best in their job especially during the class, and they tend to change their workplace

and leave the institutionor most probably resign from their position as well as give a negative impact on organizational commitment and employees' performance.

Therefore, this study is intended to understand the level of the perceive job safety among academicians in Management and Science University. Together with that, the safety programmes and policies were stately according to academicians' participation in accident investigation, workplace inspection, safety training such as the emergency drill. This study also wanted to know the level of management safety practices towards compliance safety behavior in university. Management commitment helps safety programmes to achieve the objectives. Sawacha et al. (1999) suggested that financial incentives such as bonus and merit point will improve productivity and can lead to safety being compromised.

There is a decent comprehension of the extent and pattern perceived safety behavior as many researchers have put a push to battle the issue of occupational accidents. However, there is no literature about safety behavior among the academicians in the university compared with other industries in Malaysia. This study will be the benchmark on factors that influence the safety behavior among academicians in the university setting in Malaysia.

1.4   Research Questions

The present study aims to investigate the relationship between the related factors towards safety behavior among academicians by answering the following questions:

(i)   What is the relationship between job safety and safety behavior?

(ii)   What is the relationship between safety program and policies towards safety behavior?

(iii)   What is the relationship between management safety practice towards safety behavior?
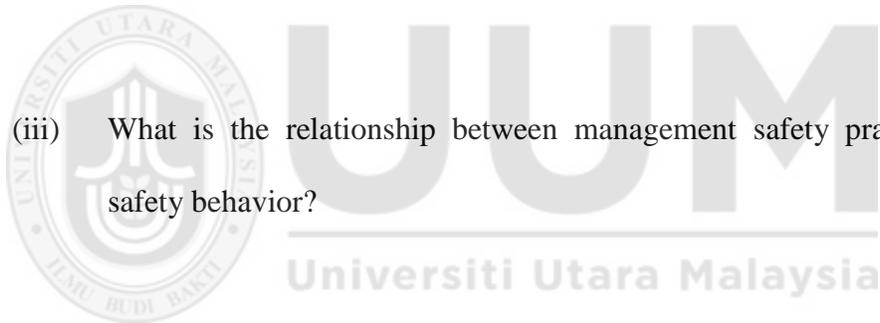
1.5   Research Objectives

The study aims to investigate the relationship between the related factors towards safety behavior among academicians and pursues the following objectives:

(i)   To identify the relationship between job safety towards safety behavior.

(ii)   To investigate the relationship between safety programme and policies towards safety behavior.

(iii)   To investigate the relationship between management safety practices towards safety behavior.

1.6   Scope and Limitation of the Study

The scope of this study focuses on the relationship of job safety, safety program and policies, and management safety practices towards safety behavior among academicians in Management and Science University. This study did not examine other potential factors that affected the safety behavior such as knowledge and understanding, personal experience and etc. It is hoped that other researchers could explore the other potential factors in the future. A limited time preparing a thesis and at the same time working is really challenging and mental testing. However, the thesis managed to be completed successfully and achieve the target.

1.7   Significance of the Study

This study is significant to endeavor in having a healthy work environment in the workplace and to increase productivity among academic staff in the university. The possible factors that could lead to accidents, injuries, and death in the organization could be identified through the findings of this research on the compliance of safety behavior. There are parties that could be highly benefited from the essential results of this investigation. The parties are as the following:

1.7.1 Management

The information related to safety awareness that prevented incidents from happening provided by this study will help the management to develop a suitable safety programme for the organization. It can also be used as a benchmark to measure the level of success of the existing safety programme in the university. Furthermore, the management can coordinate and plan a more realistic and workable safety programme in the future.

1.7.2 Academician

As to the academicians, this study will portray the real knowledge and understanding of workplace safety. Regardless of which category they are, they should not take workplace safety is a small issue.

1.7.3 Researcher

Although there are many works of literature and studies examined on safety behavior, none of them focused on safety behavior among academicians in university setup. Most of the studies conducted in sectors where risk and hazards are everywhere, such as construction site and manufacturing sectors. This research would be a milestone for the other researchers to examine more deeply on safety behavior in a university setting.

1.8   Definition of Key Terms

Safety is defined as the correct way of treatment of a substance or the appropriate behavior in completing a task in order to wipe out its ability to cause damage or to do harm (Confer & Confer, 1994).

Behaviour is defined as the acts or actions of individuals that can be observed by others (DePasquale J.P. & Geller E.S., 1999).

Safety programme is related to the success of the goal of the organization in protecting the workers at the workplace which relies on the health and safety elements and also the objectives of the organization (Coyle, I. R., Sleeman, S. D., & Adams, N., 1995).

Safety policy is a written proclamation on the company's assurance of safety and health protection for the employees and to the public by the employer. It is an embraced responsibility of the management towards its employees with respect to their health and safety (Coyle, I. R., Sleeman, S. D., & Adams, N., 1995).

Academician is defined as a member of an association or institution for the advancement of arts, sciences, or letters (Webster, 1989).

1.9   Organization of the Thesis

There are five chapters in this thesis. Chapter one contains the statement of the problem to be studied, the research question, the objectives of the study, significance of the study and the definition of the terms. Chapter Two provides a review of the literature, which includes the view of the Occupational Safety and Health in Malaysia, past studies and theories, which are of primary interest to this study. It also presents a theoretical model which depicts the relationship. Specific hypotheses about these relationships are proposed in this chapter and operational definitions for the independent, mediation and dependent variables will be specified.

Chapter Three presents the methodology utilized in the study and includes the research type and design, a description of the population and sample, research instrumentation, the procedures for the collection of data and analysis. Chapter Four provides the data, the results of the finding, testing, analysis, and discussion. Finally, Chapter Five concludes the study with a summary conclusion and recommendations for future research.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter begins with the outline of the previous studies which focused on safety behavior. In terms of literature review, this chapter will also cover the related theories, arguments, structure and compare the current, past and ongoing research that emphasized on the subject of safety behavior. This section also includes a description of job safety, safety programme and policies and management safety practices. Even though there is much research on safety behavior had been done before, this study is focusing more on academic and university setting.

2.2 Safety Behavior

Everybody who works to reduce accidents and improve safety performance is related to human behavior. According to Vijayakumar (2007), the behavior was defined as everything a person does that is observable and measurable. Safety behavior was defined as the behaviors that helped to reduce the practice of risk behaviors and as a result, it reduced accidents and injuries. Krause and Russell (1994) mentioned that the workers who were used to the risky behavior would

likely to get involved in injury situations and get hurt. If there was accident or injury that have been caused by a behavior, it most probably because it has never caused injury previously. Behavior-based safety involvement was the emphasized on group observation by the workers on workers performing regular work. Workers behavior will become better and their attitude will grow to act safely if the safety-oriented programmes were encouraged. Miltenberged (2012) stated that safety behavior was influenced by activators or antecedents and consequences.

The idea that shared behaviors, beliefs, attitudes, and values are the characteristics of organizational culture was argued by Williams et al. (1989). They mentioned that even though there was the tendency for the members of the organization to accept the same style of attire, modes of conduct and perceptions of the way the organization runs, yet they will not act similarly upon same situation. Every level of the organization such as the departments, division, workgroup and even individual would probably have the different beliefs, attitudes, and values of the organization. Hence, Williams et al. (1989), Hamden-Turner (1990) and Furnham and Gunter (1993) stated that there was the possibility of having various ways of expressing the 'culture theme' that an organization possesses even though there was a dominating 'culture theme' that was being implemented.

