



UNIVERSITI PUTRA MALAYSIA

***SAFETY AND HEALTH MANAGEMENT COMMITMENT IN FIRE AND
RESCUE DEPARTMENT, KUALA LUMPUR, MALAYSIA***

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**SAFETY AND HEALTH MANAGEMENT COMMITMENT IN FIRE AND
RESCUE DEPARTMENT, KUALA LUMPUR, MALAYSIA**

By

ARAMEH ASKARI

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia,
in Fulfilment of the Requirements for the Degree of Doctor of Philosophy**

May 2017

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Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfillment of the requirement for the degree of Doctor of Philosophy

SAFETY AND HEALTH MANAGEMENT COMMITMENT IN FIRE AND RESCUE DEPARTMENT, KUALA LUMPUR, MALAYSIA

By

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May 2017

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High-risk organizations are continuously trying to minimize risks. There is a developing concern about safety and health at work, until 1994, but Malaysia still did not have adequate provisions for safety and health of employees at the work environment, while technology and high standards are crucial, a core aspect of an effective health and safety management system constitutes the main theme for this study. In order to determine the state of safety commitment of an organization; 5 element of policy, organizing, evaluation, planning and implementation and action for improvement were measured through quantitative studies. With a specific end goal to gather required data about OSH Management System, proper questionnaire has been utilized to look for the present commitment of employers and employees. The total number of respondents for measuring a commitment were 347. For approaching a fire safety model one more set of designed questionnaire were answered by 309 respondents with higher level of education. The analytical technique is utilized to demonstrate the outcome by analyze the primary and essential information which is obtained from questionnaires. The sorts of analysis required for each of the research objectives is Kruskal Wallis for measuring the commitment of 5 elements of OSH management system, TOPSIS method for ranking the 5 elements of OSH management system, percentage descriptive analysis to identified the type of hazards, and ANOVA one way for determination of level of awareness, and the developed model were tested by LISREL software and the adequacy of the structure were validating by KMO test. The results from the related questionnaire (measuring commitment of 5 elements) showed that in policy part all stations showed high commitment which Chi square shows 58.152, in comparing the commitment of stations station Hang Tuah were committed in all part of elements while station Kepong only had higher level of commitment base on the mean rank (180.66) in comparison with the Hang Tuah station. The results for ranking the 5 elements showed that evaluation with weight 2.810 is the most important factor. Findings indicate that all of the concerns identified elements are linked to commitment. To achieve the level of the awareness of the

workers the descriptive analysis was applied. The results showed that the level of the awareness among the workers are high with mean rank of 3.95. Regarding the type of the hazards of the department, fire explosion indicates a problematic hazard in the Fire and Rescue Department in Kuala Lumpur city. Therefore, the safety model was developed. A research additionally could build the information on relevant divisions like Bomba, which can support the businesses, worker, authorities and related organizations to put more efforts in regulating and handling the safety and health systems. The information presented in this study are essential since they give firm evidence of safety and health management which is useful for future references.



Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

**PENGURUSAN KESELAMATAN DAN KESIHATAN KOMITMEN DI
JABATAN BOMBA DAN PENYELAMAT, KUALA LUMPUR, MALAYSIA**

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Organisasi berisiko tinggi sentiasa berusaha untuk mengurangkan risiko susulan terdapat cetusan kesedaran berkenaan pengurusan keselamatan dan kesihatan di tempat kerja sehingga 1994 tetapi Malaysia masih tidak mempunyai peruntukan/ sumber yang mencukupi dalam aspek keselamatan dan kesihatan pekerjaan. Walaupun teknologi dan piawaian tinggi dalam sesuatu organisasi adalah penting, namun keberkesanan sistem pengurusan keselamatan dan kesihatan pekerjaan merupakan fokus utama kajian ini. Dalam usaha untuk menentukan komitmen keadaan keselamatan sesuatu organisasi, lima (5) elemen dasar iaitu penganjuran, penilaian, perancangan, pelaksanaan dan tindakan penambahbaikan diukur melalui kajian kuantitatif. Tinjauan literatur menunjukkan penambahbaikan kajian ini. Dengan matlamat akhir yang khusus untuk mendapatkan data yang diperlukan berkenaan Sistem Pengurusan Keselamatan dan Kesihatan Pekerjaan (OSH), satu soal selidik telah diedarkan untuk melihat komitmen majikan dan pekerja melibatkan 347 responden. Terdapat satu lagi soal selidik telah direka dan dijawab oleh 309 responden berpendidikan tinggi bagi memperlihatkan model keselamatan kebakaran. Teknik analitikal telah digunakan dengan menganalisis maklumat utama dan penting dalam soal selidik tersebut. Analisis yang digunakan untuk setiap objektif kajian adalah Kruskal Wallis untuk mengukur komitmen lima (5) elemen dalam sistem pengurusan OSH, kaedah TOPSIS untuk penentuan kedudukan (ranking) 5 elemen sistem pengurusan OSH, analisis deskriptif untuk mengenalpasti tahap *hazard* dan ANOVA sehalu untuk mengukur tahap kesedaran, dan model yang dibangunkan diuji dengan perisian LISREL dan ketepatan struktur dinilai oleh ujian KOM. Keputusan daripada soal selidik (ukuran komitmen 5 elemen) iaitu dalam bahagian polisi, semua stesen menunjukkan komitmen tinggi, 58.152 Chi square melalui perbandingan komitmen stesen. Stesen Hang Tuah adalah komited dalam semua elemen manakala stesen Kepong hanya ada tahap komitmen tertinggi dalam min (180.66) berbanding stesen Hang Tuah. Keputusan daripada soal selidik yang berkaitan (ukuran komitmen 5 elemen) menunjukkan penilaian dengan pemberat 2.810 adalah faktor paling utama. Sehubungan itu, dapatan kajian mengenalpasti bahawa semua masalah yang

dikenalpasti adalah berhubungan dengan komitmen. Analisis deskriptif telah digunakan bertujuan mengukur tahap kesedaran pekerja. Keputusan menunjukkan tahap kesedaran dalam kalangan pekerja adalah tinggi dengan min 3.95. Berdasarkan jenis beberapa *hazard* (bahaya), kebakaran letupan dikenalpasti sebagai satu *hazard* (bahaya) yang bermasalah di Jabatan Bomba dan Penyelamat, Kuala Lumpur. Justeru, satu model keselamatan telah dibentuk. Kajian ini secara langsung dapat menyalurkan maklumat kepada organisasi berkaitan seperti BOMBA, yang mana ia dapat membantu sesuatu perniagaan, pekerja, pihak berkuasa dan organisasi berkaitan dalam meningkatkan usaha mengawal selia dan mengendalikan sistem keselamatan dan kesihatan pekerjaan di tempat kerja mereka. Maklumat yang diperolehi dalam kajian ini adalah berfaedah kerana ia memberi bukti kukuh tentang pengurusan keselamatan dan kesihatan pekerjaan serta memberi manfaat untuk rujukan pada masa hadapan.



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I certify that a Thesis Examination Committee has met on 15 May 2017 to conduct the final examination of Arameh Askari on her thesis entitled "Safety and Health Management Commitment in Fire and Rescue Department, Kuala Lumpur, Malaysia" in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Doctor of Philosophy.

