SAFETY BEHAVIOUR AMONG NURSES IN A TERTIARY HOSPITAL IN KUALA LUMPUR

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ABSTRACT

The purpose of this study was to determine the relationship between employer's safety leadership along safety knowledge and safety motivation and safety behaviour among nurses working in the tertiary hospital in Kuala Lumpur. The independent variables were represented by safety leadership namely safety coaching, safety caring and safety controlling along safety knowledge and safety motivation. Safety behaviour which is the dependent variable has been measured by two dimensions namely safety compliance and safety participation. A total of 332 questionnaires were distributed randomly to the nurses in the selected tertiary hospital in Kuala Lumpur during Continuous Nurse Education (CNE) session. The findings of this study revealed that the perceptions of safety leadership with respect to safety controlling along safety knowledge and safety motivation are factors that have significance correlation between safety compliance and safety participation. The findings provide valuable guidance for researchers and practitioners for identifying solutions that can improve safety and health at workplace.

Keywords: Safety Leadership, Safety Coaching, Safety Caring, Safety Controlling, Safety Knowledge, Safety Motivation, Safety Compliance, Safety Participation, Safety Behaviour.

ABSTRAK

Tujuan kajian ini dijalankan ialah untuk menentukan hubungan antara kepimpinan keselamatan berserta pengetahuan keselamatan dan motivasi keselamatan dan kelakuan kerja selamat di kalangan jururawat yang bekerja di hospital tertiari di Kuala Lumpur. Pembolehubah mewakili kepimpinan keselamatan iaitu bimbingan keselamatan, penjagaan keselamatan dan kawalan keselamatan berserta pengetahuan keselamatan dan motivasi keselamatan. Kelakuan kerja selamat pula diukur melalui kepatuhan keselamatan dan penglibatan keselamatan. Sebanyak 332 set borang soal selidik telah diedarkan secara rawak kepada jururawat di hospital tertiari terpilih di Kuala Lumpur semasa sesi Continuous Nurse Education (CNE). Hasil kajian menunjukkan persepsi kepimpinan terhadap kawalan keselamatan berserta pengetahuan keselamatan dan motivasi keselamatan adalah faktor yang mempunyai pengaruh yang signifikan dengan kepatuhan keselamatan dan penglibatan keselamatan. Hasil kajian ini boleh dijadikan sebagai panduan kepada pengkaji dan pengamal untuk mencari penyelesaian yang dapat mempertingkatkan mutu keselamatan dan kesihatan di tempat kerja.

Katakunci: Kepimpinan Keselamatan, Bimbingan Keselamatan, Penjagaan Keselamatan, Kawalan Keselamatan, Pengetahuan Keselamatan, Motivasi Keselamatan, Kepatuhan Keselamatan, Penglibatan Keselamatan, Kelakuan Kerja Selamat.

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LIST OF ABBREVIATIONS

CDC	Centers for Disease Control and Prevention
DOSH	Department of Safety and Health
HBV	Hepatitis B Virus
HCV	Hepatitis C Virus
HIV	Human Immunodeficiency Virus
HSE	Health and Safety Executive
ILO	International Labour Organisation
IOM	Institute of Medicine
MOH	Ministry of Health
NIOSH	National Institute of Occupational Safety and Health
NMRR	National Medical Research Registry
NSSIs	Needlestick and Sharp Injuries
OSH	Occupational safety and health
S.O.P	Standard Operating Procedure
SOCSO	Social Security Organisation
SPSS	Statistical Package for The Social Science
UNAIDS	United Nations Programme on HIV/AIDS
WHO	World Health Organisation

CHAPTER 1

INTRODUCTION

1.1 Introduction

This chapter explains the background of study, problem statement as well as the research objectives and research questions. Besides that, this chapter also explains scope of the study, significance of study, definition of the key terms and the organisation of the thesis.

1.2 Background of Study

Nowadays, workplace accident has become a serious issues in many industrialisation world (Biggs, Sheahan & Dingsdag, 2005). It has become a serious problem in Malaysia as the accident cases related to work are increasing every year. Occupational accident was defined as accidents that occurred at workplace that leads to injuries or fatality.

International Labour Organization (ILO) reported that workers die from a work-related accidents or disease in every 15 seconds and at the same time 153 workers also occurred in workplace accidents. Moreover, 6,300 people die every day which caused by occupational accidents or work-related diseases. As the result, approximately 2.3 million of the workers die caused by work-related disease,

meanwhile approximately 317 million are caused by accidents that occurred at the workplace.

In Malaysia, Social Security Organisation (SOCSO) reported 57, 639 cases of accidents was occurred in 2010. Meanwhile, in 2015, this number has increased by 5,198 or 9.02% to 62, 837 cases. In details, industrial accidents recorded 34, 258 cases and the remaining cases falls under category of commuting accidents with 28, 579 cases (SOCSO, 2015). Meanwhile, the Department of Occupational Safety and Health (DOSH) reported that 3666 cases of occupational accidents were investigated in 2016. There are 10 sectors from different industries in Malaysia involve in the occupation accidents which include death, permanent disability and non-permanent disability case as stated in Occupational Safety and Health Acts (OSHA) 1994. In 2016, total industrial accidents cases that involved fatality is 223 case and the number was increased by 16.15% compared to 2012 (DOSH , 2016).

Besides patients, health care workers were also expose to danger and injuries (Agnew et al., 2013). Based on Institute for Work and Health fact sheet report, one and a half time of the healthcare workers more prone to miss work than workers in the other sectors due to illness and disability . In United States healthcare workers, the exposure rate of these hazards increased in the past decade as compared to most dangerous commerce, agriculture and manufacturing which becoming better nowadays as compared to long time ago (Workplace Safety and Health Topics-Healthcare Workers section). Approximately 44 000 and 98 000 cases involving

fatality that caused by medical errors every year in United States (IOM, 2000). In 2011, Bureau of Labor Statistics reported that U.S hospitals were sustained with 253, 700 work-related injuries and diseases with rate of 6.8 for every 100 full-time workers.

The healthcare practitioners are a high risk group and among the workers, nurses is the most suffering personnel that sustained on the job injuries. Institute for Work & Health explained that nurses are expose to needle-stick injuries, infections, illnesses, stress, and workplace psychosocial issues (i.e. violence and abuse). A part of that, International Council of Nurses fact sheet described that nurses suffer with an average of one to four needlestick and other sharps injuries every year. Hence, these caused the exposure to 20 different bloodborne pathogens and lead them as the most exposed group among the healthcare personnel.

Needlestick and sharp injuries (NSSIs) were considered as the serious occupational hazards that threatening majority of the healthcare personnel (Khushdil et al., 2013*)*. NSSIs is referring to cutaneous and mucous membrane that expose to blood and serum (Leggat & Smith, 2006). There were roughly 600,000 to 800,000 cases of needlestick and sharp injuries were reported every year among healthcare in United States (NIOSH, 1999). Meanwhile, in United Kingdom, NSSIs among the HCWs were reported approximately 100,000 annually (Hofmann & Beie, 2002), and higher number of NSSIs occurred in Germany, which is in estimation of 500,000 cases yearly (O'Connor, 2009).

A lots of negative impact and burden to the workers that derived from this occupational hazards. Needlestick and sharp injuries can expose healthcare personnel to various blood borne pathogens. The most common bloodborne pathogens that may occurred the workers are Human Immunodeficiency Virus (HIV), Hepatitis B virus (HBV) as well as Hepatitis C virus (HCV). Meanwhile, World Health Organization (WHO) revealed that two million of the healthcare personnel are exposed to the blood borne pathogens which occur 40% of HBV, 40% of HCV and 4.4% of HIV. The number of people with HIV were estimated has reached 40 million worldwide, and one of the contributing factor to this problem was exposure to the infected blood components (WHO & UNAIDs). These fatal blood pathogens are probably life intimidating including long-term illness, disability and death.

The healthcare workers who experiencing an NSSI at work also expose to the psychological distractions (Adams, 2012). The individual may face emotional trauma (Braun, 2011, Costigliola et al., 2012 & CDC, 2000), distress due to waiting for the test result (Adam, 2012, Braun, 2011) as well as stress in the family, personal relationship problem and tiredness that could affect the quality of work (Braun, 2011 & Costigliola et al., 2012). The individual also sustained post-traumatic disorder (PTSD) and adjustment disorder (AD) (Bhardwaj et al., 2014).

All the issues discussed above pose a significant economic burden to the organization directly and indirectly (CDC,1987; Braun, 2011 & Adams, 2012). Direct cost are including laboratory testing and other treatment such as Prophylaxis and Post-Exposure (PEP) side-effect management (CDC, 2000). Indirect cost are

involving a few inferences such as time and cost related to receiving or providing exposure-related care; lost work productivities associated with reporting and receiving treatment during and after the exposure (CDC, 2000). In addition, indirect cost may not include compensation that borne by third-party payer in the case of staff absenteeism.

Malaysia, like many other countries across the world, is working to improve the occupational safety and health system for the identification, recording, and compensation of occupational diseases (Subramaniam et al., 2017). In Malaysia, according to Annual Report 2013 from Ministry of Health Malaysia, there were a total of 1,394 cases of sharps injuries notified to the Occupational Health Unit in year 2014 for the period of 1 January 2013 until 28 February 2014 and nurses were sustained for 254 cases (18.2%) in this report. Even though comprehensive data on needlestick injuries and other sharp incidents among workers in healthcare setting are not available in Malaysia (Subramaniam et al., 2017), there were a few studies available in this country specifically to evaluate the rate of needlestick and sharps injuries. In 2010, a study conducted in Hospital Serdang found that nurses were the highest group of healthcare workers that sustained with NSSIs with 23.5% (Rampal et al., 2010). In 2012, the number of needlestick injuries reported in a research conducted in Hospital Melaka was 19.9% (Swe et al., 2012). As this number was increased in year 2014, approximately 21% of the healthcare personnel who are working in Orthopaedic wards in Hospital Melaka were sustained with NSSIs and nurses were reported for 12.5% in this study (Bhardwaj et al., 2014).

A comprehensive study has proved that the NSSIs were associated with three main factors. Firstly, engineering factors including the form of sharp devices and barrier devices, follow by organizational factors which include policies for reporting and lastly, behavioural factors like recap the used needle as well as improper disposal-related issues (Tadesse & Tadesse, 2010). As study in Malaysia shown that most of the healthcare personnel who sustained with needlestick and sharp injuries were caused by needle recapping (Nagandla et al., 2015 & Rampal et al., 2010). Besides that, condition of works, high workload and rush in perform task (Nagandla et al., 2014 & Bhardwaj et al., 2014) and less experience also as the factor that contributed to the NSSIs in Malaysia (Swe et al., 2014 & Mohd Faid et al., 2005).

On top of that, one of the contributing factors to workplace accidents is the workers failed to work safely according to Standard Operating Procedure (S.O.P) (Noorul Huda Zakaria et.al., 2012). Hence, a comprehensive study of safety behaviour among nurses is needed. Subramaniam et al. (2013) had proved in their study that workplace safety practices are associated with higher compliance with safety behavior among nurses in Malaysia. However, study of safety behavior among nurses in Malaysia is rarely investigated. Most of safety research in nursing is focus on the determinants of patient safety (Groves et al., 2011), instead of factors that can influence the safety behaviour among the workers. Therefore, a study is needed to obtain closely into how safety behaviour influences nurses towards safety at the workplace.

1.3 Problem Statement

Safety behaviour of the workers which referring to unsafe act found to be the main fundamentals which caused accidents at the workplace besides of working unsafe condition which referring to working environment (Gyeke, 2010). A lots of efforts have been made by previous researchers to understand and identify problems related to safety beahviour among employees from various sectors (Tucker & Turner, 2011) .

Specifically, health care organizations can be considered as high reliability organizations (Weick & Sutcliffe, 2001) where a small mistake can have detrimental consequences. Needlestick and sharp injuries were revealed as the most common types of injuries incurred by health care workers in Malaysia (Subramaniam, Arip & Subramaniam, 2017). It is believed that he identification of the main contributors to safety behaviour could lead to the prevention any accident at the workplace (Turker & Turner, 2011).

A few studies have revealed that effective safety leadership was believed can reduce accidents and human error at the workplace. Safety leadership may leads the workers to work hard, efficient, and be accountable for safety performance (O'Dea & Flin, 2001). The importance of power in safety leadership to the management has been identified and management leadership has been appointed as a key element in safety matters in United States (OSHA, 1996) and achieve in safety culture (The Federal Safety Commissioner, 2006). Meanwhile, Health and Safety Executive

(HSE) (2003) reported that good safety performance is hard to achieve in an organization without effective leadership.

In healthcare setting, study on leadership has revealed a significant relationship in improving outcomes of safety in patient (Tregunno et al., 2009); vigorous work environments (Shirey, 2009); satisfied in work (Heller et al., 2004 & Sellgren et al., 2007); decrease in staff turnover (Gelinas & Bohen, 2000); and beneficial fridges in institutional and quality outcomes for patients (Wong & Cummings, 2007) as well as to the hospital Director (Cummings et al., 2005).

In order to decrease workplace accidents and encourage safety between employers and workers, safety leadership is pivotal to be developed and sustained. Moreover, senior's managers' action can help broaden organizations safety performance in order to reduce needlestick injuries among nurses in the hospital. Subramaniam et al. (2013) found the more co-worker's and supervisor's adhere work safety practice the more the employee's compliance safety behaviour would be. The presence of leadership in healthcare setting may affect changes and achieve good prestige in patient care from a different hierarchies, such as Nurse Director, Nurse Advisor, or Chief Nurse (Sullivan & Garland, 2010).

