

The copyright © of this thesis belongs to its rightful author and/or other copyright owner. Copies can be accessed and downloaded for non-commercial or learning purposes without any charge and permission. The thesis cannot be reproduced or quoted as a whole without the permission from its rightful owner. No alteration or changes in format is allowed without permission from its rightful owner.



**THE INFLUENCE OF MANAGEMENT COMMITMENT, SAFETY
TRAINING, AND SAFETY RULES AND PROCEDURES TOWARDS OSH
KNOWLEDGE AMONG MANUFACTURING WORKERS.**

By

MUHAMMAD MUZANI BIN AZIZAN



Thesis Submitted to
School of Business Management
College of Business, University Utara Malaysia
In Fulfilment of the Requirement for the
Master of Occupational Safety and Health Management

PERAKUAN KERTAS KERJA

Saya mengesahkan bahawa segala kerja yang dilakukan dalam tesis ini adalah hasil kerja saya sendiri.



UUM
Universiti Utara Malaysia

KEBENARAN MERUJUK

Kertas projek penyelidikan ini dikemukakan sebagai memenuhi keperluan pengijazahan program sarjana Universiti Utara Malaysia (UUM), Sintok, Kedah Darul Aman. Saya bersetuju membenarkan pihak perpustakaan UUM mempamerkannya sebagai bahan rujukan umum. Saya juga bersetuju bahawa sebarang bentuk salinan sama ada secara keseluruhan atau sebahagian daripada kertas projek ini untuk tujuan akademik adalah dibolehkan dengan kebenaran penyelia projek ini iaitu Dr. Marziah bt Zahar. Sebarang bentuk salinan dan cetakan bagi tujuan komersil adalah dilarang sama sekali tanpa kebenaran bertulis daripada penyelidik. Pernyataan rujukan kepada penulis dan UUM perlulah dinyatakan bagi sebarang bentuk rujukan ke atas kertas projek ini.

Kebenaran untuk menyalin atau menggunakan kertas projek ini sama ada keseluruhan atau sebahagian daripadanya hendaklah dipohon melalui:

Dekan Pusat Pengajian Pascasiswazah
Othman Yeop Abdullah
Universiti Utara Malaysia
06010 Uum Sintok, Kedah

ABSTRAK

Banyak kajian lepas mendapati bahawa punca peningkatan kemalangan di Malaysia terutama sektor pembuatan adalah berpunca daripada kekurangan tahap pengetahuan berkaitan keselamatan dan kesihatan pekerjaan. Objektif kajian ini ialah untuk menilai tahap pengetahuan berkaitan keselamatan dan kesihatan pekerjaan di kalangan pekerja sektor pembuatan. Sebanyak 201 orang pekerja iaitu kilang pembuatan barangan getah dan kilang penghasilan ais kiub di Perlis telah menyertai kajian soal selidik pada Disember 2019. Analisis kolerasi Spearman telah dilakukan dengan menggunakan SPSS versi 26. Dapatan kajian membuktikan terdapat hubungan positif diantara pembolehubah. Nilai dapatan signifikan bagi pengetahuan keselamatan pekerjaan terhadap komitmen pengurusan adalah p bersamaan 0.022, bagi latihan keselamatan p bersamaan 0.000, dan nilai signifikan bagi penyediaan peraturan dan prosedur keselamatan pula adalah p bersamaan 0.000. Secara kesimpulan kajian ini membuktikan bahawa komitmen yang baik dari pihak pengurusan, penganjuran latihan keselamatan dan penyediaan peraturan keselamatan mendorong kepada pengetahuan berkaitan keselamatan dan pekerjaan yang optimum.

Katakunci : Pengetahuan, komitmen, latihan keselamatan, polisi dan peraturan keselamatan, kilang, pembuatan

ABSTRACT

On previous years, there were many studies simplified that occupational accidents especially in manufacturing sector occurred due to lack of safety knowledge. This research was subjected to study on safety knowledge among workers in manufacturing sector. There were 201 workers from rubber manufacturing factory and ice making factory are studied in the research. The study commenced in Perlis in December 2019. Spearman's Correlation Analysis has been used to analyse the collected data on all variables. Results obtained from the analysis showed that there are positive relationships between safety knowledge towards management commitment ($p= 0.022$), safety training ($p=0.000$), and safety rules and procedure ($p=0.000$). In conclusion, this study suggested that good management commitment towards safety, providing adequate safety training, and providing good safety rules and procedure for workers will lead to optimum occupational safety knowledge among workers.

Keywords: Awareness, safety commitment, safety training, rules and policy, factory, manufacturing

APPRECIATION

Alhamdulillah thanks to almighty God who gave me the strength and knowledge to finish the project paper. He is the one who freed my time so that I can focus on settling the research.