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LIST OF ABBREVIATIONS

OSH	Occupational health and safety management
OSHA	Occupational health and safety management act
DOSH	Department of Occupational Safety and Health
SOPs	Standard operating procedures
NIOSH	National Institute of Occupational Safety and Health
WHO	World Health Organization
FMD	Factories and Machinery Department
UBBL	Uniform Building By-Law
NFPA	National Fire Protection Association
HAZMAT	Hazardous Material
FEMA	Federal Emergency Management Administration

CHAPTER 1

INTRODUCTION

1.1 Background of Study

As a quickly industrializing nation and having the vision to be placed in the developed countries category by the year 2020, Malaysia has gained colossal ground in enhancing the safety and health of the nation's workforce. The advancement for safety culture includes the implementation of OSHA since 1994. However, the issue confronted by Malaysia is not having nor building up any advancements for occupational safety and health as highlighted by Anthony, (2005). The implementation of OSHA on 1994 denoted a critical turning point in Malaysia's occupational health and safety. According to the Rampal, (2006) with the expanded scope under the Act (all workers aside from those in the Armed Forces and work on board ships) and the objects of the Act unmistakably characterized multi-dimensional endeavors are made to guarantee safety and health of employees at workplace.

DOSH perform as an organization that implements the occupational safety and health laws and regulations and is affiliated to the Ministry of Human Resources. Lately, the agency has experienced some institutional by expanding its labor skills to manage current difficulties. Consequently, the organization additionally has extended limited time exercises in a joint effort with different partners in Malaysia (DOSH, 2012).

To have the capacity to run a powerful safety and health program, there must be a purpose behind actualizing particular management system. The diverse parts meet up to guarantee a viable accomplishment of the Occupational Safety and Health objectives (Tulashie, et al., 2016). Certified occupational health and safety management (OHSM) frameworks have turned into a vital instrument for organizations in their endeavors to guarantee a sound and safe workplace (Robson, et al., 2007); (Rocha, 2010).

Friend, et al., (2007) stated that OSH is engaged in saving and ensuring human and other resources' safety in the working environment. Additionally, according to a study of Molamohamadi, (2014) Occupational Safety, Health, and Environment are crucial factors in working environment prosperity which are disputable issues and can affect the success of organizations in the competitive markets.

According to Goetsch, (2010) and Reese, (2009) OSH has experienced critical change in the course of recent decades. Some of these reasons are: developments in technology that have presented new hazards in the workplace; expansion of safety and health enactment and related regulations; expanded pressure from regulatory offices; acknowledgment by officials that specialists in a safe and healthy workplace are

ordinarily more gainful; expanded focus from environmentalists; corporate social responsibility and expanded focus from work organizations and employees by large.

Process safety varies from occupational safety as it exclusively concentrates on prevention and relieving significant process accidents, for example, fires explosion, and harmful discharges from toxics, though occupational safety concentrates on work environment hazards, for example, excursions, slips, and falls (Khan., et al 2015).

1.1.1 Importance of Having an Effective Safety and Health Management

System Economic Reason

There are sound budgetary purposes behind reducing word related occupational accidents and sick wellbeing, notwithstanding moral and administrative reasons (Hsa, 2006). Other than diminishing costs, practical wellbeing and safety administration progresses business adequacy. An extraordinary number of word related accidents, realizing more than three days off work are represented to the Health and Safety Authority consistently. Word related maladies and sick wellbeing are harder to gage as a result of their long dormancy period yet achieve wealth of one million days lost at work each year. These mischances and ill-wellbeing episodes are a direct result of disappointment disillusionments and inadequacies in the word related safety and wellbeing administration in associations (Australian Government Australian Safety and Compensation Council, 2009).

Legal Reasons

As per Hsa, (2006) Safety, Health and Welfare at Work Act 2005 (the 2005 Act) obliges people to ensure, so far as is sensibly practicable, the prosperity, security and soundness of representatives and to oversee and lead their work practices in order to ensure their wellbeing, prosperity and wellbeing. This obliges them to be proactive in managing their security, prosperity and wellbeing commitments and oversee them productively and efficiently. This direction should help associations to improve their wellbeing and security administration by giving guidance on it should be overseen, and in the process help them to conform to their legitimate necessities.

Moral and Ethical Reasons

The proactive administration of safety and wellbeing in the workplace causes organizations to alleviate accidents and ill- wellbeing at work put. The outcomes from introduce ponder should enable associations to diminish the individual misfortunes achieved as an eventual outcome of accidents and ill- wellbeing at work (Hsa, 2006).

