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 SAFETY KNOWLEDGE, SAFETY LEADERSHIP, AND SAFETY MOTIVATION TOWARD SAFETY BEHAVIOR AMONG OFFSHORE OIL AND GAS EMPLOYEES

CHING SEA LEE

MASTER OF HUMAN RESOURCE MANAGEMENT
UNIVERSITI UTARA MALAYSIA
2017
THE INFLUENCE OF SAFETY KNOWLEDGE, SAFETY KNOWLEDGE, SAFETY LEADERSHIP, AND SAFETY MOTIVATION TOWARDS SAFETY BEHAVIOR AMONG OFFSHORE OIL AND GAS EMPLOYEES

By

CHING SEA LEE

Thesis Submitted to
Othman Yeop Abdullah Graduate School of Business,
Universiti Utara Malaysia
In Partial Fulfilment of the Requirement for the
Master of Human Resource Management
THE INFLUENCE OF SAFETY KNOWLEDGE, SAFETY LEADERSHIP, AND SAFETY MOTIVATION TOWARD SAFETY BEHAVIOR AMONG OFFSHORE OIL AND GAS EMPLOYEES

COLLEGE OF BUSINESS, UNIVERSITI UTARA MALAYSIA (UUM)

BY: CHING SEA LEE

MATRIC: 818698

Dissertation submitted to

Othman Yeop Abdullah Graduate School of Business,

Universiti Utara Malaysia,

in Partial Fulfillment of the Requirement for the Master of Human Resource Management August 2017
PERAKUAN KERJA KERTAS PENYELIDIKAN
(Certification of Research Paper)

Saya, mengaku bertandatangan, memperakuan bahawa
(I, the undersigned, certified that)
CHING SEA LEE (818698)

Calon untuk ijazah Sarjana
(Candidate for the degree of)
MASTER OF HUMAN RESOURCE MANAGEMENT

telah mengemukakan kertas penelitian yang bertajuk
(has presented his/her research paper of the following title)

THE INFLUENCE OF SAFETY KNOWLEDGE, SAFETY LEADERSHIP AND SAFETY MOTIVATION TOWARDS SAFETY BEHAVIOUR AMONG OFFSHORE OIL & GAS EMPLOYEES

Seperti yang tercatat di muka surat tajuk dan kulit kertas penelitian
(as it appears on the title page and front cover of the research paper)

Bahawa kertas penelitian tersebut boleh diterima dari segi bentuk serta kandungan dan meliputi bidang ilmu
dengan memuaskan.
(that the research paper acceptable in the form and content and that a satisfactory knowledge of the field is covered by the research paper).

Nama Penyelia Pertama : PROF. MADA DR. CHANDRAKANTAN SUBRAMANIAM
(Name of 1st Supervisor)  

Tandatangan :                               
(Signature)

Nama Penyelia Kedua : DR. HADZIROH BINTI IBRAHIM
(Name of 2nd Supervisor)  

Tandatangan :                               
(Signature)

Tanggal : 17 JULAI 2017  
(Date)
PERMISSION TO USE

In presenting this dissertation/project paper in partial fulfillment of the requirements for a Post Graduate degree from Universiti Utara Malaysia (UUM), I agree that the Library of this university may make a freely available for inspection. I further agree that permission for copying of this dissertation/project paper in any manner, in whole or in part, for scholarly purpose may be granted by my supervisor(s) or in their absence, by the Dean of Othman Yeop Abdullah Graduate School of Business where I did my dissertation/project paper. It is understood that any copying or publication or use of this dissertation/project paper parts of it for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and the UUM in any scholarly use which may be made of any material in my dissertation/project paper.

