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**ASSESSMENT OF MEDICAL LABORATORY
WORKERS' COMPLIANCE TO SAFETY BEHAVIOUR**

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**MASTER OF SCIENCE
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**ASSESSMENT OF MEDICAL LABORATORY WORKERS' COMPLIANCE
TO SAFETY BEHAVIOUR**



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ABSTRACT

Workplace safety is of important irrespective whether it is manufacturing, construction or healthcare industry because it will affect the workers or the organization itself that may cause accidents that leads to death, injury, damage of machines or loss in profit. This study was held to determine the safety compliance level among medical laboratory workers and to study the influence of Work Safety Scale which consists of (a) job safety, (b) co-worker safety, (c) supervisor safety, (d) management safety practices and (e) satisfaction with safety program on the compliance with safety behaviour in a medical laboratory in Kuala Lumpur. A total of 191 questionnaires had been distributed to the medical laboratory workers which include pathologists, medical officers, science officers and medical laboratory technologists by using stratified random sampling method. 141 questionnaire were returned, however seven of them were dropped from the study due to incomplete responses in the questionnaire. The data collected from the study were analysed using Statistical Package for Social Sciences (SPSS) version 23. The result revealed the mean value of safety compliance level is of 4.159 (n = 134). The multiple regression result showed none of the facets of the work safety scale had a significant influence on compliance with safety behaviour among the medical laboratory workers.

Keywords: compliance with safety behaviours, job safety, co-worker safety, supervisor safety, safety management practices, satisfaction with safety program

ABSTRAK

Keselamatan di tempat kerja adalah penting sama ada di industri perkilangan, pembinaan atau kesihatan kerana ia boleh mempengaruhi pekerja atau organisasi di mana ia boleh menyebabkan kemalangan yang membawa kematian, kecederaan, kerosakan mesin atau kerugian dalam keuntungan. Kajian ini dijalankan adalah untuk menentukan tahap pematuhan tingkah laku keselamatan di antara pekerja makmal perubatan dan mengkaji pengaruh Skala Keselamatan Kerja (*Work Safety Scale*) yang terdiri daripada (a) keselamatan kerja, (b) keselamatan rakan sekerja, (c) keselamatan penyelia, (d) amalan keselamatan oleh pengurusan, dan (e) kepuasan program dan polisi keselamatan terhadap pematuhan tingkah laku keselamatan di sebuah makmal perubatan di Kuala Lumpur. Sejumlah 191 borang soal kaji selidik telah diedarkan kepada pekerja makmal perubatan yang terdiri daripada pakar patologi, pegawai perubatan, pegawai sains dan juruteknologi makmal perubatan dengan menggunakan kaedah persampelan berstrata rawak. 141 borang soal kaji selidik telah dipulangkan namun 7 di antaranya terpaksa digugurkan daripada kajian ini kerana jawapan yang tidak lengkap. Data yang dikumpul dari kajian dianalisis dengan menggunakan Pakej Statistik Untuk Sains Sosial (SPSS) versi 23. Keputusan kajian menunjukkan nilai min tahap pematuhan tingkah laku keselamatan adalah 4.159 ($n = 134$). Hasil ujian regresi berganda menunjukkan tiada faset daripada Skala Keselamatan Kerja yang mempunyai pengaruh yang signifikan terhadap pematuhan tingkah laku keselamatan di antara pekerja makmal keselamatan.

Kata kunci: pematuhan tingkah laku keselamatan, keselamatan kerja, keselamatan rakan sekerja, keselamatan penyelia, amalan keselamatan oleh pengurusan, kepuasan program keselamatan

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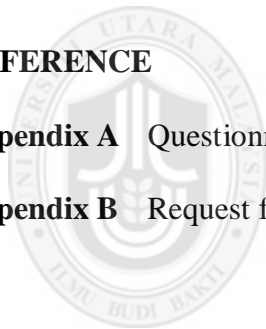
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LIST OF ABBREVIATION

CCOHS	Canadian Centre for Occupational Health and Safety
FTE	Full-time equivalent employees
MOH	Ministry of Health Malaysia
OSHA	Occupational Safety and Health Act 1994
SPSS	Statistical Package for the Social Sciences
WHO	World Health Organization



CHAPTER 1

INTRODUCTION

1.1 Introduction

Chapter 1 will discuss about the background of the study in which the reason to study the safety compliance behaviour among medical laboratory workers, the problem statement, research questions and objectives, the scope of the study, significance from the study and the definition of some terms used in the study.

