

**EXAMINING FACTORS RELATED TO SAFETY BEHAVIOR IN  
MALAYSIAN MANUFACTURING INDUSTRY**

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**By**

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## **Abstract**

This study examines the direct relationship between employee's conscientiousness, safety commitment, employee competency, perceived organizational support and safety behavior. A total of 300 questionnaires were distributed to participants who had agreed to participate in this study. However, only 150 questionnaire were returned and usable for further analyses. Hypotheses for direct effect were tested using multiple regression analyses. Results showed that only employee's conscientiousness, safety commitment, and perceived organizational support were significantly positively associated with safety behavior. Implications of the findings, potential limitations, and directions for future research are discussed.

**Keywords:** Safety behavior; Employee conscientiousness; Safety commitment; Employee competency; Perceived organizational support

## **Abstrak**

Kajian ini mengkaji hubungan langsung antara pekerja yang teliti, komitmen keselamatan, kecekapan pekerja, persepsi terhadap sokongan organisasi dan tingkahlaku keselamatan. Sebanyak 300 soal selidik telah diedarkan kepada peserta kajian yang telah bersetuju untuk terlibat dalam kajian ini. Namun begitu, hanya 150 soal selidik sahaja yang telah diterima semula dan boleh digunakan untuk analisis seterusnya. Hipotesis ke atas kesan langsung diuji menggunakan analisis regresi berganda. Dapatan kajian menunjukkan bahawa hanya pekerja yang teliti, komitmen keselamatan, dan persepsi terhadap sokongan organisasi mempunyai hubungan yang positif dengan tingkahlaku keselamatan. Implikasi dapatan kajian, limitasi dan cadangan kajian pada masa hadapan turut dibincangkan.

**Kata kunci:** Tingkahlaku Keselamatan; Pekerja yang teliti; Komitmen keselamatan; Kecekapan pekerja; Persepsi terhadap sokongan organisasi

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# **CHAPTER 1**

## **INTRODUCTION**

### **1.1 Background of Study**

A large body of existing empirical analysis on workplaces injuries focused on manufacturing and construction sites. This is due to the hazards and both sectors are found to be highly responsive to the business cycle, particularly in mature capitalist economies as well as those in transition towards industrialized economies (Davies, 2009). Rapid economic growth via industrialization has given not only significant impact in terms of income, quality of life but it has also resulted in increasing number of accident at workplace (Noor Aina, Wan Izatul, Mohd Shaladdin & Wan Abd Aziz, 2013).

Workplace accidents have huge implication for individuals, economic and their communities (Rihardson 2004). Total costs of occupational accidents and disease have been estimated at between 1 and 3 per cent of GDP in various countries; direct costs include compensation costs, costs associated with damage in the workplace and the costs of interruption of production. Indirect costs include the costs of livelihoods lost, income to dependents, and the cost associated with care-giving by families and the community (Leigh, Marrowitz, Bernstein & Landdrigan, 1992).

According to the International Labor Organization, it is estimated that every year about two million workers are killed due to work-related accidents and diseases, 270 million occupational accidents and 160 million work-related diseases are occurring (Soehod &

Laxman 2007) . National Safety Council Injury (2003) reported that the workplace accident in United States alone attributed to 3400,000 disabling injuries and 4500 death which led to staggering total cost of 156 billion, the majority of which was due to lose wages and productivity. The Social Security Organization (SOC SO) reported that there were 54,134 cases of accident at workplace in 2008 compared to 95,000 in year 2000 (New Sabah Times, April 2010). Therefore, proper attention of safe working environment has extensive benefit such as productivity, comfort, concentration, job satisfaction and morale of the people within it (Ogbo, 2009). Company have safe working environment exceed their moral obligation create goodwill and a positive image that can increase profits and employee retention.

## **1.2 Problem Statement**

Many companies have spent lots of time and effort improving safety, usually by addressing hardware issues and installing safety management system that include regular line management safety audits (Mcafee & Winn, 1989). Over a number of years, these efforts tend to produce dramatic reductions in accident rates. However accident remains appears to be stubbornly resistant to all efforts to remove them. Although many of these are attributed to peoples carelessness or poor safety attitudes, most of these are triggered by deeply ingrained unsafe behaviors(Cooper & Philips, 2004). According to statistic on accident's report Heinrich deduced that 88 percent of accidents are due to unsafe act of workers, 10 percent due to unsafe conditions and 2 percents of all accidents are associated with act of God such as natural disasters ( Wang, Liu & Chau, 2006). Research

also report workers with negative perception of safety tend to engage in unsafe act which in turn increases their susceptibility to accident (Hoffman,1996). Worker who have indicated job security, anxiety and stress have exhibited a drop on safety motivation and recorded a relatively higher accident involvement rate ( Probst & Brubabaker, 2001).

Workplace accident one of the major critical issues that occur in organization especially for companies or industries related to manufacturing sector. Since manufacturing is one of the major contributors to the Malaysian economy; the development of manufacturing sector must also be in line with the awareness and compliance of the industry towards safety and health. The policy for manufacturing in Malaysia does not only cover technology, market access, productivity and financial component but must also consider numerous hazards in the work environment. Various occupational and health issues such as exposure to chemical, lack of trained workers and deficiency in enforcement must be appropriately managed (Noor Aina et al., 2013). With refer to Table 1.1 the accident statistic of Top Glove from 2010 until 2012. It has been recorded that there were frequent number of dangerous accident occurred each year and trend is increasing from 2010 to 2012. These situation result unpredictable cost to the company and it can be more serious and affected image of the company if there are no steps action taken for prevention. Therefore, it is important to identify whether the employee conscientiousness, safety commitment, employee competency and perceive organizational support are effective way to prevent accident at workplace in future and to reduce injury and ill health in Top Glove company. By identifying all the elements the accident at the workplace, it is essential to investigate the relationship all the element and

considering the appropriate preventive measures in reducing the risk of them happening again.

Table 1.1  
*Top Glove Workplace Accidents Statistic 2010- 2012*

<b>Year</b>	<b>Rate</b>
2010	57
2011	96
2012	202
<b>Total</b>	<b>355</b>

*Source: Top Glove Safety and Health Reports (2012)*

### **1.3 Research Questions**

Based on the problems discussed above, the central question for this study would be “*what factors are considered critical in influencing individual’s safety behavior?*”. Specifically:

- a) Do individual factors such as employees’ conscientiousness, safety commitment and employees’ competency related to safety behavior at the workplace?
- b) Does organizational factor such as perceived organizational support related to safety behavior at the workplace?



## **1.4 Research Objectives**

Generally, this study aims to examine what factor influences employees' safety behavior at the workplace. Therefore, to answer the research questions posted above, the following research objectives were formulated:

1. To investigate the relationship between employees' conscientiousness, safety commitment and employee's competency and safety behavior; and
2. To examine the relationship between perceived organizational support and safety behavior;

## **1.5 Significance of Study**

The main aim of the study is to identify factor that related to the accident by human behavior at the Top Glove Company. The findings may help the organization to reduce the accident cause by employees at the workplace so that they can perform better, reduce absenteeism and increase employee's health. Secondly, findings from the study will enrich the existing literature on the safety behavior issues.

## **1.6 Scope of Study**

The main focus of this study is to examine factors that might related to safety behavior in the workplace. Specifically, to identify whether factors like employees' conscientiousness, safety commitment, employees competency and perceived

organizational support have a direct relationship with safety behavior. A total of 150 employees from Top Glove Company participated in this study. Using quantitative research design, data was collected through survey at one point of time.

