

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.



UNGKU  
ISMITH  
SYAFIQ

TELEOLOGICAL FACTORS CONTRIBUTING TOWARDS WORK  
COMMUTING ACCIDENTS AMONG MOTORCYCLISTS

MSc  
(OSHM)  
2017

**TELEOLOGICAL FACTORS CONTRIBUTING  
TOWARDS WORK COMMUTING ACCIDENTS  
AMONG MOTORCYCLISTS**



**MASTER OF SCIENCE (OCCUPATIONAL SAFETY  
& HEALTH MANAGEMENT)  
UNIVERSITI UTARA MALAYSIA**

**August 2017**

TELEOLOGICAL FACTORS CONTRIBUTING TOWARDS WORK COMMUTING  
ACCIDENTS AMONG MOTORCYCLISTS

By,

UNGKU ISMITH SYAFIQ BIN UNGKU KHALID



Thesis Submitted to  
Othman Yeop Abdullah Graduate School of Business,  
Universiti Utara Malaysia,  
in Fulfillment of the Requirement for the Master of Science (Occupational Safety and Health  
Management)



**Othman Yeop Abdullah  
Graduate School of Business**

**Universiti Utara Malaysia**

**PERAKUAN KERJA KERTAS PENYELIDIKAN  
(Certification of Research Paper)**

Saya, mengaku bertandatangan, memperakukan bahawa  
(*I, the undersigned, certify that*)

**UNGKU ISMITH SYAFIQ BIN UNGKU KHALID (820094)**

Calon untuk Ijazah Sarjana

(*Candidate for the degree of*)

**MASTER OF SCIENCE (OCCUPATIONAL SAFETY & HEALTH MANAGEMENT)**

Telah mengemukakan kertas projek yang bertajuk  
(*has presented his/her project paper of the following title*)

**TELEOLOGICAL FACTORS CONTRIBUTING TOWARDS WORK COMMUTING ACCIDENTS  
AMONG MOTORCYCLISTS**

Seperti yang tercatat di mukasurat tajuk dan kulit kertas projek  
(*as it appears on the title page and front cover of the project paper*)

Bahawa kertas projek tersebut boleh diterima dari segi bentuk serta kandungan dan meliputi bidang ilmu dengan memuaskan.

(*that the project paper acceptable in the form and content and that a satisfactory knowledge of the field is covered by the project paper*).

Nama Penyelia : **NORIZAN BT. HAJI AZIZAN**  
(*Name of Supervisor*)

Tandatangan : \_\_\_\_\_  
(*Signature*)

Tarikh : **2<sup>ND</sup> AUGUST 2017**  
(*Date*)

## **PERMISSION TO USE**

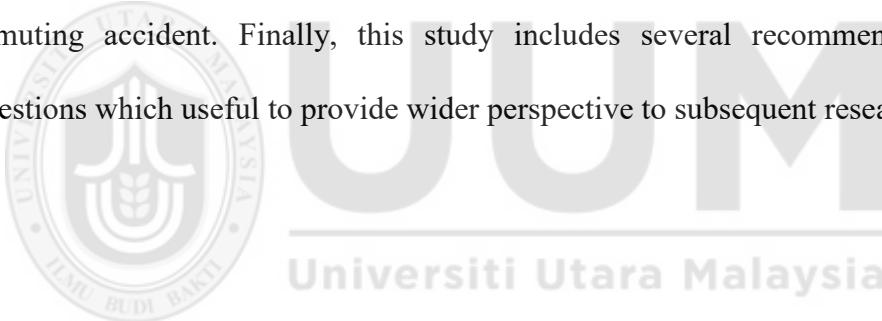
In presenting this research paper in partial fulfillment of the requirements for a Post Graduate degree from Universiti Utara Malaysia (UUM), I agree that the Library of this university may make it freely available for inspection. I further agree that permission for copying this research paper in any manner, in whole or in part, for scholarly purposes 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 research paper. It is understood that any copying or publication or use of this research 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 to the UUM in any scholarly use which may be made of any material in my research paper.