1.2 Background of the Study

Accident at workplaces may cause loss of life, injuries or properties damage and thus safety is a major concern for an organization. Yearly fatalities of over 2.3 million work related accidents and diseases took place in a global scale with about 6,300 people die every day (International Labour Organization, 2014). There were over 313 million cases of non-fatal occupational accidents reported in 2010 with an average of 860,000 people injured or suffered ill health on a daily basis (International Labour Organization, 2014). In Malaysia, for the year 2014 and 2015, the fatality rate was 4.21 and 4.84 per 100,000 worker (Department of Occupational Safety and Health Malaysia, 2017) with 63,331 cases and 62,837 cases of accidents reported respectively (Social Security Organisation, 2015).

Occupational accident causes financial loss directly or indirectly and the negative impact not only affect the employers, but also the valuable employees and the nation. For employers, lost time injury of workers and damage or machine cause reduction in productivity that may affect their business reputation and profit. In

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APPENDIX A

Questionnaire: Assessment of Medical Laboratory Workers' Compliance to Safety Behavior



This Survey (Questionnaire) is intended for
Partial Fulfillment of the Requirement for the Degree of Master of Science
(Occupational Safety and Health Management)
Universiti Utara Malaysia

Universiti Utara Malaysia

Any enquiries please contact:

Kong Sau Mun

012-9051483

SECTION 1: PROFILE DATA
BAHAGIAN 1: PROFIL DATA

Please tick (✓) the appropriate response. Sila tanda (✓) pada pilihan yang sesuai.

1. Gender / Jantina
- () Male / Lelaki
() Female / Perempuan
2. Age / Umur
- () 20 – 30 years / 20 – 30 tahun
() 31 – 40 years / 31 – 40 tahun
() 41 – 50 years / 41 – 50 tahun
() 51 years and above / 51 tahun dan ke atas
3. Race / Bangsa
- () Malay / Melayu
() Chinese / Cina
() Indian / India
() Others / Lain-lain
4. Number of Working Experience in Medical Laboratory / Tahun Pengalaman Bekerja di Makmal Perubatan
- () Less than 5 years / Kurang daripada 5 tahun
() 6 – 10 years / 6 – 10 tahun
() 11 – 15 years / 11 – 15 tahun
() 16 – 20 years / 16 – 20 tahun
() More than 20 years / Lebih daripada 20 years
5. Job title / Jawatan
- () Pathologist / Pakar Patologi
() Medical Officer / Pegawai Perubatan
() Science Officer / Pegawai Sains
() Medical Laboratory Technologist / Juruteknologi Makmal Perubatan
() Health Attendant / Pembantu Perawatan Kesihatan
6. Education level / Tahap Pendidikan
- () PHD / Doktor Falsafah
() Master Degree / Ijazah Sarjana
() Bachelor Degree / Ijazah Sarjana Muda
() Diploma / Diploma
() STPM/Certificate/Matriculation/A-level
STPM / Sijil / Matrikulasi / A-level
() SPM
7. Laboratory unit / Unit Makmal
- () Microbiology / Mikrobiologi
() Chemical pathology / Patologi Kimia
() Hematology / Hematologi
() Histology & Cytology / Histologi & Sitologi
() Core Laboratory / Makmal Teras
() Drug Lab & Toxicology / Makmal Dadah & Toksikologi
() Pre-analytical Counter / Kaunter Pre-ana
() Satellite Lab / Makmal Satelit

SECTION 2: WORK SAFETY SCALE / BAHAGIAN 2: SKALA KESELAMATAN KERJA

Think about your current job. Using the scale below, please answer the following questions.
 Fikirkan tentang pekerjaan semasa anda. Jawab soalan-soalan berikut dengan berpandukan skala di bawah:

Strongly Disagree Sangat Tidak Setuju	Disagree Tidak Setuju	Neutral Neutral	Agree Setuju	Strongly Agree Sangat Setuju
1	2	3	4	5

I. Job Safety / Keselamatan Kerja

Think about your job. Do you agree or disagree that each of the following phrases describes your job? Circle one answer for each statement using the scale at the top of the page.
 Fikirkan tentang pekerjaan semasa anda. Sejaht manakah anda bersetuju atau tidak bersetuju dengan setiap kenyataan tentang pekerjaan anda di bawah? Bulatkan setiap jawapan anda dengan berpandukan skala yang diberi di atas.