2.2.1   Empirical Studies on Safety Behavior

In the previous study by Heinrich (1931), Suchman (1961) Wigglesworth (1978), Coyle et al. (1995), Gillen et al. (2002) assumed that the behaviors of the workers were affected by their attitude and perception. This will also affect the increase or decrease of the tendency of the occurrence of 'accidents'. There were some key elements that were impacting the safety climate of specific industries that have been reported in several previous studies. The examples of studies were in the industries of construction (Dedobbeleer & Beland, 1991; Siu et al., 2004), manufacturing (Brown & Holmes, 1986), energy (Ostrom et al., 1993; Lee, 1996), airports (Diaz & Cabrera, 1997), road administration (Niskanen, 1994) and health care services (Coyle et al., 1995). Besides that, in the studies done by Heinrich(1931), Suchman(1961), Wigglesworth (1978), Coyle et al. (1995) and Gillen et al. (2002), showed that viewpoints and perceptions of the workers played significant roles in affecting the safety performance. Exploratory factor analysis (EFA) was utilized by Lu and Shang (2005) in their study of safety climate with container terminal operators. Regardless of the various previous studies on safety behavior, there is still a lack of empirical studies that used universities as the setting for investigating factors that impact the safety behavior. Despite the fact that it is really

crucial to comprehend the workers' perspectives of safety in that setting too.

Hayes et al. (1998) had done a study that showed a similar course of relationship which was done to comprehend the industrial accident process by exploring the role by perceptions of workplace safety. Accident-related variables such as the employees' compliance towards safety behaviors, their anxiety and also accidents rates were shown as related to the perceptions of workplace safety issues in the results of the study. In order to develop and validate a scale of perceptions of the workplace, the present study was done.

2.3   Job Safety
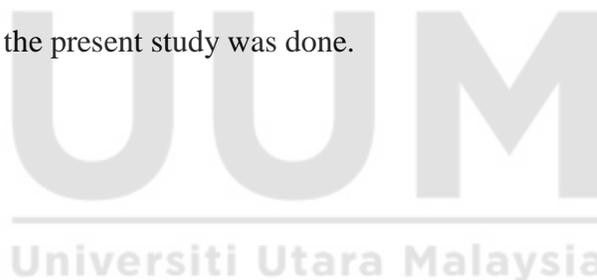
Herzberg et al. (1959) illustrated two factors related to a job which the factors were hygiene factors and motivators. Hygiene factors were the factors that removed the feeling of job dissatisfaction, such as the working environment, pay, and company policies. Meanwhile motivators were consisted of the challenging work, achievement, recognition, and responsibility that create job satisfaction. Other research proposed that job satisfaction can be predicted by the following organizational and job-related factors such as management and leadership mentioned by Coomber and Barriball (2007), Li and Lambert (2008), supervision satisfaction and support proposed by Fang (2001) and Bradley and Cartwright

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(2002), Kwak et al. (2010). Besides that, the other factors were, pay, educational and promotional opportunities, and, workload and work condition as mentioned by Bjork et al. (2006), Chan et al. (2008), Nora and Nelson (2010), Best & Thurston (2004), Kwak et al. (2010), Tao et al. (2012), and Shamian and El-Jardali (2007), Lu et al. (2011) in their papers. Meanwhile, the job satisfaction can also be predicted by the interaction or social relationship factors (Bjork et al., 2006; Nora & Nelson, 2010; Sriratanaprapat & Songwathana, 2011). Other factors were staffing and scheduling and autonomy as highlighted by Shamian& El-Jardali (2007), and Kirschling et al. (2011) and Larrabee et al. (2003), and Bjork et al. (2006).

Job stress has now become one of the most significant health and safety issues in the workplace and one of the least understood areas of organizational cost. A recent study conducted towards job safety among lecturers at Universiti Sains Malaysia (USM) found that non- clinical- based lecturers experienced lower job strain compared to clinical-based lecturers. Public hospitals in Malaysia were chosen by Azimah et al. (2008) in a related study to investigate on the Management of Occupational Safety and Health (OSH) and the perception of employees towards it. Three state hospitals from the northern region of Malaysia were selected for this study and 418 employees of the three state hospitals participated. The response rate for the study was 43.15%. Based on the results, it can be seen that the most important dimension chosen by the employees was the perceived safety reporting while the component with the least important

component in the OSH practices in their workplaces was the work pressure. A significant positive correlations between safety satisfaction and feedback and safety communication, the role of supervisors, training and competence, work pressure, safety involvement, management commitment, safety reporting, safety objectives, and leadership style were also shown in the research.

The analysis that intended to discover the causes that obstructed safe act and encouraged unsafe practice is called a behavioral analysis which is an evaluation of the precursors and consequences of behavior. Following the assessment of safety knowledge, the employees were encouraged to discuss the hazards portrayed, and generate suggestions regarding safety rules. The unsafe scenes will be replayed before showing the scenes of the appropriate manner that should be taken to avoid the occurrence of accidents. Other than unsafe acts being unintentionally reinforced and low numbers of important safe and unsafe practices being introduced, the behavioral analysis also discovered that there is no formal safety training for the new workers. Besides that, there were no words or actions of encouragement given by the supervisors and co-workers to those who chose to work in a safe manner. There were also no injuries were recorded when the employees performed in an unsafe manner. Plus, the unsafe manner was strengthened by the action of using less time to complete tasks by the employees. Due to that, the involvement in safety and health should be encouraged. The involvement highlighted personal responsibility and the workers' perceptions that pragmatic concerns and a 'welfare before profit' philosophy practiced by the

organization were the cores for safety intervention. In terms of self-reported accidents, the safety climate scores were used as predictors at the individual level.

2.4   Safety Program And Policies

Many parties will be affected due to the workplace accidents such as the injured workers themselves, their family members, the employers and organization and also the society.   There were many accident cases that had happened which caused by the negligence of the organizational policies and procedures. The accident cases that can be taken as examples are, King's Cross caught on fire, the nuclear reactor accident at Chernobyl, Piper Alpa's explosion, and the train crash at Clapham Junction. The incident of the train crash at Clapham Junction would be the best example in showing the consequences of having a bad safety behavior at the individual level, which related to the attitudes towards safety and also the company level which involving the policies and practices related to safety.

Many accident prevention activities as part of occupational safety and health awareness programmes among employees and employers were organized by the Social Security Organization (SOCSO). Throughout 2015 a total of 62,837 accident cases were reported, reflecting a reduction of 494 cases or 0.78% compared to 63,331 cases in 2014. Industrial accidents decreased by 2.94%, that was, from 35,294 cases in 2014 to 34,258 cases in 2015. However, work-related commuting accidents increased by 1.93%, from 28,037 cases in 2014 to 28,579 cases in 2015. In an effort to manage down these commuting accidents, SOCSO

conducted 284 commuting accident prevention advocacy programmes nationwide

with 100 employers who recorded the highest number of accidents. Through such

initiatives, 88 employers out of the said total have recorded a reduction in

commuting accidents by 10% compared to the prior year.

There were several steps to implement a safety programme reported starting from

the philosophy of safety assessment; disciplines of safety education; academicians

awareness on safety apprehensions; improvements implemented from safety

concerns; results shared; keep record documented or analyzed; and reassessment.

At least one of these two processes can prove the benefit of the programmes on

health promotions and occupational health. The first process was the investment

made by the company in this area encouraged the perception of management

commitment and develop worker loyalty towards safety behavior. Secondly, the

programmes can help in enhancing the workers' health level and 'immunise'

against work-related injury.

