

**UNDERSTANDING THE DETERMINANTS OF INDUSTRIAL  
RADIOGRAPHER COMPLIANCE WITH SAFETY BEHAVIOR  
IN MALAYSIA**

By

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**A Dissertation Submitted to the School of Business Management,  
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in Partial Fulfillment of the Requirements for the Degree of  
Master of Science (Occupational Safety and Health Management)**



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## ABSTRAK

Permasalahan berkaitan kepatuhan keselamatan di tempat kerja merupakan salah satu isu yang telah lama diperdebatkan dan dikaji oleh ramai penyelidik dalam bidang sains sosial di seluruh dunia. Kajian yang dijalankan oleh penulis adalah bertujuan untuk memahami persepsi pekerja sinaran atau lebih dikenali sebagai jururadiografi industri yang bekerja dalam bidang radiografi industri di Malaysia terhadap kepatuhan perilaku selamat di tempat kerja. Kajian ini mengadaptasi lima pembolehubah tidak bersandar dalam *Work Safety Scale (WSS)* yang telah dibangunkan oleh Hayes et al. (1998) iaitu keselamatan kerja, keselamatan rakan sekerja, keselamatan penyelia, keselamatan pengurusan dan program dan dasar-dasar keselamatan serta satu pembolehubah bersandar iaitu kepatuhan terhadap perilaku selamat. Borang soalselidik diedarkan kepada 226 jururadiografi industri yang bekerja dalam 25 buah syarikat radiografi industri yang beroperasi di sekitar Lembah Klang, Malaysia. Maklumbalas yang diterima adalah sebanyak 46.6% dan telah dianalisa dengan menggunakan *software SPSS* versi 17.0. Analisis yang dijalankan termasuk reliabiliti persampelan, sampel deskriptif, pembolehubah deskriptif, korelasi dan regrasi. Hasil kajian menunjukkan bahawa keselamatan kerja, keselamatan penyelia dan program dan polisi keselamatan memberikan hubungan yang signifikan terhadap kepatuhan perilaku selamat di kalangan jururadiografi industri. Program dan dasar-dasar keselamatan menunjukkan hubungan yang paling kuat ( $\beta=.754$ ) diikuti oleh keselamatan penyelia ( $\beta=.180$ ) dan keselamatan kerja ( $\beta=.179$ ).

## ABSTRACT

Problems related to compliance with safety in the workplace are one of the issues that has long been debated and studied by many researchers in the social sciences worldwide. The present study conducted by the author is to understand the perception of radiation workers, better known as industrial radiographer working in the field of industrial radiography in Malaysia to compliance with safety behavior. This study adapted the five independent variables in the Work Safety Scale (WSS), which was developed by Hayes et al. (1998) namely job safety, coworker safety, supervisor safety, management safety and safety program and policies as well as a dependent variable, compliance with safe behavior. The questionnaires were distributed to 226 industrial radiographers working in 25 industrial radiography companies in the Klang Valley region of Malaysia. The responses received were 46.6% and were analyzed using the SPSS software version 17.0. Analysis carried out, included reliability, descriptive sampling, descriptive variables, correlation and regression. The results showed that the job safety, the supervisor safety and the safety program and policies provide a significant relationship to compliance with safety behavior among industrial radiographer. Safety program and policies illustrate the strongest relationship ( $\beta = .754$ ), followed by supervisor safety ( $\beta = .180$ ) and job safety ( $\beta = .179$ ).

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## TABLE OF CONTENTS

	<b>Page</b>
<b>PERMISSION TO USE</b>	i
<b>DISCLAIMER</b>	ii
<b>ABSTRAK</b>	iii
<b>ABSTRACT</b>	iv
<b>ACKNOWLEDGEMENT</b>	v
<b>TABLE OF CONTENTS</b>	vi
<b>LIST OF TABLES</b>	ix
<b>LIST OF FIGURES</b>	x
<b>CHAPTER 1 : INTRODUCTION</b>	
1.1 Background of the Study	1
1.1.1 Malaysian Occupational Safety and Health Scenario	5
1.2 Problem Statement	7
1.3 Research Questions	8
1.4 Research Objectives	9
1.5 Scope of Study	9
1.5.1 Briefly On the Use of Ionizing Radiation in Malaysia	10
1.5.2 Industrial Radiography	11
1.6 Significance of the Study	14
<b>CHAPTER 2 : LITERATURE REVIEW</b>	
2.1 Introduction	16
2.2 Safety Performance	16
2.3 The Five Facets of Work Safety Scale (WSS) and Performance	19
2.3.1 Job Safety and Performance	19
2.3.2 Coworker Safety and Performance	22