Wu (2008) divided safety leadership into three dimensions which known as safety coaching, safety caring, and safety controlling. According to Neal et al. (2000), safety knowledge and safety motivation had considered as antecedent of safety

behaviour while in another study, safety motivation and safety knowledge were measured as two different dimensions of safety (Pousette et al., 2008). Hence, this research will expand this by examined more on the potential safety motivation and safety knowledge in the safety leadership.

It is important to have great knowledge in prevention of needle stick injuries especially universal precaution in order to reduce needlestick and sharp injuries among nurses. One of the factor that contribute to the workers not to comply with Standard Precautions is lack of knowledge (Sax et al., 2005 & Oliveira et al., 2010). Pearson (2011) elaborated that nursing is a profession that can be characterized by a huge intensity and multiplicity of knowledge. However, few studies reported the significance of noncompliance to post-exposure protocols as well as underreporting of NSSI exposures by hospital staff (Nagandla et al., 2014 & Rampal et al., 2010) directly to knowledge gaps caused by inadequate training and inappropriate perceptions, and attitude towards universal precautions (Juni et al., 2015). This shows that safety knowledge is one of the aspect that prevalent to nurses' behaviour and value researcher recognition.

Meanwhile, nurses' behaviour and performance can determine work motivation by providing good quality in nursing practice (Moody & Pesut, 2006). Some studies suggest that motivation is important to promote some of nurses safety behaviors (Conchie, 2013). Lack of motivation were believed can caused the healthcare workers to ignore and not to observe universal preventive measures due to overloaded and urgency in certain wards such as emergency and labour rooms

(Gourni et al., 2012; Habib et al., 2011 & Afridi et al., 2013). Specifically, there is an optimum workload that affects nurses' confidence. Nurses are motivate if they are provided by the right amount of work, while overloaded of work or absence of work will produces distress (Van den Berg et al., 2006 & Van Beek et al., 2012). Similarly, nurses' are more motivated if they work to fixed schedules as compared to those who have to work by shifts (Camerino et al., 2008; Yildiz et al., 2009 & Razee et al., 2012). This suggests that safety motivation as prevalent dimension of nurses behaviour and important to be measured in this study.

Considering the above studies, it is essential to explore the differential consequences of each safety leadership's components along safety motivation and safety knowledge in encouraging nurses to comply with safety behaviour at work. By doing this, an understanding of the extent of safety leadership along safety motivation and safety knowledge can impact safety behaviour, more effective measures can be implemented as organizations have scant and limited resources. Hence, the present study is concern with investigating the role of safety leadership dimensions, which is safety coaching, safety caring and safety controlling as measured by Wu et al. (2008), safety motivation and safety knowledge as measured by Vinodkumar and Bhasi (2010) in influencing employee compliance with nurses' safety behavior while at work.

1.4 Research Objectives

In conjunction with the problem statement above, this research aims to investigate the following objectives:

i. to investigate the influence of safety leadership (i.e. safety coaching, safety caring and safety controlling) on the safety behaviour (i.e. safety compliance and safety participation).

ii. to examine the influence of safety motivation on the safety behaviour (i.e. safety compliance and safety participation).

iii. to determine the influence of safety knowledge on safety behaviour (i.e. safety compliance and safety participation).

1.5 Research Question

Based on the explanation provided in the background of the study and problem statement the following research questions are formulated:

i. Is there any relationship between safety leadership (i.e. safety coaching, safety caring and safety controlling) and nurses' safety behaviour (i.e. safety compliance and safety participation)?

ii. Is there any relationship between safety motivation and nurses' safety behaviour (i.e. safety compliance and safety participation)?

iii. Is there any relationship between safety knowledge and nurses' safety behaviour (i.e. safety compliance and safety participation)?

1.6 Scope of the Study

This study intends to focus on nurses working in a hospital in Kuala Lumpur. Kuala Lumpur as the Capital City of Kuala Lumpur with 243 Sq. Km land area has state of the art of technologies in the region. There are many medical practitioners in Malaysia. Furthermore, many hospitals in Klang Valley have been certified and received MS ISO 9001 quality standards, thus uplifting medical field to a high public recognition.

Nursing is well known for jobs with long duty hours and high pressure (Jennings, 2008). Nurses as part of the largest professional group in medical fields are tied to their excellence services (Estabrooks et al., 2008; Gunther & Alligood, 2002; Oliver, 2006; Marquis & Huston, 2009; Roussel et al., 2009 & Sullivan & Garland, 2010) and essentially, nurses are the main health care professionals that deal with majority of injections, intravenous fluid and sharp objects (Motaarefi et al., 2016).

Although NSSIs are usually sustained by healthcare workers (HCWs) of all fields, they are prone to occur in nursing profession (Puro et al., 2001). Nurse is belongs to high risk group of having needle stick injuries because of handling sharp devices in their routine works (Lee & Noor Hashim, 2005; Hassanpour et al., 2013 & Smith et al., 2004).

1.7 Significance of Study

The findings of this study could benefit the Nurses Service Division in providing alternative view in implementing their OSH Management System (OSHMS) in order to promote the OSH performance in spite of their own limitations. The outcome of this study also can encourage nurse's leader to encourage the development of climate favours in nurse's professional as well as to improve nursing performance in service quality.

This study also attempted to serve as basic guideline for DOSH in formulating effective strategies in carrying out programs in the respective master plan. Furthermore, the findings of this study will be useful for designing safety leadership training programs and campaign for the nurses division and as well as to the Ministry of Health (MOH) professions in Malaysia.

On the other hand, this study also attempted to provide empirical (theoretical and managerial) supports on significant factors associated with the relationship between supervisor's safety leadership and worker's safety behaviour, specifically in Nurses Service Division in Malaysia. Besides that, this study also provide support to the Transactional - Transformational Leadership Theory by highlighting the importance of safety leadership with respect to safety coaching, safety caring and safety controlling among leaders in predicting safety behaviour. Hence, the outcome also can contribute as an academic reference to future researchers.

1.8 Definition of Key Terms

Safety Coaching

Wu (2008) defined 'safety coaching' as which a leader can be a model to the workers, engage with the worker's intellectual, share judgments as well as involves the workers' in decision-making. 'Safety Coaching' can classified as transformation leadership.

Safety Caring

Wu (2008) defined 'safety caring' as how a leader treats employees like its own family members; provides consonance environment, respects and trusts the workers; empathy and understands their problems.

Safety Controlling

Wu (2008) defined 'safety controlling' on how a leader forms a rule-governed system to set standards of behavior for the workers, has rightful authority to correct intrusion and uses expertise to monitor safety performance.

Safety Motivation

Lu and Yang (2010) defined 'safety motivation' on how a leader conducts a motivation session to increase their employees safety behaviour. Such activities may includes in rewarding positive individual development, active employees-management feedback response, and engaging them in safety decision.

Safety Knowledge

Morgeson and Humphrey (2006) explained 'safety knowledge' as a part of knowledge, skill and ability demands that are required from the workers to execute their job and boosting work's performance.

Safety Compliance

Neal and Griffin (2002) explained 'Safety Compliance' as the main safety activities at the workplace that need to be maintained by the workers. These behaviours including compliance to S.O.P and wear proper personal protective equipment at the workplace.

Safety Participation

Neal and Griffin (2002) refers to 'Safety Participation' as behaviours that provide workers' safety indirectly, but still can help to develop a safety environment. These behaviours involves worker to volunteer participate in safety activities,

facilitate coworkers with safety-related issues, as well as participate in safety meetings.

1.9 Organisation of The Thesis

This research provides five main parts. The first part is chapter 1 composed of introductory of the chapter which include background of the study which explain all the affects of needle stick injuries to the Malaysian health workers and the significance of safety behaviour to the workers. Then, this will follow by explanation of research problem statements which contains the selection of independent variables of this study. This chapter also will raise a few research questions that useful in hypothesis analysis. Besides that, research objectives, scope of the study also will be discussed in this chapter as well as the significance of the study.

Following this introductory is Chapter 2 consist of literature review which present the independent variables with supported previous study done by other researchers. This chapter will give the overall pictures of the study's framework or act as a base for the experimental of analytical section of the thesis.

Chapter 3 will discuss the research methodology that consist of research framework, the hypothesis, selected research design, definition of independent variables and dependent variables as well as the measurement of variables/ instrument. This chapter also include data collection, sampling and data analysis which is very important that reflect the study outcome (results).

Chapter 4 will discuss the results as well as the discussion of the findings. This chapter contains all the data and results/findings through the method that been choose in research methodology. This chapter present complete result and analysis of the study which illustrated in figures, tables or text, thus the main information is highlighted.

Chapter 5 consists of a brief summary of the research and the impacts to the theoretical and practical findings. Some suggestions are also proposed for future researchers and managerial improvements.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section discusses on the empirical study on safety behaviour which consisted of safety compliance and safety participation and subsequently, reviews on related empirical studies regarding the antecedents of safety behaviour. The Health and Safety Executive (HSE) (2003) has mentioned that good safety performance or safety behaviour cannot be achieved without effective leadership. Thus, this chapter will also review previous researchers on the present's overview of safety leadership's dimension- safety coaching, safety caring and safety controlling as well as safety motivation and safety knowledge that influence nurses' safety behaviour at the workplace.

2.2 Safety Behaviour

Behaviour was described as everything an individual does that can be measured and observed (Vijayakumar, 2007). In the concept of safety research, safety behaviour is defined as the individual's behavioural that supports in safety practices and in any safety activities that need to be identified by the workers based on the requirements from occupational, safety and health, to keep away from accidents at the workplace (Zin & Ismail, 2012).

Safety behaviour which also known as safety performance is divided into two dimensions namely safety compliance and safety participation. These determinants used by many authors to differentiate between task and contextual performance (Mullen & Kelloway, 2009; Inness et al., 2010 & Motowidlo & Van Scotter, 1994). Neal and Griffin (2002) pointed out that safety compliance is used in explaining the main safety activities at the workplace that need to be maintained by the workers. These behaviours including compliance to S.O.P and wear proper personal protective equipment at the workplace. Meanwhile, safety participation is referring to behaviours that provide workers' safety indirectly, but still can help to develop a safety environment. These behaviours involves worker to volunteer participate in safety activities, facilitate coworkers with safety-related issues, as well as participate in safety meetings.

Recent study conducted by Mashi, Subramaniam and Johari (2017) revealed that nurses safety performance have significant relationship between safety promotion policies, management commitment and safety rules and procedures. The finding also recommended that management commitment play an important role in developing employee's safety behaviour. Therefore, the workers can believe management who put high commitment to ensure safe hospital environment has a tendency to provide helpful changes in nurses towards positive safety behaviour. This was supported by other studies that indicated the importance factors in worker's perception of risks and safety that influenced by management's commitment to safety (Mearns & Yule, 2009; Zohar, 2002; Zohar & Luria, 2010).

Similarly, Mohamed (2002) discovered on the safety climate's dimensions towards safety behaviour. The study found that management commitment as well as the involvement of the management representative in OSH related activities can influence positive safety behaviour at construction site.

Other study among nurses in Malaysia found that safety practices at workplace are associated with high compliance with safety behaviour. The more supervisors' cohere safety practice at the workplace, the more employees' compliance safety behaviour would be (Subramaniam et al., 2013). The study also found the importance of application of social learning theory in occupational safety, as it would decrease negative outcomes and increase positive outcomes.

Vinodkumar and Bhasi (2010) in their study among industrial workers in India revealed that employees' attitudes as well as behaviour towards safety can be influenced by management safety practices. Whereas, Zohar (1980, 2000, 2002) found that employees' perception of their job-related safety was the most influenced factor towards their safety behaviour. This was followed by the perception of management attitude towards safety. In addition, Hayes, Peranda and Trask (1998) concluded that employees will work safely when the perception of their jobs are hazardous. Thus, job-related safety also found to be one of the determinants for safety behaviour.

Meanwhile, researchers have also recognized leadership as one of contributing factors towards safety behaviour. Specifically, in healthcare setting, leaders attitude found can influence the workers performance (Wong & Cummings, 2009). Besides that, leadership behaviour among managers and supervisors , specifically on safety related matters found to give a positive effect on employees thinking, perception as well as behavioural changing towards OSH (Barling, et. al. ,2002 ; Kelloway, Mullen & Francis , 2006; Mullen & Kelloway, 2009). Thus, the significance of efficient leadership in healthcare setting specifically nurses has been highlighted by several authors (Wong & Cumming, 2009; Cumming et al., 2010; Lievens & Vlerick, 2013; Cummings et al., 2010).

2.3 Antecedents of Safety Behaviour

Safety behaviour considered can be influenced by activators or antecedents and by any other consequences (Miltenberger, 2012). The activators will produce the immediate cause in discrepancy of performance. There were a few caused which influence individual performance through the consequences on knowledge, skill, and motivation. Generally, antecedents of performance at work were identified at both the employee and supervisor or manager level. A few researchers suggested that individual's capability and experience were the factors that can influence antecedents of task performance. Meanwhile, factors as conscientiousness were the important personality constructs in contextual performance (McHenry, Hough, Toquam, Hanson, & Ashworth, 1990; Motowidlo & Van Scotter, 1994; Wise, McHenry, & Campbell, 1990).

For this study purpose, safety behaviour of the nurses was believed influenced by safety leadership (safety coaching, safety caring and safety controlling), safety motivation and safety knowledge.

2.3.1 Safety Leadership

Leadership is described as two way process of interaction between leader and followers. In this process, the leader was believed can empower the followers to achieve organizational safety goals u organizational and individual factors (Wu, 2008 & Wu, 2005). In specific, this definition is referring to specific role (achieving safety goals) and influence process. Barling et al. *(*2002) & Kelloway et al. (2006) examined that leadership is completely associated with safety from the whole aspects of transformational and transactional leadership behaviours amongst employers and workers.