1	I think my job is dangerous / Kerja saya berbahaya	1	2	3	4	5
2	I think my job is safe / Kerja saya selamat	1	2	3	4	5
3	I think my job is hazardous / Kerja saya membawa ancaman	1	2	3	4	5
4	I think my job is risky / Kerja saya berisiko	1	2	3	4	5
5	I think my job is unhealthy / Kerja saya tidak sihat	1	2	3	4	5
6	I think my job could get hurt easily / Kerja saya mudah membawa kecederaan	1	2	3	4	5
7	I think my job is unsafe / Kerja saya tidak selamat	1	2	3	4	5
8	I'm fear for health with my job / Saya risau pekerjaan saya boleh memudaratkan kesihatan	1	2	3	4	5
9	There's chance of death with my job / Kerja saya berkemungkinan membawa kematian	1	2	3	4	5
10	I think my job is scary / Kerja saya menakutkan	1	2	3	4	5

II. Coworker Safety / Keselamatan Rakan Sekerja

Think about the people you work with. Do you agree or disagree that each of the following phrases describes these people? Circle one answer for each statement using the scale at the top of the page.
 Fikirkan tentang rakan sekerja anda. Sejaht manakah anda bersetuju atau tidak bersetuju sama ada dengan setiap kenyataan yang menggambarkan rakan sekerja anda di bawah? Bulatkan setiap jawapan anda dengan berpandukan skala yang diberi di atas.

1	My coworker(s) ignore safety rules / Rakan sekerja saya mengabaikan peraturan keselamatan	1	2	3	4	5
2	My coworker(s) don't care about other's safety / Rakan sekerja saya tidak mengambil berat tentang keselamatan orang lain	1	2	3	4	5
3	My coworker(s) pay attention to safety rules / Rakan sekerja saya memberi perhatian kepada peraturan keselamatan	1	2	3	4	5
4	My coworker(s) follow safety rules / Rakan sekerja saya mamatuhi peraturan keselamatan	1	2	3	4	5
5	My coworker(s) look out for others' safety / Rakan sekerja saya mengambil berat tentang keselamatan orang lain	1	2	3	4	5
6	My coworker(s) encourage others to be safe / Rakan sekerja saya menggalakkan orang lain supaya bekerja dengan selamat	1	2	3	4	5
7	My coworker(s) take chances with safety / Rakan sekerja saya tidak menitikberatkan soal keselamatan	1	2	3	4	5
8	My coworker(s) keep work area clean / Rakan sekerja saya memastikan tempat kerja bersih	1	2	3	4	5
9	My coworker(s) is safety-oriented / Rakan sekerja saya mengorientasikan keselamatan	1	2	3	4	5
10	My coworker(s) don't pay attention / Rakan sekerja saya tidak menumpukan perhatian semasa bekerja	1	2	3	4	5

Strongly Disagree Sangat Tidak Setuju	Disagree Tidak Setuju	Neutral Neutral	Agree Setuju	Strongly Agree Sangat Setuju
1	2	3	4	5

III. Supervisor Safety / Keselamatan Penyelia

Think about your immediate supervisor. Do you agree or disagree that each of the following phrases describes your immediate supervisor? Circle one answer for each statement using the scale at the top of the page.

Fikirkan tentang penyelia terdekat anda. Sejauh manakah anda bersetuju atau tidak bersetuju dengan setiap kenyataan yang menggambarkan penyelia terdekat anda di bawah? Bulatkan setiap jawapan anda dengan berpandukan skala yang diberi di atas.