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

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

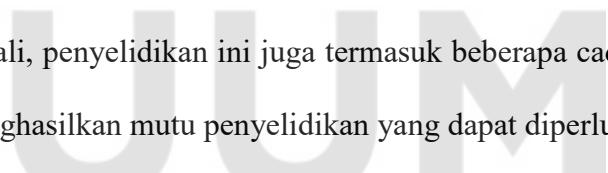
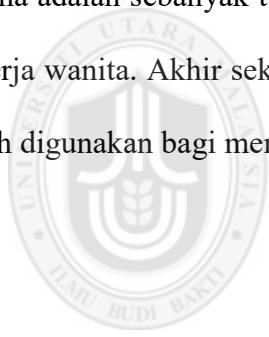
## **ABSTRACT**

The purpose of this study was to investigate teleological factor contributing towards commuting accident to or return from workplace among motorcyclist workers of COMPANY XYZ Center. A set of questionnaire was formulated based on the research model and has been used in data collection through paper based survey. One hundred and thirty-three (133) workers who are participate to do a survey excluding thirty (30) workers who are involved in pilot study. The workers are consist of male (71 workers) and female (62 workers) in the private sector participated in this study. Major finding this study revealed that majority of female workers, degree holder and environmental factor in COMPANY XYZ possess with significant value towards commuting accident. Finally, this study includes several recommendations and suggestions which useful to provide wider perspective to subsequent research.



## **ABSTRAK**

Kertas pernyelidikan ini dilakukan bertujuan untuk menyiasat faktor-faktor teleologik yang menyumbang kepada kemalangan perjalanan semasa pergi dan balik dari tempat kerja dalam kalangan penunggang motorsikal yang bekerja di syarikat XYZ. Borang soal-selidik telah direka berdasarkan model penyelidikan bagi pengumpulan maklumat melalui kertas borang soal-selidik. Sebanyak satu ratus dan tiga puluh tiga (133) pekerja yang terlibat dalam soal-selidik dan tidak termasuk tiga puluh pekerja (30) yang telah terlibat dalam “pilot study”. Pekerja-pekerja yang terlibat dari segi jantina adalah sebanyak tujuh puluh satu (71) pekerja lelaki dan enam puluh dua (62) pekerja wanita. Akhir sekali, penyelidikan ini juga termasuk beberapa cadangan yang boleh digunakan bagi menghasilkan mutu penyelidikan yang dapat diperluaskan.



## AKNOWLEDGEMENTS

***“In the name of Allah, Most Gracious, Most Merciful”***

Alhamdulilah, praise to Allah Ta’ala for giving me the strength and health to finish my research paper. This paper is part of the requirements for me to complete my study in Master of Science Occupational Safety and Health Management. However, this report will not be completed without the help and support from several individuals whether they contribute directly or indirectly. I would like to take this opportunity to thank each and every one of them.

My greatest appreciation goes to my supervisor, Pn. Norizan Hj, Azizan for all her guidance, encouragement, valuable suggestion and advice extended to me. A special thanks to my family and friends for their continuous support day and night, understanding and patience during my journey in this study. Their supports were just what I needed to give me the spirit and strength to keep on going.

Last but not least, I would like to thank all the people whom generously spent little of their valuable time to participate in their questionnaire survey. Without their feedback, this project would not have anything to report. Not forgetting all my lecturers, my entire course mates and other individuals whom names are not mentioned here for their contributions in whatever forms whether directly or indirectly. Thank you so much and may Allah bless all of them.

## TABLE OF CONTENTS

PERMISSION TO USE .....	I
ABSTRACT .....	II
ABSTRAK .....	III
ACKNOWLEDGEMENTS .....	IV
TABLE OF CONTENTS .....	V
LIST OF TABLES .....	VIII
LIST OF FIGURES .....	IX

### CHAPTER 1: INTRODUCTION

1.1 Background of the Study .....	1
1.2 Problem Statement .....	3
1.3 Research Question .....	8
1.4 Research Objective .....	8
1.5 Significance of the Study .....	9
1.6 Research Scope and Limitation of the Study .....	10
1.7 Definition of Key Terms .....	11
1.8 Organization of the Thesis .....	12