2.5   Management Safety Practices

Behavior safety interventions were carried out across UK building site during a

study done by Marsh et al. (1998). In the results, it can be seen that management

commitment played the most crucial part in executing the behavior safety

intervention. Hassan et al. (2009) studied the influence of management practices

on safety culture and found that the organizations with good safety practices had

fewer occupational injuries. This study also revealed that the attitude of individual employees influenced the incidence of occupational injuries. It is suggested that further studies on the relationships between workers' safety awareness, risk perceptions, participation in safety committees and the incidence of workplace injuries should be done. The important role played by the supervisory and managerial personnel in order to ensure the success of a programme was also emphasized in the results of the current study. The questionnaire was developed to investigate the respondents' perceptions of the level of impact that the success factors have on the safety programmes. According to the results, the management support was the factor that gave the most impact. Groups of four dimensions were developed out of the 16 CSFs through factor analysis. The four dimensions were, worker involvement, safety prevention, and control system, safety arrangement, and management commitment. DePasquale and Geller (1999); Griffiths (1985); Harper et al. (1997); Hine et al.(1999) papers on successful safety initiatives and the paper by Hofmann et al.(1995) on the discursive treatise, also agreed with the other research on the ideal safety management practices. There were four general themes that can be listed based on the research by the researchers mentioned. The four general themes were, genuine and consistent management commitment to safety, including prioritization of safety over production, maintaining a high profile for safety in meetings, personal attendance of managers at safety meetings and in walkabouts, face-to-face meetings with employees that feature safety as a topic, and job descriptions that include safety contracts.On top of that, an organization requires the commitment of the manager to complete 3 steps which

included the workplace to have a Policy Statement on Occupational Safety and Health which is the legal requirement mentioned in section 16 of Occupational Safety and Health Act (OSHA) 1994 which was the planning on Occupational Safety and Health which included the process of implementing Hazards Identification, Risk Assessment and Risk Control (HIRARC), training and, auditing and for any improvement that needs to be made, a quick restoration action should be taken.

Other than that, communication about safety issues, included the pervasive channels of formal and informal communication and regular communication between management, supervisors and the workforce. Involvement of employees, including empowerment, the delegation of responsibility for safety, and encouraging commitment to the organization.The actual practices, roles, and functions associated with remaining safe fall under the safety management as proposed by Kirwan, (1998). Hence it carried more than just a 'paper system' of policies and procedures. The way the safety management system being endorsed would not be fully shown on the paperwork through the audit and analysis. In other words, the analysis might not be able to discover the real situation of the worksite, the things that happened, and whether the people and the environment were being protected, plus the assurance that there are no contrary events occurring. The analysis would only recognize the process that should be taken by the organization in order to protect the workers, the public and also the environment from harm.

Based on the results of a research done by Cheng et al. (2009), when it was involving healthcare industry, it is shown that safety culture and safety performance were affected by the leadership behavior. Contingency leadership and a positive patient safety organization culture were the factors that helped in the improvement of safety performance. The research also mentioned that safety performance can also be improved by the existence of a well -managed system that consisted of three other characteristics which were the consideration of leadership, hospital worker training courses, and a solid safety reporting system.

2.6   Summary

Safety unquestionably involves more rather than just a trait of engineering set up. Safety conscious attitude on the part of the individual employee, labour, self-employed, designers, suppliers, importers, exporters, and landlords, and much more was emphasized by the current trend in modern technological societies. Cooper (1998) mentioned that encouragement on being involved in the safety management continuous improvement process should be applied towards the employees. Achieving overall improvement in safety culture of the organization is the crucial factor for the employees. Masaaki (1986) mentioned the key principle, *kaizen,* which isthe desire to improve is the Japanese approach to continuous improvement.

Cooper, (1998) mentioned that the improvement in communication and industrial relations has also resulted from the participation in the safety programmes.A range of activities and programmes that focused on the involvement of the employees at all levels were used by organizations in order to achieve a continuous improvement in health and safety. However, the organization's prevailing culture played an important role in ensuring the willingness of the employees to become involved in the activities and programmes.

Grindle, Dickinson and Boettcher (2000); McAfee and Winn (1989); Sulzer-Azaroff, Harris and Blake-McCann (1994) in their papers agreed that safety performance has undergone a vast development based on the reviews of some behavioral safety studies. The vast development can be seen through the reduction of accidents, workers compensation costs, and insurance premiums.
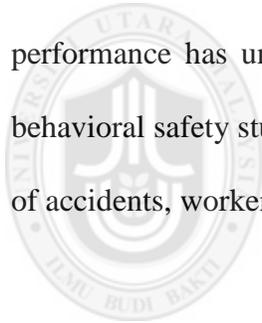
CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

The purpose of this chapter is to explain the methodological aspects of collecting empirical evidence, procedures, and information needed to achieve the study objectives. The independent variables and dependent variables are demonstrated conceptually and operationally. This study considered determining the reliable methods of measuring the contributing measures of safety management practices on safety behavior. This was done by providing an explanation of the theoretical framework, data collection, research instruments, population, sample, and data analysis method.

3.2 Research design

The study design used is a cross-sectional study, which the evaluation was done to determine the relationship between job safety, safety program and policies, and management safety practices towards safety behavior among academicians in Management and Science University, Shah Alam, Selangor.

This research used both descriptive statistic and inferential statistic where the descriptive statistic was used to describe the demographic characteristics among respondent and the inferential statistic used correlation and regression analysis to identify significant value between independent variables and a dependent variable.

A well-designed questionnaire encourages the respondent to provide complete and accurate information on the current situation. The questionnaire design stages followed those outlined by Hayes *et al.* (1998) and were prepared in dual language (English and Bahasa Melayu) to provide better understanding to the respondents. The questionnaire's items were judged to be relevant, and minor modifications were subsequently made to the wording and examples provided in some measurement items, which were finally accepted as possessing content validity. The refined measurement items were included in the questionnaire survey. A sample of 230 academicians working in Management and Science University, Shah Alam, Selangor had partaken in this study. The academicians completed a self-administrated questionnaire consisting of demographic items, a job safety, safety program and policies, and management safety practices survey as well as a question represents the compliance towards safety behavior.

3.3 Proposed Theoretical / Conceptual Framework

Sekaran (2005) defined theoretical framework as a conceptual model that involves the several factors that have been identified as important to the problem area in a research and shows the way of theorizing the relationship among them. This study has been conducted to investigate the relationship between job safety, safety programme and policies, and management safety practices which serve as the independent variables to the compliance to safety behavior as the dependent variable. A comprehensive theoretical framework was developed based on the literature review whereby the framework of this study consists of three independent variables where these independent variables were tested their relationship on the dependent variable of safety behavior as illustrated in Figure 3.1.

The theoretical framework of this study is depicted as in Figure 3.1 below.
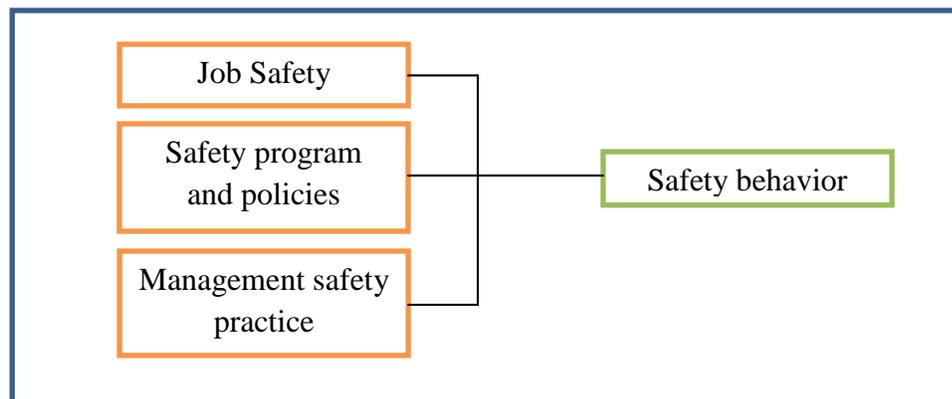
Figure 3.1:
Conceptual framework

3.4   Data Collection Method

There were two methods of data collection used in the study, which were primary and secondary data. The primary data gathering included directing a study oneself, or utilizing the data for the reason it was proposed for. Secondary research data, then again, were gathered by a third party or for some other reason.