## **1.7 Organization of Chapters**

Chapter one is the first of five chapters in this research paper. Chapter 2 presents the general review of the literature on safety behavior and past empirical findings on factors that might influence safety behavior such as employee's conscientiousness, safety commitment, employee competency, perceived organizational support. The chapter concludes with the development of the research hypotheses.

Chapter 3 describes the method for the study such as the research design and procedure. The chapter also reports the sample size and sampling technique, and the development of questionnaire. Chapter 3 ends with a brief discussion on the strategies and procedures that were used to analyze data collected from the survey.

Chapter 4 reports the results and their interpretation for the study. There are reports of the descriptive statistical analysis, bivariate correlation analysis, and regressions analysis. To facilitate the interpretation of the results reported in this chapter, the results are summarized in a number of tables.

The final chapter, Chapter 5, discusses the interpretation of the research findings presented in Chapter 4. The findings are compared to those found in the past research reviewed in Chapter 2. The chapter concludes with a discussion on the limitations of the study, their implications for both researchers and practitioners, and some suggestions for future research.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter review issues and past empirical findings that related to safety behavior. These issues are reviewed to provide a theoretical foundation for the research. The chapter begins by describing the concept of safety behavior, and this followed by findings from past studies on safety behavior. The chapter then reviews how employees' conscientious, safety commitment, employees' competency and perceived organizational support related to safety behavior. The chapter concludes by discussing the research framework and the development of hypotheses.

#### **2.2 Understanding Safety Behavior**

##### **2.2.1 Past Empirical Studies on Safety Behavior**

Safety behavior is important because it forms the context of development of individual safety attitudes, persisted and promoted (Zohar, 1999). The concept of safety culture was developed in response to major organization accident and now being widely applied to explain accident at the individual level (Mearns, 2003). Oyle (1996) also defined safety behavior as an objective to measure the attitudes and perception towards health and safety issues. Flin (2000) also find that safety behavior as a mediating variable between organizational climate and safety performance, which describe individual perceptions of the values of safety within the work environment. Moreover, Findley (2007) argued

safety behavior describe safety attitudes and perceptions of employee at single point in time an effort to identify system weakness and opportunities for safety improvement.

### **2.3 Employees' Conscientiousness**

Conscientiousness refers to self-control and the active process of planning, organizing and carrying out tasks (Barrick, 1993). According to Borman (1991) conscientious person is purposeful, strong-willed and determined. According to Sackett (1996), the relationship between conscientiousness and job performance could be attributed to the conceptual relationship between conscientiousness and integrity. Furthermore, autonomy and goal setting influence the relationship between conscientiousness and job performance (Mount, 1993). In other study, Purba (2004) found that the trait personality and employee's conscientiousness to the organization has been influence on the successful of the organization. Ahmadi (2010) also stated that all dimensions' of personality including conscientiousness have positive significant influence on successful of the organization.

### **2.4 Safety Commitment**

Cooper (2006) defined safety commitment as individual involvement in safety activities characterized by a strong acceptance of behalf in the organization safety goals and willingness to exert effort to improve safety in the workplace. According to Abd Aziz (1998), sSafety commitment consists three dimensions which are priority on safety,

safety involvement and safety compliance. Other researcher view commitment in general sense from organizational and individual perspective which is also applicable to safety. Moreover, Allen and Meyer (1990) view organizational commitment in term of affective, continuance, and normative component which are continuance commitment refers to awareness of the cost associated with leaving the organization. Rosli (2010) debated that safety commitment is reflected in employee's safety attitudes and behaviors. Based on the finding, employees who high level of safety commitment are able to identify the hazard at the workplace, always comply with safety rules and procedure are always willing to be involved in safety activities (Rosli, 2010).

## **2.5 Employees' Competency**

Competence is often used as an indicator of the effectiveness of an education or training programmer (Sullivan, 1995). According to Delker (1990), competence refers a specific skill needed in a specific situation. In other writing, Spencer (1993) argued that employee competency at an individual level has been defined as the underlying work-related characteristics such as knowledge, skills, attitudes, beliefs, motives and traits. Previous study has pointed that these characteristics play a pivotal role in fostering employee ability including problem solving and analytical (Naquin, 2006). Scott (1998), defines competency as an underlying characteristic of a person which can be motivate, a trait, a skill, an aspect of his personal image or of his social role or a body of knowledge which he or she uses. This definition show how competency to be a mix number of things

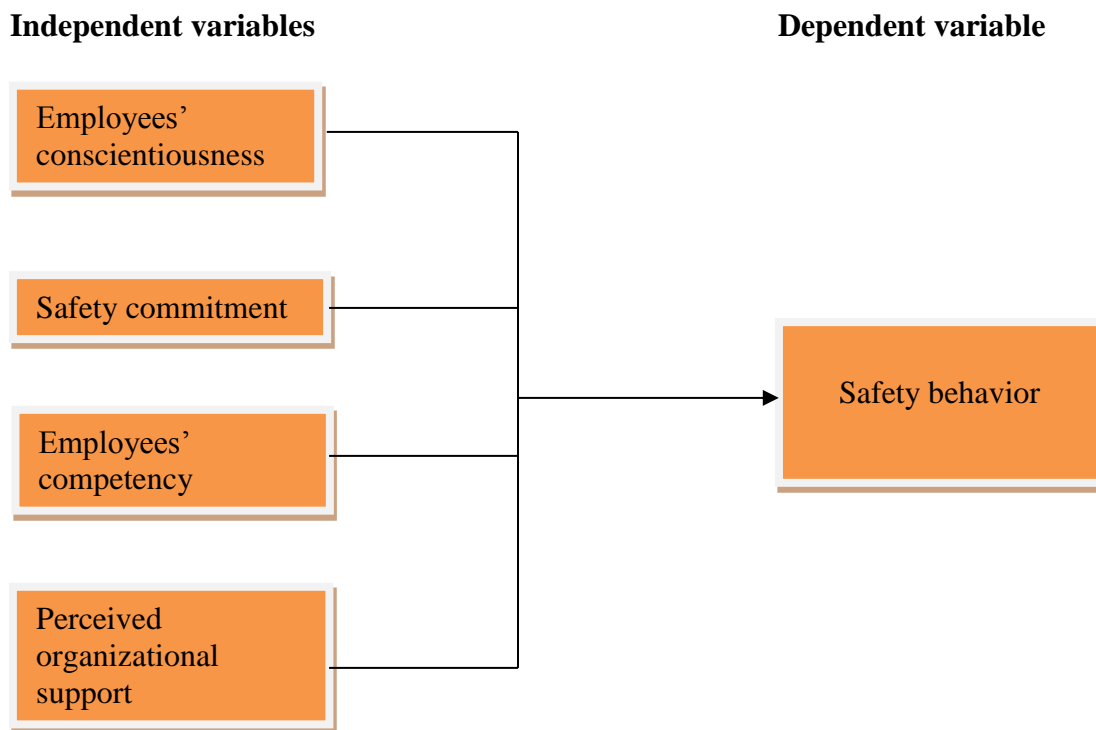
such as motivation, personal traits, skills and knowledge built it can be seen the evidence of these things in the way in which the person behaves.

## **2.6 Perceived Organizational Support**

Neves (2010) defined perceived organizational support refers to employees perception concerning the extent to which the organization values their contribution and care about their well being. Neves (2010) also found that perceived organizational support have been important consequences for employee performance and well- being. In a study conducted by Restubog (2013) found that perceived organizational support began with the observation that if manager are concerned with their employees commitment to the organization, employees are focused on the organization's commitment to them. For employees, the organization serves as an important source of socio-emotional resource, such as respect and caring and tangible benefits, such as wages and medical benefits (Restubog, 2013). Apart from that, Eisenberger (2002) also mentioned that in order to meet socio-emotional needs and to assess the benefits of increased work effort, employees form a general perception concerning the extent to which the organization values their contributions and cares about well-being. Such perceived organizational support would increase employees feeling of obligation to help the organization reach its objectives, their affective commitment to the organization, and their expectation that improved performance would be rewarded (Eisenberger, 2002).