### CHAPTER 2: LITERATURE REVIEW

2.1 Introduction .....	14
2.2 Review of Related Literature .....	14
2.2.1 Teleological Factors .....	14
2.2.2 Vehicle: Motorcycle .....	14
2.2.3 Commuting Accident .....	15
2.2.4 SOSCO Malaysia on Reported Commuting Accidents .....	17
2.2.5 MIROS on Reported Commuting Accident: Motorcycle .....	19
2.2.6 Environmental Factors towards Commuting Accident .....	20
2.2.7 Fatigue Factors towards Commuting Accident .....	23
2.2.8 Job and Work Factor Contributes towards Commuting Accidents .....	25
2.3 Summary .....	27

## CHAPTER 3: METHODOLOGY

3.1	Introduction.....	28
3.2	Research Model/ Framework.....	28
3.3	Research Design.....	29
3.4	Hypotheses/ Propositions Development .....	30
3.5	Operational Definition (Variables) .....	32
3.6	Measurement of Variables/ Instrumentation.....	34
3.7	Data Collection Procedures.....	35
3.8	Sampling .....	36
3.9	Data Analysis Techniques.....	37
3.9.1	Demographic and personal characteristics of the sample .....	38
3.9.2	Pilot Study.....	38
3.9.3	Reliability of Items .....	39
3.9.4	Test for Normality.....	39
3.9.5	Analysis of Correlations .....	39
3.9.6	Multiple Linear Regressions .....	41
3.9.7	Independent T-test .....	41
3.9.8	Analysis of Variance (ANOVA).....	42
3.9.9	Post-Hoc Multiple Comparison Test.....	42
3.9.10	Chi-Square Test.....	43
3.10	Summary .....	43

## CHAPTER 4: RESULTS AND DISCUSSION

4.1	Introduction.....	44
4.2	Overview of Data Collected.....	44
4.2.1	Response Rate.....	44
4.3	Profile of Respondents .....	45
4.4	Goodness of Measures .....	46
4.4.1	Reliability Test Analysis.....	46
4.4.2	The Reliability Analysis on Items.....	47
4.4.3	Kolmogorov Smirnov Test Statistics .....	48
4.5	Tested Research Objective/ Hypothesis.....	49

4.5.1	Analysis of Correlations and Multiple Linear Regressions .....	49
4.5.1.1	Discussion .....	51
4.5.2	Independent T–Test .....	53
4.5.2.1	Analysis of Fatigue Factor and Environmental Factor by Gender.....	54
4.5.2.2	Discussion .....	56
4.5.3	Analysis of Variance (ANOVA).....	58
4.5.3.1	Discussion .....	63
4.5.4	Association between Educational Level and Commuting Accident....	67
4.5.4.1	Discussion .....	68
4.6	Summary .....	69

## CHAPTER 5: CONCLUSION AND RECOMMENDATION

5.1	Introduction.....	70
5.2	Review of Objectives .....	70
5.2.1	Research Objective 1 .....	71
5.2.2	Research Objective 2 .....	71
5.2.3	Research Objective 3 .....	72
5.2.4	Research Objective 4 .....	73
5.3	Limitations of the Study.....	73
5.4	Recommendation .....	74
5.5	Implication .....	75
5.6	Suggestion for Future Research .....	77
5.7	Summary .....	78

REFERENCES .....	79
------------------	----

APPENDICES .....	84
------------------	----

BLANK PAGE .....	91
------------------	----

## LIST OF TABLES

Table 1.0	Accident Reported among Workers.....	4
Table 1.1	List of Definition of Key Terms by Various Scholars.....	11
Table 2.0	Types of Accident Reported .....	18
Table 3.0	Source of Every Section .....	34
Table 3.1	Pearson Correlation Table (Guildford(1973) Rule of Thumb .....	41
Table 4.0	Demographic Profile of Respondents .....	45
Table 4.1	Cronbach's Alpha Value.....	47
Table 4.2	Reliability of Items .....	47
Table 4.3	Kolmogorov Smirnov Test Statistics.....	48
Table 4.4	Correlations between Factors.....	49
Table 4.5	Analysis of Multiple Linear Regressions.....	50
Table 4.6	Independent T–Test .....	53
Table 4.7	Analysis of Independent T–Test .....	55
Table 4.8	Descriptive Analysis of ANOVA .....	59
Table 4.9	ANOVA .....	60
Table 4.10	Analysis of Post Hoc Multiple Comparison Test .....	62
Table 4.11	Chi–Square Test.....	67