3.5   Primary Data

The primary data collected from the respondent were tested to find the relationship between the independent variables towards safety behavior among academician in Management & Science University. Uma Sekaran and Roger Bougie (2010) had mentioned that it is favorable for the researchers to use questionnaires as the tool to collect data since it can be done in a short of time. The self-administered structured questionnaire consists of five parts, which included demographic data of the respondent, job safety, safety program and policies, and management safety practices and compliance safety behavior among academicians in Management and Science University, Shah Alam, Selangor.

The questionnaire handout was established and distributed by hand directly to the target respondent. Confidentiality of the responses was assured to encourage the respondents to answer all the questions honestly.

3.6   Secondary Data

The secondary data for this study are works of literature of journals, reports, and articles collected from the online database. The purpose of reviewing published works of literature related to compliance safety behavior is to develop the fundamental understanding of the key issues and challenges that surround the subject.

3.7   Sampling Technique

In this study, convenience sampling was being used. The study focused on academicians in Management and Science University (MSU). Management and Science University, Selangor Darul Ehsan is chosen for sampling area. Then, the respondents were randomly selected out of 510 academicians in MSU. The selected participants were given one set of hard copy structured questionnaire.

3.8   Target Population

The population refers to the whole institution of humans, event, of factors of interest that the researcher desire to analyze. The target population was Management & Science University academicians.

3.9   Sampling Frame

A subset of the populace to symbolize the complete populace were chosen for this research. The respondents were invited randomly from 10 faculties specifically which are Faculty of Health and Life Sciences (FHLS), Faculty of Business Management and Professional Studies (FBMP), Faculty of Information Sciences & Engineering (FISE), International Medical School (IMS), School of Pharmacy (SPH), School of Education and Social Sciences (SESS), School of Hospitality and Creative Art (SHCA), School of Graduates Studies (SGS), Graduates School of Management (PhD/DBA/MBA), Centre of Foundation Studies (CFS). The data were collected in Management & Science University. This location was chosen because the researcher also works as a lecturer in this university. Thus, the respondents can easily be approached and this can provide a greater number of potential respondents.

3.10   Sampling Size

According to the MSU academic registrar, there are currently 510 registered academicians in Management and Science University. Based on the table for figuring out sample size by Krejcie and Morgan's (1970), for a given populace of 510, a sample size of 230 (n = 230) is required to represent a cross-section of the population. Thus, by referring to the guideline of the sample size, 230 respondents were contacted by telephone. Then the hard copies of the structured questionnaire

were sent to 230 potential respondents after confirming their willingness to participate in this study. There was a follow-up session to ensure respondent answered all of the questions properly. Thus the results were generated based on these 230 questionnaires.

3.11   The structured questionnaire

The questionnaire was adapted apart from the Work Safety Scale (WSS) questionnaire whereby it constructed exquisitely in 8 pages. Start with the executive summary as to give a simple brief to the respondent regarding the study. The questionnaire consisted of 5 sections from A to E. Section A placed 5 questions related to respondent background information consists of age, gender, education level, type of designation and the period of working experiences. Section B, section C, and section D consist of 10 questions each on the job safety, safety program and policies, and management practices respectively. The questionnaire ended with 11 questions related to compliance safety behavior. This questionnaire applied a five-point Likert scale from '1' which represented 'Strongly disagree' up to '5' which represented 'Strongly Agree'. The questionnaire's items are relevant, and a minor modification was made such as participant background to suit this study purpose.

3.12   Data Analysis

The SPSS statistical package version 23 had been used to analyze the data. This study adopted a combination of descriptive analysis, reliability test and inferential analysis(Pearson Correlation Coefficient and Multiple Regression Analysis).

3.13   Reliability test

Cronbach's alpha is the most common measure of internal consistency ("reliability") which indicates whether the items measure the same construct. The reliability of each item follows the ranges provided as in the table below:

Table 3.1
Range of Cronbach's alpha

Cronbach's alpha > 0.90 (excellent reliability)
Cronbach's alpha = 0.80 to 0.90 (very good reliability)
Cronbach's alpha = 0.70 to 0.80 (good reliability)
Cronbach's alpha = 0.60 to 0.70 (fair reliability)
Cronbach's alpha < 0.60 (poor reliability)

3.14   Inferential Analysis

Correlations were used to identify relationships between variables as well as to test two quantitative variables. Pearson's correlation was used in this study to determine if a significant linear relationship exists in a bivariate association. There were three potential research hypotheses for these models which are: positive linear relationship, negative linear relationship, and no linear relationship. Regression is a statistical measure used to define the power of the connection between one dependent variable and a sequence of different changing independent variables.

3.15   Summary

This chapter has described profoundly in the process of collecting data from respondents, to the method of data analysis with the subject of the relationship between three independent variables and one dependent variable of the study. This chapter also has displayed the sampling frame and also the reason to choose Management and Science University as the study location for this study. The study of the factors contributed will increase the understanding of compliance with safety behavior among academician especially in Management and Science University.

CHAPTER 4

RESEARCH RESULTS

4.1   Introduction

This chapter shows all the results and findings. The data were analyzed using Statistical Package for the Social Sciences (SPSS) version 23.0. The results were presented in descriptive analysis, reliability analysis, and inferential analysis. The demographic characteristics were analyzed using descriptive analysis. The analysis provides frequency tables and charts, and the mean of the sampling distribution. For the reliability, it will provide the results of reliability analysis for overall sample data. From the inferential analysis, it shows the significance of the research through the result of sample data.

4.2   Response Rate

There was a total of 230 respondents participated in this study. A total of 230 questionnaires were distributed to the respondents. The respondents were randomly selected out of 510 academicians in MSU. The percentage rate of the returned samples is 100%.

4.2   Profile of Respondents

This study decided to select a subset of the population to represent the whole population. The respondents were invited randomly from 10 faculties specifically which are Faculty of Health and Life Sciences (FHLS), Faculty of Business Management and Professional Studies (FBMP), Faculty of Information Sciences & Engineering (FISE), International Medical School (IMS), School of Pharmacy (SPH), School of Education and Social Sciences (SESS), School of Hospitality and Creative Art (SHCA), School of Graduates Studies (SGS), Graduates School of Management (PhD/DBA/MBA), Centre of Foundation Studies (CFS).

The result includes demographic characteristic, Reliability Analysis, Pearson Coefficient Correlation and Multiple Regression. Table 4.1 shows the characteristic of the total of 230 respondents.

In the table below, it shows that there are 77 male respondents and 153 female respondents in which male respondents involve 33.5% in this study while 66.5 % of the study participated by women. There are also other demographic factors such as age, education level, type of designation and length of service which are also included in the analysis. The demographic data in Table 4.1 indicate that the majority respondent which is 53.9% (n=124) comes from the age 31 to 40 years old. Of the total population, 30.4% (n=70) of them were young academician less

than 30 years old, 8.7% (n=20) of them are between 41 years old to 50 years old, and 7.0% (n=16) of them are above 51 years old.

As for the level of education, the respondents mostly come from the background of master holders which is 62.2% (n=143) from the total respondents. Follow by the degree holders which consist 18.7% (n=43), PhD holders 18.3% (n=42) and others are diploma holders consist of 0.9% (n=2). For this study; as shown in Table 4.1 below, most of the respondents were coming from the category of Lecturer, which is 70% (n=161). Then, followed by tutor 24.3% (n=56) and 3.0% (n=7) of them are Assoc. Prof. While 1.7% (n=4) of them are Professors and the remaining 0.8% (n=2) are Assistant Lecturers.

The length of service of each respondent varies. It starts from 1 year till more than 15 years of service. The majority of the respondents have served more than 10 years, which is 38.7% (n=89) from the total respondents. From the category 1 to 5 years of service, there are 37.0% (n=85) respondents, while 18.3% (n=42) respondents served more than 15 years. Only 6.1% (n=14) respondents served less than one year.

