



UNIVERSITI PUTRA MALAYSIA

***PERCEPTION, SATISFACTION AND FEEDBACK AMONG EMPLOYEES
IN CERTIFIED ORGANISATIONS ON OCCUPATIONAL SAFETY AND
HEALTH MANAGEMENT SYSTEM IN THE KLANG VALLEY, MALAYSIA***

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By

NOORHASIMAH BINTI AWANG

**Thesis Submitted to the School of Graduate Studies, Universiti Putra
Malaysia, in Fulfillment of the Requirements for the Degree of
Master of Science**

November 2019

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Abstract of thesis presented to the Senate of Universiti Putra Malaysia in
fulfilment of the requirement for the degree of Master of Science

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November 2019

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Occupational safety and health management is an important aspect especially for activities that are involved in working at a high risk workplace. The main cause of various issues in the industrial sector is due to the absence or lack of an efficient management system. Malaysia currently uses the Malaysian Standard (MS) 1722:2011 and Occupational Health and Safety Assessment Series (OHSAS) 18001: 2007. The aims of this study are to determine the perception, safety satisfaction and safety feedback of the Occupational Safety and Health (OSH) Management System among employees in certified organisations in the Klang Valley. A cross-sectional study using self-administered questionnaires was conducted with a total of 300 respondents among 63 OSHMS certified organisations in the Klang Valley. The questionnaires consisted of four sections: socio-demographic, employee perception, safety satisfaction and safety feedback. IBM Statistical Package for Social Science (SPSS) was used to analyse all collected data. The findings revealed higher employee perception on OSHMS in evaluation (4.15 ± 0.56) and action for improvement (4.04 ± 0.53). Evaluation consisted of performance monitoring and measurement, incident investigation, audit and management review. The overall view of respondents towards the implementation of MS 1722 was positive which was in the moderate to good score. The findings revealed higher level of safety satisfaction of OSHMS in evaluation (3.77 ± 0.49) and action for improvement (3.68 ± 0.64). Employees' overall job satisfaction towards the implementation of MS 1722 certification was also positive (moderate – good score). Based on the safety feedback finding, respondents agreed that allowance or incentive from employers will encourage them to take safety as an important issue. Findings on the relationship between certified organisation and satisfaction show that only evaluation ($r = -0.134$, $p = 0.020$) was significant since the p-value was smaller than 0.05. It is

recommended that organisations should proceed to be certified in OSHMS for safety culture. Employee perception, satisfaction, and feedback, on the other hand, would be an important indicator to measure the effectiveness of OSH Management System implemented in the organisation as well as creating a positive safety culture. As a conclusion, further study can be extended about the need for OSHMS to ensure continuous OSH performance improvement and reduce accidents or occupational diseases.



Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia
sebagai memenuhi keperluan untuk ijazah Master Sains

**PERSEPSI, KEPUASAN DAN MAKLUM BALAS DIKALANGAN PEKERJA
DALAM ORGANISASI YANG MEMPUNYAI PENSIJILAN SISTEM
PENGURUSAN KESELAMATAN DAN KESIHATAN PEKERJAAN DI
LEMBAH KLANG, MALAYSIA**

Oleh

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Pengurusan keselamatan dan kesihatan pekerjaan adalah salah satu aspek penting terutamanya untuk aktiviti bekerja di kawasan berisiko tinggi. Penyebab utama pelbagai isu di sektor industri disebabkan oleh ketiadaan atau kekurangan sistem pengurusan yang cekap. Malaysia pada masa ini menggunakan Siri Keselamatan dan Kesihatan Pekerjaan (MS) 1722: 2011 dan Siri Penilaian Kesihatan dan Keselamatan Pekerjaan (OHSAS) 18001: 2007. Tujuan kajian ini dijalankan adalah untuk mengenalpasti persepsi, kepuasan keselamatan dan maklum balas keselamatan terhadap Sistem Pengurusan Keselamatan dan Kesihatan Pekerjaan (OSHMS) di kalangan pekerja di organisasi yang mempunyai persijilan MS 1722 di Lembah Klang. Kajian rentas keratan yang menggunakan borang soal selidik dijalankan dengan jumlah 300 responden di kalangan 63 organisasi yang disahkan persijilan OSHMS di Lembah Klang. Borang soal selidik terdiri daripada empat bahagian iaitu sosio-demografi, persepsi pekerja, kepuasan keselamatan dan maklum balas keselamatan. Pakej Statistik untuk Sains Sosial (SPSS) IBM digunakan untuk menganalisis data. Hasil dapatan kajian menunjukkan, persepsi pekerja yang lebih tinggi terhadap OSHMS dalam elemen penilaian (4.15 ± 0.56) dan tindakan untuk penambahbaikan (4.04 ± 0.53). Penilaian terdiri daripada pemantauan dan pengukuran prestasi, penyiasatan insiden, semakan audit dan pengurusan. Pandangan keseluruhan responden ke arah pelaksanaan MS 1722 adalah positif dimana berada dalam skor yang sederhana dan baik. Dapatan kajian bagi kepuasan keselamatan peringkat tinggi dalam OSHMS dalam elemen penilaian (3.77 ± 0.49) dan tindakan untuk penambahbaikan (3.68 ± 0.64). Kepuasan kerja keseluruhan pekerja terhadap pelaksanaan pensijilan MS 1722 juga positif kerana pandangan mereka terhadap MS 1722 (skor sederhana - baik). Berdasarkan pencapaian maklum

balas keselamatan, responden bersetuju bahawa elaun atau insentif daripada majikan akan mendorong mereka untuk mengambil keselamatan sebagai isu penting kepada mereka. Penemuan hubungan antara organisasi yang disahkan dan kepuasan menunjukkan bahawa hanya penilaian ($r = -0.134$, $p = 0.020$) signifikan kerana nilai p lebih kecil daripada 0.05. Adalah disyorkan bahawa organisasi perlu terus diperakui dalam OSHMS untuk membudayakan keselamatan. Persepsi, kepuasan dan maklum balas pekerja, sebaliknya, akan menjadi petunjuk penting untuk mengukur keberkesanan Sistem Pengurusan Keselamatan dan Kesihatan yang dilaksanakan dalam organisasi serta mewujudkan budaya keselamatan yang positif. Sebagai kesimpulan, kajian lanjut dapat diperluaskan ke dalam kajian atau kajian baru mengenai keperluan OSHMS untuk memastikan peningkatan prestasi KKP yang berterusan dan dapat mengurangkan kemalangan atau penyakit pekerjaan.