1.1.2 Occupational Health and Safety Management

In the investigation of Zahari, (2014), he mostly focused around the Occupational Safety And Health Act 1994 section 514, which incorporates all corrections up to 1 January 2006 as a vital part of the new structure to make further procurements for securing the safety, health and welfare of persons at work, for ensuring others against risks towards safety regarding the performance of persons at work, to set up the National Council for Occupational Safety and Health, and for matters associated therewith.

OSHA was implemented on 25th February 1994 with the goal to guarantee safety, health and welfare of all persons at all workplace with the essential obligation of guaranteeing safety and health at the working environment subjected with the individuals who make the risks and work with the risks (Hamid, 2003). Aside from those subjected to Merchant Shipping Ordinance and the military (Law of Malaysia, 2000). Under Section 15 (1) and (2) Occupational Safety and Health Act 1994, managers have an obligation to guarantee, similarly as practicable, that employees are not presented to any risk at the work environment (Law of Malaysia, 2000).

The Act additionally accommodates a consultative procedure at the policy level with the foundation of National Council for Occupational Safety and Health. This consultative procedure stretches out to where safety and health projects are actualized with both employers and employees delegate as individuals from safety and health committee.

The Occupational Safety and Health Act 1994 is upheld by the Department of Occupational Safety and Health, (2012), a government management under the Ministry of Human Resources Malaysia which will guarantee through implementation and limited time works that businesses, self-employed persons, manufacturers, designers, importers, suppliers and employees dependably perform in safe and healthy working environment, and dependably conform to existing enactment, guidelines and codes of practice. Additionally, the department plans and review legislation, policies and codes of practice on relating to occupational safety, health and environment as a premise in guaranteeing safety and health at work.

The use of health and safety law is different for Fire and Rescue workers in connection to some of their operational exercises since: they need to send firefighters into dangerous circumstances keeping in mind the end goal to spare lives when any other person would try to avoid the threat; they need to prepare individual workers to have the capacity to make difficult decisions in risky position, quick moving, mentally charged and pressurized circumstances, notwithstanding when there may in some cases be incomplete data about the incidents; they need to react to dangerous circumstances which are not of their own, this is different to most divisions where it is the business that creates the dangers; and they will be unable to control or alleviate a few aspects of the workplace (Mahinder, 2003).

Regarding the general obligations of employers to employees, there will be an obligation for each business to ensure the working environment for their workers is under a safe, healthy and secured condition. For instance, machineries and materials stockpiling inside the factories ought to be accurately monitored in a practicable and free of risk to health. In this way, it can minimize the rate of accidents happen inside the work environment. According to DOSH, (2011) as a consequence of certainty, any worker found that has violated the obligation, a punishment could force to employer, for example, a fine not surpassing fifty thousand ringgit or detainment for a term not surpassing than two years or to both.

Furthermore, workers at work likewise have forced general obligations similarly to managers. Each worker ought to take great look after safety and health of himself or different workers too. At that point, worker is prudent to co-work with employer and other individual who doled out any obligation under this Act. DOSH, (2011) found that undoubtedly, employers will have a tendency to give any safety equipment to workers to keep away any risks happened to workers. Along these lines, as workers ought to comply any guideline given by the employer and stay away from any risky occurrence.

The research of Zin, (2012) have demonstrated that OSHA 1994 is recognized as a compelling methodology giving management system to authorize human conduct towards safety compliance.

Generally Occupational Safety and Health management ought to have determined capacities that incorporate observation of the workplace and health of employees, activities on the control of hazards at work, organization of medical aid and emergency response, safety advancement and procurement of remedial measures for occupational disease. It is likewise vital to guarantee the safety and health of the workforce in such way (Jemoin, 2006).