Meanwhile, Cooper (2015) defined safety leadership as the system of transcribing off desire outcome, leading the workers toward success as well as participates with convenience efforts that lead to safety value. Safety leadership is identified to be at high risk (HSE, 2001) especially when existing safety behaviour or safety performance is weak (Wong & Cumming, 2009; Doran et al., 2004; Cooper, 2015 & Mullen at al., 2011). Leadership plays important in terms of maintaining organization's stability and currently has an increasing important for occupational safety (Künzle et al., 2010).

Cooper (2015) identified that effective leader usually implemented one of three leadership style which is referring to transformational, transactional and servant. Meanwhile, Wu (2008) categorized dimensions of leadership by two essential styles which consisted of transformational leadership and transactional leadership. Transformational leadership is classified based on the value based, individualized relationship as well as make sure quality exchange and better concern for workers wellbeing (Bass & Avolio, 1997).A great transformation leadership can influences the workers to pledge with the group and institutional aims, preferably to personal gain (Flin & Yule, 2004). Employee's self- reported safety behaviour was found to be the determinants if the perceptions of transformational leadership were exist. Transactional leader behaviors applied monitoring concepts and incentives whereas a transformational leader behavior is focusing on inspire and motivate the workers properly (Reid et al., 2008). Meanwhile, transactional leadership also known as task- oriented leadership that focuses on the relationship between rewards and performance. Thus, both elements in leadership styles can reveal management's commitment to safety.

A recent study conducted among nurses in Belgium revealed that leadership (transformational leadership) is strongly associated to job safety participation and safety compliance (Lievens & Vlerick, 2013). Knowledge-related job characteristic had a positive influence in mediating transformational leadership as well as nurses' safety compliance and safety participant. Their study revealed safety performances of nurses were influenced directly and indirectly by nurse leader's transformational leadership.

The other study about nursing leadership style showed that transformational leadership has positive influence in production and efficiency but showed negative influence in fright and pressure (Cummings et al., 2010). Other experimental study indicated that transformational leadership is related to safety performance among the workers (Mullen & Kelloway 2009). In other words, transformational leadership style that shown by nurse's supervisor will contribute to a positive impact of the safety performance among the nurses.

Safety leadership also believed can influence the quality of the leader and the nurse's relationship which in turn affected the quality of the work environment and safety climate. A study in Canada among 600 acute care registered nurses (RNs) intends in supporting environment that safe to work with. Therefore, the employers need to struggle in building up the best quality relationships throughout leadership. As this was proved in terms of quality that related to equality and sympathy that act as the factor in producing good safety climates (Squires et al., 2010 & Xuesheng & Wenbioa, 2012) and work environments (Squaires et al., 2010).

Mullen, Kelloway and Teed (2011) conducted a study examining the leadership styles (transformational, passive or inconsistence) as the predictor of safety performance (safety compliance and safety participation) among the young and older workers of healthcare industry in Canada. The results showed significant prediction between transformational leadership and inconsistent leadership towards both aspects of safety behaviours. Whilst, passive leadership is only associated with safety compliance but not safety participation.

Barling et al. (2002) found that transformational leadership has a significant relationship with safety behavior in the hospitality field. Besides that, this study revealed that the importance perception of transformational leadership to the workers was the main antecedent of safety behaviour in terms of self reporting.

A study done by Khdair et al. (2011) revealed that workplace leadership style influence on safety performance in Oil & Gas industry. This was supported by several of previous studies with some of the finding illustrated a positive relationship between leadership style and safety performance at the workplace (Yang et al., 2010 & Wu et al., 2007).

Clarke (2013) conducted a study predicted that transformational and transactional leadership have a positive effect and will promote higher level of safety compliance as well as safety participation. The result showed that transformational and transactional leadership showed a significant relationship with safety behaviour which explained in the context of safety compliance and safety participation. In specific, transformational leadership style is more associated to safety participation while transactional leadership style was the most effective towards safety compliance.

Lu and Yang (2010) examined three dimensions of safety leadership (i.e. safety motivation, safety policy and safety concern) among the container terminal operations in Taiwan. Safety motivation and safety concern are classified as

transformational leadership and safety policy is classified as transactional leadership. The finding suggested that safety motivation and safety concern have a positive relationship to worker's behaviour in terms of self reporting. Hence, these styles of leadership showed important functions in encouraging safety behaviors among the workers that may influence by the other workers.

In other empirical study among the laboratory's staff in four Universities in Taiwan found that the leaders were suggested to demonstrate safety leadership variables (i.e. safety caring, safety coaching and safety controlling) towards the faculty and staff (Wu et al., 2008). This can help CEO's and managers to improve the commitment and actions toward the safety. Safety coaching and safety caring are categorized into transformational leadership meanwhile safety controlling is categorized as transactional leadership. This study also revealed that safety controlling (transactional leadership) had influenced the top management's safety commitment and action in safety climate, while safety organization and management, safety equipment and measures as well as accident investigations in safety performance (Wu et al., 2008). In this study, controlling contained three behaviors such empower authority, enforce the employees to obey safety policy, and utilize the safety tactics. Controlling believed will motivate CEOs' and managers' safety commitment and action towards safety at the workplace.

In contrast of other finding, the researcher found that employees' perceptions of their head of department's safety caring and safety coaching are more significant than worker's perceptions of safety controlling. But, in general, the employees'

perceptions of the safety leadership found to be positive towards their head of departments (Wu, 2008).

In year 2017, a study conducted to analyse the effectiveness of safety leadership towards safety performance from the aspect of manufacturing sectors in Malaysia. The study hypothesized that the lower level of workplace accidents is affected by the higher level of safety leadership at the workplace (Lun & Abdul Wahab, 2017). The conceptualization of safety leadership in this study was explained by safety coaching, safety caring and safety controlling which exerted from Wu et al. (2008). The study revealed that safety leadership plays vital example in determining level of safety at workplace through safety coaching, safety caring, and safety controlling. The importance of leaders within the organizations to implement safety-related leadership skills as well as provide more attention on safety issues in return for safer workplace were highlighted in the study outcomes.

2.3.1.1 Safety Coaching

Safety coaching is defined in the aspect of transformational leadership (Wu, 2008) and highlight in the context of role model, intellectual, motivation and shared contribution (Wu, 2005). Whereas, safety coaching along safety motivation were believed can provide a clear safety vision together with adequate knowledge that can make the leaders circulate safety mission, vision, essential skills as well as any relevant messages to the employees(Arnold et al., 2000).

A study conducted on safety leadership in the electric and automotive manufacturing in a few hospitals in Taiwan showed the association between workers' perceptions and their head of department's safety coaching (Wu, 2008). This study also aimed to discuss the effects of safety leadership towards institutional characteristics and each of faculty members' characteristics. Besides that, this study also revealed that younger faculty members showed significant perception towards safety coaching in the universities with safety committee. However, other universities without safety committee among younger faculty members showed contrast result. Hence, it is suggested that Head of Department's universities without safety committee should make improvement to their safety coaching of younger faculty members.

A study conducted by Passmore et al. (2015) done a review of the research literature on safety coaching focusing on working in risky environment such as oil and gas, industrial and driving. The result revealed that safety coaching believed can help in latent education, changing in behaviour as well as provide feedback and improvement in safety consistently.

On the other hand, safety coaching in radiology department showed a reduction in error rates by using observation and feedback methods (Dickerson et al., 2010). After two years later, safety performance and safety culture were then examined before the coaching intervention. The result revealed that safety performance showed a drastic improvement where mean of no accidence reported increased from 200 to 1,031. Safety culture showed significance improvement and

the rate of the results indicate an improvement engagement with safety. Unlikely other department in the hospital which did not receive coaching interventions shown a positive relationship with safety culture. Besides that, direct coaching involvement could helped to ease in handling patient at the hospital. It was found that, staff reporting of safety awareness and self-confidence in using patient lifting equipment (Alamgir et al., 2011). This is shows potential in the current research purpose because it shows that coaching can help in safety at the working behavioural practices as well as to promote awareness related to safety issue.

2.3.1.2 Safety Caring

Safety caring is explained by the level of concern and attention amongst leaders towards safety issues and involves efforts to ensure the quality of safety at the workplace (Wu et al., 2008 & Cooper, 2008). In details, leaders who are effective demonstrate their concern towards workers through a few ways; encourage workers in participating safety; give rewards; put a trust on the workers performing the right work; good listener; and act towards appropriate particulars (Cooper, 2015). Meanwhile, Wu et al. (2008) explained safety caring in the aspects of stimulating harmony's value, put on respect and trust as well as caring and sympathetic.

Some studies explained safety caring as safety motivation (Du & Sun, 2012) and active management (Lu & Yang, 2010). Wu (2008) defined safety caring in the aspects of transformational leadership and it has a positive relationship between employees' perceptions and their head of department's safety caring in the study

among the workers in electric and automatic manufacturing laboratories in a few universities in Taiwan (Wu, 2008). The finding suggested that head of department in the universities by the absence of committee's safety have to improve their safety caring and safety controlling among the youth members of faculty.

Meanwhile, a study conducted in manufacturing industries in China is targeted in examining relationships between safety leaderships amongst the managers, suppliers and vendors as well as to discover leadership dimensions that could determine the impact of performance in safety of the manufacturing (Wu et al., 2016). The main findings of this study revealed positive relationships present within the leaders in different levels while managers of safety culture act towards moderator. Other major finding revealed that safety leaders with charismatic, role mode and caring behaviors were the most effective in the frontline setting. In addition, the managers in construction should give special attention to keep effective communication connection with the superior and give a positive respond to their orders and requirements.

2.3.1.3 Safety Controlling

In spite of showing caring to the workers, effective leaders also need to manage the activities and outcomes by having apparent instruction to response with, to illustrate the expectancy, accountability as well as set a clear as well as maintain the targets improvement (Cooper, 2015). Performance is at optimum if the leader can balance safety caring and safety controlling. Otherwise, overloaded in caring or

controlling directs to deficit (Cooper, 2015). Other researcher classified safety controlling including utilizes power, set up rules and make use others (Wu et al., 2008).

Wu (2008) defined safety controlling as the aspect of transactional leadership where this type of leadership is associated with incentives and performance. It also known as task-oriented leadership (Krause, 2005). Safety controlling in safety leadership found affected mostly the safety in organization and management, safety equipment and measures, and accident inspections in safety performance between four universities in central Taiwan (Wu et al., 2008).

Besides that, Blaire (2003) suggested in his study that the leaders must focus on definite behaviors to enhance safety culture at the workplace. The leaders must have the eager and wisdom to set up excellent culture. A leader also must know how to influence the right person to make the right actions. These are the aspects of safety controlling in safety leadership. Besides that, safety leaders could apply five concepts in safety controlling which refer to permissible authority, incentive authority, coercive authority, proficient authority and referent authority to strengthen safety performance at the workplace (Williams, 2002).

Carrillo (2002) explained that safety excellent can be achieved by following five steps of safety controlling dimensions which are referring to insight, direction, focus, capability development and accountability in order to achieved safety excellent. However, Cooper (1998) believed that safety caring and safety controlling were the most important dimension in safety leadership because the leader can utilize communications to provide necessary manpower, and remove any organizational barriers to achieve organizational goals easily.

2.3.2 Safety Motivation

Safety motivation can be described in the context when the worker's eager to put on effort to accept safety behaviour. The workers are motivated to practice safety at the workplace and contribute in any safety activities if they have a positive perception towards safety climate at the workplace (Neal & Griffin, 2006).

A number of researchers identified safety motivation and knowledge as contributing factors in safe workplaces models (Neal & Griffin, 2006). As employee are influenced by safety motivational efforts has leads to positive improvement in the research outcomes (Neal & Griffin, 2006). There are few factors can affect workers motivation and knowledge, which is safety climate (Neal & Griffin, 2006), leadership (Bono & Judge, 2003; Ford & Tetrick, 2008 & Lu & Yang, 2010), personal characteristics, and attitudes (Christian et al., 2009). The scope of motivation research is wide, so the present study only focusing on how safety motivation will influence safety behaviour behavior amongst the co-workers.

Based on various previous researches, supervisors and organizational environment play important key-contribution in the worked acceptance in safety behaviouur (Christian et al., 2009). A research done by Mearns and Reader (2008) in 18 offshore installations in the North Sea (U.K. sector) found that, safety (outcomes) was not motivating the workers. In details, the workplace is free from accidents if performance was good and in the absence of any feedback of worker's performance, it was difficult to keep employees motivate to engage in safe behaviors. Therefore, the main reason was not to emphasize safety outcome goals, but to engage workers to participate in safety behaviour in workplace and practice it willingly (Mearns & Reader, 2008).

On the other hand, nurse's leader could have e a main role within a group and may have a strong influence on staffing, motivation, competency and quality (Luis, 2014). Besides that the capacity of nurse's leader to influence the workers were depends more on motivation and leadership than the level of hierarchical at which they carry out the organization (Bally, 2007). Hence, nursing leadership can be considered as the abilities to motivate nurses, throughout ideas, strategies and actions to focus on efforts and achieve the objectives as well as contribute to service effectiveness and success (Bally, 2007) as intrinsic motivation of employees is important in promoting some of the safety behaviors in the workplace (Conchie, 2013).