Request for permission to copy or to make other use of materials in this dissertation/project paper in whole or in part should be addressed to:

Dean of Othman Yeop Abdullah Graduate School of Business
University Utara Malaysia
06010 UUM Sintok
Kedah Darul Aman
ABSTRACT

Safety behavior is vital in reducing injuries and accident in the workplace by identifying the workplace hazard, and to combat them to the minimal accident rate. It has positive influence on both employees and employers behavior towards safety and health. This study explored the relationship between safety knowledge, safety leadership, and safety motivation towards safety behavior among offshore oil and gas workers in Terengganu. The information was collected by questionnaire distribution to offshore oil and gas workers and the total numbers of workers responded was 170 out of 300. The finding of this study revealed that safety leadership with respect to safety policy is positively significant with safety behavior. Besides, safety motivation is proven that it has positive significant relationship with safety behavior. Besides, the relationship between safety knowledge and safety compliance has a positively significant relationship between these two variables. Lastly, the results obtained from this study also revealed that there is a positively significant relationship between safety leadership with respect to safety motivation with safety participation. The findings give an insightful information and guidance for researchers and practitioners to identify solutions that can help to improve safety and health at workplace.

Keywords: safety knowledge, safety leadership, safety motivation, safety compliance and safety participation.
ABSTRAK


Kata Kunci: keselamatan pengetahuan, keselamatan kepimpinan, motivasi keselamatan, pematuan keselamatan dan penyertaan keselamatan.
ACKNOWLEDGEMENT

My sincere appreciation to my beloved supervisors Dr. Chandrakantan a/l Subramanian and Dr. Hadziroh binti Ibrahim, who have the genuine attitude to pass on their knowledge about research and their concerted effort of giving advice and guidance throughout the whole thesis journey. This dissertation/project paper would not succeed without their guidance and persistent help.

I am so thankful to my beloved husband Mogana Kumara Vel a/l N Thoppasamy for his patience, understanding, as well as his morale support. Moreover, I would also like extend my thanks to the management of the Petronas Carigali Terengganu for the opportunity to let me to collect data from them which is so beneficial to my study.

I owe special gratitude to those person following: Dr Abdelhak Senadjki, Dr Ng Lee Peng, Dr Choong Yuen Oon, Mohd Mazshurrein Nasir, Charles Surendh David, Zailani Dani bin Mat Sahid, Goh Swee Ling, Lam Chee Hong, Habibah Othman, Goh Mei Yong, Siti Aminah Roslan, Wan Muhammad Majdi, Chin Boon Keong, Lionel Keith for their unending support as well as their effort and time to help me in this thesis.

Forget not my family members support especially my lovely mother Khoo Ai Leng and sisters for having faith in me and accompanied me throughout the whole study life.

At last, thanks be to God for His grace and blessing for giving me the strength to endure and not giving up. Amen.
# TABLE OF CONTENT

## CHAPTER 1 INTRODUCTION

1.1 Background of the study .................................................. 1
1.2 Problem Statement ......................................................... 5
1.3 Research Objectives ....................................................... 8
1.4 Research Questions ....................................................... 8
1.5 Significance of Study .................................................... 9
1.6 Scope of Study ............................................................... 11
1.7 Operational Definition .................................................. 12
1.8 Organization of the Thesis ............................................. 13

## CHAPTER 2 LITERATURE REVIEW

2.1 Introduction ................................................................. 14
2.2 An Overview of Relevant Legislation ............................... 14
2.3 Factors Affecting Safety Behavior ................................. 15
   2.3.1 Human Factors .................................................... 15
   2.3.2 Technological Factors ........................................... 17
   2.3.3 Organizational Factors ......................................... 17
2.4 Safety Behaviour ........................................................ 19
2.5 Safety Leadership ......................................................... 22
   2.5.1 Safety Leadership with respect to Safety Policy .......... 24
   2.5.2 Safety Leadership with respect to Safety Concern ...... 25
   2.5.3 Safety Leadership with respect to Safety Motivation .... 26
2.6 Safety Knowledge 30
2.7 Safety Motivation 32
2.8 Social Exchange Theory 33
2.9 Hypotheses Development 35
2.10 Theoretical Framework 36
2.11 Summary 37

CHAPTER 3 METHODOLOGY

3.1 Introduction 38
3.2 Conceptual Definition 38
3.3 Research Approach/Design 40
3.4 Sampling and Sampling Procedure 41
3.5 Research Instrument 42
3.6 Pilot Study 45
3.7 Data Collection Procedure 46
3.8 Data Analysis Technique 46
3.9 Summary 48