Then, millions of thanks to my parents, my wife and siblings who always put their prayers on me. They were very supportive emotionally and physically in helping me finishing the project paper. This success is dedicated to them all.

Tokens of appreciation also dedicated to my supervisor Dr. Marziah bt Zahar who always guide me on this paper. Lots of thanks to

Prof. Madya Dr. Mohd Faizal, Prof. Madya Dr. fadzli Syah, Prof. Madya Dr. Chandrakantan, Dr. Wan Shakizah, and Dr. Zuraida Hasan who dedicated their time to give extra lectures on all topics of the research.

INDEX

ABSTRAK

ABSTRACT

APPRECIATION

INDEX

LIST OF TABLES.....	i
LIST OF FIGURES.....	ii
LIST OF ABBREVIATION.....	iii
CHAPTER 1: INTRODUCTION.....	1
1.1 Background of Study.....	1
1.1.1 Transitional from FMA to OSHA in Manufacturing Perspective...	2
1.1.2 Overcoming Injuries in The Manufacturing Industries.....	3
1.2 Problem Statements.....	6
1.2.1 Management Commitment.....	8
1.2.2 Safety Training.....	9
1.2.3 Safety Rules and Procedures.....	10
1.2.4 Selection of Place of Study.....	11
1.2.5 Conclusion of Problem Statement.....	12
1.3 Research Questions.....	13
1.4 Research Objectives.....	13
1.5 Scope of The Study.....	14
1.6 Significant of The Study.....	15
1.7 Definition of Key Terms.....	16
1.8 Organization of The Thesis.....	17
1.9 Conclusion of Chapter One.....	17

CHAPTER 2: LITERATURE REVIEW

2.1 Operational Definition of Knowledge.....	18
2.1.1 General Definition of Knowledge.....	18
2.1.2 Awareness in Osh.....	18
2.1.2.1 Factors Affecting Knowledge in Osh.....	19
2.1.2.1.1 Physiological.....	19
2.1.2.1.2 Preconception.....	20
2.1.2.1.3 Abilities/Experience/Training.....	20
2.1.2.1.4 System Design.....	20
2.2 Operational Definition: Management Commitment.....	21
2.2.1 General Definition.....	21
2.2.2 Management Commitment in Osh.....	21
2.3 Operational Definition: Safety Training.....	23
2.3.1 General Definition of Training.....	23
2.3.2 Safety Training in Osh.....	23
2.4 Operational Definition Safety Rules and Procedures.....	24
2.4.1 General Definition.....	24
2.4.2 Safety Rules and Procedure in Osh.....	25
2.5 Theory of Perceptual Cycle by Neisser 1976.....	28
2.5.1 The Concept.....	28
2.5.2 Procedure.....	29
2.6 Development of Research Framework.....	31
2.6.1 Management Commitment Vs Awareness.....	31
2.6.2 Safety Training Vs Awareness.....	31

2.6.3 Safety Rules and Procedures Vs Awareness.....	32
2.7 Research Framework.....	32
2.8 Conclusion of Chapter Two.....	33
 CHAPTER 3 : RESEARCH METHODOLOGY	
3.1 Introduction.....	34
3.2 Research Framework.....	35
3.3 Hypothesis Development.....	36
3.4 Research Design.....	36
3.5. Operational Definition.....	37
3.6 Variables and Instrumental.....	37
3.7 Measurement of Variables.....	39
3.8 Sample and Population.....	42
3.8.1 Sampling Method.....	42
3.9 Data Collection Procedure.....	44
3.10 Pilot Study.....	45
3.11 Data Analysis.....	46
3.11.1 Normality Test.....	46
3.11.2 Descriptive Analysis.....	47
3.11.2.1 Frequency Analysis.....	47
3.11.3 Inferential Analysis.....	47
3.11.3.1 Correlation Test.....	48
3.12 Ethical Issue.....	48
3.13 Conclusion.....	49

CHAPTER 4: DATA ANALYSIS

4.1 Introduction.....	50
4.2 Findings from Data Collection.....	50
4.3 Normality Test and Descriptive Analysis.....	52
4.4 Inferential Analysis-Correlation.....	55
4.4.1 Correlations Between Variables.....	55

CHAPTER 5 : DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Introduction.....	58
5.2 Background.....	58
5.3 Relationship Between Variables.....	59
5.3.1 Management Commitment.....	60
5.3.2 Safety Training.....	61
5.3.3 Safety Rules and Procedures.....	61
5.3.4 Safety Knowledge.....	63
5.4 Conclusion.....	64
5.4.1 Implication Towards Workers.....	65
5.4.2 Implication Towards Organizations.....	66
5.4.3 Implications Towards Country.....	66
5.5 Recommendations.....	67
REFERENCES.....	69
APPENDICES.....	72