Jemoin, (2006) said that in different conditions, indicated that workers' access to the occupational health management in just restricted to five to ten percent in first world countries. Accordingly, there is a critical need expected to organize and promote OHS keeping in mind the end goal to manage present and future difficulties emerging from working environments in Malaysia. In addition, the National Institute of Occupational Safety and Health (NIOSH) additionally have a center mission which is to directly examine enhancements and ensure the safety and health of workers (Gillen, 2010).

1.2 Problem Statement

Regardless of the way that individuals are working and spend the vast majority of their working hours at the workplace, little consideration and assets are concurred to safety and health at work. Specific difficulties for Fire and Rescue Department staff undoubtedly is that, firefighting is highly hazardous work. In most high risk work

circumstances, the objective is to mitigate the risk and hazard (Kunadharaju, et al., 2011).

Information from SOCSO, (2007) Social Safety Organization demonstrated that the amount of fatal accidents is still not alleviated to a fulfilling level and still is classified as high if contrast with others regions. Additionally, taking into account the Bomba report in 10 of December in 2013, Sungai Siput, a line of seventeen shops were completely collapsed by the fire that happened in the morning. In this manner, the number of accidents and injuries were the center of attention since the implementation of OSHA 1994, yet despite this fact there has not been credible improvement.

The significance of safety and health management in occupational accidents and illnesses prevention, has emerged as a vital exploration ground in the H&S research group (Yorio, 2015). Albeit regulation in safety, and health management in Malaysia are reasonably expansive, the level of knowledge and awareness of regulations of these measures within society itself is lower than what expected (Kamar, 2014). The level of awareness among the employees and employers at these organizations is determined and discussed further in chapter four. Tappura, et al., (2015) mentioned weak functioning in safety and health and the need to enhance their performance is well established in the literature, implying an urge to consider and analyze safety and health management commitment among employees and employers of Fire and Rescue Department to organize hazards and ascertain hazard volume to increase safety and help health and safety environment expertise in basic leadership functions. There are numerous purposes behind commitment evaluation. This study ranked the components of OSH management system in commitment by utilizing TOPSIS technique as a part of safety and health management of employees and employers with respect to MS1722 Malaysian guideline

Insufficient OSH information may has effected the health of fire fighters due to the lack of immediate information of about the real situation at a disaster scene. In any case, poor collaboration or an absence of it between the experts and the different groups of laborers included will build the level of hazard for specialists' health and safety. Poor management brings about lack of inadequate or inappropriate: readiness arranges coordination of all different communication required in a specific occasion, given specificity of their undertakings, diverse correspondence framework they may utilize or dialect they might have the capacity to comprehend, data and correspondence some time recently, amid, and after the occasion, individual PPE and defensive clothes, training, post-occasion bolster (EU-OSHA, 2011).

High rates of injuries are basically because of deficient or non-presence of an OSH management system. Numerous occupational accidents and injuries are because of a breakdown in the current OSH management system. In this way, the utilization of a "powerful" management can prompt more secure organizations and reduce rate of injuries and work related diseases (Davies, 1996).

The current implementation of safety and health management in organizations are slightly poor in the budget allocate for safety and health manner. Lack of enforcement, monitoring and safety audit on mandatory safety and health requirements due to lack of serious commitment, insufficient workforce and budget allocation are the most important factors that lead to the weak management in occupational safety and health commitment. The unsatisfactory OSH record has always been addressed. It is because the OSH management system is a neglected area and a function that has not been pursued systematically. Safety is an important issue, but many employers do not feel it is vital to the success of organization (Bakri, 2006).

Fire and Rescue Department Malaysia (FRDM) reported that seven years' fire statistics in Malaysia demonstrate that it was 27387 fire building cases in Malaysia, indeed step by step expanded from 2005-2011. Fire and Rescue Department Malaysia, (2012); Salleh, (2009). Unfortunately, there are moderately no adequate legislation and guidelines ablaze safety for structures in Malaysia.