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This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfillment of the requirement for the degree of Master of Science. The members of the Supervisory Committee were as follows:

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LIST OF ABBREVIATIONS

OSH	Occupational Safety and Health
OSHMS	Occupational Safety and Health Management System
OHSAS	Occupational Health and Safety Assessment Series
ILO	International Labour Organization
MS	Malaysian Standard
POPEA	Policy, Organizing, Planning and Implementing, Evaluation and Action for Improvement
SOCISO	Social Security Organization
NIOSH	National Institute of Occupational Safety and Health
PDCA	Plan, Do, Check and Act
SHE	Safety Health Committee
OSHA	Occupational Safety and Health Act 1994
IAEA	International Atomic Energy Agency
DOSH	Department of Safety and Health
HSE	Health and Safety Executive
SIRIM	Standard & Industrial Research Institute of Malaysia
NCSB	National Institute of Occupational Safety and Health Certification Sdn. Bhd
ACD	Accreditation Certification Body
SPSS	Statistical Package for Social Science
HIRARC	Hazard Identification, Risk Assessment and Risk Control
ERP	Emergency Response Plan
SOP	Standard Operating Procedure

CHAPTER 1

INTRODUCTION

This chapter describes the research background, problem statement and justification, significance of the study, research questions, research objectives, research hypotheses and conceptual framework.

1.1 Research background

Occupational Safety and Health Management System (OSHMS) is a set of interrelated or interacting elements to establish, implement and achieve Occupational Safety and Health (OSH) policy and objectives. OSHMS is part of an organisation's overall management system used to manage OSH risks. According to the Malaysian Standard; (2011), a management system includes organisational structure, designing activities, risk assessment as well as the setting of objectives, responsibilities, practices, procedures, processes, and resources.

According to MS 1722: 2011, occupational safety and health, including compliance with the OSH requirements pursuant to national laws and regulations; and practice, are the responsibility and duty of the employer. Leadership and commitment from the employer are needed to encourage OSH activities in organisations and appropriate arrangements for the establishment of an OSHMS. The system consists of elements of policy, organising, planning and implementation, evaluation and action for improvement (Malaysian Standard, 2011).

The systems approach for occupational health and safety has gained worldwide acceptance since the introduction of OHSAS 18001 and ILO guidelines. OHSAS 18001, MS 1722, and most of the management systems advocate continual improvement and accident prevention. Measuring health and safety climates could be the performance indicators to evaluate the effectiveness of such systems. Both of these advocate continual improvement and accident prevention.

In Malaysia, the Occupational Safety and Health Management System requirements used are the Malaysian Standard (MS) 1722:2011 and the Occupational Health and Safety Assessment Series (OHSAS) 18001: 2007. This research will focus on the Malaysian Standard (MS) 1722: 2011 (Malaysia Standard, 2011).

The International Labour Organisation (ILO) highlighted that implementing an OHS Management System is a way to improve the safety culture in organisations, and at the same time, comply with OHS regulations (Dias, 2005). The setting up of a safety and health management system through continuous improvement in the workplace is seen as a means to improve working conditions and satisfy legal compliance.

The Occupational Safety and Health Act (OSHA) 1994, aimed to promote safety and health awareness as well as safety practices. Work-related accidents and diseases are preventable by complying with the Occupational Safety and Health Act, developing an awareness of occupational safety and health hazards among workers, assessing the nature and extent of hazards, as well as introducing and maintaining effective control and evaluation measures, organisational accident prevention programmes, etc. Occupational Safety Health (OSH) and OHSAS help to comply with legal requirements as specified in OSHA 1994 and the relevant regulations while providing the benefits of fulfilling business and social responsibility on environmental management (OSHA, 1994). The scenario of OHS Management Systems in Malaysia shows that since 1999, OHSAS 18001 has been the only OHS Management System implemented with 268 companies certified to this system (SIRIM, 2009). Most transnational companies operating in Malaysia have their own OHS Management Systems. Since there is no national standard for OHS Management Systems in Malaysia, the government developed the Occupational Safety and Health Management Systems – Malaysian Standard based on the ILO standards in 2003. Until 2005, OSH-MS 1722 was introduced but so far, only private organisations are certified to the standard (MSQH, 2009).

Consequently, to systematically prevent and control the possibility of accidents and illnesses in the workplace and to comply with statutory requirements, OSHMS have become one of the major strategies for addressing workplace safety and health (LaMontagne & Shaw, 2004). The system is a set of plans, actions, and procedures based on the common OHSMS and it consists of five elements (policy, organising, planning and implementation, evaluation, and action for improvement) to systematically manage health and safety in the workplace. Many organisations have found that a good management system and improvement of performance through an efficient management system and a well-structured performance evaluation are vital to their survival (Coelho & Moy, 2003). Previous research has revealed that an excessive number of injuries and accidents are caused by unsatisfactory or absence of health and safety systems (Lin & Mills, 2001).

In Malaysia, there are five Accreditation Bodies (AB) for the Malaysian Standard (MS 1722:2011), which include SIRIM QAS International Sdn. Bhd., SGS (Malaysia) Sdn. Bhd., Intertek Certification International Sdn. Bhd., NIOSH Certification Sdn. Bhd. and CI International Certification Sdn. Bhd.

(Department of Standards Malaysia, 2016). Being certified to a standard means that an organisation has established a systematic approach to control and improve its occupational, health and safety performance. This will give protection to employees from work hazards, injuries, ill health, diseases, near misses, and fatalities. Complying with the relevant standards can help organisations to comply with legal requirements set out by OSHA 1994, Factory and Machinery Act (FMA) 1967, Petroleum (Safety Measures) Act 1984 (Act 302), and other relevant regulations.