Table 4.1
Summary for demographic characteristic of respondent

Demographic	Categories	Frequency	Percentage (%)
Gender	Male	77	33.5
	Female	153	66.5
Age	21 to 30 years old	70	30.4
	31 to 40 years old	124	53.9
	41 to 50 years old	20	8.7
	51 years old and above	16	7.0
Education level	Diploma / Certificate	2	0.9
	Degree	43	18.7
	Master	143	62.2
	PhD	42	18.3
Type of designation	Tutor	56	24.3
	Assistant Lecturer	2	0.8
	Lecturer	161	70
	Assoc. Prof.	7	3.0
	Professor	4	1.7
Length of working	Less than one year	14	6.1
	1 to 5 years	85	37.0
	Over 10 years	89	38.7
	Over 15 years	42	18.3

4.3 Reliability Analysis

For this purpose of the study, 230 sets of questionnaire were collected. SPSS has been used to test the reliability measurement through the approach of Cronbach's Alpha to check on the internal consistency for each factor. Cronbach (1990) suggested that the reliability of a basic research must be at least 0.7 or above. The

measurement and the corresponding alphas of the current study were job safety (α = 0.880), management safety (α = 0.902), safety programme (α = 0.848) and finally, safety behavior (α = 0.774). The data reflect that the items in a set are independent measures of the same concept and positively correlated to one another, thus they are all reliable items. This also shows good internal consistency for structured questionnaire used in this study. The presentation of Cronbach's alpha for each variable is presented in Table 4.2 below.

Table 4.2
Reliability Statistics for Sample Data

Factors	Cronbach's Alpha	N of Items
Job safety	.880	10
Safety program and policies	.848	10
Management safety practices	.902	10
Safety behavior	.774	11

4.4   Descriptive Analysis

The descriptive analysis, which includes the mean and standard deviation values for the independent and dependent variables are attained and documented in table 4.3. The mean value is a measure of central tendency that offers a general picture of the data without unnecessarily inundating one with each of the observations in a data set (Sekaran & Bougie, 2010). More simply, the mean value is the average

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of all values in a given data set. The mean is a descriptive statistic that measures the center of balance of the data. The mean is often quoted along with the standard deviation. The mean describes the central location of the data, whereas the standard deviation describes the spread. All the variables were evaluated based on a five-point rating scale ranging from 1 (strongly disagree) to 5 (strongly agree). Looking at table 4.3, management safety practice has recorded the least mean value of 3.25 (SD=0.74) compared with other variables. It means most of the respondents almost agreed that the factors discussed have influences on safety behavior.

Table 4.3
Descriptive Statistics

Factor	Mean	Std. Deviation	N
Safety Behavior	3.7225	.51585	230
Job Safety	3.7957	.73626	230
Safety Program and Policies	3.5419	.66321	230
Management Safety Practice	3.2517	.74481	230

4.5   Pearson Correlation Analysis

Correlation is frequently used as a descriptive tool in a non-experimental research (Pakisamy, 2012). The intensity of the correlation is expressed by a number called

the Pearson coefficient of correlation which is always denoted by letter r. The main idea behind the coefficient of correlation is to compute an index, which reflects how much two variables are related to each other i.e. nature, strength, direction and significance of the bivariate relationships. A Pearson correlation matrix is used to provide this information. Table 4.4 displays the results of a correlation analysis between the discussed factors with safety behavior.

Table 4.4
Pearson Correlation Analysis

	Safety Behavior	Job Safety	Safety Programme and Policies	Management Safety Practice
Safety Behavior	1			
Job Safety	.387**	1		
Safety Programme and Policies	.382**	.293**	1	
Management Safety Practice	.340**	.356**	.420**	1

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

Table 4.4 shows the correlation between the three factors of safety management practices towards safety behavior. The results indicated that not all factors have a moderate positive significant correlation with safety behavior. The job safety score is 0.387 and shows the strongest correlation with safety behavior, followed

by safety programme and policies 0.382 while management safety practice indicates that there is weakest correlation with the score of 0.340 compared with another two factors. This relationship has fallen under the coefficient range from ±0.30 to ±0.49. This result indicates that there is a moderate positive relationship between all factors except management safety practice towards compliance safety behavior among academicians in Management and Science University. Thereby, when job safety and safety programme is high, compliance safety behavior is also high. It is because it has achieved the p-value 0.000 (p-value<0.01).

4.6   Multiple Regression Analysis

Multiple regression analysis is to determine how much of the variance in the dependentvariable is explained by a set of predictors. It shall determine how well a set of variables isable to predict a particular outcome and which variable in a set of variables is the bestpredictor of an outcome.

In this study, three main hypotheses were generated. Multiple regression analysis was used to analyze the hypotheses. The results obtained and the interpretation is discussed precisely as below.

Table 4.5 below describes the relationship between the three variables with safety behavior among academicians in Management and Science University.

Table 4.5
Multiple Regression Result on Safety Behavior

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	2.024	.201		10.058	.000
Job Safety	.185	.044	.264	4.208	.000
Safety Programme and Policies	.189	.050	.244	3.768	.000
Management Safety Practice	.100	.046	.144	2.177	.031

a. Dependent Variable: Safety Behavior

Based on the table, the results show that both of job safety and, safety program and policy is the significance of 0.00 with p-value 0.000. Job safety is the predictor variable that shows the highest variation of the safety behavior because the Beta value (under standardized coefficient) for this predictor variable is the highest (0.264) if being compared to other predictor variables whereby the Beta values for both safety program and policies, and management safety management practices are (0.244) and (0.144) respectively.

The results are presented in the table labeled Model Summary (Table 4.6) under the heading R Square and ANOVA[b] (Table 4.7). This will tell how much of the variance in the dependent variable is explained by the model. According to the table 4.6, the 0.494 is the correlation coefficient (R-value) for this study. The R-value is the correlation coefficient between the dependent variable and

independent variables that are taken together. The R square shows the extent or percentage the independent variables can explain the variations in the dependent variable. R square calculates the regression line that approaches closest to the real data points. In this study, the independent variables (job safety, safety program and policies and safety management practices) can explain only 24.4% of the variation in the dependent variable (safety behavior). However, there is still 75.6% (100%-24.4%) which cannot be explained in this study.

Table 4.6
Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.494[a]	.244	.234	.45144

a. Predictors: (Constant), Management Safety Practice, Job Safety, Safety Programme Policies

b. Dependent Variable: Safety Behavior

Table 4.7
ANOVA[b]

Model	Sum of Square	df	Mean Square	F	Sig.
Regression	14.878	3	4.959	24.335	.000[a]
Residual	46.059	226	.204		
Total	60.937	229			

a. Predictors: (Constant), Management Safety Practice, Job Safety, Safety Programme Policies

b. Dependent Variable: Safety Behavior

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4.7   Summary

This chapter has presented the finding of the data analysis. In the earlier section, respondents' demographic characteristics were described. It was followed by reliability analysis, descriptive analysis, Pearson correlation analysis and multiple regression analysis. The study was conducted among 230 respondents and yielded 100 percent response rate. The major findings of the study have indicated that two independent variables, i.e. job safety and safety programmes policies influenced significantly the compliance safety behavior. On the other hand, management safety practices were not significantly related to compliance safety behavior of the academicians in Management and Science University (Table 4.8). Focuses on the discussion of finding, theoretical and practical contribution and implications, the limitation of the present study and suggestion for future research will be discussed in the next chapter.

Table 4.8
Hypothesis result

	Research Questions	Test	Result
RQ1	What is the relationship between job safety and safety behavior?	Correlation	Moderately positive significant
RQ2	What is the relationship between safety program and policies and safety behavior?	Correlation	Moderately positive significant
RQ3	What is the relationship between management safety practice and safety behavior?	Correlation	Not significant

CHAPTER 5

CONCLUSION AND RECOMMENDATION

5.1   Introduction

This chapter will discuss the results from the present research which has examined the relationship between job safety, safety program and policies and management safety practices towards safety behavior among academicians in Management and Science University, Shah Alam, Selangor. The second part would include the implication of the current study followed by suggesting the realistic approach and the best solution to enhance safety behavior among academicians in Management and Science University. At the end of this chapter, the limitation that had been confronted during the current study and suggestion for improvement will be highlighted. Finally, the conclusion will also be provided in this chapter.