CHAPTER 4 RESULTS AND DISCUSSION

4.1 Introduction 49
4.2 Rate of Response 49
4.3 Respondents’ Demographic Background 50
4.4 Reliability Analysis 53
4.5 Descriptive Analysis

4.6 Pearson Correlation Analysis

4.6.1 Safety Leadership (safety concern, safety motivation, safety policy) and Safety Behaviour (Safety Compliance)

4.6.1.1 Safety Policy and Safety Compliance

4.6.1.2 Safety Concern and Safety Compliance

4.6.1.3 Safety Motivation and Safety Compliance

4.6.2 Safety Knowledge and Safety Compliance

4.6.3 Safety Motivation and Safety Compliance

4.6.4 Safety Leadership (safety concern, safety motivation, safety policy) and Safety Behaviour (Safety Participation)

4.6.4.1 Safety Policy and Safety Participation

4.6.4.2 Safety Concern and Safety Participation

4.6.4.3 Safety Motivation and Safety Participation

4.6.5 Safety Knowledge and Safety Participation

4.6.6 Safety Motivation and Safety Participation

4.7 Hypotheses testing for Safety Compliance

4.7.1.1 Safety Policy and Safety Compliance

4.7.1.2 Safety Concern and Safety Compliance

4.7.1.3 Safety Motivation and Safety Compliance

4.7.2 Safety Knowledge, Safety Motivation and Safety Compliance

4.8 R Square for Safety Compliance

4.9 Hypotheses testing for Safety Participation

4.9.1 Safety leadership (safety policy, safety concern, safety motivation) and safety behavior (safety participation)

4.9.2 Safety Knowledge, Safety Motivation and Safety Participation
CHAPTER 5 CONCLUSIONG AND RECOMMENDATIONS

5.1 Introduction

5.2 Recapitulation of Major Findings

5.3 Discussion on Findings

5.3.1 The Relationship between Safety Leadership with respect to Safety Policy

5.3.2 The Relationship between Safety Leadership with respect to Safety Concern

5.3.3 The Relationship between Safety Leadership with respect to Safety Motivation

5.3.4 Safety Knowledge

5.3.5 Safety Motivation

5.4 Implication

5.4.1 Theoretical Implication

5.4.2 Managerial Implication

5.5 Limitations and Suggestions for Future Study

5.6 Summary

References
### LIST OF TABLES

<table>
<thead>
<tr>
<th>Table 3.1</th>
<th>Variables</th>
<th>43</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 3.2</td>
<td>Pilot Study Reliability Test</td>
<td>45</td>
</tr>
<tr>
<td>Table 3.3</td>
<td>Rule of Thumb Cronbach-Alph - Alpha Coefficient Size</td>
<td>47</td>
</tr>
<tr>
<td>Table 4.1</td>
<td>The Response Rate of Survey</td>
<td>49</td>
</tr>
<tr>
<td>Table 4.2</td>
<td>Demographic Characteristic of the Respondents</td>
<td>50</td>
</tr>
<tr>
<td>Table 4.3</td>
<td>Reliability after Items Deleted</td>
<td>53</td>
</tr>
<tr>
<td>Table 4.4</td>
<td>Descriptive Analysis for Main Variables</td>
<td>55</td>
</tr>
<tr>
<td>Table 4.5</td>
<td>Pearson Correlation Analysis</td>
<td>61</td>
</tr>
<tr>
<td>Table 4.6</td>
<td>Results of Regression Analysis for Safety Compliance</td>
<td>64</td>
</tr>
<tr>
<td>Table 4.7</td>
<td>Results of Regression Analysis for Safety Participation</td>
<td>66</td>
</tr>
<tr>
<td>Table 4.8</td>
<td>Hypotheses Results</td>
<td>67</td>
</tr>
</tbody>
</table>
LIST OF FIGURE

Figure 2.1 Research Framework
## LIST OF ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSH</td>
<td>Occupational Safety and Health</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety and Health 1994</td>
</tr>
<tr>
<td>SOSCO</td>
<td>Social Security Organization</td>
</tr>
<tr>
<td>SPSS</td>
<td>Statistical Package for The Social Science</td>
</tr>
</tbody>
</table>
LIST OF APPENDIXES