Many fires have an impact on the environment because of the relative ease of transmission of harmful chemicals to the nearby environment, fires with significant impacts on the environment or that represent a fire where there was a particular effort to address the environmental impacts of the fire and firefighter activity (Martin, 2016). If an environmental event causes an impact to the ecology, generally it will affect a large area and affect the ecology of that area. This is the more likely outcome of a fire event. One can break the impacts into pathways, over which the hazards travel from the source to the target. The pathways are environmental pollution through water, air, land or noise pollution. (CRC, 1999). Hazards that can be experienced from a fire include general pollutants/indicators, metals, particulates, polycyclic aromatic hydrocarbons (PAHs), chlorinate dioxins and furans, brominated dioxins and furans, polychlorinated biphenyls and polyfluorinated compounds (Turekova & Balog, 2010).

In this manner, the number of accidents and injuries were the center of attention since the implementation of OSHA 1994, yet despite this fact there has not been credible improvement. Insufficient commitment among occupants, lack of information among workers may contribute problem while poor planning by the management and also absence of occupants during fire drill exercise (Bakri, 2006).

The significance of safety and health management in occupational accidents and illnesses prevention, has emerged as a vital exploration ground in the H and S research group (Yorio, et al., 2015). Albeit regulation in safety and health management in Malaysia are reasonably expansive, the level of knowledge and awareness of regulations of these measures within society itself is lower than what expected. Therefore; the level of awareness among the employees and employers at these organizations is needed to be determined in this study. Implying an urge to consider and analyze safety and health management commitment among employees and employers of Fire and Rescue Department is important to organize hazards and ascertain hazard volume to increase safety and help health and safety environment

expertise in basic leadership functions (Tappura, et al., 2015). That is why a most problematic kind of an identified hazards need to determine in the study. There are numerous purposes behind commitment evaluation, somehow there are different in terms of commitment.

Zahari, (2014) expressed that the regular issues with respect to health and safety management are absence of commitment among occupants, lack of awareness and training among Emergency Response Team (ERT) individuals that couldn't perform their part appropriately. These shortcomings may underline the need for commitment in health and safety management framework appropriately that has not been implemented before in the mentioned department which needs to be covered in this study. This issue can be prevented if the organization had executed the updated guidelines instead of the old one (MS1722, 2011) that specified meticulously how operations were to be directed.

Kunadharaju, et al., (2011) highlighted much of the regular incidents that implied the issues use and enforcement of standard operating procedures (SOPs) pertaining to basic firefighting procedures and techniques. Absence of SOPs may prompt issues. SOPs are likewise the key element for tending to the different legislative and regulatory necessities that influence fire administration operations (Federal Emergency Management Agency, 1999). They outline a structure to convey lawful and managerial requirements, hierarchical policies, and key plans to the individuals (Akyar, 2012). Base on Balkissoon, (2011) the issues of safety responsibilities must have documented in existing procedures, job descriptions, or objectives and targets, in order by the employees involved in developing the safety policy. Although a basic accident reporting and investigation system had been in use in the operations departments for several years, the company did not provide formal training or guidance to support companywide use of the system

In view of literature, firefighters are faced to health harming air poisons which can bring about harsh health issues (Reisen, 2011). Also, Fire fighters and other specialists in rescue department sent in catastrophic events might be especially at danger of respiratory and asthmatic issues. Fire explosion deliver abnormal amounts of thermal radiation and overweight. The stun wave of an explosion can prompt the harm or death of individuals in the region and huge harm to structures. Emergency workers might be specifically threat when a domino impact happens, prompting auxiliary explosions (EU-OSHA, 2011).

The study of Salleh, (2011) recognized different fire safety issues in the structures, for example, lack fire safety policy, standards and plans, lack of periodical fire trainings for staff, lack of fire authentications, lack of emergency escape plans and lack of fire policies. This is bolstered by the results for the situations where every examined structure has not maintained a most part of the prerequisites of the Malaysian enactments, legislation and standard identified with fire safety, additionally the study said that there are no extensive fire safety guidelines particularly for structures at both

the government and state levels in Malaysia, which is considered in this study as one of the objectives to develop a fire safety model.