LIST OF TABLES

Table 1.1 Dosh Report by Sector 2019.....	5
Table 1.2 Dosh Report by States 2019.....	7
Table 1.3 Definition of Key Terms.....	16
Table 2.1 Generating Operational Definition.....	26
Table 2.2 Theory Implementation.....	30
Table 3.1 Definition of Key Terms.....	35
Table 3.2 Instrument Division.....	38
Table 3.3 Questionnaire.....	39
Table 3.4 Likert Scale.....	41
Table 3.5 Population Table.....	43
Table 3.6 Krejcie and Morgan Sampling Table.....	43
Table 3.7 Range of Cronbach's Alpha.....	45
Table 3.8 Cronbach's Alpha for Pilot Study.....	46
Table 3.9 Normality Test Guidelines.....	47
Table 4.1 Summary of Total Data.....	51
Table 4.2 Descriptive Analysis.....	52
Table 4.3 Normality Table.....	53
Table 4.4 Correlation Between Variables.....	57

LIST OF FIGURES

Figure 2.1 Research Framework.....	32
Figure 3.1 Research Flow	34
Figure 4.1 Data Analysis Flow Chart.....	54



LIST OF ABBREVIATION

Dosh- Department of Occupational Safety and Health

Dv – Dependent Variable

FMA – Factories and Manufacturing Act

Iv – Independent Variable

Osh – Occupational Safety and Health

OSHA – Occupational Safety and Health Act



CHAPTER ONE

INTRODUCTION

This chapter will focus on the preliminary ideas of the research that outline its background, problem statement, objectives of the research, research questions or hypothesis, and more importantly, its significance. Chapter one will also discuss on the limitation and the organization of the research. A brief description of the research is presented in the last part of this chapter.

1.1 Background of the study

Industrial revolution, IR 4.0 has created an awareness for employers to improve productivity, higher quality products and innovative management. In general, an organization in the manufacturing industry tends to overlook the aspects of safety and health (Simard & Marchand, 1994). According to the Industrial Co-ordination Act (ICA) 1975, a 'Manufacturing Activity' is defined as *"The making, altering, blending, ornamenting, finishing or otherwise treating or adapting any article or substances with a view to its use, sale, transport, delivery or disposal; and includes the assembly of parts and hip repairing but shall not include any activity normally associated with retail or wholesale trade"*.

In Malaysia, the Factory and Machinery Act (FMA) has been enforced in year 1967 as a commencement of workplace safety affairs. The FMA 1967 was enacted to protect employees that work in the general factory, quarry mining and construction

REFERENCES

- Abdul Rahman, B. (2006). Keynote address "Driving Improvements in Occupational Safety and Health". In Soehod, K. & Laxman, L. (2013), Law on Safety and Health in Malaysia. Fakulti Pengurusan dan Pembangunan www.ccsenet.org/ass *Asian Social Science* 9(3) Sumber Manusia, Universiti Teknologi Malaysia.
- Armstrong, M (2006). *Human resource management practice*. London: Kogan page limited
- Alyssa & Essenmacher, Lynnette & Hamblin, Lydia & Luborsky, Mark & Upfal, Mark & Arnetz, Judith. (2016). Management Commitment to Safety, Teamwork, and Hospital Worker Injuries. *Journal of Hospital Administration*. 5. 10.5430/jhav5n6p46.
- Borstorff, P. C., & Lowe, S. K. (2010). The Culture of Safety: How Important to Employee Health? *International Journal of Business Research*, 10(5), pp 147-156.
- Burke, M.J., Sarpy, S.A., Tesluk, P.E., Smith-Crowe, K., (2002). General safety performance: a test of a grounded theoretical model. *Personnel Psychology* 55, 429–457.
- Cheyne, A., Cox, S., Oliver, A., Tomas, J., 1998. Modelling safety climate in the prediction of levels of safety activity. *Work and Stress* 12, 255–271.
- Department of Occupational Safety and Health Malaysia. (2020). *Occupational Accident Statistic by State*. Retrieve at <https://www.dosh.gov.my/index.php/ms/statistic-v/occupational-accident-statistics-v/occupational-accident-statistic-2019/3509-occupational-accidents-statistics-by-state-until-december-2019-investigated/file> on 10 March 2020
- Department of Occupational Safety and Health Malaysia. (2020). *Occupational Accident Statistic by Sector*. Retrieve at <https://www.dosh.gov.my/index.php/ms/statistic-v/occupational-accident-statistics-v/occupational-accident-statistic-2019/3508-occupational-accidents-statistics-by-sector-until-december-2019-investigated/file> on 10 March 2020.
- DePasquale, J.P., Geller, E., (1999). Critical success factors for behaviour based safety: A study of twenty industry-wide applications. *Journal of Safety Research* 30, pp 237–249.