## 2.7 Research Framework

The research framework shown in Figure 2.1 is developed based on the discussion of literature on safety behavior. The research framework for this study shows the relationship between employees' conscientiousness, safety commitment, employee competency, perceived organizational support and safety behavior. In this study, employees' conscientiousness, safety commitment, employee competency, and perceived organizational support are the independent variables, while safety behavior is the dependent variable.





## **2.8 Development of Hypotheses**

### **2.8.1 Relationship between Employees' Conscientiousness and Safety Behavior**

Clarke (2006) identified that employee conscientiousness lead to effective attention to detail and an orderly process of implement tasks that mitigate safety hazards. Conscientious person are typically careful and thorough in conducting their jobs and are goal-oriented, hardworking and well organized (Demorouti, 2006). Compare to less responsible coworkers, highly conscientiousness individuals are more inclines to value their work, learn more than others, establish and plan towards increasingly difficult goals, shows increment in maturity evince ethical behavior, and demonstrate upwardly mobile career progression (Smithikrai, 2008). Thus, conscientiousness employee show tendencies to work towards continual improvement and showed increased work commitment and self-efficacy compared to their less conscientious peer.

Moreover, worker who are not effective, dissatisfied and risk taker pose a major safety problem to management and are more likely to be injured on the job, affecting overall productivity (Clarke, 2006). According to Robtson's (2005) meta-analysis of empirically derived big five personality dimension (extraversion, neuroticism, conscientiousness, agreeableness and openness) it was found that there is a correlation between low conscientiousness and low agreeableness with accident involvement. In other writing, Wallace and Chen (2006) argued that a personal capacity for conscientiousness motivates workers safety behavior. Conscientiousness worker are safety minded either because of desire to act correctly or due to fear of consequences if mishap occurs. The selection of

highly conscientious employee may be one way to improve safety behavior at workplace. Beside that according to Barrick and Mount (1991) conscientiousness employee is a predictor of effort that has been validated for job performance and linked to accident outcomes.

Based on the above discussions, the following hypothesis is proposed:

H1: There is positive relationship between employees' conscientiousness and safety behavior

### **2.8.2 Relationship between Safety Commitment and Safety Behavior**

Over the years, commitment has been defined and measured in many ways. Indeed, this lack of consensus in the definition of the term has contributed greatly to its treatment as a multi-dimensional construct (Meyer & Allen, 1991). Safety commitment is important part to determine success factor in safe work behavior. It is because according to Andi (2008) safety commitment is a main key in develop worker awareness of safety. Safety commitment is a behavioral-oriented technique that includes individuals or group in the upward communication movement and decision making process in the organization (Vredenburgh, 2000). Moreover to ensure safety commitment among worker, involving worker in safety awareness at the work place. A safety program succeeds when all concerned parties from top to bottom hierarchical level understand that preventing accidents is everyone duties (Akson & Hadikusomo, 2008). Copper (2000) identified that success in occupational safety and health management can only be accomplished through

safety commitment especially between all projects stakeholders. It's important for the employee to get involved in the safety program because they are the backbone of the company and they are linked closely to the operation held in the organization. Every activity in the operation will involve the employee as they are the one handling the task daily.

Study by Lock and Schweiger (1979) and Fenton (1998) have shown that safety commitment from employee increased job satisfaction and productivity it is because the worker tends to prevent workplace accident. According to Stewart (1996), proper attention to workplace safety can result in improved morale, increased job satisfaction, and greater health for the organization as a whole with power to affect the quality of individuals to do so in positive way.

Based on the above finding it can be concluded that safety commitment is main factor to help determine success factor in safe work behavior and safety program in organization. Therefore, the following hypothesis is proposed:

H2: There is positive relationship between safety commitment and safety behavior

### **2.8.3 Relationship between Employees' Competency and Safety Behavior**

Employee competency is defined as a behavior or set of behaviors that links interpersonal skills, capabilities, and personal characteristics to excellent performance in a particular work context such as job, role or group or whole organization. Employee competency

prevention strategy strategically avoids behaviors that mismatch a goal or standard that might prevent the person from reaching the desired outcome (Higgins, 1997). Specifically, “individuals in a prevention focus, who are strategically inclined to avoid mismatches to desired end-states, should be vigilant to ensure safety and non-losses. That is, they try to make sure they do not have any errors of commission for example make mistake by increasing the salience of possible obstacles in an attempt to avoid negative outcomes such as acting safe to avoid mistakes during task completion. Such a strategy is sensitive to the presence or absence of negative outcomes”. The negative outcome is the focus here; not the positive as is the case with promotion focus (Forster, 2003). Moreover, according to Robert (1995), complementarily condition also concerns the relationship between organizational change and skills, especially in that organization changes have a greater impact on productivity if workplace can count on high level of skills. Kleiner (2004) develop this concept further, demonstrating both the existence and persistence of a genuine workplace effect, independent of personal dispositions on the individual worker’s perception of their role and the organization. They also show that workers’ attitudes are strongly correlated to firm performance. Finally, Green, Ashton, and Felstead (2001) provide evidence of a strong correlation between the level of a subset of key skills, namely, competencies, and some specific work practices.

Based on the above finding, it can be concluded that employee competency is one of the factors that help determine safe work behavior and safety program in organization. Thus, the following hypothesis is proposed:

H3: There is positive relationship between employees’ competency and safety behavior

#### **2.8.4 Relationship between Perceived Organizational Support and Safety Behavior**

Perceived organizational support refers to employees' perceptions about the degree to which the organization cares about their well-being and values their contribution, to describe the social exchange relationship between the organization and its employees (Eisenberger, Huntington, Hutchinson, & Sowa, 1986). According to Rhoades and Eisenberger (2002), employees with higher levels of perceived organizational support are more likely to repay the organization with positive attitude and favorable work behaviors.

The most commonly studied form of commitment in occupational psychology is organizational commitment. In the earlier research from Donald and Carter (1993), management commitment is found to be the important role in ensuring the success safety initiatives. Rowlinson (1997) argued that safety program should start from top management. Management commitment is the part of the organizational issues, denoting the extent to which upper level management shows positive and supportive safety values, attitudes and behaviour (Hsu, Lee, Wu, & Takano, 2008). According to Meshkati (1997), it is not just management participation and involvement in safety activity that is important, but the extent to which management encourages the involvement of the workforce. Senge (1990) has defined organization knowledge as the exercise through which managers seek to improve organization members aspiration and ability to understand and manage the organization and its environment so that they make choices that continuously raise organization effectiveness.

When an individual perceived that their organization provide support, they will feel free to raise safety behavior with their supervisor. Based on researched conducted by Hofmann and Morgeson (1999), when there is organizational support and concern, employees are more likely to feel that safety issues are important and the action will be taken. It shows that employees who perceived the organizational concern about it employees will report greater comfort in communicating with their supervisor about safety issues than those who do not received much organizational concern (Hofmann & Morgeson, 1999).

In summary, the above discussion indicates that perceived organizational support will improved safety behavior among worker in manufacturing company. Thus, the following hypothesis is proposed:

H4: There is positive relationship between organizational support and safety behavior

## **2.9 Conclusions**

From the literature, it is clear that safety behavior have relationship with safety commitment, employee's competency, perceived organizational support and employees' conscientiousness.

## **CHAPTER 3**

### **METHOD**

#### **3.1 Introduction**

Chapter 3 presents the method for the study. In this chapter, the research design, population and sampling, development of research measures, pilot testing and data collection procedure are presented. The chapter ends with strategies for data analyses.