## **LIST OF FIGURES**

Figure 1.0	Total Number of Reported Accidents 2012–2015 .....	5
Figure 2.0	The Proportion of Accidents by Type of Vehicles are used .....	15
Figure 3.0	Theoretical Framework .....	28
Figure 3.1	Research Design .....	29



# **CHAPTER 1**

## **Introduction**

### **1.1 Background of the Study**

The International Labor Organization (ILO) defines commuting accident as “an accident occurring on the habitual route, in either direction which is between the place of departure to work or work-related training such as the worker’s principle or secondary residence, the place where the worker is usually takes his or her meals or the place where he or she routinely receives his or her remuneration which can contribute as a result in death or personal injury.

The ILO stated that safety risks can be resulting to work accidents which are diminishing, work related to commuting are on the rise which can be proved that 2.2 million work-related deaths occurred every year in which 350, 000 deaths were from accidents at work while 1.7 million due to occupational diseases and 158, 000 due to commuting accidents. Thus, the number of commuting accident at less than accident at work and occupational disease but the number flow keep rising which is compulsory to take into consideration as main priority in safety awareness or prevention.

The contents of  
the thesis is for  
internal user  
only

## Reference

- Abdelfatah, A. (2016). Traffic Fatality Causes and Trends in Malaysia. *Malaysia Sustainable Cities Program, Working Paper Series*, 1-19.
- Act, M. E. (1955). *National Laws on Labour, Social Security and Related Human Rights*. Malaysia.
- Allison, D., Swanseen, K., Metha, Y. A., & Gabler, H. (2010). Rating Roads for Motorcyclist Safety: Development of a Motorcycle Road Assessment Program. *Transportation Research Record No. 2194*, 67-64.
- Anitei, M., Chraif, M., & Lonita, E. (2015). Gender differences in workload and self-perceived burnout in a multinational company from Bucharest. *Procedia-Social and Behavioral Sciences*, 733-737.
- Armstrong, K., Obst, P., Livingstone, K., & Haworth, N. (2009). Investigation of Differences in Crash Characteristics Between Males and Females Involved in Fatigue-Related Crashes or Close-Call Events. *Women's Issues in Transportation Summary of the 4th International Conference*. Irvine, California: Transportation Research Board of The National Academics.
- Artarcoz, L., Cortes, I., & Borrell, C. (2011). *Work and Family: "double workload" overburdens women's health*. Barcelona: Public Health Agency.
- Aziz, N. H., & Yusof, A. A. (2015). The Employer's Duties and Liabilities in Commuting Accidents in Malaysia: Law and Management. *2nd Global Conference on Business and Social Science*, 796-802.
- Anitei, M., Chraif, M., & Lonita, E. (2015). Gender differences in workload and self-perceived burnout in a multinational company from Bucharest. *Procedia-Social and Behavioral Sciences*, 733-737.
- Artarcoz, L., Cortes, I., & Borrell, C. (2011). *Work and Family: "double workload" overburdens women's health*. Barcelona: Public Health Agency.
- Bryman, A., & Cramer, D. (2011). *Quantitative Data Analysis with SPSS 17, 18 and 19*. Loughborough: psypress.co.
- Bensing, J. M., Hulsman, R. L., & Schreurs, K. M. (1999). Gender Differences in Fatigue (Biopsychosocial Factors Relating to Fatigue in Men and Women). *Medical Care Volume 37, Number 10*, 1078-1083.

*Civil Engineering Dictionary* . (2014). Retrieved from Traffic Volume Study:  
<http://www.aboutcivil.org>

Crundall, D., Bibby, P., Clarke, D., Ward, P., & Bartle, C. (2008). Car driver's attitudes towards motorcyclist: A Survey. *Accident Analysis & Prevention*, 983-993.

Geiger-Brown, J., Trinkoff, A., & Rogers, V. (2011). The Impact of Work Schedules, Home, and Work Demands on Self-Reported Sleep in Registered Nurses. *JOEM Volume 53*, 3.