1	My supervisor praises safe work behavior / Penyelia saya memuji perilaku kerja yang selamat	1	2	3	4	5
2	My supervisor encourages safe behavior / Penyelia saya menggalakkan perilaku yang selamat	1	2	3	4	5
3	My supervisor keeps workers informed of safety rules / Penyelia saya sertilasa memaklumkan peraturan keselamatan kepada pekerja	1	2	3	4	5
4	My supervisor rewards safe behavior / Penyelia saya memberi ganjaran terhadap perilaku yang selamat	1	2	3	4	5
5	My supervisor involves workers in setting safety goals / Penyelia saya melibatkan pekerja dalam menetapkan matlamat keselamatan	1	2	3	4	5
6	My supervisor discuss safety issues with others / Penyelia saya membincangkan isu keselamatan dengan orang lain	1	2	3	4	5
7	My supervisor updates safety rules / Penyelia saya mengemaskini peraturan keselamatan	1	2	3	4	5
8	My supervisor trains workers to be safe / Penyelia saya melatih pekerja supaya bekerja dengan selamat	1	2	3	4	5
9	My supervisor enforces safety rules / Penyelia saya menguatkuasakan peraturan keselamatan	1	2	3	4	5
10	My supervisor acts on safety suggestions / Penyelia saya mengambil tindakan atas cadangan berkaitan hal keselamatan	1	2	3	4	5

IV. Management Safety Practices / Amalan Keselamatan oleh Pengurusan

Think about your management. Do you agree or disagree that each of the following phrases describes your management? Circle one answer for each statement using the scale at the top of the page.

Fikirkan tentang pihak pengurusan anda. Sejauh manakah anda bersetuju atau tidak bersetuju dengan setiap kenyataan yang menggambarkan pengurusan anda di bawah? Bulatkan setiap jawapan anda dengan berpandukan skala yang diberi di atas.

1	The management provides enough safety training programs / Pengurusan menyediakan program keselamatan yang mencukupi	1	2	3	4	5
2	The management conducts frequent safety inspection / Pengurusan sering membuat pemeriksaan keselamatan	1	2	3	4	5
3	The management investigates safety problems quickly / Pengurusan menyalasat masalah berkaitan keselamatan dengan segera	1	2	3	4	5
4	The management rewards workers that work safe / Pengurusan memberi ganjaran kepada pekerja yang bekerja dengan selamat	1	2	3	4	5
5	The management provides safe equipment / Pengurusan menyediakan alat-alat keselamatan	1	2	3	4	5
6	The management provides safe working conditions / Pengurusan menyediakan suasana bekerja yang selamat	1	2	3	4	5
7	The management responds quickly to safety concerns / Pengurusan segera bertindak balas terhadap perkara berkaitan dengan keselamatan	1	2	3	4	5
8	The management helps maintain clean work / Pengurusan membantu mengekalkan kebersihan di tempat kerja	1	2	3	4	5
9	The management provides safety information / Pengurusan menyediakan maklumat berkaitan hal keselamatan	1	2	3	4	5
10	The management keeps workers informed of hazards / Pengurusan mewartarkan keadaan berbahaya kepada pekerja	1	2	3	4	5

Strongly Disagree Sangat Tidak Setuju	Disagree Tidak Setuju	Neutral Neutral	Agree Setuju	Strongly Agree Sangat Setuju
1	2	3	4	5

V. Safety Program (Policies) / Program dan Polisi Keselamatan

Think about your safety programs at work. Do you agree or disagree that each of the following phrases describes this safety program? Circle one answer for each statement using the scale at the top of the page.

Fikirkan tentang pelaksanaan program keselamatan di tempat kerja anda. Sejauh manakah anda bersetuju atau tidak bersetuju dengan setiap kenyataan berkaitan dengan program keselamatan di bawah? Bulatkan setiap jawapan anda berpandukan skala yang diberikan di atas.

1	The safety program (policies) are worthwhile / Program (polisi) keselamatan bermanfaat	1	2	3	4	5
2	The safety program (policies) help prevent accidents / Program (polisi) keselamatan membantu mencegah kemalangan	1	2	3	4	5
3	The safety program (policies) are useful / Program (polisi) keselamatan berfaedah	1	2	3	4	5
4	The safety program (policies) are good / Program (polisi) keselamatan adalah bagus	1	2	3	4	5
5	The safety program (policies) are first-rated / Program (polisi) keselamatan adalah yang terbaik	1	2	3	4	5
6	The safety program (policies) are unclear / Program (polisi) keselamatan tidak jelas	1	2	3	4	5
7	The safety program (policies) are important / Program (polisi) keselamatan penting	1	2	3	4	5
8	The safety program (policies) are effective in reducing injuries / Program (polisi) keselamatan berkesan mengurangkan kecederaan	1	2	3	4	5
9	The safety program (policies) don't apply to my workplace / Program (polisi) keselamatan tidak sesuai diaplikasikan di tempat kerja saya	1	2	3	4	5
10	The safety program (policies) do not work / Program (polisi) keselamatan tidak berkesan	1	2	3	4	5