The greatest problem in safety is the difficulty of measuring an organisation's OHS performance (Petersen, 2000). Previously, the numbers of accident were the primary means of evaluating the effectiveness of a company's safety programme. However, in recent years, audits are commonly used to gauge the effectiveness of safety programmes. Another measure of safety system effectiveness is through perception surveys. Using perception surveys, Petersen (2000) identified that "high achievement" organisations had a high degree of supportive relationships by using the principles of group decision-making and through the significant role of the top management in realising this success. In addition, safety excellence happens when supervisors, managers, and executives are made accountable for the safety performance of the group that they manage or supervise (Petersen, 2000).

Risks to employees and other interested parties who may be exposed to OH&S risks associated with their activities has potential to drop by establishing an OSH Management System. It also will protect and safeguard businesses by providing customers, suppliers, and stakeholders with confidence that the organisation is aware and capable of managing OH&S issues. Businesses will save more money on OH&S incidents and accidents as the cost of preventing OH&S incidents will be lesser than the cost of handling and corrective actions after accidents occurred. The systems promote continual improvement, which will give businesses a competitive edge to compete in the marketplace and for those who have succeeded, to become more successful and resilient. The systems also look into the needs of human resource that will also increase staff morale and commitment in OH&S. Complying to standards provides the organisation with the accolades for a competitive edge (Department of Standards Malaysia, 2016).

The ISO 45001 certification for Occupational Health and Safety Management Systems helps organisations prevent work-related injuries and illnesses and provides safe and healthy workplaces. This standard applies for all organisation types, regardless of size or nature of work. Companies can integrate the standard into other health and safety programs for workers' health and wellbeing and fulfil legal requirements. The new standard for OHSMS has the same High-Level Structure (HLS) for improved alignment with other management system standards. ISO 45001 will replace the previous OHSAS 18001 standard. Thus, current users of OHSAS 18001 will need to update their

systems according to the new international standard. The companies have three years to transition to the new standard after its publication (published in March 2018).

Lastly, the aim of this study is to determine the employee perception, safety satisfaction as well as safety feedback on the implementation of Occupational Safety and Health Management System.

1.2 Problem statement and justification

OSHMS has already existed before; however, it is only widely practiced today due to worrying accidental case occurrences in the workplace. According to Vinodkumar and Bhasi (2010), the main cause of various issues about the industrial sector was caused by the absence or lack of an efficient management system. They added that OSHMS could guarantee safety and health in the workplace besides influencing employees' attitudes as well as behaviour. The core issue is what are the perceptions, safety satisfaction as well as safety feedback about the implementation of OSHMS in the workplace in terms of employees' point of view.

The efficiency of an OSHMS is heavily dependent on its capacity to encourage the involvement of the workforce and decentralise decision-making in this matter (Fernandez et al., 2007). Although much literature have highlighted the importance of employee involvement in OSH, there is still a lack of focus on the long-term sustainability of safety participation in OSHMS, which is fundamental to stay competitive.

The greatest problem in safety is the difficulty of measuring an organisation's OHS performance (Petersen, 2000). According to Neal and Griffin (2000), employee perception is the reflection of their belief on safety culture in the workplace. Indeed, the occupational safety and health culture is important to reduce workplace accidental rate.

The latest accidental rate statistical data shows a decrease in the number of accidental cases; however, it is still at an alarming state. Table 1 shows the trend of industrial accidental statistics from the years 2013 to 2015. The aim of this study is to determine the employee perception, safety satisfaction, and safety feedback on the implementation of Occupational Safety and Health Management System.

Table 1 : Industrial Accidental Statistics Year 2013 to 2015

Industry	2013	2014	2015 (Jan – Jun)
Agriculture, Fisheries and Forestry	2,249	2,135	909
Mining and Quarrying	411	453	193
Manufacture	16,145	15,323	7,445
Electricity, Gas, Water and Sanitation Services	791	905	445
Construction	5,908	6,552	3,278
Commercial	10,133	9,618	4,457
Accommodation and Food and Drink Activities Services	2,209	2,052	1,019
Transportation and Storage	4,002	4,178	2,064
Finance and Insurance / Takaful Activities	1,231	1,452	790
Real Estate, Renting and Business	5,438	5,445	2,500
Public Administration and Defense / Compulsory Security Activities	15,040	15,218	7,866
Total	63,558	63,332	30,966

(Source: Social Security Organization (SOCSO), 2015)

All industries in Malaysia, including government organisations, have to comply with the OSHA 1994 Act to fulfil their responsibilities as employers to make sure that workers have a safe workplace. 25 years of OSHA implementation has reduced the number of occupational accidents and diseases at the workplace. Although this regulation binds employers, the Social Security Organisation (SOCSO) statistics showed a fluctuated number of industrial accidents, from 63,558 accidents in 2013 to 63,332 in 2014 (35%) (SOCSO, 2015).

The manufacturing sector of small and medium industry (SMIs) in Malaysia has rapidly expanded consistently due to Malaysia's 2020 Vision to become an industrialised country. Despite the contributions of SMIs to the Malaysian economy, employees in this sector are suffering high cases of fatality annually due to workplace accidents and work-related health hazards.

Occupational health and safety (OHS) is linked with any employee in any organization including universities. There are cases of injuries and even deaths of students and instructors in universities (Wu et al. 2006). Risks related to OHS may weaken the aims and objectives of universities.

According to International Labor Organization (ILO), —every year more than 2 million people die from occupational accidents or work-related diseases (ILO

Safety and Health at Work, 2010) and rate of injuries and ill-health is much higher than this figure. Several studies like Robson et al. (2007), Fernández-Muñiz et al. (2008), Seoul Declaration (2008), ILO-OSH (2001) and BS 8800 (2004) indicates that the OHS based management systems not only reduce accidents and injury rates but it also improves the business and productivity of an organization.

Makin and Winder (2008) explained the base of any OHSMS is the identification of hazards and measures to control them. This base determines the scope and content which contributes in the success of the system and any negligence in the base can let down the performance of OHSMS. Fernández-Muñiz, et al. (2008) have said that satisfactory working conditions give benefits directly to workers and indirectly to insurers, contractors, consumers, families and society.