The purpose of having a fire safety model analysis is to provide a guideline to relevant authorities such as local authorities, consultants, professional bodies and others before any proposal to build a new building in the future can be granted. However, research in fire safety for organizations is not many have been done and concerning fire safety in organization in Malaysia is very new and very limited resources are available to review.

Through this research, it is found that there is no standard procedure of fire safety management even though, there are regulations, standards and codes and this could lead to many different procedures worst among Fire and Rescue Department. Moreover, every party should play their role in order to ensure a good commission is implemented. However, a knowledge of fire safety is quite high but still there must be a strategy to be implemented in order to increase the awareness and knowledge (Zahari, 2014). That is the reason there is a requirement for continuous and exact monitoring, evaluation and compliance with OSHs law and present any data, updated guideline and important safety and health training as is empirically expected to ensure the safety and health of the workers in workplace.

1.3 Significance of Study

In developing regions, safety rules ordinarily don't exist; on the off chance that they do, regulatory authority is generally exceptionally frail in executing such rules successfully (Alhajeri, 2011). In Malaysia the safety management implication system as of now practice have some components, as it does not have the mission, vision and targets of safety management system framework and in addition absence of awareness and drive for acknowledgment of safety among management administration due to over accentuation on generation. Most occupational accidents are because of administration failure, unsafe strategies, absence of personal protective equipment (PPE), dangerous and unsafe equipment, and so forth (Hamid, 2003). As indicated by Amponash, (2013) the organization ought to formulate and practice the Safety and Health administration policy inside the organization, continual training and education are along these lines crucial to keep their insight overhauled on the significant S and H issues. There is still a ton of space for enhancements and certainty that accidents rates could be decreased with higher OSH Act compliance.

Organization for advancement and execute a safety approach and policy must build up destinations and procedures for commitment the responsibilities of the policy, take the activities important to enhance the framework's system performance, and exhibit its conformance with the prerequisites of the standard and with the legal commitments (Abidin, 2015).The safety statements conveys a decent management up to the most elevated amount by allotting clear obligations in the control of safety and health management framework at the workplace, additionally may guarantee that suitable

procedures are brought to meet the significant statutory procurements and that those monitored and reviewed all the time, diminish the hazards and mitigate risks.

This research presents the findings of an OSH Act gap analysis of the systems and practices of Fire and Rescue Department. They have policy in the system but some of them are not applicable in all kind of organization and the terminology are not really clear. While findings would vary from firm to firm, this work would be useful to local companies as it notes several common areas of concern for their managers and employees. Also, the research recommendations may be adoptable or adaptable by those local companies and may help to improve their OSH management systems, in compliance with the OSH Act.

Present research additionally could build the information on relevant divisions like Bomba, DOSH and so forth, which can support the businesses, worker, authorities and related organizations to put more efforts in regulating and handling the safety and health systems.

1.4 Research Questions

General question: Is management commitment associated to OSH implementation.

Q1: Is there any significant relationship between elements of safety and health management system

Q 2: Is there any difference between the level of management commitment on different stations with regards to Safety and Health Act and Regulation.

1.5 Research Objectives

The main objective of this study is to assess the commitment of OSH management system in Fire and Rescue Department base on 5 element of policy, organizing, planning and implementation, evaluation and action for improvement.

1. To compare fire stations commitment of safety and health management with regards to health and safety at workplace (fire ground)
2. To rank the elements of OSH management system in commitment and determine importance of them in safety and health management of employees and employers regarding MS1722 Malaysian guideline.
3. To determine the level of awareness among the employees and employers at Fire and Rescue Department.
4. To determine the type of hazards, present in the workplace (fire ground).
5. To develop fire safety model in order to reduce the risk from the most problematic kind of an identified hazards at the workplace.