5.2   Recapitulation of Result

The R square regression analysis, which was featured in table 4.6 has portrayed that the F score of the regression analysis has given the value of 24.335 with the significance of 0.000 and the mean square of the analysis is 4.959. Satisfaction with job safety has the highest beta coefficient (0.264), which is the strongest contribution in predicting the relationship to comply with safety behavior

followed by safety programme and policies (0.244) which is the second highest. All these two variables are significant because their values are lower than the alpha value of 0.01. However, the management safety practice was not significant in explaining compliance safety behavior.

5.3   Discussion

This study is focused mainly on investigating the relationship between job safety, safety program and policies and management safety practices towards safety behavior among academicians in Management and Science University, Shah Alam, Selangor.

The relationship between the dependent variable and independent variables was investigated using Pearson's correlation coefficients. With reference to the correlation table in chapter 4, it had explained the relationship between compliance with safety behavior and the variables. The relationship between the compliance safety behavior and job safety is the highest linear score where r = 0.387. The second highest score is found in safety programmes and policies where r = 0.382. Finally, the relationship between the compliance safety behavior and management safety practice is the lowest correlation where r = 0.340. The following section will discuss the result of the hypotheses of this study based on theories and previous empirical evidence.

5.3.1   Job Safety with Safety Behavior

The results indicated that the job safety variable is moderately significant and contributed to the variance in compliance safety behavior. The participants may have realized that they do not expose with any risk or hazard that can cause harm to them. This perception may depend on academic background, experience, environment, facility and the standardized work process that has been in place. According to Vinodkumar and Bhasi (2009), employees with higher qualifications could understand safety rules and regulations better because of the apprehend knowledge that they possessed. Gyekye (2009) also mentioned in his study that there was a positive significant result of the better-educated employees where they were more committed to the safety work behavior. This finding was, in fact, had revealed that this correlation was actually excellent for this type of respondents.

Williams et al. (1989) took issue with the notion that organizational culture reflected shared behaviors, beliefs, attitudes, and values. They argued that not all organizational members responded in the same way in any given situation, although there may be a tendency for them to adopt similar styles of dress, modes of conduct, and perceptions of how the organization does, or should, function. Beliefs, attitudes, and values about the organization, its function or purpose can vary from division to

division, department to department, workgroup to workgroup, and from individual to individual. Thus, although an organization may possess a dominating `cultural theme', there were likely to be a number of variations in the way in which the theme was expressed throughout the organization (Williams et al., 1989; Hamden-Turner, 1990; Furnham and Gunter, 1993).

As with any management function, however, performance depends not just on management policies and procedures, but on the development of effective operational practices, which are appropriate to the working environment and which is also perceived to be appropriate by the workforce implementing them.
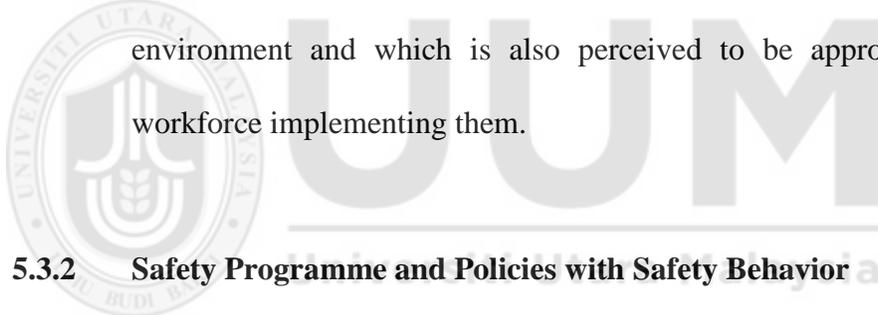
5.3.2   Safety Programme and Policies with Safety Behavior

The study indicated that satisfaction of safety programmes contributed moderately to the variance compliance safety behavior. This is probably due to the high level of satisfaction held by the employees from the safety programmes provided by the management or employer. To enhance a good safety environment, management could develop safety programs such as safety training, safety awareness induction course and so forth. This finding supports the study by Zohar (1980) where safety program effectiveness scored the highest safety climate measure. This

was also supported by Gyekye (2006) where workers were satisfied with safety programs provided by their organization were more complied with safety regulation. This can be aligned with the excellent safety practice implemented in the organization. In fact, employees who received their safety programme in their pre-phase of the current job were having a safer work environment as compared to those who have not received any safety orientation (Hayes et al, 1998). Job enrichment programs and skill training could also be used. Employees are more concerned about a much promising career path when they could expect a higher post with higher skills owned by them. As for job enrichment programs, the employees will be the multi-skilled workers and thus could also motivate them. Induction training has also been proven to set new employees' mind on what they could expect from the organization they are working for and could understand better how things work especially in a safe work environment.

5.3.3   Management Safety Practices with Safety Behavior.

In the study, the result of regression analysis depicted that management safety practices were correlated with the compliance safety behavior but not significantly. This might be due to the authority held by the management in imposing rules and regulation on safety. Once there is a

strong emphasis on safety procedures and regulation taken by the management, the employees would have no choice but to follow them. Specifically, management participation and involvement in work and safety activities, as well as frequent, informal communications between workers and management, are recognized as critical behaviors. Success factors of a very well functioning safety management system which entail the personnel to have a sense of ownership of the safety management system and are empowered to safety. Therefore, leadership and commitment from the top management are needed and safety policies should be well documented to ensure that safety rules and procedures are being obeyed at all time. Management controls training resources, develops and implements policies and procedures, regulates spending for equipment, and selects and places personnel. When management understands its responsibility for employee safety and chooses to direct improvement efforts on the safety system it created, then management also understands that blaming the employees will not result in safety improvements.

5.4   Implication

In this section, the implication resulting from the outcome of the study will be discussed. It will focuson both theory and practice.

5.4.1 Theoretical Implication

This study was done to investigate the relationship between thought variables on safety behavior among academicians in Management and Science University. Even though there were many similar studies on safety compliance done in various industries such as telecommunication industry, hospitality industry, and construction industry and even in government agencies, the study done in an academic institution is considered less in this country. It is because the setup of campus is seen as less risky compared with other settings.

Nevertheless, the more research was done to prove on compliance safety behavior, the better or valid the result will be. Therefore, this study was extended to education organization to measure the reliability of the variables which will increase the stability of the study academically. Besides that, this study was conducted in the campus setting where it created another angle of study in the safety behavioral. Apart from that, this study would be worthy and can contribute value to the academic world because it was done at a place that was rarely given focus in studying the safety behavioral.

5.4.2   Practical Implication

The result of the study shows positive significant contributions to the safety behavior from satisfaction with job safety, safety programme and policies, and management safety practice. It is suggested to the management of MSU to put more effort in these three predictor variables to maintain safety and enhance the best safety practices as it has been proven they could influence the safety behavior. This, in turn, could probably reduce near misses, injury and accident involvement rates (Hayes et. Al. 1998; Zohar 1980, Gadd and Collins 2002; Guldenmund, 2000; O'Toole, 2002). It is mandatory for every academician to implement safety practices at their department. By conducting more study on safety compliance, the management could see the lacking in enforcement to improve the quality of the working and provide a safe working environment. Indeed, there should be more campaigns on cultivating a safety culture at the workplace to provide awareness and training on safety should be held more to ensure that safety practices are being fully implemented in the workplace.

5.5   Limitation

This study was conducted within a small sample size of 230 compared to the overall population of the academician across the country.It should involve a larger

sample group in order to gain results more precisely. The findings would be helpful in providing stability for the study. Besides that, the data obtained for this study were only focusing on the MSU setup.