Human resources is the most important component in the company and in the implementation of the production process, therefore company should pay attention to maintaining OSH. This is done to provide comfort whilst working and the resulting sense of security for the employees at the time of the production process and when dealing directly with their work environment (Rachmawati, 2008). Various studies have found that OSH that has been performed by company not only provides a sense of security to employees, but also could provide satisfaction to employees (Robin and Walker, 2000) and (Sumarni and Soeprihanto, 2000). When employees are satisfied with the security and safety in their workplace, the accident could at best be avoided (Mathis and Jackson, 2003).

1.3 Significance of study

Occupational health and safety (OHS) is one of the most important problem of a company because each manager should consider the workers as the most valuable resource of the enterprise. This issue is all the more important as in the last decades, the types of OHS risks have changed due to technological, social and economic advances, and companies should use new approaches and instruments to control and manage these risks (Darabont et al., 2018).

The industrial sector plays a vital role in economic growth, which leads to the increase in demand of human resources or employees. Employee is the most important asset for a country's development; therefore, their welfare, safety, and health should be of concern. Organisations that promote welfare, safety, and health as well as safety consciousness at the workplace will think about the need for a systematic management that can contribute towards the protection of employees from workplace hazards and injuries.

A systematic Occupational Safety and Health Management System have been established to facilitate the organisation to have a safety and health culture at workplace. Occupational Safety and Health is a management system developed to ensure the development of a sustainable safety and health culture in an organisation (National Institute of Occupational Safety and Health, 2013). OSHMS is a tool to reduce OSH risks or accidents and related injuries in the workplace (Abidin & Irniza, 2015).

1.4 Research questions

This study focuses primarily on employee perception, satisfaction, and feedback on the implementation of OSH Management System, MS 1722. This study seeks to answer the following research questions:

- Q1: What is the perception of employees towards the implementation of OSH Management System in their organisation?
- Q2: What is the level of satisfaction and safety feedback of employees throughout the organisation's OSH Management System?
- Q3: What is the relationship between demographic factors: educational background and employees; work experience towards employees' perception and safety satisfaction?
- Q4: What is the relationship between certified organisation and safety satisfaction?

1.5 Objectives

1.5.1 General Objective

The general objective of this research is to determine the perception, safety satisfaction, and safety feedback of Occupational Safety and Health (OSH) Management System among employees in certified organisations in the Klang Valley.

1.5.2 Specific objectives

The specific objectives of this research are:

- i. To describe the socio-demographic and employment characteristics of employees in certified organisations in the Klang Valley.
- ii. To determine employee perception on Occupational Safety and Health (OSH) Management System.

- iii. To determine the level of safety satisfaction and safety feedback on Occupational Safety and Health (OSH) Management System.
- iv. To determine the relationship between employee perception and satisfaction with demographic factors.
- v. To determine the relationship between certified organisation and safety satisfaction.

1.6 Research hypotheses

- i. There is a significant relationship between employee perception and demographic factors.
- ii. There is a significant relationship between safety satisfaction and demographic factors.
- iii. There is a significant relationship between certified organisation and safety satisfaction.

1.7 Conceptual framework

There are several independent variables that will be put on focus in conducting this study. Socio-demographic such as working experiences, educational background and industry, OSHMS elements include of policy, organising, planning & implementation, evaluation and action for improvement play important roles as independent variables in determining the association between employee's perception, employee's satisfaction and employees' feedback. Figure 1 below show the conceptual framework from this current study.

Independent Variable

Dependent Variable

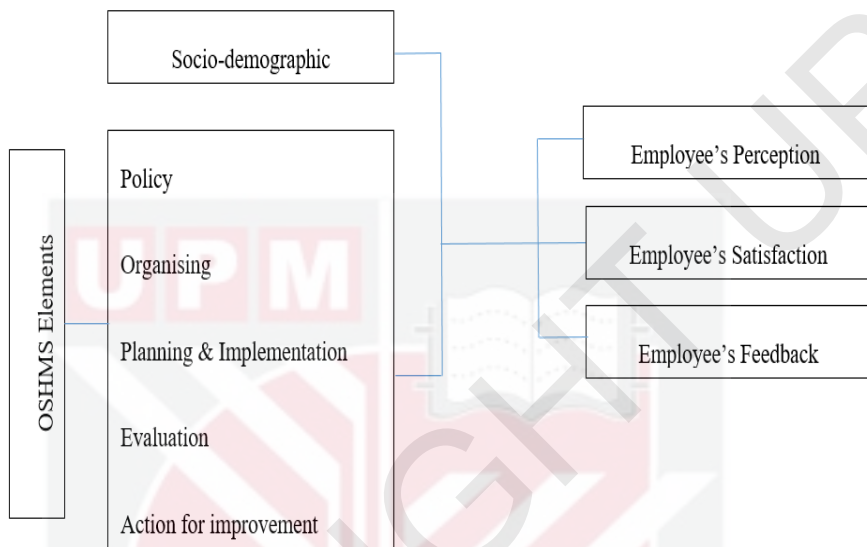


Figure 1 : Conceptual framework on factors associated with employee's perception, employee's satisfaction and employee's feedback between OSHMS elements

REFERENCES

- A.S. Ligade and S.B.Thalange. (2013). Occupational Health and Safety Management System (OSHMS) Model for Construction Industry. *International Journal of Research in Engineering and Technology*, 395–399.
- Abidin, E.Z., and Ilniza, R. (2015). Occupational safety and health management system in malaysia: comparison between ohsas 18001:2007 and ms 1722:2011. *International Journal of Public Health and Clinical Sciences*, 2(3): 23–32.
- Ahmadon Bakri, Rosli Mohd Zin, Mohd Saidin Misnan and Abdul Hakim Mohammed. (2006). Occupational Safety and Health Management System: Towards Development of Safety and Health Culture. *Proceedings of the 6th Asia - Pasific Strutural Engineering and Construction Conference (ASPEC 2006)*, 5- September, Kuala Lumpur, C-19 - C-28.
- Anderson, P. (2013). Implementing an effect: Basic advice for shipping companies and seafarers. IMO Symposium on the Future of Ship Safety. *International Chamber of Shipping London*, 1–8.
- Ashari, H, Mahmod, N.A.K (2013). Legal Knowledge of Legislated Employment Rights : An Empirical Study. *International Journal of Social, Management, Economics and Business Engineering*, 7:1460-1466.
- A.Veltri, M.Pagell, M.Behm, and A.Das. A Data-Based Evaluation of the Relationship *between Occupational Safety and Operating Performance*. *Journal of SH&E Research*, Vol. 4, Num.1 (2007).
- Aziri, B. (2011). Job Satisfaction : A Literature Review. *Management Research and Practice*, 3(4): 77–86.
- Bahari, S.F. (2011). An investigation of safety training, safety climate and safety outcomes: A longitudinal study in Malaysian manufacturing plant. Doctoral thesis, University of Manchester.
- B.E.Hayes, P.Perander, T.Smeko, and J.Tack. *Measuring Perseptions of Workplace Safety : Development and Validation of the Work Safety Scale*. *Journal of Safety Research*, Vol. 29, No.3, pp : 145-161 (1998).
- BSI OHSAS 18001:2007.
- BS 8800 (2004), *Occupational health and safety management systems — Guide*,
- British Standards Institution.