1.6 Scope of Study

The scope of this research is that the study is focused on the fire stations in Kuala Lumpur city while measuring the commitment of OSH management system of the employees and employers of the mentioned department is considered in analysis as a main goal of the study. Moreover, rankings the main factor and sub factors of the elements of OSH management in commission to the MS1722 as guideline will be analysed as ruled out by Jabatan Bomba dan Penyelamat Malaysia.

Absence of consistency and standards strategies for data gathering are not unprecedented particularly when the source of information for the same data might be gathered by more than one location. In the department of Fire and Rescue the guidelines is available while the terminology is not really clear. They should have follow and adapted the rules of others country while they can prepare the own one. Fragmented data is an impediment of any information that is obtained from secondary sources. Some portion of this is because of the reason for which a specific organization is gathering information and the sort of data it is interested in.

17 stations were included in the case study, however just 12 of them were participated in the research based on the limitation, 5 of them does not take part in this examination some of them are shutting down for construction and some of them were change their location. Likewise, in various times of a week the shift of the personnel was changed and researcher found the same staff in other stations. To prevent from reiterations of the answers a portion of the stations were removed from the data gathering. To cover this issue, the researcher hired assistant who managed and gathered the questionnaire surveys.

Although on other part most workers come from rural areas with little education. Some of them even don't know that they have the privilege to claim payment when they are harmed. In this circumstance, workers can barely tell whether their working environment is safe or whether the workplace safety management is properly performed. Dejoy, et al., (2004) found that in spite of the fact the research has effectively achieved its goals, even such "goal" indicators are, in any case, not generally steady and reliable. There are a few impediments to this study which might be useful to enhance future studies.

Keeping in mind the problem of handling the issue of small sample size, even the organization under study was a big organization with various obligations yet couldn't provide a bigger sample because of a bustling period and shift rotation in different reviews and absence of motivation concerning the study. Despite the fact that the sample was genuinely different, with reactions drawn from different areas, shifts in the organization, there was a reasonable return rate (91%) from distributed questionnaire among 380 workers, whose respondents were employers and employees.

Formally issued statistical information about the safety of fire fighters are by and large viewed as less reliable, for the information reporting, gathering and preparing procedures are not very much audited. Absence of true field information has restricted the studies on workplace safety management, particularly related quantitative studies. Training and meeting records from workshop and training program with a specific end goal to include data in regards to the examination issue to supplement and check the information gathered is essential which some way or another are difficult to gather. The present research expected that the respondents provide reliable and valid data that would help with valid information to be utilized as a part of making conclusions in connection to the study. The research additionally expected that the variables would stay consistent and the questionnaires would be returned in time.

1.7 Organization of the Thesis

There are 5 chapters in this thesis with reference and appendixes. The first part of this chapter is background: basic principles and history. Chapter one is a brief introduction to the overall thesis, introduces the subject matter and problem(s) being studied, and indicates its importance, it sets out the research question and research objectives to be attained.

In Chapter 2 the section encompasses a critical and comprehensive review of the literature related to the topic of thesis base on the foundation and main studies on OSH management system, theories/components of OSH management, management commitment of Fire and Rescue Department of Kuala Lumpur city.

Chapter 3 contains a description and justification of the materials, theoretical approaches and methods (including statistical analysis) used to achieve the stated objectives of the study undertaken. Moreover, it gives an overview on the methods utilized, the credibility of results finding and conclusions are depending on the quality of the research design, data collection and data analysis.

Chapter 4 portrays the general findings gathered from questionnaires study and collected data which analyzed and the results of the analysis are then exhibited in following Chapter, discussion part in relation to the objectives were set out after the results presented.

Chapter 5 is discussed the significance of the study and stresses the findings upon which a conclusion or conclusions are drawn in line with the objectives set, acknowledges the limitations, and suggests further research which may be carried out on the topic.

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