Clarke, D, Bartle, P, & Truman, W. (2004). In-depth study of motorcycle accidents. *D.f. Transport, Editor London.*

Conditions, E. F. (2004). *EU road freight transport sector*. Retrieved from Work and employement conditions:

<http://www.eurofound.europa.eu/publications/htmlfiles/ef03102.htm>

(EU-OSHA), E. A. (2010). Working Environment Information: Literature Review. In S. Copsey, N. Christie, L. Drupsteen, J. v. Kampen, L. Kuiljt-Evers, E. Schmitz-Felten, & M. Verjans, *A review of accidents and injuries to road transport drivers* (pp. 1-59). Luxembourg: (EU-OSHA), European Agency for Safety and Health at Work.

*Extreme tiredness and fatigue management*. (28 March, 2012). Retrieved from Wolters Kluwer: <https://app.croner.co.uk/feature-articles/extreme-tiredness-and-fatigue-management?product=22>

Ehrlich, R. L., Steele, M. S., Flanagan, R. L., & Pedersen, N. J. (2003). *The Reltionship Between Congestion Levels and Accidents*. Maryland: State Highway Administration.

Fagnant, D. J., & Kockelman, K. M. (2015). U.S Motorcycle Use: Crash Experiences, Safety Perspectives, and Countermeasures. *Journal of Transportation Safety & Security, Volume 7 (1)*, 20-39.

Geiger-Brown, J., Trinkoff, A., & Rogers, V. (2011). The Impact of Work Schedules, Home, and Work Demands on Self-Reported Sleep in Registered Nurses. *JOEM Volume 53*, 3.

Hearthfield, S. M. (2 September, 2016). *The balance*. Retrieved 4 November, 2016, from What is Shift Work and Who Works Shifts: <http://www.thebalance.com>

Hsiea, M., Hsiao, W.-T., & Cheng, T.-m. (n.d.). A Model Used in Creating a Work-Rest Schedule for Laborers. *Department of Civil Engineering, National Chung-Hsing University, Taiwan. Department of Construction Engineering Chaoyang University of Technology*.

- Hennessy, D. A., & Wiesenthal, D. (1999). Traffic Congestion, Driver Stress, and Driver Aggression. *Department of Psychology and LaMarsh Center for Research on Violence and Conflict Resolution, York University, North York, Ontario, Canada*, 409-423.
- Huberman, Michael, A., & Miles, M. (7 April, 2017). *Organizing Your Social Sciences Research Paper: Limitation of the Study*. Retrieved from USC Libraries: <http://libguides.usc.edu/writingguide>
- Hanjabam, B., & Kailashiya, J. (2015). Gender Difference in Fatigue Index and its Related Physiology. *Indian J Physiol Pharmacol*, 170-174.
- Jamaluddin, N., Sim, H. J., Shabadin, A., Johari, N. M., & Ameer, W. (2015). Exposure Work Commuting: Case Study among commuting accidents in Klang Valley, Malaysia. *Journal of Civil Engineering and Architecture*, 51-56.
- Keller, & Warrack. (2006). *Statistics for Management and Economics*. Academic Internet Publishers I; 7th edition.
- Krejcie, R., & Morgan, D. (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement*, 607-610.
- Kamberidou, I. (2010). The "Glass Escalator" and "Gender Fatigue": Getting Gender Back On The Agenda. *The 5th International Conference on Interdisciplinarity in Education ICIE' 10*, 89-98.
- Kostyniuk, L., Molnar, L. J., & Eby, D. W. (1995). *Are Women Taking More Risks While Driving? A Look at Michigan Drivers*. Michigan: University of Michigan.
- Lam, T. S. (12 December, 2012). Industrial accidents down in Malaysia but commuting ones up. (B. P. Online, Interviewer)
- Merriman, J. (3 November, 2009). *Discover Thomson Reuters*. Retrieved from After gender bias, women face gender fatigue: <http://www.reuters.com/article/us-gender-fatigue-idUSTRE5A13HE20091102>
- McMillan, J. H., & Schumacher, S. (2001). *Research in Education Second Edition*. Virginia: Scott, Foresman and Company.
- Man, N., & Zain, N. M. (2014). Roles and Contributions of Brokers (Middlemen) and Perceptions towards the Custom Farming System in the Muda Area, Malaysia. *Journal of Applied Sciences*, 1-8.