- Fernandez-Muniz, M., Montres-Peon, J.M., Vazquez-Ordas, C.J., (2007). Safety management system: development and validation of a multidimensional scale. *Journal of Loss Prevention in the Process Industries* 20, pp 52–68.
- Ganesh, V. (2009). Enterprise resource systems software implementation. *Handbook of Research on Enterprise Systems*. Retrieved at <https://www.igi-global.com/chapter/enterprise-resource-systems-software-implementation/20285>
-
- Graham, J.D. (2000). *Practical Tools for Continuous Improvement*. Statistical Tools. 1. PQ Systems.
- Hair, J.F., Anderson, R.E., Tatham, R.L., Black, W.C., (1998). *Multivariate Data Analysis*. Prentice-Hall International, New Jersey, USA.
- Krejcie, R.V. and D.W. Morgan, (1970). Determining Work and sample size for research activities. *Educational and Psychological Measurement*, 30(3): pp 607-610.
- Simard, M., and Marchand, A. (1994). The behaviour of first-line supervisors in accident prevention and effectiveness in occupational safety. *Safety Science* 17(3): pp 169-185
- Mearns, K., Hope, L., (2005). *Heal and Well Being in the Offshore Environment: The Management of Personal Health*. Research Report 305. HSE Books, Norwich.
- Mullen, J.E., & Kelloway, E.K. (2009). Safety leadership: A longitudinal study of the effects of transformational leadership on safety outcomes. *J Occup Organ Psychol*.82(2):253–272
- Noor Aina Amirah, Wan Izatul Asma, Mohd Shaladdin Muda & Wan Abd Aziz Wan Mohd Amin. (2013). Safety Culture in Combating Occupational Safety and Health Problems in the Malaysian Manufacturing Sectors. *Asian Social Science*; 9(3) ISSN 1911-2017 E-ISSN 1911-2025
- Olsen E. (2010). Exploring the possibility of a common structural model measuring associations between safety climate factors and safety behaviour in health care and the petroleum sector, *Accid Anal Prev*. 42(5): 1507-16
- Root, D. (2005). Creating a Culture of Safety on Construction Sites. *Risk Management*, 52(11), pp 56-62.
- Shannon, H.S., Walters, V., Lewchuk, W., Richardson, J., Moran, L.A., Haines, T., Verma,D., (1996). Workplace organizational correlates of lost-time accident rates in manufacturing. *American Journal of Industrial Medicine* 29, pp 258–268.

- Shannon, H., Mayr, J., Haines, T., (1997). Overview of the relationship between organizational and workplace factors and injury rates. *Safety Science* 26, pp 201–217.
- Smith-Crowe, K., Burke, M.J., Landis, R.S., (2003). Organizational climate as a moderator of safety knowledge-safety performance relationships. *Journal of Organizational Behavior* 24, pp 861–876.
- Soehod, K., & Laxman, L. (2007). *Law on Safety and Health in Malaysia*. Fakulti Pengurusan dan Pembangunan Sumber Manusia, Universiti Teknologi Malaysia.
- Subramaniam C, Shamsudin FM, Mohd Zin MLM, Ramalu SS, Hassan Z. (2016). Safety management practices and safety compliance in small medium enterprises: Mediating role of safety participation. *Asia Pac. J. Bus. Admin.* 8(3): pp 226-244.
- Trenchlesspedia, (2018). *Definition of Safety Training*. Retrieved at <https://www.trenchlesspedia.com/definition/3110/safety-training>
- Vinodkumar M.N. & Bhasi. M. (2010). Safety management practices and safety behaviour: Assessing the mediating role of safety knowledge and motivation. *Accident Analysis and Prevention*. 42; pp 2082–2093
- Zohar, D. (2000). A group-level model of safety climate: testing the effect of group climate on micro-accidents in manufacturing jobs. *Journal Appl Psychol.* 85(4): pp 587-96.
- Zohar D & Luria G. (2003). The use of supervisory practices as leverage to improve safety behaviour: a cross-level intervention model.; *Journal Safety Res.* 34(5): pp 567-77.
- Zohar D., Polachek T. (2014). Discourse-based intervention for modifying supervisory communication as leverage for safety climate and performance improvement: A randomized field study. *J Appl Psychol.* 99(1): pp 113-2



UUM

APPENDICES



SCHOOL OF BUSSINESS MANAGEMENT

QUESTIONNAIRE ON INFLUENCE OF MANAGEMENT COMMITMENT, SAFETY TRAINING, AND SAFETY RULES AND PROCEDURES TOWARDS OSH KNOWLEDGE AMONG MANUFACTURING WORKERS.