#### **3.2 Research Design**

Quantitative research design was employed as the main objective of this study is to examine the relationship between employee's conscientiousness, safety commitment, employee competency, perceived organizational support and safety behavior. As argued by Leedy and Ormrod (2005), quantitative research design able to answer questions about relationships among measured variables with the purpose of explaining, predicting, and controlling phenomena. It is also allows the analysis to be carried out on a large sample using a standard and formal set of questionnaire that can be generalized to the whole population.

In this study, the unit of analysis is at the individual level. Since the primary data for this study was collected through distribution of questionnaire where respondents' perceptions about the employee's conscientiousness, safety commitment, employee competency, perceived organizational support and their relation to safety behavior, taking individual as

a unit of analysis is more suitable in testing all the variables shown in the research framework. Finally, the study is cross-sectional, where the data was collected at one point of time. A cross-sectional design is simple, inexpensive and allows for the collection of data in a relatively short period.

### **3.3 Population and Sampling**

#### **3.3.1 Population of the Study**

The study population includes all employees (management level, maintenance level, executive level and supervisory level) from all departments and currently employed in Top Glove Company. There are 800 employees who are currently working with Top Glove Company.

#### **3.3.2 Sampling Size**

Zikmund (2003) argued that it is not practical to collect data from the whole population. Therefore, sampling process is conducted to determine the sampling size. Sampling process normally involved three steps: identifying the population, identifying sample size and choosing the sample. As mentioned earlier, the total population is 800. Based on the sample size table by Krejcie and Morgan (1970), the sample size for this study is 260. This means 260 respondents are needed to represent the whole study population. This sample size fit with Roscoe's rule of thumb where a sample that is larger than 30 and less



than 500 is appropriate for most research. However, the researcher has decided to distribute 300 questionnaires with the intention to receive higher response rate.

### **3.3.3 Sampling Technique**

In this study, all the 300 respondents are selected based on a systematic random sampling. Systemic random sample reduced the potential for human bias in the selection of cases to be included in the sample and simple to implement. According to Gay and Diehl (1996), systematic random sampling involves six steps. First, define the population. In this study, the population is 800. Second, determine the desired sample size. The sample size for this study is 300. Third, obtain a list of the population. The list was obtained from the respective departments in Top Glove Company. Fourth, determine the K by dividing population by the desired sample size. In this study, K is equal to 2 ( $800/300 = 2.67$ ). Fifth, determine the total respondent for each of the department. Sixth, researcher will pick a random number from the list of employee from each of the department as the starting number. Then every 2<sup>nd</sup> name is automatically in the sample.

## **3.4 Operational Definitions and Measurements**

### **3.4.1 Safety Behavior Measure**

Safety behavior is the dependent variable. In this study, safety behavior is measured by safety initiative and safety compliance. Safety initiative is the behavior that supports safety like participating in safety program. Safety initiative is measured by 8 items

developed by Zacharatos (2001). Safety compliance is referred to core activities that employees need to do to ensure the area is safe from injuries like comply with safety rules and procedures. Three items were adopted from Neal et al. (2006) to measure safety compliance.

Based on a five-point scale whereby, 1 = strongly disagree, and 5 = strongly agree, participants rated their degree of agreement with the safety behavior statements. Table 3.1 shows the safety behavior items used in this study.

Table 3.1  
*Safety behavior items*

Variable	Operational definition	Items	Authors
Safety behavior	Behavior that supports safety like participating in safety program and comply with safety rules and procedures	<ol style="list-style-type: none"> <li>1. I use all the necessary safety equipment to do my job</li> <li>2. I ensure the highest levels of safety when I carry out my job</li> <li>3. I am involved in improving safety policy and practices</li> <li>4. If I think it will make work safer, I initiate steps to improve work procedures</li> <li>5. If I see something unsafe, I go out of my way to address it</li> <li>6. I voluntarily carry out tasks or activities that help to improve workplace safety</li> <li>7. I often make suggestions to improve how safety is handled around here (e.g. plant areas)</li> <li>8. I often try new approaches to improving workplace safety</li> <li>9. I often try to solve problems in ways that reduce safety risks</li> <li>10. I keep abreast of changes to do with safety (i.e. to know the recent facts)</li> </ol>	Zacharatos (2001) & Neal et al. (2006)

### 3.4.2 Employee's Conscientiousness Measure

Employee's conscientiousness is the first independent variable. In this study, employee's conscientiousness is operationalized as personality trait associated with a person's conscience and self-control (Stewart, 1999) and was measured using 20 items adapted from Goldberg (1999). In this study, participants rated their degree of agreement with employee's conscientious statements based on five-point scale whereby, 1 = strongly disagree, and 5 = strongly agree. Table 3.2 shows the employee's conscientious items used in this study.

Table 3.2  
*Employee's conscientiousness items*

Variable	Operational definition	Items	Authors
Employee's conscientiousness	Personality trait associated with a person's conscience and self-control	1. I normally follow the rules and regulations 2. I get others to do my duties (reverse coded) 3. I completed my duties on time 4. I listen to my conscience 5. I break the rules (reverse coded) 6. I go straight for the goal 7. I break my promises (reverse coded) 8. I do more than what is expected of me 9. I keep my promises 10. I normally misrepresent the facts (reverse coded) 11. I demand for quality 12. I work hard 13. I put little time and effort into my	Goldberg (1999)

		work (reverse coded)	
		14. I plunge into tasks with all my heart	
		15. I do the opposite of what is asked (reverse coded)	
		16. I set high standards for myself and others	
		17. I turn plans into actions	
		18. I am not highly motivated to succeed (reverse coded)	
		19. I do just enough work to get by (reverse coded)	
		20. I tell the truth	

### 3.4.3 Safety Commitment Measure

Safety commitment is the second independent variable. In this study, safety commitment is operationalized as individual's identification with an involvement in safety activities, which characterized by strong acceptance of and belief in organization's safety goals (Cooper, 1998) and was measured using 21 items adapted from Abd Aziz (2008). In this study, participants rated their degree of agreement with safety commitment statements based on five-point scale whereby, 1 = strongly disagree, and 5 = strongly agree. Table 3.3 shows the safety commitment items used in this study.

Table 3.3  
*Safety commitment items*

Variable	Operational definition	Items	Authors
Safety commitment	Individual's identification with an involvement in safety activities, which characterized by strong acceptance of and belief in organization's safety goals	<ol style="list-style-type: none"> <li>1. I would not be worried about the hazard and risk at my workplace</li> <li>2. I really care about the safety procedures and regulations at my workplace</li> <li>3. Near-miss accidents are not important in safety records (reverse coded)</li> <li>4. I am willing to put great effort beyond that normally expected in order to be a competent worker</li> <li>5. I would ensure the risks are assessed before starting my work</li> <li>6. It is very important to work in a safe environment</li> <li>7. I never give co-operation to my supervisor / manager about safety issues (reverse coded)</li> <li>8. I am willing to put in great effort to achieve safety goals</li> <li>9. I would like to obey the safety regulations in order to keep workplace safe</li> <li>10. All employees should be actively involved in safety promotion activities</li> <li>11. I think putting more effort into understanding all safety rules is a waste of time</li> <li>12. I am extremely glad if I am selected to be a member of a safety committee at my workplace</li> <li>13. Safety procedures and regulations reflect the safest techniques of doing a job</li> <li>14. It is an employee's duty and responsibility to support and encourage their colleagues to obey the safety rules / procedures / regulations</li> <li>15. I always ensure that the safety equipment is working properly before I start a job</li> <li>16. I am willing to do extra jobs in order to improve the safety performance at my workplace</li> <li>17. I would not feel guilty if I used a "shortcut" while completing my work (reverse coded)</li> </ol>	Abd Aziz (2008)

		18. I would like to be involved in safety discussions at my workplace 19. I am ready to involve myself in the organizational safety activities 20. I really would like to take part in occupational safety rule / procedure / regulation reviews 21. I would like to be involved in the safety goal planning at workplace	
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### 3.4.4 Employee Competency Measure

Employee competency is the third independent variable. In this study, employee competency is operationalized as sets of behavior that are instrumental in delivering the desired goal (Spencer & Spencer, 1993) and was measured using 10 items adapted from Davies, Spencer and Dooley (2001). Participants were asked to rate their degree of agreement with employee competency statements based on five-point scale whereby, 1 = strongly disagree, and 5 = strongly agree. Table 3.4 shows the employee competency items used in this study.