- Marmor, M., & Nicholas, E. (2006). Slippery Road Conditions and Fatal Motor Vehicle Crashes in the Northeastern United States 1992-2002. *American Journal of Public Health*, 914-920.
- Nordin, R. (2014). Rising Trend of Work-Related Commuting Accidents, Deaths, Injuries and Disabilities in Developing Countries: A Case Study of Malaysia. *Industrial Health*, pp. 275-277.
- Navidian, A., Rostami, Z., & Rozbehani, N. (2015). Effect of motivational group interviewing-based safety education on Workers' safety behaviors in glass manufacturing. *BMC Public Health*.
- NSW, T. f. (2015). Making roads more motorcycle friendly. In *A guide for road design, construction and maintenance* (pp. 1-12).
- Online, B. P. (12 December, 2012). Industrial accidents down in Malaysia but commuting ones up. Sabah, Malaysia.
- Oxley, J., Yuen, J., Ravi, M. D., & Hoareau, E. (2013). Commuter motorcycle crashes in Malaysia: An understanding of contributing factors. *57th Annuals of Advances in Automative Medicine, Annual Conference*, 45-54.
- Personal Safety Awareness. (2012). Butler.
- Phelan, C., & Wren, J. (2006). *UNI*. Retrieved from Exploring Reliability in Academic Assessment: <https://chfasoa.uni.edu/reliabilityandvalidity.htm>
- Post, T. H. (13 April, 2013). *Women Are More Tired Than Men - Here's 7 Possible Reasons Why*. Retrieved from HUFFPOST:  
[http://www.huffingtonpost.com/2013/04/12/women-more-tired-than-men\\_n\\_3072270.html](http://www.huffingtonpost.com/2013/04/12/women-more-tired-than-men_n_3072270.html)
- Peden, M., Scurfield, R., Sleet, D., Mohan, D., A. Hyder, A., Jarawan, E., & Mathers, C. (2004). *World Report on Road Traffic Injury Prevention*. Geneva: World Health Organization.
- Road Safety Information. (June, 2011). *Driver Fatigue and Road Accidents*. Edgbaston, Birmingham: The Royal Society for the Prevention of Accidents.
- Rosa, R. R. (1995). Extended workshifts and excessive fatigue. *National Institute for Occupational Safety and Health, Division of Biomedical and Behavioral Science*, 51-56.
- Shah, S. S., Ahsan, R. J., Jabran , A., Wasiq, E., Ihsan, U.-H., & Raza, S. N. (2011). Workplad and Performance of Employees. *Interdisciplinary Journal of Contemporary Research in Business*, 256-267.

- Shankar, V, & Mannering, F. (1996). An Exploratory Multinomial Logit Analysis of Single-Vehicle Motorcycle Accident Severity. *Journal of Safety Research*, 183-194.
- Sultan, Z., Ngadiman, N. I., A. Kadir, F. D., Roslan, N. F., & Moeinaddini, M. (2016). Factor Analysis of Motorcycle Crashes in Malaysia. *Journal of the Malaysian Institute of Planners*, 135-146.
- Sarani, R., Roslan, A., & Saniran, N. (2011). *ADSA Fact Sheet Volume 1*. Kajang: Malaysian Institute of Road Safety Research.
- Sarrion, M. F., & Recio, J. (2015). *Classification of commuting accidents practical guide for medical practitioners*. Spain: Instituto Nacional de la Seguridad Social.
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 53-55.
- Tharmmaphornphilas, W. G. (2003). Applying mathematical modeling to create job rotation schedules for minimizing occupational noise exposure. *AIHA Journal*, 401-405.
- Tharmmaphornphilas, W., Green, B., Carnahan , B., & Norman, B. (2003). Applying mathematical modeling to create job rotation schedules for minimizing occupational noise exposure. *AIHA Journal*, 401-405.
- T. Flores, G. M., T. Gotohio, M. P., C. Paras, N. G., & R. Seva, R. (n.d.). Analysis Motorcycle Accidents Based on Environmental and Personal Factors. *Department of Industrial Engineering*, 820-825.
- The Claim Solicitors*. (2004). Retrieved from Car accidents - road conditions: <http://www.the-claim-solicitors.co.uk/car-accident/car-accident-road-conditions.htm>
- Thordarson, S., & Olafsson, B. (2008). Weather induced road accidents, winter maintenance and user information. *Journal of Transport Research Arena Europe*.
- Unit, A. O. (2000). *Health and Safety Guidelines for Shift Work and Extended Working Hours*. Melbourne: ACTU .
- Venkatesh, V., & D. Davis, F. (2000). A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies. *Institute for Operations Research and the Management Sciences (INFORMS)*, 186-204.