A few studies have proved that lack of motivation were believed can caused the healthcare workers to ignore and not to observe universal preventive measures due to overloaded and urgency in certain wards such as emergency and labour rooms (Gourni et al., 2012; Habib et al., 2011 & Afridi et al., 2013). Specifically, optimum amount of workload will motivate nurses whereas, too much workload will produce distress (less motivation) towards the nurses (Van den Berg et al., 2006 & Van Beek et al., 2012). Besides that, nurse's motivation also influence by their scheduled of work. Those who is working with fixed schedule reported to be more motivated than those who rotate day and night shifts (Camerino et al., 2008; Yildiz et al., 2009 & Razee et al., 2012).

Meanwhile, Ford and Tetrick (2008) conducted a theoretical study to explore the factors related to motivation which contribute to safety performance. The study found that safety leadership is associated tosafety motivation and contributes to safety behaviour. Other study conducted by Griffin and Hu (2013) examined leadership behaviour which consist of three dimensions namely “safety inspiring” (motivation) , “safety monitoring” (policy) and “safety learning” and investigated their effect towards safety performance. In this study, employee's safety performance was measured by safety compliance and safety participation. The results revealed that safety inspiring in the perception of motivation among the respondents from different occupational background in Australia predicted safety participation but did not supported safety compliance.

2.3.3 Safety Knowledge

Previous study discussed that individual performance were influenced by three determinants which including knowledge and skill as well as motivation. Therefore, safety performance must be explained by knowledge and skills as well as employee's motivation specifically for particular behaviors (Campbell et al., 1993).

A study conducted by Griffin and Neal (2000) was aimed to measure the perceptions of safety at the workplace. The outcomes of their study provide further exploration of the effects towards employee perceptions, employee behavior, and the outcomes to the organizational safety. The result revealed that perceptions of safety knowledge together with safety motivation were believed can influence the workers reports of safety performance and safety climate in the organizations

On top of that, a study conducted in eight major accident hazard process industrial units in Kerala, India revealed that safety knowledge showed a positive relationship with three main safety management practices and two elements of safety performance (Vinodkumar & Bhasi, 2010). The result of this research grant useful guidance for academician and researchers as well as practitioners to identify the mechanisms hence improving safety at workplace.

Lievens and Vlerick (2013) conducted a study among nurses in Belgian Hospital which aimed to examine relationship between the impacts of transformational leadership to the nurses' safety performance and to examine the

function of knowledge that related to the job characters. The study showed transformational leadership and knowledge-related job characteristics exerted a significant positive impact on both dimensions of nurses' safety performance. Hence, nurse's supervisor with transformational leadership style are able to influence the perception that their coworkers are provided with enough knowledge in their job, which can also direct them to increase in both dimensions of safety performance. Hence, lack of knowledge about the procedure conducted was proven as one of the factor that caused needle stick injuries among the nurses (Sax et al., 2005; Oliveira et al., 2010 & Li et al., 2008).

A study in Erbil Hospitals was conducted to assess of nurse's knowledge regarding needle stick injuries and its risks revealed that nurse's knowledge regarding to needle stick injuries were good (Abdullah Karim et al., n.d.). In contrast of study conducted by Sharma et al. (2010), lack of knowledge was found as a gap amongst the health personnel towards needlestick and sharp injuries. These involved danger related to needlestick and sharp injuries and the use of preventive measures as well as needle disposal. These lacking can be encounter through comprehensive knowledge. Thus, serious attention should be given to nurses since they were the most exaggerate personnel that expose to NSSI.

2.4 Underlying Theory- Transactional and Transformational Leadership Theory

Research on leader's trait theory which contained leadership theory have been revived by Bass and Avolio (1994) who investigated studies on transformational leadership. Their Full Range Leadership Model consist of transformational, transactional, management by exception active, management by exception passive, and laissez-faire leadership, have led to the continuing study of follower perceptions of leadership, leader implicit values, and the spirituality of the leader and leadership style (Salter, 2007; Green, Kodatt, Salter, Duncan, Garza-Ortiz, & Chavez, 2008).

According to Kuhnert and Lewis (1978), transformational leaders offer a purpose that transcends short-term goals and focuses on higher order intrinsic needs. In contrast, transactional leaders are focusing on the proper exchange of resources. If transformational leadership results in followers identifying with the needs of the leader, the transactional leader gives followers something they want in exchange for something the leader wants (Kuhnert & Lewis, 1987). Meanwhile, transactional leadership is more commonplace than transformational leadership, if less dramatic in its consequences (Burns, 1978).

Bass (1999) pointed out that the best leaders are both with transformational and transactional. Howell and Avolio (1993) agreed with this viewpoint, stating that transformational leadership complements transactional leadership and that effective leaders often supplement transactional leadership with transformational leadership.

In a study conducted by Wu (2005), he had develop a safety leadership scale (SLS) for college and universities presidents which focus on safety coaching and safety caring which categorized as transformational leadership. Meanwhile, safety controlling categorized as transactional leadership. Hence, this concept of leadership with respect to safety coaching, safety caring and safety controlling were adapted in this present study in predicting safety behaviour among nurses in the hospital.

2.5 Research Framework

Research framework is a collection of interrelated concepts and shows the relations between the independent and dependent variables. Dependent variable, is known as outcome variable can be predicted and explained. Independent variables, also known as predictors or explanatory variables, explain variation in the dependent variable.

Present study framework is basically adopted from Wu et al. (2008) who conducted a study on safety leadership and safety performance in four universities in central Taiwan and Vinodkumar and Bhasi (2010) who assessing safety knowledge and safety motivation's role among employees in industrial units in India. Wu et al. (2008), established safety caring, safety coaching and safety controlling as the dimensions of safety leadership. Thus, the independent variables for this study are safety caring, safety coaching, safety controlling, safety motivation and safety knowledge. The dependent variable is “safety behaviour” which is measured by two elements that are safety compliance and safety participation which adopted from the Griffin and Neal's, (2000). This framework has served as a basis for conducting

present research. Below is the proposed framework to show the relationship of the variables. It is pointed that the relationships of the variables have a significant and positive influence on safety behaviour in terms of safety compliance and safety participation.

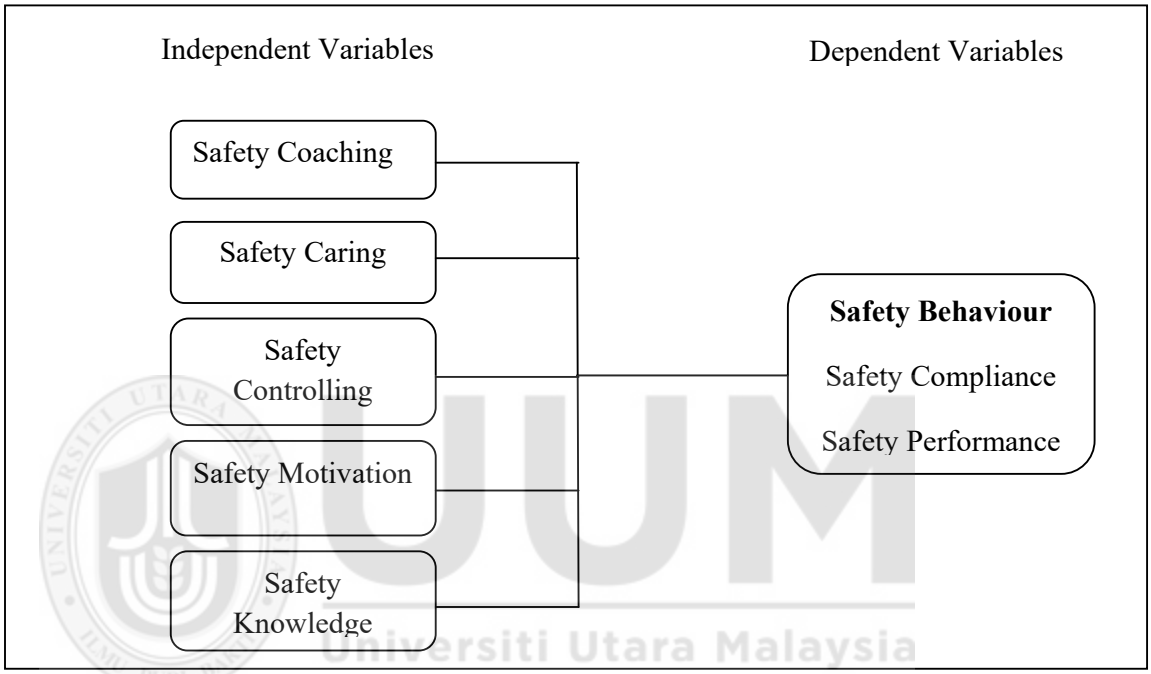

Figure 2.1
Research Framework

2.6 Hypotheses Statements

Research hypothesis are the specific testable predictions made about the independent and dependent variables in the study that been discussed in the research framework. Based on the relationships exist between the variables, the hypotheses of the study could be developed and furthermore enables the process of the relationships testing.

H1a *: Perceptions of safety leadership with respect to safety coaching is positively related to safety compliance.*

H1b *: Perceptions of safety leadership with respect to safety coaching is positively related safety participation.*

H2a *: Perceptions of safety leadership with respect to safety caring is positively related to safety compliance.*

H2b *: Perceptions of safety leadership with respect to safety caring is positively related to safety participation among nurses in the hospital.*

H3a *: Perceptions of safety leadership with respect to safety controlling is positively related to safety compliance..*

H3b *: Perceptions of safety leadership with respect to safety controlling is positively related to safety participation.*

H4a : *Safety motivation is positively related to safety compliance.*

H4b : *Safety motivation is positively related to safety participation.*

H5a *: Safety knowledge is positively related to safety compliance.*

***H5b** : Safety knowledge is positively related to safety participation.*

2.7 Summary

Based on the literatures above, it is indicated that safety leadership (i.e. safety coaching, safety caring and safety controlling), safety motivation and safety knowledge are related to safety behaviour. The conceptual framework was designed based on the literature reviews above in the following chapter.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This following chapter explains the methodological aspects used in the research. The research design, population and sampling design are described. The major parts of this chapter are research framework, conceptual definitions, data collecting technique, pilot test and data analysis. This chapter also describes the instrument used in this research including the process to analyze the obtained data.

3.2 Research Approach and Design

This research is a explanatory study using quantitative approach. Quantitative method involving survey questionnaires was used to collect the data in this study. Such methods have been widely used by past researchers in the area of safety awareness on the grounds that data collection can be more far reaching than is possible with a predominantly qualitative approach. Quantitative data can be conveyed into numbers, in a formal, objective, systematic process to obtain information and describe variables and their relationship (Cavana, Delahaye & Sekaran, 2000).

Present study purpose is to investigate the relationship between safety leadership and safety behaviour at workplace, specifically the nurses' in the hospital. For research setting, the study was conducted at the public hospital in Klang Valley.

3.3 Measurement of Variables

This study employed a self-administered questionnaire as the data collecting instrument which was adopted from Wu et al. (2008), Vinodkumar and Bhasi (2010) and Griffin and Neal (2000). The questionnaire are divided into two sections; Section A- Personal Information and Section B is consisted of main study (Safety Behaviour, Safety Leadership, Safety Motivation and Safety Knowledge). The items in the questionnaire were used to measure the dependent variable, 'safety behaviour' and the independent variable, 'safety leadership', 'safety motivation' and 'safety knowledge'. 'Safety behaviour' were assessed by means of two dimensions which are 'safety performance' and 'safety compliance' which are adapted from Griffin and Neal (2000). Meanwhile, the latter was assessed by means of five dimensions; 'safety coaching', 'safety caring' and 'safety controlling' were adapted from Wu et al. (2008) and the other two dimensions; 'safety motivation' and 'safety knowledge' were adapted from Vinodkumar and Bhasi (2010).

In specific, section A serves 14 questions to gather demographic information of the respondents; age group, gender, education level, year of services, frequency of having accidents and needle stick and sharp injuries and the respondents' training record. Section B contains 18 questions to measure the perceptions of the employees about the 'safety leadership' dimensions; 10 questions to measure the participants' level of 'safety knowledge' and 'safety motivation' and 7 questions to measure 'safety compliance' and 'safety participation'. In this study, Likert scale were chosen to measure all the variables by using scale of 1 - 5 (1: "strongly disagree", 2: "disagree", 3: "neutral", 4: "agree" and 5: "strongly agree").

Table 3.1 shows items used for measuring the independent variables. This was prepared based on review of related literatures and theories. A total of 28 questions were used for this purpose. Specifically, safety coaching, safety caring and safety controlling consisted of six questions for each dimension, meanwhile safety knowledge consisted of five questions and safety motivation had five questions. The reliability of safety coaching is 0.95, safety caring is 0.94 and safety controlling is 0.94 which adapted from Wu et al. (2008). Meanwhile the reliability of safety motivation is 0.72 and safety knowledge is 0.77. These value of Cronbach's Alpha were adapted from Vinodkumar and Bhasi (2010).