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SECTION 3: COMPLIANCE WITH SAFETY BEHAVIOR
BAHAGIAN 3: KEPATUHAN TERHADAP PERI LAKU SELAMAT

Think about your current job. Using the scale below, please answer the following questions.
 Fikirkan tentang pekerjaan semasa anda. Sila jawab soalan-soalan yang disenaraikan dengan berpandukan skala di bawah.

Never <i>Tidak Pernah</i>	Seldom <i>Jarang-jarang</i>	Sometimes <i>Kadang-kala</i>	Often <i>Kerap Kali</i>	Always <i>Selalu</i>
1	2	3	4	5

1	Never eat, drink or smoke while working in laboratory / <i>Tidak makan, minum atau merokok semasa bekerja di makmal</i>	1	2	3	4	5
2	Keep my work area clean and decontaminate workbench at the end of working day / <i>Memastikan tempat kerja saya bersih dan mendekontaminasikan meja kerja selepas tamat waktu bekerja</i>	1	2	3	4	5
3	Wear lab coat or overalls or gown when working in the laboratory / <i>Memakai kot makmal atau pakaian pelindung apabila bekerja di makmal</i>	1	2	3	4	5
4	Wear protective eye-shield whenever there is a possibility of splash / <i>Memakai pelindung mata di mana kemungkinan percikan berlaku</i>	1	2	3	4	5
5	Wear disposable glove for all hazard work and whenever there is a risk of contamination / <i>Memakai sarung tangan (pakai buang) untuk semua kerja bahaya dan berisiko terhadap kontaminasi</i>	1	2	3	4	5
6	Use a biosafety cabinet when work with specimens that may produce infectious aerosols / <i>Menggunakan kabinet keselamatan biologi semasa mengendalikan spesimen yang mungkin menghasilkan aerosol berjangkit</i>	1	2	3	4	5
7	Never do mouth pipetting / <i>Tidak menggunakan mulut dalam hal memipet</i>	1	2	3	4	5
8	Dispose of sharp objects into a sharp container / <i>Membuang objek tajam ke dalam bekas khas objek tajam</i>	1	2	3	4	5
9	Dispose all potentially contaminated materials into a yellow biohazard bag / <i>Membuang semua bahan yang berkemungkinan tercemar (kontaminasi) ke dalam beg kuning biohazard</i>	1	2	3	4	5
10	Know and understand the appropriate procedures in the event of an emergency / <i>Mengetahui dan memahami prosedur kecemasan</i>	1	2	3	4	5

END OF QUESTIONNAIRE / KAJI SELIDIK TAMAT

THANK YOU / TERIMA KASIH

APPENDIX B



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"MUAFAKAT KEDAH"

Our Ref : UUM/UUMKL/P-39/133
Date : 22nd December 2016

TO WHOM IT MAY CONCERN

COLLECTION OF DATA FOR RESEARCH PURPOSES

We are pleased to inform you that the following individual is UUM Kuala Lumpur student who is presently pursuing his Master of Science Occupational Safety and Health Management. She is required to collect data from your organization as a requirement for the BPMZ69912 Research Paper courses that she is pursuing this semester.

No.	Name	Matric No.	I/D No.
1.	Kong Sau Mun	820090	830121145488

Since she has chosen your organization as her assignment, we would be most grateful if you could render all assistance to her to carry out the project successfully.

Please be informed that the data collected is purely for academic purposes and we assure you that all information or data will be kept strictly confidential.

We really appreciate your kindness and cooperation in the above matter.

Thank you.

"SCHOLARSHIP, VIRTUE AND SERVICE"

Sincerely yours,

DR. AHMAD RIZAL BIN MAZLAN
Director
Universiti Utara Malaysia
Kuala Lumpur (UUMKL)

Universiti Pengurusan Terkemuka
The Eminent Management University