## **Appendix A**

### **SAMPLE QUESTIONNAIRE**



**UNIVERSITI UTARA MALAYSIA**

Dear Respondents,

I am Master student that has enrolled for this program which is Master in Occupational Safety and Health Management (MOSH) of Universiti Utara Malaysia and conducting a survey among COMPANY XYZ employees which specifically within the service sector to fulfill the Master's requirement of the university.

I understand and recognize that your time is valuable and many demands are made upon it by your heavy workload. However, your participation in this survey, which will require only about 10–15 minutes of your time, is vital to the success of this study.

All the information provided in this questionnaire will be confidential for the present study purposes. No information pertaining to individuals will be divulged to any third person or organization. In sum, the information obtained in this study will be used purely for academic purposes only.

Thank you very much for your cooperation in responding to the questionnaire. Your participation in this study is greatly appreciated.

Best Regards,

**Ungku Ismith Syafiq Bin Ungku Khalid**  
Master in Science of Occupational Safety and Health Management's Candidate

## **Section A: Demographic Information**

*Bahagian A: Maklumat Demografik*

**Please check (□) in the appropriate box or fill in the blank, where appropriate.**  
*Sila tandakan (□) dalam kotak yang berkenaan.*

1. Gender/ *Jantina*:

Male/ *Lelaki*       Female/ *Perempuan*

2. Marital status/ *Status Perkahwinan*:

Single/ *Bujang*       Married/ *Berkahwin*       Divorced/ *Janda*  
*atau Duda*

3. Highest educational level/ *Tahap pendidikan*:

SPM       STPM/ Certificate/ Diploma       Bachelor Degree/ *Ijazah Sarjana Muda*  
 Master Degree/ *Ijazah Sarjana*       PhD Holder/ *Doktor Falsafah*  
(Others please specify/ *lain-lain, sila nyatakan*): \_\_\_\_\_

4. Race/ *Bangsa*:

Malay/ *Melayu*       Chinese/ *Cina*       Indian/ *India*  
(Others, please specify/ *Lain-lain, sila nyatakan*): \_\_\_\_\_

5. Age/ *Umur*: \_\_\_\_\_ years/ *tahun*:

18–28 years/ *tahun*       29–39 years/ *tahun*       40–50 years/ *tahun*        
51–60 years/ *tahun*

6. How long have you been working with current company?/ *Berapa lamakah anda berkhidmat pada pekerjaan semasa anda?*

Less than 2 years/ *Kurang daripada 2 tahun.*  
 Between 2 to 5 years/ *Antara 2 sehingga 5 tahun.*  
 Between 6 to 10 years/ *Antara 6 sehingga 10 tahun.*  
 More than 10 years/ *lebih daripada 10 tahun.*

7. How long the distance that you have to travel to or return from workplace?/ *Berapakah jarak antara tempat kerja anda dari/ ke rumah anda?*

Less than 10KM/ *Kurang daripada 5 tahun.*  
 Between 10KM to 20KM/ *Antara 5KM sehingga 20KM.*  
 Between 20KM to 30KM/ *Antara 20KM sehingga 30KM.*  
 More than 30KM/ *Lebih daripada 30KM.*



**SURVEY OF COMMUTING ACCIDENT TO OR RETURN FROM WORKPLACE/ SOAL SELIDIK  
BERKENAAN KEMALANGAN PERJALANAN SEMASA PERGI DAN BALIK DARI TEMPAT KERJA**

Strongly Disagree/ Sangat Tidak Setuju	Disagree/ Tidak Setuju	Slightly Disagree/ Sedikit Tidak Setuju
1	2	3
Slightly Agree/ Sedikit Setuju	Agree/ Setuju	Strongly Agree/ Sangat Setuju
4	5	6

**Instruction:** As an employee which ride a motorcycle frequently to or return from your workplace, you have to think about your fatigue factors, job or work factors and environmental factors which can cause commuting accident to or return from workplace. To what extent you are agree or disagree whether each statement below based on your potential, situation, or experience? **Circle** your answer using the scale provided.