Burton J (2009). WHO healthy workplace framework and model: Background and supporting literatures and practices. World Health Organisations. Retrieved from http://www.who.int/occupational_health/healthy_workplace-framework.pdf on 3rd October 2016.

Cameron and Freeman's (1991). Cultural congruence strength and type: Relationships to Effectiveness. *Research in Organizational Change and Development*, 5: 23-55.

Campbell, J. P., McCloy, R. A., Oppler, S. H. and Sager, C. E. (1993) 'A theory of performance', in C. W. Schmitt and W. C. A. Borman (eds), *Personnel Selection in Organizations*. San Francisco: JosseyBass, 35-70.

Cheah, W.L., Giloi, N., Chang, C.T., and Lim, J.F. (2012). The perception , level of safety satisfaction and safety feedback on occupational safety and health management among hospital staff nurses in Sabah State Health Department. *Malays J Med Sci*, 19(3): 57–63.

Clarke, S., Ward, K. (2006). The role of leader influence tactics and safety climate in engaging employees' safety participation. *Risk Analysis*. 26 (5): 1175-1185.

Coelho, J. F. G. M., & Moy, D. (2003). The New performance evaluation methodology and its integration with management systems. *The TQM Magazine*, 15(1): 25 – 29.

Cropanzano and Marie. (2005). Social Exchange Theory : An Interdisciplinary Review. *Journal of Management*, 31(6): 874-900.

Darabont, Doru Costin; Bejinariu, Costica; Ionita, Iulian; Bernevig-Sava, Mihai-Adrian; Baci, Constantin; Baci, Elena-Raluca, 2018. Considerations On Improving Occupational Health And Safety Performance In Companies Using Iso 45001 Standard, *Environmental Engineering & Management Journal (EEMJ)* . Nov2018, Vol. 17 Issue 11, P2711-2718. 8p.

Deming, W.E. (1986). *Principles for transformation. In Out of the crisis*. Cambridge, MA: Massachusetts Institute of Technology, Centre for Advanced Engineering Study.

Department of Occupational Safety and Health, Guideline on Occupational and Safety Health Management System:Mashi Publication Sdn Bhd, 2011.

Department of Standards of Malaysia. (2011). *Malaysian Standard MS 1722:2011: Occupational Safety and Health (OSH) Management System-Requirements (First Revision)*. Selangor, Malaysia.

Department of Standards Malaysia. (2016). List of Occupational Safety and Health Management System , MS 1722:2011 Accreditation Certification Body. Retrieved Desember 2016, From http://www.jsm.gov.my/about-us#.Xi3F_mgZY2w.

DeVellis, R.F., (2003). Scale development: theory and applications, applied social research methods. *Sage Publications*. 2003.

Dias, L.A. (2005). Occupational Safety and Health Management Systems in Construction. The need for a recognition system at the National Level. Retrieved April 26, 2006 from http://www.fundacentro.gov.bt/CTN/XXVII%20SIMP%C3%93SIO%20INTERNATIONAL%20DA%20AISS_Anis_do_Evento/ALVESDIAS.pdf.

Dixon, C.J. & Leach, B. (1978). Questionnaires and Interviews in Geographical Research London: Institute of British Geographers.

European Agency for Safety and Health at Work (2002). Study Identifies Key Ingredients for Successful OSH Management Systems. Retrieved April 20, 2004, from http://agency.osha.eu.int/news/press_releases/en/05_08_2002.

Ezrin, H.S., Nurud, S.S., and Norhidayah, A. (2012). Preliminary study of the safety culture in a manufacturing industry. *International Journal of Humanities and Social Sciences*, 2(4): 176–183.

Fan, W., & Yan, Z. (2010). Factors affecting response rates of the web survey: A systematic review. *Computers in Human Behavior*, 26(2), 132-139.

Farouk UK, Richardson S, & Santhapparaj AJS (2011), Occupational safety and health committees: How fares the pulse of the self-regulatory system in Malaysian manufacturing firms?. *International Journal of Trade, Economics and Finance*. 2(5): 412-418.

Fernandez-Muniz B, Montes-Peon JM & Vazquez-Ordas CJ (2007), Safety culture: Analysis of th causal relationships between its key dimension. *Journal of Safety Reasearch* 38(6): 627-641.

Fernandez-Muniz, B., Montes-Peon, J.M., & Vazquez-Ordas, C.J. (2008), —Relation between occupational safety management and firm performancell, *Safety Science* 47 pp. 980–991.

Ferraro, L. (2002). *Measuring Safety Climate: The Implications for Safety Performance*. PhD thesis, Department of Psychology, School of Behavioural Science, University of Melbourne. University of Melbourne.

Flynn, A., and Shaw, J. (2010). Leadership and organisational safety culture. In *Safety Matters! A Guide to Health and Safety at Works: Chapter 3: Leadership and Organizational Safety Culture*, 29–42. Academia,

American.

Friend M. A and Kohn J. P. (2007). Fundamentals of occupational safety and health. Fourth Edition. Government Institute. The Scarecrow Press, Maryland. United States of America, 1-7.

Gadd, S., and Collins, A.M, (2002). Safety Culture: A Review of a Literature. Health and Safety Laboratory. *International Journal of Informative & Futuristic Research*. 2(5); 1416 - 1425.