Table 3.4  
*Employee competency items*

Variable	Operational definition	Items	Authors
Employee competency	Sets of behavior that are instrumental in delivering the desired goal	1. I fully understand the safety procedures / instructions associated with my job 2. I understand the safety rules for my job 3. Sometimes I am uncertain what to do to ensure safety in the work for which I am responsible (reverse coded) 4. I am confident that I can identify the	Davies, Spencer and Dooley (2001)

		<p>safety risks associated with the work for which I am responsible</p> <p>5. I am clear about what my responsibilities are for safety</p> <p>6. I understand the nature of all the hazards I am likely to encounter during my work</p> <p>7. Sometimes I am confused about what I am supposed to do (reverse coded)</p> <p>8. I have a poor understanding of the risks associated with my work (reverse coded)</p> <p>9. I am good at detecting unsafe behavior during performing the job</p> <p>10. I am not very effective at ensuring safety in the work for which I am responsible (reverse coded)</p>	
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### 3.4.5 Perceived Organizational Support Measure

Perceived organizational support is the fourth independent variable. It is operationalized as employee's perception concerning to extent to which the organization values their contribution and cares about their well-being (Eisenberger, Hungtington, Hutchinson & Sowa, 1986). In this study, perceived organizational support is measured by 8 items adapted from Eisenberger, Hungtington, Hutchison and Sowa (1986). Participants rated their degree of agreement with perceived organizational support statements based on five-point scale whereby, 1 = strongly disagree, and 5 = strongly agree. Table 3.5 shows the perceived organizational support items used in this study.

Table 3.5  
*Perceived organizational support items*

Variable	Operational definition	Items	Authors
Perceived Organizational Support	Employee's perception concerning to extent to which the organization values their contribution and cares about their well-being.	<ol style="list-style-type: none"> <li>1. The organizations value my contribution to its well-being.</li> <li>2. The organization fails to appreciate any extra effort from me (reverse coded)</li> <li>3. The organization would ignore any complaint from me (reverse coded).</li> <li>4. The organization really cares about my well-being.</li> <li>5. Even if I did the best job possible, the organization would fail to notice (reverse coded).</li> <li>6. The organization cares about my general satisfaction at work.</li> <li>7. The organization shows very little concern with me (reverse coded).</li> <li>8. The organization takes pride in my accomplishment at work.</li> </ol>	Eisenberger, Hungtington, Hutchison & Sowa (1986)

### 3.5 Layout of Questionnaire

The survey materials were prepared in both Bahasa Malaysia and English. Participants were given the choice between the two versions so that they could express their ideas freely. Both versions of the questionnaire are shown in Appendix A-1 and A-2. Each respondent received a ten-page questionnaire which consisted of six main sections. Section 1 asked about safety behavior and there are 11 items. Section 2 asked about safety commitment and there are 21 items. In Section 3 of the questionnaire, there are 20 items asking the respondents' conscientiousness, while Section 4 consists of 10 items on employee competency. In section 5, there are 8 items on perceived organizational support. In the final section of the questionnaire, Section 6, there are questions on the demographic characteristics of the participating staff, and their respective organizations.



### **3.6 Pilot Test**

Pilot test is a study from small-scale research project, where the data are collected from the respondents similarly with those to be used later in the full study (Zikmund, 2010). The purpose of conducting pilot test is to ensure that the items in the questionnaire used are understood by the participants before real study is being conducted. Besides, this preliminary test is essential for improving data collection and to check for the appropriateness of the measures. Any errors caused by unforeseen problem can be effectively overcome by performing pilot testing. A pilot study or preliminary trial is similar to the actual research but conducted in a smaller scale.

In this study, a pilot test was conducted before the actual survey and the questionnaire was distributed to 40 employees in Top Glove Company who are not participated in the actual data collection. There were no changes required to the questionnaire. The internal consistency reliabilities (Cronbach's Alpha) of the research measures from the pilot study are reported in Table 3.6. As shown in Table 3.6, all variables have satisfactory reliability values ranging from .60 to .93.

Table 3.6

*The Cronbach's Alpha for each research measures from the pilot study (n = 40)*

Variable	No. of items	Cronbach's Alpha
Employee conscientiousness	20	0.66
Safety commitment	21	0.72
Employee's competency	10	0.60
Perceived organizational support	8	0.91
Safety behavior	11	0.93

### 3.7 Data Collection Procedure

The actual data collection began after the pilot test was conducted and permission was granted by the management of the company. Once the permission was granted, the process of distributing the questionnaire began. A total of 300 questionnaires were given to all departments' manager in Top Glove Company. The manager then randomly distributed the questionnaire to their employees. Each respondent was given a week to complete the questionnaire. The questionnaires were then collected by the manager before handing them to researcher.

### 3.8 Technique of Analysis

Analysis of the data obtained from the self-administered questionnaire will be done using Statistical Package for Social Sciences (SPSS). Pearson correlation was used to examine the correlation of the employee's conscientiousness, safety commitment, employee

competency, perceived organizational support and safety behavior. Multiple regressions were used to test the prediction and contribution of independent variables on the dependent variables. The following subsections discuss on the statistical tools that were conducted to analyze the data and to test the hypotheses.

### **3.8.1 Descriptive Analysis**

The descriptive analysis is conducted as the analysis will provide the researcher with the demographic characteristics of respondents. The process is crucial to ensure that the respondents obtain in this study represent all the demographic characteristic of the population. In this study, the demographic characteristics of respondent such as age, gender, academic qualifications, marital status, and length of services in respective department were described by using frequency and percentage.

### **3.8.2 Correlation Analysis**

According to Pallant (2011), correlation analysis describes the strength and direction of the linear relationship between two variables. In this study, correlation analysis was conducted to test the inter correlation between the variable. It is important to determine the significant correlation and how strong the independent variables (employee's conscientiousness, safety commitment, employee competency, perceived organizational support) influence the dependent variables (safety behavior).

The Pearson correlation used to measure the significance of linear bivariate between the independent and dependent variables thereby achieving the objectives of this study (Hair et al., 2006). While Sekaran (2003), state the Pearson correlation is used to measure between two or more variables to test whether it have significant relationship and either positive or negative correlations of relationship. The symbol of a correlation coefficient is  $r$ , and its range is from -1.00 to + 1.00. In this study, researcher indicates the scale which is outlined by Hair, Money, Samuel and Page (2007) to interpret the relationship between variables as follows:

Table 3.7

*The coefficient scale and relationship strength of correlation*

Coefficient Scale	Relationship Strength
$\pm 0.91$ to $\pm 1.00$	Very Strong
$\pm 0.71$ to $\pm 0.90$	Strong
$\pm 0.41$ to $\pm 0.70$	Moderate
$\pm 0.21$ to $\pm 0.40$	Weak
0.00 to $\pm 0.20$	Very Weak

Source: Hair, Money, Samuel and Page (2007)

### 3.8.3 Regression Analysis

Regression analysis is a set of statistical procedures used to predict and explain the value of dependent variable based on the value of one or more independent variables (Fah & Hoon, 2009). Multiple regression analysis is used in this study to analyze the relationship between dependent variable and independent variables. Regression analysis will help to find out the strength of the relationship that exists between dependent variable and

independent variables, if there is a significant relationship between two variables that know through correlation test.