2.3.3	Supervisor Safety and Performance	25
2.3.4	Management Safety Practices and Performance	29
2.3.5	Safety Program and Policies and Performance	33
2.4	Summary	37

### **CHAPTER 3 : RESEARCH METHODOLOGY**

3.1	Introduction	38
3.2	Research Framework	38
3.3	Conceptual Definition	39
3.4	Operational Definition Summary	40
3.5	Instrument Scales	41
3.6	Population	42
3.7	Sample	42
3.8	Sampling Procedure	43
3.9	Pilot Test	43
3.10	Data Analysis	44
3.11	Summary	46

### **CHAPTER 4 : RESEARCH FINDINGS**

4.1	Introduction	47
4.2	Response Rate	47
4.3	Profile of the Respondent	47
4.4	Reliability Analysis	51
4.5	Descriptive Statistic of Variables	52
4.6	Correlation Analysis	53
4.7	Regression Analysis	54
4.8	Summary	55

## **CHAPTER 5 : DISCUSSION AND CONCLUSION**

5.1	Introduction	56
5.2	Recapitulation of Result	56
5.3	Discussion	57
5.3.1	Job safety and compliance with safety behavior	57
5.3.2	Coworker safety and compliance with safety behavior	58
5.3.3	Supervisor safety and compliance with safety behavior	59
5.3.4	Management safety and compliance with safety behavior	59
5.3.5	Safety program and policies and compliance with safety behavior	60
5.4	Implication	60
5.4.1	Job Safety	61
5.4.2	Supervisor Safety	62
5.4.3	Safety Program and Policies	64
5.4.4	Theoretical Implication	65
5.5	Limitation	66
5.6	Future Studies	67
5.7	Conclusion	68
	<b>REFERENCES</b>	70
	<b>APPENDIX A</b>	82
	<b>APPENDIX B</b>	88
	<b>APPENDIX C</b>	91
	<b>APPENDIX D</b>	97
	<b>APPENDIX E</b>	103
	<b>APPENDIX F</b>	104

## LIST OF TABLES

	Page
Table 1.1 Record of the reported occupational accidents and death in Malaysia	6
Table 1.2 Record of the compensation paid due to industrial accident in Malaysia	7
Table 1.3 Record of the reported radiological accident in Malaysia	13
Table 1.4 Record of the annual average dose (in unit of millisieverts) received by radiation workers in Malaysia	14
Table 3.1 The pilot study reliability test	44
Table 4.1 Descriptive analysis for demographic variables	48
Table 4.2 Frequency analysis for demographic variables	49
Table 4.3 Reliability test for WSS subscale and compliance with safety behavior items	51
Table 4.4 Descriptive analysis results	52
Table 4.5 Correlation coefficient among variables	53
Table 4.6 Result of linear regression analysis	54

## LIST OF FIGURES

	Page
Figure 3.1 Research framework	39

# CHAPTER 1

## INTRODUCTION

### 1.1 Background of the Study

Various efforts have been made by researchers to understand and identify problems related to safety behavior among employees from different sectors of employment such as in the construction industry, oil and gas industry, food industry, manufacturing industry and so forth (DePasquale & Geller, 1999; Langford, Rowlinson, & Sawacha, 2000; Medina, McSween, Rost, & Alvero, 2009; Rundmo, Hestad, & Ulleberg, 1998; Tucker & Turner, 2011).

According to Ray, Bishop and Wang (1997), studies related to safety behavior showed tremendous development since the study was carried out by Komaki, Barwick and Scott (1978). These efforts intend to identify the main factors or contributors related to human behavior that may lead to an accident happening at the workplace. Despite attempts to improve workplace safety, high rates of job-related injuries persist worldwide (Haama-laïnen, Takala, & Saarela, 2006; Inness, Turner, Barling, & Stride, 2010). Gaining an understanding of the determinants of employee safety performance that precede such injuries can potentially facilitate improvements to workplace safety (Neal & Griffin, 2006).

Compliance to safety behavior has been proven to be one of the factors in preventing occurrences of accident at workplace (Burke, Sarpy, Tesluk, &

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