Table 3.1
Items of the independent variables

Independent Variables	**Items**	**Source**
Safety Coaching	1. *My Supervisor handles safety cases honestly.* 2. *My Supervisor sets an example by obeying safety regulations.* 3. *My Supervisor helps employees to recognize the importance of safety.* 4. *My Supervisor explains the concept of safety clearly.* 5. *My Supervisor involves personnel in safety decision-making.* 6. *My Supervisor draws a picture to describe a safety vision.*	Wu et al. (2008)
Safety Caring	1. *My Supervisor creates a harmonious group climate.* 2. *My Supervisor allocates safety resources fairly.* 3. *My Supervisor accepts employees' advice to improve safety.* 4. *My Supervisor be confident of employee's safety performance.* 5. *My Supervisor makes an effort to meet employees' need for safety.* 6. *My Supervisor recognizes employees' safety achievements.*	Wu et al. (2008)

Safety Controlling	1. *My Supervisor order employees to accomplish safety goals firmly.* 2. *My Supervisor effectively assesses and rewards staff safety performance.* 3. *My Supervisor supports to establish regulations of safety management.* 4. *My Supervisor consistently requests employees to obey regulations of safety management.* 5. *My Supervisor requests employees to improve safety defects continuously.* 6. *My Supervisor regularly audits employees' safety performance.*	Wu et al. (2008)
Safety Motivation	1. *I feel that it is important to maintain safety at all times.* 2. *I believe that safety at workplace is a very important issue.* 3. *I feel that it is necessary to put efforts to reduce accidents and incidents at workplace.* 4. *I feel that it is important to encourage others to use safe practices.* 5. *I feel that it is important to promote safety programmes.*	Vinodkumar and Bhasi (2010)
Safety Knowledge	1. *I know how to perform my job in a safe manner.* 2. *I know how to use safety equipments and standard work procedures.* 3. *I know how to maintain or improve workplace health and safety.* 4. *I know how to reduce the risk of accidents and incidents in the workplace.* 5. *I know what are the hazards associated with my jobs and the necessary precautions to be taken while doing my job.*	Vinodkumar and Bhasi (2010)

Meanwhile, Table 3.2 shows items used for measuring the dependent variables. This also prepared based on review of related literatures and theories. A total of seven questions were used in this study. In specific, safety compliance and safety participation consisted of four questions and three questions respectively. The reliability of safety compliance is 0.92 and safety participation is 0.83. These value of Cronbach's Alpha were adapted from Neal and Griffin (2000).

Table 3.2
Items of the dependent variables

Dependent Variables	Items	Source
Safety Compliance	1. *I carry out work in a safe manner.* 2. *I use all necessary safety equipment to do my job.* 3. *I use the correct safety procedures for carrying out my job.* 4. *I ensure highest level of safety when I carry out my job*	Griffin and Neal (2000)
Safety Participation	1. *I put in extra effort to improve the safety of workplace.* 2. *I help my co-works when they are working under risky or hazardous conditions.* 3. *I voluntarily carry out tasks or activities that help improve work place safety.*	Griffin and Neal (2000)

3.4 Population and Sampling Design

The present number of nurses working in this selected tertiary hospital is 4200 staffs. The sample therefore, selected randomly from a total of 354 respondents whereby the number of respondents would be able to facilitate the need of achieving the objectives of the study. The sample size selected was based on the criteria set according to Krejcie & Morgan.

Sampling designs is divided into probability and the non-probability sampling (Sekaran, 2003). For this study, non-probability sampling design will be exploited, where the elements do not have any probabilities attached to their being chosen as sample subjects (Sekaran, 2003). In addition, simple random sampling was chosen in

this study. This sample method was chosen because each element in the population will have equal chance of being selected as the sample (Zikmund et al., 2013) and its ease of use and accurate representation of the larger population.

3.5 Pilot Study

Pilot study or 'pilot test' is conducted on a survey questionnaire to determine the comprehensibility of the questions as well as to obtain the appropriate length of the designed questionnaire (Driscoll, 2011). In this research, the instrument was pilot tested for reliability. The purpose of the pilot test done is to determine problems of the questionnaire. The pilot test also conducted to ensure the questionnaire is understood, reliable, and usable to collect the data. After the pilot test is done, the questionnaires is assessed and re-designed to ensure the consistency.

Reliability test was done to identify the internal consistency of the items in every section of the questionnaires and Cronbach's alpha reliability coefficients were obtained to check for internal consistency of the dependent and independent variables. For the purpose of this study, 30 respondents participated in the pilot study. The results of pilot study shown in Table 3.3 below.

Table 3.3
Reliability test (Pilot Test)

Variables	No of Items	Cronbach's alpha
Safety Coaching	6	0.89
Safety Caring	6	0.89
Safety Controlling	7	0.90
Safety Knowledge	6	0.71
Safety Motivation	5	0.82
Safety Compliance	4	0.93
Safety Participation	3	0.89

3.6 Translation of Measures

The adopted questionnaire was in English. However, it is needs to be in a bilingual form to facilitate the respondents who are not well-verse in English. Then, the instrument was translated into Malay Language and subsequently, the translated questionnaire will be translated back to English. Then, the back-translated questionnaire will be compared with the original questionnaire to ensure the quality of the translation process. The final outcomes had resulted minor modification in the Malay Language translation and the final instrument was finalized.

3.7 Data Collection Procedure

Data collection procedures for this study purpose involved five steps. First, the researcher applied Ethical Approval from Ministry of Health Medical Research Ethics Committee (MREC) and permission from Hospital Director. The estimation time derived for data collection was within one week after the MREC approval. Then, the questionnaires were then distributed to all nurses during Continuous Nurses Education (CNE). CNE session is an educational activity. It is primarily designed to keep the registered nurses updates their particular field of interest and do not lead to any formal advanced standing in the profession. All the nurses are invited to participate in this research. Approximately the whole process will take 15 - 20 minutes. The respondents only allow to participate one time in this study. All respondents were briefed on the main purpose of the study in order to obtain the permission to conduct the research besides to earn their full cooperation. After that, they were required to fill up patient information sheets and informed consent before participate in this survey as this was required from the MREC for the study which involved human subjects. Lastly, the questionnaire were then collected immediately after the CNE and analyzed accordingly.

3.7.1 Ethical Considerations

This study is registered in National Medical Research Registry (NMRR). Ethical approval was obtained from Ministry of Health Medical Research Ethics Committee (MREC).

3.7.2 Confidentiality and Data Storage

No personal identifiable data was collected during the course of this study; respondent's confidentiality will be maintained and guaranteed.

Hardcopies of the research data was stored in locked cabinets in the department. Research data will only be accessible to the Principal Investigator. Data will be kept for up to 6 months upon the completion of Master of Occupational Safety and Health Management; after which it will be destroyed.

3.7.3 Dissemination Policy

In any form of research publication or dissemination of research findings (eg. oral/ poster presentations, scientific meeting discussion etc), the confidentiality of the subject's personal information was protected as personal identifiers were not collected during the study process. Results of the analysis were presented in cumulative format and were not traceable to a particular individual.

Prior approval was obtained from the Director General of Health, Malaysia for any publication or dissemination of this research as stipulated in the NIH Guidelines for conducting research in MOH institutes and facilities.

3.8 Techniques of Data Analysis

This section describes the statistical tools used for data analysis, including the purpose for each statistical tool used. Standard statistical techniques were used in this study for purpose of data analysis beside of to test the hypotheses. The results of the questionnaires were analyzed using "Statistical Package Social Science (SPSS) version 23". For data analysis, both descriptive and inferential statistics were applied. The data collected were analysed using descriptive analysis (frequencies, min, max, mean and standard deviation), reliability analysis, correlation coefficient and multiple regression analysis.

3.8.1 Reliability Test

Reliability is defined as the proportion of observed score variance that is attribute to true score variance. There are a few techniques to develop the reliability of measuring instrument, and the internal consistency method is the commonest method used in the in studies with cross-sectional design.

The reliability of questionnaires is measured by Cronbach coefficient alpha as this is well known test of inter-item consistency reliability (Cavana, Delahaye and Sekaran, 2000). The strong criterion of internal consistency of established scales is considered as 0.70 or above. (Nunnally, 1978). The reliability of a measure is established by using both consistency and stability test. The closer Cronbach's Alpha to 1.0, the higher the internal consistency reliability is. Table 3.4 shows the Cronbach's Alpha measures.

Table 3.4
Cronbach's Alpha Measures

Cronbach's Alpha	Reliability
0.8 and above	Good
0.7	Acceptable
0.6 and below	Poor

Populations and the properties of populations are called descriptive statistics, just like parameters which refers to mean or standard deviation, where both of them represent the whole population. In this research, descriptive analysis is performed to examine the measures of central propensity (mean and median) and measures of spreading (variance, standard deviation, etc.).

3.8.2 Correlation Test

The relationship between two variables can be measured by correlation analysis (Lind, Marchal & Wathen, 2010). In this research, Pearson Correlation Coefficient was chosen to see the relationship between independent variables and dependent variables. From correlation analysis, it will determine whether the relationship existed is negative or positive besides of determine the significant of the variables. If the value of the $p < 0.05$, there is a relationship between independent variables and dependent variable and thus, the H_0 is failed to be accepted. If the value of $p>0.05$ or $p= 0.05$, there is no relationship between independent variables and

dependent variable. Hence, the H_0 is failed to be rejected. Table 3.5 shows the measurements of the relationship used in Pearson Correlation.

Table 3.5
The strength of relationship between the dependent and independent variables

r value	Relationship
0.7 and above	Strong
0.4 to 0.69	Moderate
0.39 and below	Weak

3.8.3 Multiple Regression Analysis

Multiple Regression Analysis was used to indicate the magnitude of the bivariate relationship and Multiple Regression Analysis was subsequently used to describe and to test the significance relationship between a single dependent variable and more than one independent variable.

In this research, it explains on how much the variance in supervisor's safety leadership behavior in terms of safety coaching, safety caring and safety controlling along safety knowledge and safety motivation can be explained by the two dimensions of safety behaviour which are safety compliance and safety participation. In present research, multiple regression analysis was conducted separately between the independent variables and safety compliance, as well as between the independent

variables and safety participation. Variance could be explained from r squared (R^2) value and the beta (β) coefficient values would verify the contributors ranking. The criteria are shown in Table 3.6 below:

Table 3.6
Multiple Regression Analysis Criteria

p value	Results
<0.05 or 0.001	Significant
>0.05 or 0.001	Not Significant

3.9 Summary

As overall, this chapter explained about the details and process in the research methodology. A well planned methodology will ensure the smoothness and the effectiveness of conducting research on the role of safety leadership in influencing nurses' behaviour to the safety at the workplace.

CHAPTER FOUR

FINDINGS OF THE STUDY

4.1 Introduction

This chapter discusses the research findings from the survey performed by analyzing the relationship between the leadership components which are consist of safety coaching, safety caring and safety controlling along safety knowledge and safety motivation and the dependent variables (safety compliance and safety participation). Data is analyzed using Statistical Package for the Social Sciences version 23. The data were examined in terms of reliability analysis (goodness of measure), descriptive analysis, correlation coefficient analysis and multiple regression analysis. Frequency analysis has been computed to identify respondents' demographic information such as gender, age, marital status, race, length of service and education level. The statistical method of Pearson Correlation was used to determine the existence of relationships between the independent variables and dependent variables. This chapter also reports multiple regression analysis is used to verify the hypotheses listed in Chapter 3.

4.2 Rate of Response

A total of 354 questionnaires were distributed to the nurses in a selected tertiary hospital in Klang Valley during Continuous Nurse Education (CNE) session. The respondents were given a brief explanation on the study purposes and were granted confidentiality of their responses. The respondent were given sufficient time

to complete the questionnaires and were collected immediately once answered completely by them. Thus, the respondent rate was 93.9%. Table 4.1 summarized the response rate of the survey.

Table 4.1
Rate of Response

Items	Total	Percentage (%)
Distributed Questionnaires	354	100
Collected Questionnaires	346	97.7%
Unreturned Questionnaires	8	2.3
Completed Questionnaires	332	93.9

4.3 Respondents' Demographic Background

The analysis of respondent's background determined the distribution of respondent's age, gender, race, marital status, education qualification and working experience. The frequency of occupational accidents, needle stick and sharp injuries, reported needle stick and sharp injuries and record of safety training also been analysed in this section. These were presented in Table 4.2 below.

Table 4.2
Demographic Background of the Respondents

Variables		Frequency (n)	Percent (%)
Age	20 - 25	85	25.6
	26 - 35	171	51.5
	36 - 45	45	14.8
	46 - 55	19	5.7
	56 - 60	8	2.4
Gender	Male	43	13
	Female	289	87
Race	Malay	276	83.1
	Chinese	16	4.8
	India	19	5.7
	Others	21	6.3
Marital Status	Married	183	55.1
	Single	146	44.0
	Others	3	0.9
Highest Educational Education	Secondary school	8	2.4
	Diploma	288	86.7
	Certificate	6	1.8
	Degree	27	8.1
	Master and above	2	0.6
	Others	1	0.3
Working experience	Less than 1 year	38	11.4
	1 - 5 years	149	44.9
	6 - 10 years	62	18.7
	11 - 15 years	34	10.2
	More than 15 years	49	14.8
Working Experience with current Organisation	Less than 1 year	43	13
	1 - 5 years	172	51.8
	6 - 10 years	57	17.2
	11 - 15 years	30	9.0
	More than 15 years	30	9.0

Variables		Frequency (n)	Percent (%)
Occupational Accidents	Yes	51	15.4
	No	281	84.6
Accident Frequency (if Yes)	1 - 3	47	92.2
	4 - 8	3	5.9
	9 - 15	1	2
Needle and Sharp Injury	Yes	73	22.0
	No	259	78.0
Frequency of Needle and Sharp (if Yes)	1 - 3	67	91.8
	4 - 8	5	6.8
	9 - 15	1	1.4
Reported NSI	Yes	36	49.3
	No	37	50.7
Safety Training	Yes	199	59.9
	No	133	40.1
Frequency of Safety Training (if Yes)	Every month	6	1.8
	Once in three month	24	7.2
	Once in six month	70	21.1
	Once a year	150	45.2
	Not at all	82	24.7

Table 4.2 shows that the majority of respondents were between the age of 26 - 35 (51.5%). For gender, the majority of respondents were female (87%) and Malay (83.1%) represented the majority of the respondent's race. For marital status, most of the respondents were married (55.1%) and for educational qualification, employee with Diploma qualification was represented the highest percentage of respondents with 86.7%.