### **3.9 Conclusions**

This chapter has explained the research method for the study. It described how the sample of respondents was obtained, development of the research materials, and the data collection procedure. This chapter also briefly explains the adoption of several analyses such as correlation and regression analysis to test the research hypotheses. The results of the study are reported in Chapter 4.

## **CHAPTER 4**

### **FINDINGS**

#### **4.1 Introduction**

Chapter 4 reports results of the study. The chapter begins by reporting the response rate and the demographic characteristics of the participants. The discussions continue with a report on correlation analysis. The chapter concludes with a discussion on regression analysis.

#### **4.2 Response Rate**

A total of 300 questionnaires were distributed to respondents. But, at the end of the survey period, a total of 150 were returned, yielding a return rate of 50%. Data from 150 participants are usable for further analysis.

#### **4.3 Demographic Characteristics of the Participants**

Table 4.1 presents the detailed descriptive statistics of the participants' demographic characteristics. It is noted that 52.7% of the 150 participants in this survey were males. Most of the respondents were 25 years old. Out of 150 participants, 55.3% were Malays. With regards to highest academic qualification, most of the respondents (41.3%) were holding a degree. Most of study respondents were middle manager (32.7%) and

permanent (89.3%). Out of 150 participants, 52% had been with their current position for two years and 47.3% had been with the organization for two years.

Table 4.1  
*Demographic characteristics of the participants (n=150)*

Descriptive	Frequencies	(%)
<b>Gender</b>		
Male	79	52.7
Female	71	51.5
<b>Age</b>		
25 years	44	29.3
29 years	43	28.7
31 years	30	20.0
37 years	20	13.3
42 years	12	8.0
50 years	1	0.7
<b>Race</b>		
Malay	83	55.3
Chinese	49	32.0
Indians	19	12.7
<b>Academic Qualification</b>		
Primary school certificate	2	1.3
Secondary school certificate	26	17.3
Diploma	54	36.0
First degree	62	41.3
Second degree and above	6	4.0
<b>Job category</b>		

<b>Descriptive</b>	<b>Frequencies</b>	<b>(%)</b>
Non-executive	41	27.3
First-line supervisor	47	31.3
Middle management	49	32.7
Top management	9	6.0
Others	4	2.7
<b>Employment status</b>		
Permanent	134	89.3
Temporary	8	5.3
Contract	8	5.3
<b>Years with present position</b>		
2 years	78	52.0
5 years	36	24.0
7 years	18	12.0
10 years	13	8.7
15 years	5	3.3
<b>Years with present organization</b>		
2 years	71	47.3
5 years	37	24.7
7 years	23	15.3
10 years	12	8.0
15 years	7	4.7



#### **4.5 Correlations Analysis**

Table 4.2 presents the means, standard deviations, and Pearson correlations of variables for the 150 participants who participated in the study. The internal consistency reliabilities (Cronbach's Alpha) of the research measures are reported in parenthesis along the diagonal of the correlation table. As shown in Table 4.2, the Cronbach's alpha for the employee conscientiousness was .73. It is also noted that Cronbach's alpha for safety commitment was .78 and employee competency was .60. For the perceived organizational support, the Cronbach's alpha has satisfactory reliability value of .91. Finally, safety behavior also has high reliability value of .93.

As shown in Table 4.2, employee conscientiousness were significantly positively related to safety behavior ( $r = .41, p < .05$ ). These results imply that the higher the employee conscientiousness, the higher the safety behavior. There were also significant positive relationships between safety commitment and safety behavior with correlation coefficient of .52. The result indicates that the higher the employees' safety commitment, the higher their safety behavior

In terms of employee competency, there was a significant positive relationship with safety behavior ( $r = .17, p < .01$ ). The result indicate that the higher the employee competency, the higher the safety behavior. Table 4.2 also revealed significant positive relationship between perceived organizational support and safety behavior, with

correlation coefficients .46. These results imply that the higher the organization provides support, the higher the safety behavior.

Table 4.2  
*Descriptive statistics, scale reliabilities and correlations of variables*

Variables	N	Mean	Std Dev	1	2	3	4	5
1. Employee's conscientiousness	150	3.87	.41	(.73)				
2. Safety commitment	150	4.00	.38	.40**	(.78)			
3. Employee's competency	150	3.64	.44	.12	.15	(.60)		
4. Perceived organizational support	150	3.67	.63	.28**	.19*	.38**	(.91)	
5. Safety behavior	150	4.14	.50	.41**	.52**	.17*	.46**	(.93)

*Note: \*\*Correlation is significant at the 0.05 level (2-tailed); \*Correlation is significant at the 0.01 level (2-tailed)*

#### 4.6 Multiple Regression Analysis

To test hypotheses 1, 2, 3, and 4 regression analysis was conducted. Results in Table 4.3 showed that 42.8% ( $R^2 = 0.428$ ,  $F = 27.11$   $p < .01$ ) of the variance in safety behavior was significantly explained by employee's conscientiousness, safety commitment, employee competency and perceived organizational support. In the model, employee's conscientiousness, safety commitment and perceived organizational support were found positively associated with safety behavior. Among the variable tested, safety commitment ( $\beta = .394$ ,  $p < .01$ ) were found to be the most significant predictor of safety behavior. Therefore, hypotheses H1, H2, and H4 were supported. The results demonstrate that safety behavior can be achieved if the employees are conscientious person, committed to safety and received support from organization. Thus, these variables were proved to be significantly related safety behavior.

Table 4.3  
*Regression results of employee's conscientiousness, safety commitment, employee competency and perceived organizational support on safety behavior*

	Dependent variable (Safety behavior) (Standardized Beta)	Significant ( $p$ )	Tolerance	VIF
Independent variables				
Employee's conscientiousness	.164	.021*	.801	1.25
Safety commitment	.394	.000**	.830	1.21
Employee competency	-.043	.525	.848	1.18

Perceived organizational support	.354	.000**	.797	1.26
F value		27.11		
R <sup>2</sup>		.428		
Adjusted R <sup>2</sup>		.412		
<i>Note.</i> *p <0.05, **p <0.01				

In conclusion, the analysis techniques used in this study such as multiple regressions has able to answer the research objectives and test the proposed hypotheses. Table 4.4 presents the summary of the hypotheses testing.

Table 4.4  
*Summary of hypotheses testing*

Hypotheses	Statement	Findings
H1	There is positive relationship between employees' conscientiousness and safety behavior	Supported
H2	There is positive relationship between safety commitment and safety behavior	Supported
H3	There is positive relationship between employees' competency and safety behavior	Not supported
H4	There is positive relationship between organizational support and safety behavior	Supported

## 4.7 Conclusions

This chapter described the demographic characteristics of the 150 participants and the results of correlation and regression analyses. The results indicate that employee's

conscientiousness, safety commitment and perceived organizational support are significantly positively related to safety behavior. The research implications, limitations and direction for future research are discussed in the next chapter, Chapter 5.

## **CHAPTER 5**

### **DISCUSSIONS, RECOMMENDATIONS AND CONCLUSIONS**

#### **5.1 Introduction**

In this chapter, findings of the study are discussed in light of the literature reviewed on safety behavior and the hypotheses developed in Chapter 2. The findings, as presented in Chapter 4, are discussed in the sections below. The discussion that follows is organized around the hypotheses presented in Chapter 2.