5.6 Recommendation for Future Studies

This study was done to particularly investigate the relationship between thought variables on safety behavior among academicians in Management and Science University. Therefore, more studies can be carried out in investigating the perceptions of safety behavior among the other universities in Malaysia. This may give higher reliability to the chosen independent variables. Apart from that, accident rates or injury severity caused throughout the time of teaching and learning activities can be measured as the dependent variable replacing compliance to safety behavior in future studies on safety. This may provide data and evidence on actual accident rates incurring in various universities in Malaysia. In addition to the three independent variables discussed, the study should also examine how the other possible aspect, such as level of education would influence the safety behavior. Therefore, it would have been more comprehensive to studying the level of education as another independent variable in the study.

5.7   Conclusion

Safety of employees is primarily important to any workplace irrespective of the fact whether it is utility, manufacturing, and construction. The importance of safety at work cannot be over exemplified. Adoption of safety measures not only to ensure the safety of life of the academicians but also the staff and students in the university. Therefore, a study was conducted in determining the relationship between job safety, safety program and policies and management safety practices towards safety behavior among academicians in Management and Science University, Shah Alam, Selangor. The finding of the study had proven that safety behaviors of the academicians were influenced moderately by job safety and safety programmes in the organization. One of the key aspects of defining a safety culture is in understanding the role national, professional and organizational cultures play in safety decisions. The key to shaping the safety and risk culture of an organization is in how an organization creates the environment for risk to be managed and how safety decisions are to be made and safety actions to be taken. When an organization adopts a formal approach to safety oversight by implementing a safety management system, an environment is created that influences behavior which then eventually shapes the beliefs and attitudes of the people in the organization.

Nevertheless, the least significant variables such as the management safety practices indicated that the variable makes fewer contributions to a better safety behavior. In sum, findings inferred that academicians' safety behavior, such as keeping the work area safe, caring about peers' safety, and following safety rules can increase safety in the work environment and reduce accidents in daily routine. Accidents and incidents in the campus can be costly in terms of equipment and personnel losses. The only way to keep these costs to a minimum is to reduce the risk of accidents. The recognition of the prevalent role of human error in accident causation has led the management to expend considerable effort in ensuring that adequate human factors integration guidelines are available to support the procurement of equipment. In addition to the implementation of such guidelines, a well-developed safety case and an appropriate safety management system for the equipment are fundamental to safe operation. Thus, while it could be said that the organizational safety culture in the educational organization is not strong, the most acute problem may lie less with the commitment of an individual or management, and more with the failure of the system for regulating and managing safety to provide effective channels to translate safety aspirations and initiatives into effective outcomes. Strengthening the safety culture requires a systems approach, which should include the following elements, namely, strengthening the safety management process, defining more clearly the measurable outputs of safety management, developing competence standards for training and ensuring that performance criteria and targets are auditable. Keeping our academicians safe in whatever they do, should be a part of our culture in order to be successful. Our

bottom line is ensuring every academician within our organization or formations is there every day, safe, healthy and ready to execute the vision and mission of the university.

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APPENDIX

Date :_____   Staff ID :_____

UNIVERSITI UTARA
MALAYSIA

EXECUTIVE SUMMARY

The purpose of this questionnaire that distribute to the academic staff working in Management and Science University, Shah Alam, Selangor is to determine the relationship between potential factors influencing towards safety behavior Among Academic Staff. The information collected from this questionnaires distribution can be used to identify the most significance factors that contribute to the safety behavior. The questionnaires output also give benefits to the university to plan and improve the safety performance as well as to reduce the accidents and diseases statistics in the university compound. Lastly, the collected data can be used for reference for anyone who interested to study on this topic.

Thank you

RINGKASAN EKSEKUTIF

Tujuan soal selidik ini diedarkan kepada kakitangan akademik Management and Science University, Shah Alam, Selangor adalah untuk menentukan hubungan korelasi diantara faktor yang berpotensi kepada tingkahlaku selamat di kalangan kakitangan akademik di universiti ini. Maklumat yang dikumpul daripada pengedaran soal selidik ini boleh digunakan untuk mengenalpasti faktor yang paling signifikan yang menyumbang kepada tingkahlaku selamat . Maklumat yang dikumpul juga akan memberi manfaat kepada universiti untuk merancang dan meningkatkan prestasi keselamatan seterusnya mengurangkan statistik kemalangan dan penyakit di institusi ini. Akhir sekali , data yang dikumpul boleh digunakan untuk rujukan untuk sesiapa sahaja yang berminat untuk mengkaji topik ini.

Terimakasih

Date :_____   Staff ID :_____

INSTRUCTIONS: This questionnaire consists of eight (8) pages. Please read the questions carefully before answering them.
ARAHAN: Soal selidik ini terdiri daripada lapan (8) muka surat . Sila baca soalan dengan teliti sebelum menjawab.

SECTION A: RESPONDENT INFORMATION
SEKSYEN A: MAKLUMAT RESPONDEN
(Objective: To identify the socio-demographic of employees)

Instruction: Please choose one for the answer for each question by (X) the chosen answers
***Arahan:** Sila pilih satu jawapan sahaja bagi setiap soalan dengan (X) jawapan pilihan.*

1. **Age/*Umur:***
   - [ ] 20 years old and below */20 tahundankebawah*
   - [ ] 21-30 years old */20-30 tahun*
   - [ ] 31-40 years old */30-40tahun*
   - [ ] 41-50 years old */40-50 tahun*
   - [ ] 51 years old and above */51 tahundankeatas*

2. **Gender/*Jantina:***
   - [ ] Male/*Lelaki*
   - [ ] Female/*Perempuan*

3. **Education level/*Tahap pendidikan***
   - [ ] PMR/SPM/STPM/STAM
   - [ ] Diploma, Certificate /*Diploma, Sijil*
   - [ ] Degree/*Ijazah Sarjana Muda*
   - [ ] Master Degree /*Ijazah Sarjana*
   - [ ] Doctor of Philosophy (PHD)/*Ijazah Kedoktoran*

4. **Type of designation/*Jenis jawatan***
   - [ ] Tutor/*Tutor*
   - [ ] Assistant Lecturer/*Pembantu Pensyarah*
   - [ ] Lecturer /*Pensyarah*
   - [ ] Associates Professor/Profesor Madya
   - [ ] Professor/Profesor

5. **Period of working experiences/*Tempoh pengalaman bekerja***
   - [ ] Less than one year */Kurang dari setahun*
   - [ ] 1-5 years */1-5 tahun*
   - [ ] Over 10 years / *Lebih 10 tahun*
   - [ ] Over 15 years /*Lebih 15 tahun*

Date :_____   Staff ID :_____

6. Faculty/Fakulti

☐	Faculty of Health and Life Sciences (FHLS)
☐	Faculty of Bussiness Management and Professional Studies (FBMP)
☐	Faculty of Information Sciences & Engineering (FISE)
☐	International Medical School (IMS)
☐	School of Pharmacy (SPH)
☐	School of Education and Social Sciences (SESS)
☐	School of Hospitality and Creative Art (SHCA)
☐	School of Graduates Studies (SGS)
☐	Graduates School of Management (PhD/DBA/MBA)
☐	Centre of Foundation Studies (CFS)

Date :_____ Staff ID :_____

SECTION B: JOB SAFETY
SEKSYEN A: KESELAMATAN KERJA
(Objective: To identify the safety of work process/place)

Instruction: Think about your job. To what extent you agree or disagree whether each statement below describes your job? **Circle** your answer using the scale below.

Arahan: Fikirkan tentang pekerjaan anda. Sejauh mana anda bersetuju atau tidak bersetuju sama ada setiap kenyataan di bawah menggambarkan kerja yang anda lakukan sekarang?
Bulatkan jawapan anda berpandukan skala di atas.