In terms of working experience, majority of the respondents have been working for 1-5 years which consisted of 149 respondents (44.9%) and all these employees have working in this organization for 1-5 years (51.8%).

A total number of 284 respondents (85.5%) admitted that they have not met any accidents since working with current organization. Only 51 respondents (15.4%) indicated that they have met with an accident an out of that, 47 respondents (92.2%) were experienced an accident for one to three times since working in the organization. Other than that, 3 respondents (5.9%) had an accident four to eight times and remaining 1 respondent had an accident nine to fifteen times since working in the present organization.

Besides that, this study also revealed the number of nurses who had experienced with needle and sharp injury. A total of 73 respondents (22%) confessed that they had needle and sharp injuries since working with the present organization and the remaining 259 respondents (78%) did not experience needle and sharp injuries. The majority of the respondents experienced needle and sharp injuries for one to three times (91.8%), five respondents (6.8%) experienced four to eight times and remaining one respondent (1.4%) experienced nine to fifteen times since they were working with the organization. A part of that, only 36 (49.3%) of the respondents reported needle and sharp injuries and 37 respondents (50.7%) did not report needle and sharp injuries to the organization.

The table shows the classification of respondents attended safety training in the hospitals. 199 respondents (59.9%) have attended the safety training and 133 respondents (40.1%) do not attended the safety training. The majority of the respondents (150 or 45.2%) indicated that they have attended the safety training once a year.

4.4 Reliability Analysis

The reliability test was conducted to determine whether the questionnaires were dependable and acceptable. The level of internal consistency between multivariate could be determined based on Cronbach's Alpha (Hair, Babin & Anderson, 2010). According to Sekaran and Bougie (2010), the closer reliability coefficients gets to 1.0, the better it is, and those values over 0.80 are considered as good. The values of 0.70 are considered acceptable and the reliability values less than 0.60 are considered to be poor. The present study produced satisfactory reliability and all the independent and dependent variables met the above requirements range from 0.80 to 1.0.

One item of safety knowledge (*I don't know what to do and whom to report if needle stick and sharps injuries noticed in my workplace*) and one item of safety controlling (*My Supervisor do not order employees to accomplish safety goals firmly*) were deleted due to reliability issue.

Table 4.3 shows the result of reliability in this study.

Table 4.3
Reliability of Test Result

Variable	No. of Items	Cronbach's Alpha
Safety Knowledge	5	0.89
Safety Motivation	5	0.89
Safety Coaching	6	0.94
Safety Caring	6	0.96
Safety Controlling	6	0.93
Safety Compliance	4	0.93
Safety Participation	3	0.85

From the Table 4.3 above, all the independent variable's dimensions (safety knowledge, safety motivation, safety coaching, safety caring and safety controlling) and dependent variable's dimensions (safety compliance and safety participation) having the Cronbach's alpha coefficient of higher than 0.6; make all the items in the study are reliable.

Specifically, Cronbach's Alpha on Safety Compliance is 0.93 and Safety Participation is 0.85. It can be concluded that the items measuring the dependent variables are reliable. The above result also concluded that the items to measure the independent variables are also reliable. Safety Caring is the most reliable with Cronbach's Alpha 0.96 (very strong), followed by Safety Coaching (0.94), Safety Controlling (0.93), Safety Knowledge (0.89) and Safety Motivation (0.89).

This concludes that all of the items measuring both dimensions of independent variable as well as all the dependent variables are strongly reliable.

4.5 Descriptive Analysis of Variables

Descriptive statistics allows the researchers to describe the main features of the collected data. 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). Table 4.4 shows descriptive analysis which include the mean and standard deviation values for the independent variables and dependent variables.

Table 4.4
Reliability of Test Result

	N	Minimum	Maximum	Mean	Std Deviation
Safety Knowledge	332	1.80	5.00	4.17	0.57
Safety Motivation	332	1.00	5.00	4.61	0.51
Safety Coaching	332	1.00	5.00	4.07	0.73
Safety Caring	332	1.00	5.00	3.96	0.76
Safety Controlling	332	1.00	5.00	3.94	0.73
Safety Compliance	332	1.50	5.00	4.22	0.60
Safety Participation	332	1.67	5.00	4.10	0.60

Mean is a descriptive statistic that measures the centre 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. In this study, Likert scale was chosen to measure the dependent variable and the independent variables

by using scale of 1 - 5 (1 : “strongly disagree”, 2: “disagree”, 3: “neutral”, 4: “agree” and 5 : “strongly agree”). The level of the variable is considered high when the mean score is 3.68 – 5.00, whereas the score for moderate level is 2.34 – 3.67 and low level (1.00 – 2.33) (Davies , 1971).

Based on Table 4.4, the standard deviations for all the variables are below than 1 where it shows low dispersion as well as high consistency. The highest mean with the lowest standard deviation among the variables is safety motivation. The mean score for all variables are more than 3 and this indicates that the respondents are agree with most of the items describing safety compliance, safety participation, safety knowledge, safety motivation, safety coaching, safety caring, and safety controlling.

4.6 Correlation Analysis

Table 4.5 shows the correlation between the five elements of independent variables (safety knowledge, safety motivation, safety coaching, safety caring and safety coaching) and safety behaviour (safety compliance and safety participation). The results show that all of the independent variables are positively correlated at 0.01 with the dependent variable.

The table also shows that the highest correlation between independent variables and safety compliance was indicated at safety knowledge (r=0.72). Whereas, the highest correlation between independent variables and safety participation was indicated at safety knowledge (r=0.61). This concluded that all variables have the positive correlation.

Table 4.5
Correlation Analysis

	Safety Knowledge	Safety Motivation	Safety Coaching	Safety Caring	Safety Controlling	Safety Compliance	Safety Participation
Safety Knowledge	1						
Safety Motivation	0.48**	1					
Safety Coaching	0.56**	0.454**	1				
Safety Caring	0.54**	0.38**	0.90**	1			
Safety Controlling	0.48**	0.36**	0.84**	0.87**	1		
Safety Compliance	0.72**	0.51**	0.53**	0.53**	0.52**	1	
Safety Participation	0.61**	0.42**	0.49**	0.48**	0.53**	0.75**	1

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

4.7 Hypothesis Testing

This study generated ten hypotheses and multiple regression was used to analyze the hypotheses. Regression is the suitable technique for testing relationship between independent variables and dependent variable as well as the significance of the independent variables will predict the value of the dependent variable (Bougie & Sekaran, 2013).

4.7.1 Hypotheses Testing for Independent Variables and Safety Compliance

Table 4.6 indicated that all independent variables have significance prediction on the safety compliance (R= 0.76). Then, the result (R^2= 0.582) showed that all variables accounted for 58.2% of the variance in safety compliance while the rest of 41.8% is explained by other variables.

Table 4.6
Model Summary A

Model	R	R Square	Adjusted R Square	Std. Error of estimate
1	.76[a]	.582	.575	.389

a. predictors: (Constant), Safety Knowledge, safety Motivation, Safety Coaching, Safety Caring, Safety Controlling

Meanwhile, Table 4.7 indicated that β values of three variables (safety knowledge, safety motivation and safety controlling) are found positively related to safety compliance. Safety knowledge (β = 0.545 , p < 0.01) was found to have the greatest influence on safety compliance followed by safety controlling (β= 0.205, p < 0.01) and safety motivation (β= 0.196, p < 0.01) towards safety compliance. Whereas, safety coaching (β= - 0.112, p > 0.05) and safety caring (β= 0.084, p > 0.05) have no positive relation to safety compliance.

Table 4.7
Multiple Regression Result on Safety Compliance

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Safety Knowledge	.57	.05	.545	11.88	.00
Safety Motivation	.23	.05	.196	4.61	.00
Safety Coaching	-.09	.07	-.112	-.1.25	.21
Safety Caring	.07	.08	.084	.87	.38
Safety Controlling	.17	.06	.205	2.71	.01

Thus, the analysis supported Hypotheses H3a, Hypotheses 4a and Hypothesis H5a but did not support Hypotheses H1a and Hypotheses H2a.

4.7.2 Hypotheses Testing for Independent Variables and Safety Participation

Table 4.8 indicated that all independent variables have significance prediction on the safety compliance (R= 0.683). Then, the result (R^2= 0.466) showed that all variables accounted for 46.6% of the variance in safety participation while the rest of 53.4% is explained by other variables.

Table 4.8
Model Summary B

Model	R	R Square	Adjusted R Square	Std. Error of estimate
1	.683[a]	.466	.458	.444

a. predictors: (Constant), Safety Knowledge, safety Motivation, Safety Coaching, Safety Caring, Safety Controlling

Furthermore, Table 4.9 indicated β values of three variables (safety knowledge, safety motivation and safety controlling) are found positively related to safety participation. Safety controlling (β = 0.452, p < 0.01) was found to have the greatest influence on safety participation followed by safety knowledge (β= 0.449, p < 0.01) and safety motivation (β= 0.130, p < 0.01) towards safety participation. Whereas, safety coaching (β= - 0.059, p > 0.05) and safety caring (β= -0.155, p > 0.05) have no positive relation to safety participation.

Table 4.9
Multiple Regression Result on Safety Participation

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Safety Knowledge	.48	.06	.449	8.67	.00
Safety Motivation	.15	.06	.130	2.70	.01
Safety Coaching	-.05	.08	-.059	-.58	.56
Safety Caring	-.12	.09	-.155	-.1.42	.16
Safety Controlling	.38	.07	.452	5.29	.00

Thus, the analysis supported Hypotheses H3b, Hypotheses H4b, and Hypothesis H5b but did not support Hypotheses H1b and Hypotheses H2b. The summary of hypotheses results were explained in the Table 4.10 below.

Table 4.10
Hypotheses Results

Hypotheses	**Result**
H1a: Perceptions of safety leadership with respect to safety coaching is positively related to safety compliance.	Not supported
H1b: Perceptions of safety leadership with respect to safety coaching is positively related to safety participation.	Not supported
H2a: Perceptions of safety leadership with respect to safety caring is positively related to safety compliance.	Not supported
H2b: Perceptions of safety leadership with respect to safety caring is positively related to safety participation.	Not supported
H3a: Perceptions of safety leadership with respect to safety controlling is positively related to safety compliance.	Supported
H3b: Perceptions of safety leadership with respect to safety controlling is positively related to safety participation.	Supported
H4a: Safety motivation is positively related to safety compliance.	Supported
H4b: Safety motivation is positively related to safety participation.	Supported
H5a: Safety knowledge is positively related to safety compliance.	Supported
H5b: Safety knowledge is positively related to safety participation.	Supported

4.8 Summary

This chapter has demonstrated the finding of the data analysis which consisted of respondent's demographic characteristics, reliability analysis, Pearson correlation analysis and multiple regression analysis (hypothesis testing).

Based on the statistical results, it can be concluded that all the independent variables are have a significant correlation towards dependent variables. The correlation analysis demonstrated that safety knowledge had the highest correlation for both correlations between independent variables and dependent variables. Meanwhile, multiple regression concluded that safety knowledge, safety motivation and safety controlling have a positive influence in safety compliance and safety participation respectively. On the other hand, safety coaching and safety caring have no influence on safety compliance and safety participation. It can be concluded that safety knowledge, safety motivation and safety controlling are important variables in ensuring safety behaviour as they have been consistently significant in explaining the variance in both dimension of safety behaviour. Thus, this summarize that six out of ten hypotheses in this study were supported. The obtained results will be further discussed and concluded in next chapter.

CHAPTER FIVE

DISCUSSION AND RECOMMENDATION

5.1 Introduction

This chapter will discuss the findings of the present results which is to examine the influence of safety leadership's dimensions (safety coaching, safety caring, safety controlling), safety motivation and safety knowledge with safety behaviour (safety compliance and safety participation) among the nurses working in the hospital. This chapter also includes the recommendations and suggestions for further research as well as the limitations confronted during the present study also will be highlighted.

5.2 Discussion of Findings

This study is conducted mainly to investigate whether nurses' perceptions towards their supervisor's safety leadership from the aspect of safety coaching, safety caring and safety controlling together with safety motivation and safety knowledge will influence their safety compliance and safety participation. Based on the studies and previous empirical evidence, this present study generated ten hypotheses which is explained in the following section.

5.2.1 Safety Coaching with Safety Compliance and Safety Participation

It was hypothesized that perceptions of safety leadership with respect to safety coaching is positively related to safety compliance and safety participation. The study found that safety coaching is not related to safety compliance and safety participation. The findings are consistent with the previous empirical investigation that was done in four universities in Central Taiwan (Wu et al., 2008).

There are a few reasons that influence the results. Firstly, the supervisor in this organisation could have failed to show an example by obeying safety regulations at the workplace. Wu (2005) explained that the concept of safety coaching usually focuses on the role model, intelligence inspiration and shared participation. This would be one of the possibilities for workers not to comply and participate in the safety and health matters at the workplace.

Besides that, the supervisor could have failed to explain the concepts of safety clearly and could not help the employees to recognize the importance of safety at the workplace because the messages about safety usually send by Safety and Health Officer (SHO) or other safety committee. Workers are more likely to appreciate, value, and internalize the safety message if they are occasionally delivered by their superior.

On top of that, other possibility that influence the findings of this study is due to the main decision on formulating safety policies, rules and procedures are made by the top management or supervisors rather than involvement of other workers. The decision on the aspect of safety and health should not be undertaken by experts or top management alone (Johnstone et al., 2005). Wharton (2003) pointed out that the safety performance is higher and increase when the employees are allowed to be a part of the decision-making process.