Gervais, L.R., Pawlowska, Z., Bojanowski, R., Kouvonen, A., Murray, M.K., Greef, M.D., & Broek, K.v.D., (2009). Occupational health and safety and economic performance in small and medium-sized enterprise: a review. *European Agency for Safety and Health at Work (EU-OSHA)*. 1- 42.

Ghasemi, A., & Zahediasl, S. (2012). Normality Tests For Statistical Analysis: A Guide For Non - Statisticians. *International Journal of Endocrinology and Metabolism*, 10 (2), 486- 489.

Gilmore, M.R., and Perdue, S.R. (2002). SPE 74067 Behavior-Based Safety : The Next Step in Injury Prevention.

Gouldner, A.W. (1960). The Norms of Reciprocity: A Preliminary Statement. *American Sociological Review*. 25; 161 - 178 . doi 10.2307/2092623.

Gray, J.H., Densten, I.L., & Sarros, J.C. (2003). Size Matters: Organisational culture in small, medium, and large Australian Organization. *Science Association of Canada*. 31 - 46.

Griffin, M., and Neal, A. (2015). Safety climate and safety behaviour. *Australian Journal of Management*, 27 (Special Issue), 67–76. <http://doi.org/10.1177/031289620202701S08>.

Gyekye and Salminen. (2015). Workplace safety perceptions and perceived organizational support: Do supportive perceptions influence safety perceptions? *International Journal of Occupational Safety and Ergonomics*. 189 - 200.

Gyekye, S.A. (2006). Workers ' perceptions of workplace safety: An African Perspective. *International Journal of Occupational Safety and Ergonomics (JOSE)*, 12(1): 31–42.

Hair, J. F., Anderson, R. E., Tatham, R. L. dan Black, W. C. (1998). *Multivariate Data Analysis* (5th ed). New Jersey: Prentice Hall International, Inc.

Health and Safety Executive (2004). Managing health and safety, five steps to success. London HSE Books. Published by the Health and Safety Executive. 1-62.

Idrus, D., Ab.Rahman, H., Ashari, H., Zaini, F., Jamil, R., Muktar, S. N. (2004). Level of awareness of UTM staff on occupational safety and health at the work place, Faculty of Management and Human Resources Management, University Teknologi Malaysia. Penulisan tesis PhD.

I.K.Rachmawati. *Manajemen Sumber Daya Manusia*. Penerbit : ANDI Yogyakarta (2008).

ILO-OSH (2001), Guidelines on occupational safety and health management systems, *International Labour Office*, Geneva. 2001.

ILO - Safety and Health at Work, *ILO (International Labour Organization)*
http://www.ilo.org/global/Themes/Safety_and_Health_at_Work/lang-en/index.htm Accessed on: 8th April, 2010.

International Labour Organization. Changing patterns in the world of work (ILO conference 95th session). Geneva: ILO, 2006.
www.ilo.org/public/english/standards/relm/ilc/ilc95/pdf/rep-i-c.pdf.

International Labour Organization web page www.ilo.org/global/topics/safety-and-health-at-work/lang-en/index.htm [accessed 5 March 2018].

International Organization for Standardization. Occupational Health and Safety Management Systems – Requirements with guidance for use (ISO 45001: 2018). Geneva: ISO, 2018.

Jabatan Keselamatan dan Kesihatan Pekerjaan, Malaysia. (2016). *Pelan Induk Keselamatan dan Kesihatan Pekerjaan 2016-2020; Transformasi KKP - Budaya Pencegahan*, 1-48.

Jacobs, L.C., (1991) Test Reliability. Available at:
http://www.indiana.edu/~best/test_reliability.shtml. Retrieved March 7, 2017.

John, H., and Helen, T. (2007). The Power of Feedback. *Review of Educational Research*, 77(1): 81–112.

Jorgensen, K., Duijm, N. J., & Troen, H. (2010). Accident prevention in SME using ORM. *Safety Science*, 48(8), 1036–1043. doi:10.1016/j.ssci.2010.02.008.

Kaila, H.L. (2006). Behaviour based safety in organizations. *Indian Journal of Occupational and Environmental Medicine*, 10(3): 102–106.

Kanten, S. (2013). The relationship among working conditions, safety climate, safe behavior and occupational accident: An empirical research on the marble workers. *The Macrotheme Review*. 2 (4):173-182.

- Khalique, M., Abdul, J., Shaari, N., & Ageel, A. (2011). Challenges faced by the small and medium enterprises (SMEs) in Malaysia: An intellectual capital perspective. *International Journal of Current Research*, 3(2011): 398–40.
- Kongtip, P., and Chantanakul, S.,(2008). Occupational health and safety management in small and medium-sized enterprises: An overview of the situation in Thailand. *Safety Science*. 46(9):1356-1368.
- Kogi, K. (2002). Work Improvement and occupational safety and health management systems : Common features and research needs. *Industrial Health*, 40, 121–133.
- LaMontagne, Anthony D. and Shaw, Andrea 2004, *Evaluating OHS interventions : a Workplace Victoria intervention evaluation framework*, Victorian WorkCover Authority, Melbourne, Vic.
- Lay, K.K and Lilis Surienty (2018). Safety Advice and Safety Participation in OSHMS among OHSAS 18001 certified Malaysian Manufacturing Companies. *International Journal of Engineering & Technology*, 7 (3.24) (2018) 55-61.
- Ligade, A.S and Thalange, S.B (2013). Occupational Health and Safety Management System (OSHMS) Model for construction industry. *International Journal of Research in Engineering and Technology*, 2321-7308: 395–399.
- Lin, J. and Mills, A. (2001), "Measuring the occupational health and safety performance of construction companies in Australia", *Facilities*, 19 (3/4): 131-139. <https://doi.org/10.1108/02632770110381676>.
- Lund, D.B., (2003). Organizational culture and job satisfaction. *Journal of Business and Industrial Marketing*. 18, 219-236. doi:10.1108/0885862031047313.
- Lwanga SK and Lemeshow S (1991). Sample Size Determination in Health Studies: A Practical Manual. Geneva: World Health Organization.
- Lyneis, J., and Madnick, S. (2008). *Preventing Accidents and Building a Culture of Safety : Insights from a Simulation Model John Lyneis Insights from a Simulation Model*. Working paper, Sloan School of Management Massachusetts Institute of Technology.
- Makin, A.M. & Winder, C. (2008), —A new conceptual framework to improve the application of occupational health and safety management systemsll, *Safety Science* 46, pp. 935–948.
- Malaysian Society for Quality in Health (MSQH) (2009). The Malaysian Society for Quality in Health (MSQH) standards. Retrieved February 02, 2010, from <http://msqh.com.my/>.