LATAR BELAKANG

Kajian ini adalah bertujuan untuk mengenal pasti pengaruh komitmen pengurusan, latihan keselamatan serta penyediaan peraturan dan prosedur keselamatan terhadap tahap pengetahuan keselamatan dan kesihatan pekerjaan dikalangan pekerja sektor pembuatan.

BACKGROUND

This study is intended to determine the influence of management commitment, safety training, and safety rules and procedures towards the level of OSH knowledge among manufacturing worker.

OBJECTIVES

Objectives of the study is to determine the influence of management commitment, safety training, and safety rules and procedures towards OSH knowledge among manufacturing workers.

ETHICS

Respondents will not be asked to disclose any personal information. All data collected from the study will be kept private and confidential. Data collection is only intended to be used in research study.

Researcher do not hold any stakes or relation with respondents' employers.



CONSENT TO PARTICIPATE IN THE STUDY

I have read and understood the background of the study, it's objectives and the research ethics hold by the researcher. I am now willing to participate and co-operate with the researcher by answering this question set.

Name:

Identification number:

Signature:

PART A: DEMOGRAPHIC

Please choose only one (1) answer and tick.

Q1. Are you a male or female?

Male		Female	
------	--	--------	--

Q2. What is your age range?

18-29 years old	
30-39 years old	
40-49 years old	
50 years old and above	

Q3. Years of working experience?

1-5 years	
6-10 years	
11-15 years	
More than 15 years	

Q4. Your highest education is?

School	
Certificate	
Diploma	
First degree and above	

Q5. Your monthly salary range?

RM 1000- RM 2000	
RM 2001- RM 3000	
RM3001- RM 4000	
More than RM 4000	

PART B: this section will be asking about your agreement on management commitment on safety at your workplace. Choose only one (1) answer.

Management Commitment	Strongly disagree	Disagree	Neither disagree or agree	Agree	Strongly agree
Q1. Safety is given high priority					
Q2. Safety rules and procedures are strictly followed by the management.					
Q3. Corrective action is always taken when the management is told about unsafe practices.					
Q4. In my workplace managers/supervisors do not show interest in the safety of workers.					
Q5. Management considers safety to be equally important as production.					
Q6. Members of the management do not attend safety meetings					
Q7. feel that management is willing to compromise on safety for increasing production.					
Q8. When near-miss accidents are reported, my management acts quickly to solve the problems.					
Q9. My company provides sufficient personal protective equipment for the workers.					

PART C: This section will be asking about safety training at your workplace. Choose only one (1) answer.

Safety training	Strongly disagree	Disagree	Neither disagree or agree	Agree	Strongly agree
Q1. My company gives comprehensive training to the employees in workplace health and safety issues.					
Q1. My company gives comprehensive training to the employees in workplace health and safety issues.					
Q3. Safety issues are given high priority in training programmes.					
Q4. I am not adequately trained to respond to emergency situations in my workplace					
Q5. Management encourages the workers to attend safety training programmes.					
Q6. Safety training given to me is adequate to enable to me to assess hazards in workplace					

PART D: This section will be asking about safety rules and procedures at your workplace. Choose only one (1) answer.

Safety rules and procedures	Strongly disagree	Disagree	Neither disagree or agree	Agree	Strongly agree
Q1. The safety rules and procedures followed in my company are sufficient to prevent incidents occurring.					
Q2. The facilities in the safety department are not adequate to meet the needs of my organization.					
Q3. My supervisors and managers always try to enforce safe working procedures.					
Q4. Safety inspections are carried out regularly.					
Q5. The safety procedures and practices in this organization are useful and effective.					

PART E: This section will be asking about safety knowledge at your workplace.
Choose only one (1) answer.

Safety knowledge	Strongly disagree	Disagree	Neither disagree or agree	Agree	Strongly agree
Q1. I know how to perform my job in a safe manner.					
Q2. I know how to use safety equipment and standard work procedures					
Q3. I know how to maintain or improve workplace health and safety.					
Q4. I know how to reduce the risk of accidents and incidents in the workplace.					
Q5. I know what are the hazards associated with my jobs and the necessary precautions to be taken while doing my job.					
Q6. I don't know what to do or whom to report if a potential hazard is noticed in my workplace					

End of questions set