5.2.2 Safety Caring with Safety Compliance and Safety Participation

In this research, it was hypothesized that perceptions of safety leadership with respect to safety caring is positively related to safety compliance and safety participation. Previous studies show that supervisor's safety caring is an important factor for worker's safety compliance and safety participation (Cooper, 2015 & Wu, 2008). However, in this study, safety caring is not significantly related to safety compliance and safety participation.

Cooper (2015) pointed out that effective leaders show that they truly care about the workers by encourage everyone to participate in safety; showing appreciation; put a trust on people to do the right thing; listening to their followers; and acting on relevant information. As such this could have resulted in supervisor's safety caring relationship on safety behaviour not manifested.

Besides that, safety caring was explained in the aspect of aspects of stimulating harmony's value, put on respect and trust as well as caring and sympathetic (Wu et al., 2008). However, there is a possibility that harmonious group climate was not established at the nursing workplace. Thus, having a simple organisational structure which promotes more direct contact between supervisor and nurses would have been an ideal approach in expressing safety concern. In addition, Dejoy (1985) together with Lin and Mills (2001) further stressed that good communication within leaders and workers may influence the effectiveness of OSH performance at the workplace. As such there is a possibility that such an atmosphere wouldn't have taken place in the present research context and this could have resulted in supervisor's safety caring not influencing safety behaviour.

5.2.3 Safety Controlling with Safety Compliance and Safety Participation

In this study, it was predicted that perception of safety leadership with respect to safety controlling is positively related to safety compliance and safety participation. The result from analysis revealed the significant relationship between safety controlling and safety behaviour (safety compliance and safety participation) among the nurses in the hospital. The present study was supported by Wu et al. (2008) who concluded that safety controlling in safety leadership found affected mostly safety organization and management, safety equipment and measures, and accident investigations in safety performance between four universities in central Taiwan.

Cooper (2015) described that effective leaders also need to manage the activities and outcomes by having a clear instruction for action, to illustrate the expectations, accountable and responsible, and set a clear as well as maintain the targets improvement. In this study, nurse's supervisor had played their role effectively where they order the employees to accomplish safety goals firmly and obey the regulations of safety management consistently. These elements of controlling have positively influenced the employee's behaviour at the workplace.

Besides that, leader with safety controlling includes utilizing power, set up rules and make use others (Wu et al., 2008). In nursing context, the supervisor is the most important person who needs to make sure that the employees can improve safety defects continuously as they are dealing with the patients and the quality of works and patients safety care are the most important things to look into. In this study, the supervisor also seem likes regularly audits employees' safety performance and rewards them as this aspects can influenced them to comply with safety and encourage them to participate in any safety activities at the workplace. This was parallel with Wu (2008) who classified safety coaching is focus on incentives and achievements.

Besides that, Awolusi and Onikoyi (2014) pointed out that fringe, income and financial incentives are the most successful motivating factors towards employee's commitment. In contrast, the non-monetary benefits are seemed could only motivate

nurse's towards safety compliance and safety participation at the workplace in this institution.

5.2.4 Safety Motivation with Safety Compliance and Safety Participation

Based on regression analysis, safety motivation showed significant relationship with safety compliance and safety participation. This result is concurrent with the finding in a few previous studies (Bally, 2007; Conchie, 2013; Ford & Tetrick, 2008; Griffin & Hu, 2013; Lu & Yang, 2010).

This study had revealed that employee's behaviour is strongly influence by safety motivation that reflects a positive impact in their daily working day. In details, the employees found the importance to maintain safety at all times, felt the importance of having a safety workplace as well as they knew the importance of encouraging others to use safety practices in this organisation. The nurses are motivated to work well when positive perceptions of workplace conditions have been linked with self-directed and intrinsic work motivation (Moran et al., 2012), especially when work matches individuals' psychological needs for being independent, psychological relatedness and feelings of competence (Ryan & Deci 2000).

In addition, good leadership practice correlates positively with nurses' intrinsic work motivation and better patient safety outcomes in this and previous studies (Moody et al., 2006, Germain & Cummings 2010). This concluded that better motivation among the nurses give a better outcome to the organisation and reduce the accidents at the workplace.

5.2.5 Safety Knowledge with Safety Compliance and Safety Participation

It was hypothesized that there is a significant relationship between safety knowledge with safety compliance and safety participation in this study. The result in this study had revealed that safety knowledge had positive influence in nurse's safety behaviour (safety compliance and safety participaion). This finding was parallel with previous studies conducted by Vinodkumar and Bhasi (2010) and Lievens and Vlerick (2013).

There were several plausible reasons of the significant relationship. Firstly, the employees knew how to use safety equipments and standard procedures correctly at the workplace. According to Subramaniam et al., 2017, the level of knowledge on blood-borne pathogen transmission, risk perception, standard precautions, and importance of using personal protective equipment (PPE) were high among the workers.

Secondly, the result of this study also revealed that the employee can identify the hazards that associated with their jobs and knew how to reduce the risk of accidents and incidents at the workplace accordingly. Hence, attending proper training of prevention and management of needle stick injuries were significant to the finding of this study. As in this study was shown that the majority of nurses have attended the safety training once a year. Nsubuga and Jaakkola (2005) pointed out that nurses who were attended any training of prevention and management of needle stick injuries expose less risk of sustaining the injuries as compared with those who had not attended some kind of training. Besides that, Vinodkumar and Bhasi (2010) suggested that safety training can be created to convey useful knowledge regarding various procedures, related dangers and the measures of safety that need to be taken off by the employees during emergencies cases. Thus, knowledge is important aspect that can influence employee's behaviour in reducing the accidents at the workplace.

5.3 Implication

This section will discuss the theoretical implications as well as managerial implications of present thesis findings. These study findings have implications to both the theory as well as managerial in the area of occupational safety and health.

5.3.1 Theoretical Implications

This research was conducted to explore the relationship between safety behaviour (safety compliance and safety participation) and safety leadership dimension's (safety coaching, safety caring and safety controlling) along safety knowledge and safety motivation. Previous studies by Wu et al. (2008) and Vinodkumar & Bhasi (2010) which are comparable to this study were found conducted in other major sectors while this study has been conducted among nurses working in the hospital in Kuala Lumpur. In addition, other studies were conducted in other countries such as Australia (Neal & Griffin, 2006), Taiwan (Wu et al., 2008) and India (Vinodkumar & Bhasi, 2010); while this study's findings has extended the research in understanding the relationship between safety leadership dimension's along safety knowledge and safety motivation and safety behaviour in Asia region, specifically Malaysia. The results of this study also provide marginal support to the Transactional- Transformational Leadership Theory. In addition, this study can creates new opportunity for researchers in the non-western to prove on the influences of safety leadership, safety knowledge and safety motivation with safety compliance and safety participation among nurses working in the hospital. This study would be worthy and contributes value to the academic world due to lack of study were conducted among nurses in Malaysia.

5.3.2 Managerial Implications

In this study, safety behaviour which comprised of safety compliance and safety participation is an important factor as it should be practiced in the organization. Therefore, the managers or leaders are expected to continuously encourage safety compliance and safety participation among employees. This study proposes several suggestions based on the findings which highlighted the importance of safety leadership (safety coaching, safety caring and safety controlling), safety knowledge and safety motivation in encouraging safety behaviour (safety compliance and safety participation).

The findings of this study show that the antecedents of safety behaviour (safety compliance and safety participation) are safety controlling, safety knowledge and safety motivation. Thus, in attempt to increase safety compliance and safety participation among employees, leaders or supervisors need to encourage these three variables.

The first variable is safety controlling. The finding from the present study showed that safety leadership in terms of safety controlling has predicts safety compliance and safety participation. Safety controlling is defined in terms of monitor safety performance of the workers, compare to the safety visions as well as make improvement towards relevant barriers. The process consisted of three behaviors including utilize power, set up rules and make use others. These can be enhanced through safety and health policy. Based on the research findings, it is understood that nurse's supervisor should maintain

their leadership behaviour in terms of formulating and implementing safety and health policy in the hospital. Their commitment towards workers' safety and health while working should be translated in a clearly written statement and should be implemented accordingly.

Besides that, supervisor should explain clearly on what the organisation is able to provide employees in regard to safety and health and, also what will be expected from them. Supervisor also needs to respond to all the reports of unsafe, unhealthy conditions and works practices immediately. For the example, if injuries or illness occur, the supervisors should go beyond the regulations and tackle all hazards with appropriate resolutions.

The second variable is safety motivation. The leader needs to show respect to their workers and look for social support in their healthcare teams. In details, how supervisors provide feedback on performance, appreciate the achievement and provide encouragement are the factors that influence nurses' motivation working efficiently. On the other hand, motivation in nurses and perceptions of work can vary according to the particular goals and tasks their work entails. Therefore, staff appraisal and capacity review of individual nurses and the whole team could help to sustain work motivation and avoid ethical conflicts concerning nursing practice.

On top of that, an optimum workload is also can affects nurse's motivation. In details, the right amount of work or ‘eustress’ motivates, while an excess or absence of work produces distress. Working hours is also can influence nurses' motivation in two ways. Firstly, the appropriate time such as either working at night or day and secondly flexibility in planning their time. Those elements stated above are important aspects that influence nurses’ behaviour at the workplace and need to give serious attention by their supervisor. Nurses’ safety motivations are highly important to produce good quality in managing patients and maintain safety continuously when performing their job. Besides that by giving them chances to make differentiation may influence their consciousness and produce good quality of work.

The third variable is safety knowledge. This findings of this study provided evidence that safety knowledge is significantly related to safety compliance and safety participation. Therefore, supervisors should ensure safety knowledge is well executed to increase safety behaviour (safety compliance and safety participation) among the nurses. In nursing context, the supervisors should ensure different types of safety training (e.g. understanding of Malaysia legal requirement on occupational safety and health at workplace, accident reporting and investigating procedures and emergency responses) are well implemented in order to encourage safety behaviour (safety compliance and safety participation) among employees.

Supervisors are also should establish safety and health committee and actively inspect the workplace. These are to ensure that the training provided are clear, no ambiguous, and are carry out consistently without personal bias. Employees' feedback and input should also take into account because they expose to the danger directly and know more about safety problems and solutions than supervisors do. Besides that, supervisor are also responsible to inform the employees consistently about safety inspections, injuries and illness statistics. This will helps in improving the safety training in future.

5.4 Limitations and Suggestions for Future Research

There were few limitations encountered upon conducting the study. The first limitation of this study is this research only focuses on a single hospital in Malaysia. It is hoped that this study will be replicated by using the sample from other tertiary hospital or healthcare sectors in Malaysia for better results.

This study only focuses on three dimensions of safety leadership which are safety coaching, safety caring and safety controlling together with safety knowledge and safety motivation. These independent variables only contribute 40 - 60% of the safety behaviour as the dependent variables (based on the R^2 value). It means that there are other dimensions that have not been studied in this research that determine the safety behaviour among nurses in the healthcare sectors.

In the future, other researcher are suggested to conduct studies exploring the relationship between demographic factors such as age, length of service, gender (Lu & Yang , 2010; Omer Sadullah & Kanten, 2009), ethnicity and educational level (Nahar, Ford, Hallam, Bass, & Vice, 2013) and safety behaviour among the healthcare workers. Qualitative methods may also be suggested to support the study because the workers will be able to reflect the real situation and put forward their perception towards employers leadership attributes in the most accurate manner.

5.5 Conclusion

In conclusion, the results of this study indicates that employer's safety leadership in the aspects of safety controlling along safety knowledge and safety motivation has significant and positive relationship with employee's safety behaviour. Thus, such safety leadership behaviour of the employer along safety knowledge and safety motivation could influence the safety behaviour, in terms of compliance and participation among the nurses in healthcare sector. This study would be useful to all relevant parties involved in the educational sector, ranging from those involved in academic research, students as well as the various practitioners in safety behaviour management identifying the methods that can improve safety at the workplace.

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APPENDIX A

UUM KUALA LUMPUR
Universiti Utara Malaysia
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MALAYSIA

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"MUAFAKAT KEDAH"

Our Ref : UUM/UUMKL/P-39/133
Date : 05th Dicember 2016

TO WHOM IT MAY CONCERN

COLLECTION OF DATA FOR RESEARCH PURPOSES

We are pleased to inform you that the following individual is UUM Kuala Lumpur student who is presently pursuing his Master of Science Occupational Safety and Health Management. She is required to collect data from your organization as a requirement for the BPMZ69912 Research Paper courses that she is pursuing this semester.

No.	Name	Matric No.	I/D No.
1.	Rohaizah Binti Mohamad	820093	830620135858

Since she has chosen your organization as her assignment, we would be most grateful if you could render all assistance to her to carry out the project successfully.

Please be informed that the data collected is purely for academic purposes and we assure you that all information or data will be kept strictly confidential.

We really appreciate your kindness and cooperation in the above matter.

Thank you.

"SCHOLARSHIP, VIRTUE AND SERVICE"

Sincerely yours,

DR. AHMAD RIZAL BIN MAZLAN
Director
UniversitiUtara Malaysia
Kuala Lumpur (UUMKL)

APPENDIX B

Date :

Dear Respondent,

I am a Postgraduate student from Universiti Utara Malaysia and carrying out a survey regarding Safety Behaviours (SB), in order to fulfil the Master Degree requirements. The research objective is to determine the relationship between safety knowledge, safety motivation, safety coaching, safety caring and safety controlling towards nurses safety behaviour (SB).

Attached with this letter is a questionnaire that addresses the Safety Behaviour among employee in an organisation. I realize that your time is priceless and very precious; however, your involvement in this survey, will contribute to the success of this study.