- Malaysian Standard, MS 1722: 2011 (2011). Occupational Safety and Health (OSH) Management Systems- Requirement (First revision). Retrieved February 20, 2016, from <http://www.jsm.gov.my/ms-1722#.Xi3bwmgzY2w>.
- Mansol NH, Mohd-Alwi NH & Ismail W (2016), Managing organizational culture requirement for business continuity management (BCM) implementation using Goal-Question-Metric (GQM) Approach. *Jurnal Teknologi*. 78(12-3): 13-22.
- Meng, L.C. (2009). The study on job satisfaction amongst the executive personnel in a rubber glove manufacturing company. Master Thesis. Faculty of Human and Social Development. University Utara Malaysia, 1-88.
- M.Sumarni and J. Soeprihanto. *Pengantar Bisnis*. Edisi Kelima. Yogyakarta : Liberty (2000).
- Mohd Adam Marsidi. (2007). The perception of occupational safety and health management among level of workers in construction industry in Kuala Lumpur and Selangor and its implication towards the safety and health performance at the workplace. Master Thesis. Universiti Utara Malaysia, 1141.
- Mori, K., and Takebayashi, T. (2002). The introduction of an occupational health management system for solving issues in occupational health activities in Japan. *Industrial Health*, 40:167–174.
- Mustazar, M., and Peng, H.S. (2009). Keberkesanan latihan keselamatan dan kesihatan dalam mengurangkan kemalangan di tempat kerja. In *Prosiding PERKEM IV* (Vol. 2, 293–324). Kuantan, Pahang. Retrieved 13 march 2017, from <http://www.ukm.my/fep/perkem/pdf/perkemIV/PERKEM2009-2-25.pdf>.
- Naing,L., Winn,T., Ruslil, B.N., (2006). Practical Issues in Calculating the Sample Size for Prevalence Studies. *Archives of Orofacial Sciences* 2006; 1: 9-14.
- National Institute of Occupational Safety and Health, Malaysia. (2013). OSH Management System :Introduction and Understanding of OSH MS Elements.
- Neal, A., Griffin, M.A., & Hart, P.M. (2000, Feb.). The impact of organizational climate on safety climate and individual behavior. *Safety Science*, 34(1-3), 99 – 109.
- Noradila, M., and Shamsul, M.T. (2016). Relationship between safety climate perception and safety and health management system with occupational occupational safety and health: *SciCOSH 2016*. 3(2);63-69.

- Nor Azimah, C.A., Spickett, J.T., Rumchev, K.B., and Dhaliwal, S.S. (2009). Assessing employees perception on health and safety management in public hospitals. *International Review of Business Research Papers*. 5 (4) June: 54-72.
- Nor Azimah, C.A. (2010). Occupational Health Safety Management Perceptions in Malaysian Public Hospitals. Implications for the implementation of standardized management systems. Ph.D. Curtin University of Technology, School of Public Health.
- Occupational Safety Health Act (1994). International Law Book Services. Kuala Lumpur. 1994.
- Occupational Safety and Health Master Plan for Malaysia 2015*. Ministry of Human Resources, 2009.
- OHSAS Project Group. (2007). *Occupational Health and Safety Management System – Requirements (OHSAS 18001:2007)*. United Kingdom, London: British Standards Institution.
- O' Toole, M. (2002). The relationship between employees' perceptions of safety and organizational culture. *Journal of Safety Research*, 33: 231–243.
- Ozmec, M. N., Karlsen, I. L., Kines, P., Andersen, L. P. S., & Nielsen, K. J. (2015). Negotiating safety practice in small construction companies. *Safety Science*, 71, 275–281. <http://doi.org/10.1016/j.ssci.2014.03.016>.
- Ozutku H (2012), The influence of intrinsic and extrinsic rewards on employee results: An empirical analysis in Turkish Manufacturing Industry. *Business and Economics Research Journal* 3(3): 29-48.
- Petersen, D. (2000). Safety management 2000: Our strengths and weaknesses. *Professional Safety*, 45(1): 16-19.
- Podgorski, D. (2015). Measuring operational performance of OSH management system – A demonstration of AHP-based selection of leading key performance indicators. *Safety Science*, 73, 146–166., Leung, <http://doi.org/10.1016/j.ssci.2014.11.018>.
- Poon, S.K K.T. and Fung, K.C.(2003). Factors affecting the planning and implementation of Occupational Health & Safety Management System. Paper presented at the 12th International Conference on Safety Communities, 18-20 March 2003, Hong Kong.
- Rampal, K.G., and Mohd Nizam, J. (2006). Developing regulations for occupational exposures to health hazards in Malaysia. *Elsevier*, 46, 131–135. <http://doi.org/10.1016/j.yrtph.2006.01.013>.