#### **5.2 Summary of Research**

The study was conducted with the aim to investigate the relationship between employee's conscientiousness, safety commitment, employee competency, perceived organizational support and safety behavior. Multiple regressions analysis were conducted to test hypotheses 1, 2, 3 and 4 which is to test the direct relationship between employee's conscientiousness, safety commitment, employee competency, perceived organizational support and safety behavior. The findings revealed that only employee's conscientiousness, safety commitment and perceived organizational support are significantly positively related to safety behavior.

### **5.3 Relationship between Employee Conscientiousness and Safety Behavior**

The current findings show that employee conscientiousness positively associated with safety behavior. These results provide support for previous studies (Arthur, 1996; Hunted, 1999; Nelson, 2001; Wallace, 2003). As argued by Barrick and Mount (1991), individuals who are conscientious at work are organized, focused, ambitious, methodical, perfectionist, and driven. A conscientious person is believed to possess that reflect dependability such as careful, organized and responsible as well as volitional constructs such need for achievement (Moon 2001). According to Fallon (2000), conscientious person work more safely due to the characteristics they possess and exhibit. Thus, it is not surprising that more conscientiousness person perform better as they have higher level of work motivation.

### **5.4 Relationship between Safety Commitment and Safety Behavior**

In this study, safety commitment was found positively related to safety behavior. The current findings were inline with previous studies conducted by Morgeson (1999) and Michael, Guo, Wiedenbeck and Ray (2006). Logically, those who are showing their commitment towards safety will indirectly demonstrate safety behavior. As argued by many authors safety commitment is about to the extent to which every individual and every group of the organization is aware of the risks and unknown hazards induced by its activities; is continuously behaving so as to preserve and enhance safety; is willing and able to adapt itself when facing safety issues; is willing to communicate safety issues; and



consistently evaluates safety related behavior (Anderson & Martin, 1995; Carolyn, 2006; Michel, 2006). Thus, it is not not surprise to find those who are committed to safety would demonstrate safety behavior.

## **5.5 Relationship between Perceived Organizational Support and Safety Behavior**

Perceived organizational support was found positively related to safety behavior. These finding are in accordance with previous research (Hoffmann & Morgeson, 1999; Meshkati, 1997; Rowlinson 1997). Logically, when management show their commitment in safety issues at the workplace, employees will be more willing to commit to safety requirement. Employees will have the perception that their organization care about their well being at the workplace. Thus, employees will be more willing to demonstrate safety behavior when top management themselves show their commitment.

## **5.6 Implications for Practice**

The present findings have several implications for management of the organizations. The research results revealed that employee conscientiousness, employee commitment and perceived organizational support related to safety behavior. Interestingly, both individual and organizational factors contribute to safety behavior in the organization. Since the findings pointing to the attitude of the employees, management can find ways of changing those attitudes by educating the employees regarding the safety issues and consistently monitoring employee safety behavior. Apart from educating and monitoring

the employees' safety behavior, the organization can also provide support for employees by giving incentive for those who are committed about safety, providing safe working environment, providing with safety equipment for employees and others.

## **5.8 Limitations and Direction for Future Study**

There are limitations in the design of this study that might influence the interpretations and generalizations of the findings. The study was aimed at understanding the influence of employee's conscientiousness, safety commitment, employee competency, perceived organizational support on safety behavior, but the study was conducted on only one manufacturing company. The study does not include employee from manufacturing companies in other geographical areas and from other sectors. Thus, the findings only captured perceptions of employee from one manufacturing company from one geographical area regarding factors that might influence their safety behavior. Thus, future research needs to extend the exploration of the influence of employee's conscientiousness, safety commitment, employees competency, perceived organizational support on other sectors and in other locations which might offers greater understanding on the issues of safety behavior. Conducting the study in different sectors with different sizes might lead to different results as issues relating to safety behavior might be different in these settings.

Another limitation is that the study only tested three individual factors, namely employee's conscientiousness, safety commitment, employee's competency and one

organizational factor (perceived organizational support) in an effort to understand their relation to safety behavior. Other situational factors that beyond the scope of this study such as organizational culture and working environment were not included in this study. This provides another direction for future research.

In conclusions, despite the limitations in the approach used here and given the exploratory nature of the study, the results provide useful findings that should be of interest both researchers and practitioners.

## **5.9 Conclusions**

This study was conducted with intention to investigate factors that might influence safety behavior. The main interest is on the role of employee's conscientiousness, safety commitment, employee competency, perceived organizational support on safety behavior. The results indicate that employee's conscientiousness, safety commitment and perceived organizational support were related to safety behavior. By examining all these factors, it is hoped that both scholars and management of the organization can have a more complete understanding of factors that might influence safety behavior in the organization.

## REFERENCES

- Abd Aziz, F. S. (2008). *Safety culture and commitment to safety in the Malaysian railway system*. Unpublished doctoral dissertation, University of Nottingham, UK
- Abudayyeh, O. (2006). An Investigation of management commitment to construction safety. *International Journal of Project Management*, 24(2), 167-174
- Andi. (2008). The safety observer effect: The effect of conducting safety observation. *Journal of Safety Research*, 39(4), 365-373
- Arthur. (1996 ). Effects of human resource system on manufacturing performance and turnover. *Academy Of Management Journal*, 37(3), 670-687
- Barling. (2002). Development and test of a model linking safety- specific transformational leadership and occupational safety. *Journal of Applied Psychology*, 87(3), 488
- Barrick, M. R., & Mount, M. K. (1991). The big five personality dimensions and job performance: A meta-analysis. *Personnel Psychology*, 44, 1-26
- Bennett. (2000). Modifying supervisory practices to improve subunit safety . *Journal Of Applied Psychology*, 87(1), 156
- Blair, E. (1999). Behavioral safety: Myths magic & relality . *Professional Safety*, 44(8), 25
- Brill. (1992). Effect of supervisor monitoring on productivity and quality performance . *Journal of Experimental Psychology*, 4(3), 211
- Brubabaker, P. A. (2001). Organizational commitment and whistle- blowing. *Journal of Personality*,
- Carter, D. A. (1993). Safety In design of offshore platform. *Safety Science*.
- Carolynn. (2006). Functional relationship among construction the same content domain at different level analysis. *Journal Of Applied Psychology*, 83(2), 234
- Clarke (2006). A competency model for general practice: Implication for selection, training and development *British Journal of General Practice*, 50(452), 188-193.
- Cooper, D. (1998). *Improving safety culture: A practical guide*. England: John Wiley and Sons Ltd

- Cooper, M. A. (2004 ). Exploratory analysis of the safety climate and safety behaviour relationship . *Journal Safety Research* , 497-512.
- Cullen. (2002 ). An ethical weather report assessing the organization's ethical climate. *Organizational Dynamic*, 18(2), 50-62
- Davies, F. (2009). Understanding Behaviour safety-step-by-step methods to improve workplace. *Journal Of Personality And Social Psychology*
- Davies, F., Spencer, R., & Dooley, K. (2001). Summary guide to safety climate tools. Offshore Technology Report 1999/063. Oxfordshire: MaTSU, Harwell and Didcot,
- Demorouti (2006). Describing conception of the world around us. *Instructional Science*, 10(2), 177-200
- Dyer. (2001). Multiple meaning of behavior: construing action in term of competence and morality. *Journal Of Personality and Social Psychology*
- Eiff. (1999). The nature of safety culture : A survey of the state-of -the- Art . *Journal of Safety Science*
- Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of applied psychology*, 71(3), 500-507.
- Fallon. (2000). Conscientiousness as predictor of productive and counter productive behaviors. *Journal Of Business and Psychology*, 15(2), 339-349
- Fenton. (1998). The two faces of transformational leadership empowerment and dependency. *Journal Of Applied Psychology* , 107-142.
- Foster. (2003). Employee voice to supervisors. *Jounal Employee Right and Responsibilities* , 599-627.
- Fulfiller. (2000). People-based safety: Ten key factors to improve employee's attitudes. *Profesional Safety*
- Gay, L. R., & Diehl, P. L. (1996). *Research methods for business and management*. Singapore: Prentice Hall.
- G.L, S. (1996). Causal modelling of processes determining job performance . *Psychological Science* .
- Goldberg, L.R. (1999). A broad-bandwidth, public domain, personality inventory measuring the lower facets of several five-factor models. *Personality Psychology in Europe*, 7, 7-28