There is no right or wrong answer to the statements listed in the questionnaire. Your sincerity and honesty is highly required in answering these statements. Please be rest assured that all your responses will be kept confidential and will be strictly used for the academic research purposes only.

With this, I highly appreciate your cooperation and participation in this study and wish to convey my thanks in advance.

If you are interested in this study and its outcome, please do not hesitate to contact me via email at a_izah143@hotmail.com or call me at 0132881707.

Thank you for your time and attention

Yours sincerely,

Tuan/Puan,

Saya merupakan pelajar Sarjana dari Universiti Utara Malaysia yang sedang menjalankan satu kajian mengenai Gelagat Kerja Selamat bagi memenuhi pra-syarat Sarjana dari Universiti Utara Malaysia. Objektif kajian ini adalah untuk menentukan hubungan antara pengetahuan keselamatan, motivasi keselamatan,latihan keselamatan, perhatian keselamatan dan kawalan keselamatan, terhadap Gelagat Kerja Selamat di kalangan Jururawat.

Bersama-sama ini disertakan soal selidik yang berkaitan dengan Gelagat Kerja Selamat dikalangan Jururawat di dalam organisasi ini. Saya sedar bahawa masa anda sangat berharga dan bermakna, namun begitu penglibatan anda dalam tinjauan ini, akan menyumbang kepada kejayaan kajian ini.

Tidak ada jawapan yang betul atau salah dalam soal selidik ini. Hanya keikhlasan dan kejujuran anda diperlukan dalam menjawab soalan. Untuk makluman, semua maklumbalas anda akan dirahsiakan dan hanya digunakan bagi tujuan penyelidikan akademik sahaja.

Dengan ini, saya sangat menghargai kerjasama dan penglibatan anda dalam kajian ini dan saya dahului dengan ucapan terima kasih.

Jika anda berminat dengan kajian ini dan dapatannya, sila hubungi saya melalui e-mel di a_izah143@hotmail.com atau menghubungi saya di talian 013-2881707.

Terima kasih atas kerjasama dan perhatian anda.

Yang benar;

ROHAIZAH BINTI MOHAMAD (820093)
Universiti Utara Malaysia, Kuala Lumpur.

SECTION A : DEMOGRAPHIC STATEMENTS

Please fill in blank and tick (√) in the appropriate boxes that corresponds to your answer to each of the following questions below.
Sila isikan tempat kosong dan tandakan (√) untuk mewakili jawapan anda pada semua soalan di bawah.

1. Age/ *Umur* :
   - ☐ 15-25 years/ *tahun*
   - ☐ 26-35 years/ *tahun*
   - ☐ 36-45 years/ *tahun*
   - ☐ 46- 55 years/ *tahun*
   - ☐ 56- 60 years/ *tahun*

2. Gender/ *Jantina*: ☐ Male/ *Lelaki* ☐ Female/ *Perempuan*

3. Race/ *Bangsa* :
   - ☐ Malay/ Melayu
   - ☐ Chinese/ Cina
   - ☐ Indian/ India
   - ☐ Others/ *Lain- lain*

4. Marital status/ *Status perkahwinan* :
   ☐ Married/ *Berkahwin* ☐ Single/ *Bujang* ☐ Other/ *Lain-lain:* _____

5. Highest Educational level/ *Tahap pendidikan tertinggi* :
   - ☐ Secondary school/ *Sekolah Menengah*
   - ☐ Diploma/ *Diploma*
   - ☐ Certificate/ *Sijil*
   - ☐ Degree/ *Ijazah*
   - ☐ Master and above/ *Master ke atas*
   - ☐ Others/ *Lain-lain*.....

6. How long have you been working?/ *Berapa lama anda telah bekerja?* :
   - ☐ Less than 1 year/ kurang dari se*tahun*
   - ☐ 1-5 years/ *tahun*
   - ☐ 6-10 years/ *tahun*
   - ☐ 11-15 years/ tahun
   - ☐ More than 15 years/ melebihi 15 tahun

7. How long have you been working with the present organisation?
   Berapa lama anda sudah bekerja dengan organisasi sekarang? : _____ *years/ tahun*

8. Have you ever had any occupational accident ever since you started working in this organisation
Adakah anda pernah mengalami kemalangan di tempat kerja sepanjang bekerja di organisasi ini ?

☐ Yes/ Ya ☐ No/ Tidak

9. If yes, how many accidents have you had while working in this organisation?
Jika ya, berapakah bilangan kemalangan yang pernah dialami sepanjang bekerja di organisasi ini?

☐ 1 - 3 ☐ 4 – 8
☐ 9 - 15 ☐ More than 15/ *Melebihi 15*

10. Have you ever had a needle and sharp injury?
Pernahkan anda mengalami kecederaan akibat tusukan jarum dan benda tajam?

☐ Yes/ *Ya* ☐ No/ *No*

11. If yes, how many needle and sharp injury have you had while working in this organisation?
Jika Ya, berapakah bilangan kecederaan akibat tusukan jarum dan benda tajam yang dialami sepanjang bekeja di organisasi ini?

☐ 1 - 3 ☐ 4 – 8
☐ 9 - 15 ☐ More than 15/ *Melebihi 15*

12. Was the incident of needle stick or sharp injury reported?
Adakah kejadian kecederaan akibat tusukan jarum dan benda tajam itu dilaporkan?

☐ Yes/ *Ya* ☐ No/ *Tidak*

13. Have you attended any occupational safety training?
Pernahkah anda pernah menghadiri latihan keselamatan?

☐ Yes/ *Ya* ☐ No/ *Tidak*

14. How often do you have to attend safety training?
Berapa kekerapan latihan keselamatan yang anda perlu hadiri?

☐ Every month/ *Setiap bulan*
☐ Once in three month/ *Sekali dalam tempoh tiga bulan*
☐ Once in six month/*Sekali dalam tempoh enam bulan*
☐ Once a year/ Sekali setahun
☐ Not at all/ *Tiada langsung*

SECTION B : **MAIN STUDY**
BAHAGIAN B : ***KAJIAN UTAMA***

Considering only your perception, please circle the most appropriate answer to you based on the scale below:
Dengan hanya mengambil kira pandangan anda, bulatkan jawapan yang paling tepat kepada anda berpandukan pada skala jawapan di bawah:

1	2	3	4	5
Strongly Disagree *Sangat Tidak Setuju*	Disagree *Tidak Setuju*	Neutral *Neutral*	Agree *Setuju*	Strongly Agree *Sangat Setuju*

No.	Statements/Pernyataan					
1	I know how to perform my job in a safe manner. *Saya tahu bagaimana untuk melakukan pekerjaan saya dengan cara yang selamat.*	**1**	**2**	**3**	**4**	**5**
2	I know how to use safety equipments and standard work procedures. *Saya tahu bagaimana untuk menggunakan peralatan-peralatan keselamatan dan standard prosedur kerja.*	**1**	**2**	**3**	**4**	**5**
3	I know how to maintain or improve workplace health and safety. *Saya tahu bagaimana untuk mengekalkan atau meningkatkan kesihatan dan keselamatan tempat kerja.*	**1**	**2**	**3**	**4**	**5**
4	I know how to reduce the risk of accidents and incidents in the workplace. *Saya tahu bagaimana untuk mengurangkan risiko kemalangan dan insiden di tempat kerja.*	**1**	**2**	**3**	**4**	**5**
5	I know what are the hazards associated with my jobs and the necessary precautions to be taken while doing my job. *Saya tahu apakah bahaya/hazad yang berkaitan dengan pekerjaan saya dan langkah berjaga-jaga yang perlu diambil semasa melakukan pekerjaan saya.*	**1**	**2**	**3**	**4**	**5**
6	I don't know what to do and whom to report if needle stick and sharps injuries noticed in my workplace. *Saya tidak tahu apa yang perlu dilakukan dan kepada siapa perlu dilaporkan jika suatu potensi bahaya/hazad diperhatikan dalam tempat kerja saya.*	**1**	**2**	**3**	**4**	**5**
7	I feel that it is important to maintain safety at all times. *Saya rasa adalah penting untuk mengekalkan keselamatan pada sepanjang masa.*	**1**	**2**	**3**	**4**	**5**
8	I believe that safety at workplace is a very important issue. *Saya percaya bahawa keselamatan di tempat kerja merupakan isu yang sangat penting.*	**1**	**2**	**3**	**4**	**5**
9	I feel that it is necessary to put efforts to reduce accidents and incidents at workplace. *Saya rasa adalah perlu untuk meletakkan usaha dalam mengurangkan kemalangan dan insiden di tempat kerja.*	**1**	**2**	**3**	**4**	**5**
10	I feel that it is important to encourage others to use safe practices. *Saya rasa adalah penting untuk menggalakkan orang lain untuk mangamalkan amalan-amalan selamat.*	**1**	**2**	**3**	**4**	**5**
11	I feel that it is important to promote safety programmes. *Saya rasa adalah penting untuk mempromosikan program-program keselamatan.*	**1**	**2**	**3**	**4**	**5**
12	My Supervisor handles safety cases honestly. *Penyelia saya menangani kes-kes keselamatan dengan jujur.*	**1**	**2**	**3**	**4**	**5**

No	Statements/Pernyataan					
13	My Supervisor sets an example by obeying safety regulations. *Penyelia saya menunjukkan contoh dengan mematuhi peraturan-peraturan keselamatan.*	1	2	3	4	5
14	My Supervisor helps employees to recognize the importance of safety. *Penyelia saya membantu pekerja-pekerja untuk mengenalpasti kepentingan keselamatan.*	1	2	3	4	5
15	My Supervisor explains the concept of safety clearly. *Penyelia saya menerangkan konsep keselamatan dengan jelas.*	1	2	3	4	5
16	My Supervisor involves personnel in safety decision-making. *Penyelia saya melibatkan pekerja dalam membuat keputusan berkaitan keselamatan.*	1	2	3	4	5
17	My Supervisor draws a picture to describe a safety vision. *Penyelia saya memberi gambaran untuk menerangkan visi keselamatan.*	1	2	3	4	5
18	My Supervisor creates a harmonious group climate. *Penyelia saya mewujudkan kumpulan persekitaran yang harmoni.*	1	2	3	4	5
19	My Supervisor allocates safety resources fairly. *Penyelia saya mengagihkan sumber untuk keselamatan pekerjaan dengan adil.*	1	2	3	4	5
20	My Supervisor accepts employees' advice to improve safety. *Penyelia saya menerima nasihat pekerja- pekerja untuk meningkatkan keselamatan.*	1	2	3	4	5
21	My Supervisor be confident of employee's safety performance. *Penyelia saya yakin terhadap prestasi keselamatan pekerja.*	1	2	3	4	5
22	My Supervisor makes an effort to meet employees' need for safety. *Penyelia saya berusaha untuk mencapai keperluan keselamatan pekerja-pekerja.*	1	2	3	4	5
23	My Supervisor recognizes employees' safety achievements. *Penyelia saya mengiktiraf keselamatan pekerja-pekerja*	1	2	3	4	5
24	My Supervisor order employees to accomplish safety goals firmly. *Penyeia saya mengarahkan dengan tegas pekerja-pekerja untuk mencapai matlamat keselamatan.*	1	2	3	4	5
25	My Supervisor effectively assesses and rewards staff safety performance. *Penyelia saya menilai dan memberi gajaran kepada prestasi keselamatan kakitangan.*	1	2	3	4	5
26	My Supervisor supports to establish regulations of safety management. *Penyelia saya memberi sokongan untuk menggubal peraturan dalam pengurusan keselamatan.*	1	2	3	4	5
27	My Supervisor consistently requests employees to obey regulations of safety management. *Penyelia saya memohon pekerja-pekerja untuk mematuhi peraturan pengurusan keselamatan secara konsisten.*	1	2	3	4	5
28	My Supervisor requests employees to improve safety defects continuously. *Penyelia saya memohon pekerja-pekerja untuk memperbaiki kekurangan keselamatan secara berterusan.*	1	2	3	4	5
29	My Supervisor regularly audits employees' safety performance. *Penyelia saya membuat pemeriksaan terhadap prestasi keselamatan pekerja secara berkala.*	1	2	3	4	5
30	My Supervisor do not order employees to accomplish safety goals firmly. *Penyelia saya tidak memberi arahan yang tegas kepada pekerja-pekerja untuk mencapai matlamat keselamatan.*	1	2	3	4	5

No.	Statements/Pernyataan					
31	I carry out work in a safe manner. *Saya melaksanakan kerja saya dengan cara yang selamat.*	1	2	3	4	5
32	I use all necessary safety equipment to do my job. *Saya menggunakan semua peralatan keselamatan yang sesuai untuk melakukan kerja saya.*	1	2	3	4	5
33	I use the correct safety procedures for carrying out my job. *Saya menggunakan prosedur keselamatan yang betul ketika menjalankan kerja saya.*	1	2	3	4	5
34	I ensure highest level of safety when I carry out my job. *Saya memastikan tahap keselamatan paling tinggi apabila saya melaksanakan tugas saya.*	1	2	3	4	5
35	I put in extra effort to improve the safety of workplace. *Saya membuat usaha tambahan untuk membaiki keselamatan di tempat kerja.*	1	2	3	4	5
36	I help my co-works when they are working under risky or hazardous conditions. *Saya membantu rakan-rakan sekerja ketika mereka melakukan tugasan yang berisiko atau merbahaya.*	1	2	3	4	5
37	I voluntarily carry out tasks or activities that help improve work place safety. *Saya membantu menjalankan tugasan atau aktiviti-aktiviti untuk membaiki keselamatan di tempat kerja secara sukarela.*	1	2	3	4	5