Strongly disagree *(Sangat tidak setuju)*	Disagree *(Tidak setuju)*	Neither agree nor disagree *(Berkecuali)*	Agree *(Setuju)*	Strongly agree *(Sangat setuju)*
1	2	3	4	5

1.	My job is dangerous (*Kerja saya berbahaya*)	1	2	3	4	5
2.	My job is safe (*Kerja saya selamat*)	1	2	3	4	5
3.	My job is hazardous (*Kerja saya mengundang ancaman*)	1	2	3	4	5
4.	My job is risky (*Kerja saya berisiko*)	1	2	3	4	5
5.	My work is unhealthy (*Kerja saya tidak menyihatkan*)	1	2	3	4	5
6.	I could get hurt easily in my job (*Dalam kerja saya, saya mudah tercedera*)	1	2	3	4	5
7.	My job is unsafe (*Kerja saya tidak selamat*)	1	2	3	4	5
8.	I fear for my health in my job (*Semasa melakukan kerja saya, saya bimbang kesihatan saya akan terjejas*)	1	2	3	4	5
9.	There is a chance of death in my job (*Saya terdedah pada kematian dalam kerja saya*)	1	2	3	4	5
10.	My job is scary (*Kerja saya menakutkan*)	1	2	3	4	5

Date :_____   Staff ID :_____

SECTION C: SAFETY PROGRAM AND POLICIES
SEKSYEN C: PROGRAM DAN POLISI KESELAMATAN
(Objective: To identify safety program and policies at work place)

Instruction: Think about safety programs at your workplace. To what extent you agree or disagree whether each statement below describes these safety programs? **Circle** your answer using the scale below.

Arahan: Fikirkan tentang pelaksanaan program keselamatan di tempat kerja anda. Sejauh mana anda bersetuju atau tidak bersetuju sama ada setiap kenyataan di bawah menggambarkan program tersebut? Bulatkan jawapan anda berpandukan skala di bawah.

Strongly disagree *(Sangat tidak setuju)*	Disagree *(Tidak setuju)*	Neither agree nor disagree *(Berkecuali)*	Agree *(Setuju)*	Strongly agree *(Sangat setuju)*
1	**2**	**3**	**4**	**5**

Safety programs at my workplace is … *(Program keselamatan di tempat kerja saya …)*					
1.	Worthwhile *(Bermanfaat)*	1	2	3	4	5
2.	Helps prevent accident *(Membantu mencegah kemalangan)*	1	2	3	4	5
3.	Useful *(Berfaedah)*	1	2	3	4	5
4.	Good *(Bagus)*	1	2	3	4	5
5.	First-rate *(Terbaik)*	1	2	3	4	5
6.	Unclear *(Tidak jelas)*	1	2	3	4	5
7.	Important *(Penting)*	1	2	3	4	5
8.	Effective in reducing injuries *(Berkesan mengurangkan kecederaan)*	1	2	3	4	5
9.	Doesn't apply to my workplace *(Tidak boleh dilaksanakan di tempat kerja saya)*	1	2	3	4	5
10.	Does not work *(Tidak berfaedah)*	1	2	3	4	5

Date :_____   Staff ID :_____

Instruction: Think about your management. To what extent you agree or disagree whether each statement below describes your management? **Circle** your answer using the scale below

Arahan: Fikirkan tentang pihak pengurusan anda. Sejauh mana anda bersetuju atau tidak bersetuju sama ada setiap kenyataan di bawah menggambarkan pengurusan anda? Bulatkan jawapan anda berpandukan skala di atas.

Strongly disagree *(Sangat tidak setuju)*	Disagree *(Tidak setuju)*	Neither agree nor disagree *(Berkecuali)*	Agree *(Setuju)*	Strongly agree *(Sangat setuju)*
1	2	3	4	5

Management… (*Pihak pengurusan …)*					
1. Provide enough safety programs (*Menyediakan program-program keselamatan yang mencukupi*)	1	2	3	4	5
2. Conduct frequent safety inspections (*Sering membuat pemeriksaan keselamatan*)	1	2	3	4	5
3. Investigates safety problems quickly (*Segera menyiasat masalah keselamatan*)	1	2	3	4	5
4. Rewards safe workers (*Memberikan ganjaran kepada pekerja yang bekerja secara selamat*)	1	2	3	4	5
5. Provides safe equipment (*Menyediakan alat keselamatan*)	1	2	3	4	5
6. Provide safe working conditions (*Menyediakan tempat kerja yang selamat*)	1	2	3	4	5
7. Respond quickly to safety concerns (*Cepat bertindak balas terhadap perkara-pekara yang berkait dengan keselamatan*)	1	2	3	4	5
8. Helps maintain clean work area (*Sentiasa membantu mengekalkan kebersihan tempat kerja*)	1	2	3	4	5
9. Provides safety information (*Menyediakan maklumat berkaitan keselamatan*)	1	2	3	4	5
10. Keeps workers informed of hazards (*Sentiasa mewar-warkan keadaan berbahaya kepada pekerja*)	1	2	3	4	5

Date :_____   Staff ID :_____

<table>
<tr><td colspan="3" align="center">SECTION E: COMPLIANCE SAFETY BEHAVIOR
<i>SEKSYEN E: KEPATUHAN PERILAKU SELAMAT</i>
<i>(Objective: To identify the compliance of safety behavior)</i></td></tr>
</table>

Instruction: Think about your current job. Using the scale below, please **circle** the statement that best described you.
Arahan: Fikirkan tentang pekerjaan semasa anda. Dengan menggunakan skala di bawah, sila **bulatkan** kenyataan yang paling memerihalkan anda.

Strongly disagree *(Sangat tidak setuju)*	Disagree *(Tidak setuju)*	Neither agree nor disagree *(Berkecuali)*	Agree *(Setuju)*	Strongly agree *(Sangat setuju)*
1	2	3	4	5

1.	I overlook safety procedures in order to get job done more quickly. (*Saya terlepas pandang prosedur keselamatan agar tugas dapat diselesaikan dengan lebih cepat*).	1	2	3	4	5
2.	I follow all safety procedures regardless of the situation I am in (*Saya mematuhi segala prosedur keselamatan tanpa mengendahkan situasi yang sedang dihadapi*).	1	2	3	4	5
3.	I handle all situations as if there is a possibility of having an accident. (*Saya menangani semua situasi dengan andaian kemalangan akan berlaku*).	1	2	3	4	5
4.	I wear safety equipment required by practice. (*Saya menggunakan semua alat keselamatan seperti yang ditetapkan*).	1	2	3	4	5
5.	I keep my work area clean. (*Saya memastikan kawasan tempat kerja bersih*).	1	2	3	4	5
6.	I encourage co-workers to be safe. (*Saya menggalakkan rakan-rakan sekerja agar bekerja dengan selamat*).	1	2	3	4	5
7.	I keep my work equipment in safe working condition. (*Saya memastikan semua peralatan kerja berada dalam keadaan selamat*).	1	2	3	4	5
8.	I take shortcuts to safe working behaviours in order to get the jobdone faster. (*Saya tidak begitu mengendahkan perilaku selamat agar kerja dapat diselesaikan dengan segera*).	1	2	3	4	5

Date :_____   Staff ID :_____

9.	I do not follow safety rules that I think are unnecessary. (*Saya tidak mematuhi peraturan keselamatan yang saya rasa tidak perlu*).	1	2	3	4	5
10.	I report safety problems to my supervisor when I see safety problem. (*Saya melapor kepada penyelia masalah keselamatan apabila saya menemuinya*).	1	2	3	4	5
11.	I correct safety problems to ensure accidents will not occur. (*Saya membetulkan masalah keselamatan bagi memastikan kemalangan tidak berlaku*).	1	2	3	4	5

END OF QUESTIONNAIRE (*KAJI SELIDIK TAMAT*)
THANK YOU (*TERIMA KASIH*)