- Hair, Jr., J. F., Money, A. H., Samouel, P., & Page, M. (2007). *Research methods for business*. Chichester, West Sussex: John Wiley & Sons Ltd.
- Haunted. (1999). Managing safety in the workplace: An attribution theory analysis and model . *Journal of Safety Research*
- Henzberg. (1996 ). The psychology of safety: How to improve behaviour and attitudes . *Journal of Personality and Social Psychology*
- Higgins. (1997). Putting the service -profit chain to work. *Journal of Business*
- Hofman, D.A., & Morgeson, F. P. (1999). Safety-related behavior as a social exchange: The role of perceived organizational support and leader-member exchange. *Journal of Applied Psychology*, 84(2), 286-296.
- Hogan, J. O. (1997). *Handbook of personality psychology*. San Diego : Acedmic Press
- Holmstrom. (1992). Work and nature of man. *Journal of Communication*
- Hopkins. (2006). Organizational silence: A barrier to change and development in a pluralistic world . *Journal of Academy Management*
- Huntebriker, C. A. (2003). Charismatic leadership at the strategic level. *Journal Of Management Academy*
- Kim, M. A. (1993). Attitude-behavior relation: A meta analysis of attitudinal relavance and topic . *Journal Of Communication*
- Kleiner. (2004). Divergant Effect Of Transformational and Passive Leadership An Employee Safety . *Journal Of Occupational Health Psychology*, 11(1), 76
- Koch, R. A. (2004). Staff training in applied behavior analysis: improving knowledge competencies of services providers for people with developmental disabilities. *Journal Of Applied Behavior*
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychology Measurement*, 30, 607-610.
- Leedy, P. D. & Ormrod, J. E. (2005). *Practical Research: Planning and Design (8th ed.)* Pearson Educational International and Prentice Hall: New Jersey.
- Leigh, J. (1992 ). *Costs of occupational injuries & illinessess* . University of Machigan Press

- Macky, B. (2009). Strategies to promote safety behavior as part of health and safety management system. *Journal Of Industrial Medicine*
- Margeson. (1999). Towards a theory of the linkages between safety and quality. *Journal of Operation Management*
- Mark, A., & Griffin, M. N. (2000). Perception of safety at work: A framework for linking safety. *Journal of Occupational Health Psychology*
- Martin, C. A. (1995). Workplace violance intervention effectiveness. *Safety Science*
- Meskati (2007). Employee effects of an educational program for managers at insurance company
- Michel. (2006). Change management or change leadership. *Journal Of Change Management*, 48-54
- Moon, H. (2001). Assessment of perceived injury risk and priorities among truck drivers and trucking company. *Journal of Safety Research*
- Neal, A., & Griffin, M.A. (2006). A study of the lagged relationships among safety climate, safety motivation, safety behavior and accidents at the individual and group levels. *Journal of Applied Psychology*, 91(4), 946-953
- Nelson. (2001). Creating sprit at work: revisioning organization development and leadership. *Journal Organizational Development* , 60-72
- Neves W.L (2010). Study of the perceptions of safety at work and safety behaviour. *Journal of Applied Psychology*
- New Sabah Times, N. (2010, April 29). Conduct safety and health awareness at workplace
- Niskanen. (1994). Asaessing the safety enviroment in the work organization of road maintance-jobs. *Journal of Personality and Social Psychology*, 27-39
- Noor Aina Amirah, W. I. (2013). Safety culture in combating occupational safety & health problem in the Malaysian manufacturing sector. *Journal of Social Science*
- Ogbo, A. (2009 ). Occupational safety & health management adhere for sustainable development in Negeria. *Journal Of Negerian Institute* , 14-19
- Ostrom. (1993). The Effect of behavior skills training on staff implementation of discreate trial teaching. *Journal Of Applied Behavior Analysis*, 13

- Pallant, J. (2011) *SPSS survival manual: A step-by-step guide to data analysis using SPSS for Windows (version 15)* (4<sup>th</sup> ed.). Crows Nest NSW, Australia: Allen & Unwin
- Pelsted, G. A. (2001). Is job for life or just for christmas . *Journal of Economic*
- Real, G. a. (2000). Perception of safety at work a framework for linking safety climate to safety performance, knowledge and motivation. *Journal Occupational Health Psychology*, 15(3), 347
- Robert. (1995). motivating employees for safety sucess. *Professional Safety*
- Robtson.(1995). Incentive and cooperation: The joint effects of task and reward interdependence on group performance . *Journal Of Organization Behavior*
- Rowlison (1997). Human competence at work: An interpretative approach
- Salkovskis. (1991). National prevention through design initiative. *Journal Safety Research*
- S, Clerke. (2006 ). Relationship between safety climate and safety performance. A meta-analytic. *Journal of Occupational Health Psychology*, 11(4), 315
- Sekaran, U. (1992). *Research method for business*. New York : John Wiley & Sons
- Sekaran, U. (2003). *Research methods for business: A skill building approach*. 4th ed. New York: John Wiley and Sons.
- Senge. (1990). General mental ability in the world: occupational attainment and job performance. *Journal of Personality and Social Psychology*, 86(1), 162
- Skinner. (1953). Predicting exit, voice, loyalty and neglect. *Journal of Management* .
- Smithikrai (2008). Harassment and bulling at work: review of the scananavion approach
- Stanson. (2005). Using persuasive message to encourage voluntry hearing proctection among coal mines. *Journal of Safety Research*
- Stewart, G. L. (1999). Trait bandwidth and stages of job performance: assessing different effect for conscientiousness and it substrats. *Journal of Applied Psychology*, 84(6), 959-968
- Takana. (2008). A cross-cultural study of organizational factors on safety
- Uma Sekaran & Bougie, R. (2010 ). *Research method for business: a skill building approach*



- Umar, S. (2003). *Research methods for business: A skill building approach* . USA : John Willey & Sons, Inc
- Vredenburg, A. (2000). High risk recreational activities skiing and scuba- what predict compliance with warning. *International Journal of Industrial Ergonomic* , 123-128 .
- Wallace, J. (2003). Workplace safety performance: conscientiousness, cognitive failure and their interaction . *Journal Of Occupational Health Psychology* , 216-327.
- Win, M. &. (1989). Middle range theories of social system. *Behavioral System*
- Well. (1995). Measuring corporate social performance international. *Journal Of Management Review* .
- Zacharatos, A. (2001). An organization and employee level investigation of the relationship between high performance work system and workplace safety. A published doctoral dissertation, Queen's University Kingston, Ontario
- Zhang, Z. (2000 ). Implementation of total quality management an empirical study of chinese manufacturing firm . *PHD unpublished thesis*. University of Groningen
- Zikmund, W. G. (2003). *Business Research Methods*, 7th edition, Thomson/South-Western.
- Zohar (2002). Climates as social- cognitive construction of supervisory safety practices : Scripts as proxy of behavior patterns . *Journal of Applied Psychology* .