Appendix 1: Oil and Gas Industry Accidents Reported to the Labor Department & Social Security Organization (SOSCO), 2010-2014
CHAPTER 1
INTRODUCTION

1.1 Background of the Study

The discovery of oil in Sarawak in the year 1910 marked the beginning of Malaysia’s oil and gas industry, an industry that has generated various opportunities for many major oil and gas companies to invest in the upstream and downstream sectors of the industry. This has ultimately provided a wide spectrum of Malaysians ample employment opportunities and skills transfer, thereby altering the economic landscape of the country (Haq, 2014). Along with the progress of Malaysia’s Oil and Gas Industry, local companies have had the opportunity to go on to become one of the providers for service which cater the area of exploration as well as production in Malaysia. Moreover, the oil and gas industry in Malaysia also extends their service worldwide. There are much contribution done by Malaysian oil and gas companies based on their competence in giving various services, for instance, process design, electrical instrumentation, oil rigs engineering and much more services. The Malaysian economy is strongly impacted by the oil and gas industry, which has achieved one-fifth of the national GDP over the ten years. The industry is expected to create 52,300 new jobs by 2020 (Matrade, 2016).

Malaysia’s oil and gas industry has the second largest ranking for producing the oil and gas in the Association of Southeast Asian Nations (ASEAN), and also one of the world’s top LNG (Liquefied natural gas) producers. Being a major contributor to the country’s wealth, the Malaysian oil and gas industry has understandably been placed under high scrutiny in the aspect of safety. This makes it an important move to highlight unforeseen
The contents of the thesis is for internal user only
REFERENCES


safety climate to safety performance, knowledge, and motivation. Journal of
Occupational Health Psychology, 5(3), 347-358. http://dx.doi.org/10.1037/1076-
8998.5.3.347


Journal of International Journal of Occupational Safety and Ergonomics (JOSE),


a-brief-legal-introduction/

workers towards safety, health and environment. Journal of Engineering Science


4375(95)00011-E

relationship between leader-member exchange and content specific citizenship:


conference safety on construction sites – Discussion, 12-13 March (1969), The
Institution of Civil Engineers, London.


Mullen, J., Kelloway, K., & Teed, M., (2011). Inconsistent style of leadership as a predictor of safety behavior. *Journal of Work and Stress*


## Appendix 1

Table 1.1: Oil and Gas Industry Accidents Reported to the Labor Department & Social Security Organization, 2010-2014

<table>
<thead>
<tr>
<th>Year</th>
<th>Perusahaan/Industry</th>
<th>Kemalangan dilaporkan</th>
<th>HUS dibayar</th>
<th>HUK dibayar</th>
<th>FOT dibayar</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>L/M P/F Jumlah</td>
<td>L/M P/F Jumlah</td>
<td>L/M P/F Jumlah</td>
<td>L/M P/F Jumlah</td>
</tr>
<tr>
<td>2014</td>
<td>Pencarian minyak &amp; gas</td>
<td>71 12 83</td>
<td>73 9 82</td>
<td>25 1 26</td>
<td>1 0 1</td>
</tr>
<tr>
<td></td>
<td>Crude oil &amp; natural gas production</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>Pencarian minyak &amp; gas</td>
<td>49 5 54</td>
<td>41 4 45</td>
<td>11 0 11</td>
<td>3 0 3</td>
</tr>
<tr>
<td></td>
<td>Crude oil &amp; natural gas production</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>Pencarian minyak &amp; gas</td>
<td>58 3 61</td>
<td>43 2 45</td>
<td>16 1 17</td>
<td>2 0 2</td>
</tr>
<tr>
<td></td>
<td>Crude oil &amp; natural gas production</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>Pencarian minyak &amp; gas</td>
<td>48 4 52</td>
<td>45 4 49</td>
<td>6 1 7</td>
<td>0 0 0</td>
</tr>
<tr>
<td></td>
<td>Crude oil &amp; natural gas production</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>Pencarian minyak &amp; gas</td>
<td>38 4 42</td>
<td>27 3 30</td>
<td>4 0 4</td>
<td>0 0 0</td>
</tr>
</tbody>
</table>