- Rehan and Rafiq. (2012). Investigation of demographic factors relationship with safety climate. In *48th ASC International Conference Proceedings* .54.
- Renata Kleinova and Petra Szaryszova (2014), *International Journal Of Interdisciplinarity In Theory And Practice* ITPB - NR.: 3, YAR: 2014 – (ISSN 2344 - 2409), page 43-47.
- Ria, A. and O. (2012). The Influence of occupational safety and health on performance with job satisfaction as intervening variables (Study on the Production Employees in PT. Mahakarya Rotanindo, Gresik). *American Journal of Economics*, (June 2012), 136–140.
- Ria Mardiana Yusuf1,* , Anis Eliyana2 , Oci Novita Sari3, 2012. The Influence of Occupational Safety and Health on Performance with Job Satisfaction as Intervening Variables (Study on the Production Employees in PT. Mahakarya Rotanindo, Gresik), *American Journal of Economics* June 2012, Special Issue: 136-140.
- R.L.Mathis and J.J. Jackson. *Human Resorce Management*. Tenth Edition. Ohio: Thomson Corporation (2003).
- Robson, L.S., Cullen, K.L., Bielecky, A., and Clarke., J.A., (2007). The effectiveness of occupational health and safety management system interventions: *A systematic review*. *Safety Science*. 45(3): 329-353.
- Rosliza, O., Noorhasimah, A., Syed Abdul Hamid, S.H., and Norsyahidah, M.Y. (2015). Level of awareness on behaviour-based safety (BBS) in manufacturing industry towards reducing workplace incidents. *International Journal of Education and Research*, 3(1), 77–88.
- Rozhan, O., Rohayu, A.G. & Rasidah, A. 2001. “Great expectations: CEOs’ perception of the performance gap of the HRM function in the Malaysian manufacturing sector”, *Personnel Review*, 30(1) : 61 – 80.
- Samosamo, M., Marais, C., and Joubert, P. (2014). Employee perceptions of the effectiveness of health and safety induction at arcelormittal , Vanderbijlpark , South Africa. *Mediterranean Journal of Social Sciences*, 5(23), 412–420. <http://doi.org/10.5901/mjss.2014.v5n23p412>.
- Santos, G., Barros, S., Mendes, F., & Lopes, N. (2013). The main benefits associated with health and safety management systems certification in Portuguese small and medium enterprises post quality management system certification. *Safety Science*, 51(1), 29–36.
- Seoul Declaration (2008), *Seoul Declaration on Safety and Health at Work*, <http://www.seouldeclaration.org> Accessed on: 16th April, 2010.

- Settoon, R.P., Bennett, N., and Liden, R.C. (1996). Social exchange in organization: perceived organizational support, leader member exchange, and employee reciprocity. *Journal of Applied Psychology*, Vol 81 (3): 219-227.
- Shaari, Z., & Soebarto, V. (2013). Investigating sustainable practices in the Malaysian office building developments. *Construction Innovation*, 14(1), 17–37.
- SIRIM (2009). SIRIM QAS: Occupational Health and Safety Management Systems Certification Scheme (OHSAS 18001) & ISO 1400. Retrieved May 08, 2009, from <http://www.sirimqas.com.my>.
- SIRIM QAS International Sdn. Bhd, RETRIEVE FROM <https://www.sirim-qas.com.my/our-services/management-system-certification-related-services/ohsas-18001-ms-1722/> on 25 feb 2020.
- Smith, G.S., Huang, Y.H., Ho, M., and Chen. P.Y., (2006). The relationship between safety climate and injury rates across industries: The need to adjust for injury hazards. *Accident Analysis Prevention*. 38:556-562.
- Social Security Organization. (2015). Accidental Statistics by Industries in Malaysia. Sorenson O.H., Hasle, P., & Bach, E. (2007). Working in small enterprises – is there a special risk? *Safety Science*. 45:1044-1059.
- S.P.Robbins. *Perilaku Organisasi : Konsep, Kontroversi dan Aplikasi*. Terjemahan. Jakarta : PT. Prenhallindo (1996).
- S.P.Robbins. *Organizational Behavior*. Edisi Bahasa Indonesia. Jakarta : Indeks (2003).
- Straub, L. (2005). Behavior-Based Safety. *Water Well Journal*, (December).
- Sulaiman, J., and Alaguthankamani, M. (2013). A study on employee's satisfaction and safety measures (with special reference to two wheeler spare parts manufacturing industry in Chennai). *Indian Journal of Applied Research*, 3(3): 41–43.
- Surienty, L. (2012). Management practices and OSH implementation in SMEs in Malaysia. School of Management, Universiti Sains Malaysia, Malaysia. 1-13.
- Tharaldsen, J, Mearns, K & Knudsen, K. (2010). Perspectives on safety: The impact of group membership, work factors and trust on safety performance in UK and Norwegian drilling company employees. *Safety Science*. 48:1062–1072.
- Totton, N., & White, P. (2011). The Ubiquitous Mythical Normal Distribution. *UWE Bristol*, (July).

T.Robin and D.Walker. *Motivating the Workforce: The Value of External Health and Safety Awards*. *Journal of Safety Research*, Vol. 31, No.4, pp : 143-251 (2000).

U.S. Department of Occupational Safety and Health Administration. (2008).

Vinodkumar, M. N., & Bhasi, M. (2009). Safety climate factors and its relationship with accidents and personal attributes in the chemical industry. *Safety Science*, 47(5): 659 – 667.

Vinodkumar, M.N. and Bhasi, M. (2010). Safety Management Practice and Safety Behaviour: Accessing the Mediating Role of Safety Knowledge and Motivation. *Elsevier*, 42(6). Safety and Fire Engineering, School of Engineering. Cochin University of Science and Technology. Kochi, Kerala India.

Vredenburg, A.G. (2002). Organizational Safety: Which management practices are more effective in reducing employee injury rates? *Journal of Safety Research*, 33: 259–276.

Wikhamn and Angela. (2012). Social exchange in a Swedish work environment. *International Journal of Business and Social Science*, 3(23): 56–64.

Workplace Safety and Health Management. Health and Safety Authority, 2006.

Work Safe. (2016). Benefits of Occupational Safety and Health Management System. Retrieved 21 April 2017 from [http:// www.worksafe.vic.gov.au](http://www.worksafe.vic.gov.au).

Wu, T., Liu, C., Lu, M. (2006), —Safety climate in university and college laboratories: Impact of organizational and individual factors, *Journal of Safety Research* 38, pp. 91–102.

Y.-H.Huang, P.Y.Ghen, A.D.Krauss, and D.A.Rogets. *Quality of the Execution of Corporate Safety Policies and Employee Safety Outcomes : Assessing the Moderating Role of Supervisor Safety Support and the Mediating Role of employee Safety Control*. *Journal of Business and Psychology*, Vol.18, No. 4, pp : 483-506 (2004).

Yoon, S.J., Lin, K.H., Chen, G., Yi, S., Choi, J., and Rui, Z. (2013). Effect of occupational health and safety management system on work-related accident rate and differences of occupational health and safety management system awareness between managers in South Korea ' s Construction Industry. *Elsevier*, 4(4): 201–209.

Yule, S. (2003). Senior management influence on safety performance in the UK and US energy sectors. Doctoral thesis, University of Aberdeen, Scotland.

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