**Arahan:** Sebagai pekerja yang sering menunggang motosikal ke atau balik dari tempat kerja, anda hendaklah memikirkan faktor keletihan, tugas dan pekerjaan dan alam sekitar yang menyumbang pada berlakunya kemalangan semasa pergi dan balik dari tempat kerja. Sejauh manakah anda bersetuju atau tidak bersetuju pada kenyataan yang diberikan dalam jadual di bawah mengikut potensi, situasi atau pengalaman anda? Kemudian, bulatkan jawapan yang berkenaan mengikut skala yang yang telah diberikan.

#### Section B: Fatigue Factors

##### Bahagian B: Faktor-Faktor Keletihan

1	I do appear to "suffer" from permanent tiredness, even on rest days and holidays, because I have the limitless energy. <i>Saya mengalami keletihan yang teruk walaupun semasa cuti rehat atau cuti umum disebabkan kekurangan tenaga.</i>	1	2	3	4	5	6
2	I have ever felt sleepy while I am driving to or return from workplace. <i>Saya akan berasa mengantuk semasa memandu pergi dan balik dari tempat kerja.</i>	1	2	3	4	5	6
3	I think my pressure at workplace can cause commuting accident. <i>Saya rasa tekanan di tempat kerja akan menyebabkan berlakunya kemalangan perjalanan.</i>	1	2	3	4	5	6
4	I continued to drive after noticing symptoms of sleepiness. <i>Saya akan meneruskan perjalanan jika terdapat simptom mengantuk atau kepenatan.</i>	1	2	3	4	5	6
5	My work-rest scheduling is keep changing frequently which may cause fatigue because I have to take sometime to adapt and adjust my working time. <i>Jadual rehat Saya sentiasa bertukar dari sesama ke semasa yang boleh menyebabkan keletihan kerana saya akan mengambil masa untuk menyesuaikan diri dan perubahan jadual kerja.</i>	1	2	3	4	5	6
6	My workload prompted me which I can consider as the factors of commuting accident. <i>Beban tugas saya di tempat kerja boleh dijadikan sebagai faktor-faktor berlakunya kemalangan perjalanan.</i>	1	2	3	4	5	6
7	Stress at workplace can positively influence my focus when I do commute by motorcycle to or return from workplace. <i>Tekanan di tempat kerja boleh mempengaruhi tumpuan semasa berulang-alik ke tempat kerja.</i>	1	2	3	4	5	6
8	My perception towards commuting accident can be avoided if my workload will be improved and to be more reasonable. <i>Persepsi saya terhadap kemalangan perjalanan boleh diatasi jika bebanan tugas saya dapat dibaiki dan lebih berpatutan.</i>	1	2	3	4	5	6
9	Work-rest scheduling which designated for me is realistic. <i>Jadual rehat yang dilakarkan untuk saya adalah realistik.</i>	1	2	3	4	5	6
10	I do feel my heavy workload can impact the quality of safety when I have to commute to or return from workplace. <i>Saya merasakan bebanan tugas saya boleh memberi kesan terhadap kualiti keselamatan apabila saya berulang-alik dari tempat kerja.</i>	1	2	3	4	5	6

### Section C: Job or Work Factors

#### Bahagian C: Faktor-Faktor Tugasan dan Pekerjaan

1	I think that short distance for travelling to or return from workplace can avoid accident will be happened. <i>Saya rasa jarak yang dekat untuk perjalanan pergi dan balik dari tempat kerja boleh mengelakkan daripada berlakunya kemalangan.</i>	1	2	3	4	5	6
2	I am sort of person who feels at my best early in the morning, and who tends to feel tired earlier than most people in the evening. <i>Saya adalah orang yang suka pada waktu pagi dan akan merasai kepenatan dengan kadar segera pada waktu petang berbanding dengan orang lain.</i>	1	2	3	4	5	6
3	I do still use the same route thoroughly when I have commuting to or return from workplace even though there are no safety precautions on the road for motorcyclist who is undertaking the journey. <i>Saya masih menggunakan arah perjalanan yang sama semasa saya pergi dan balik dari tempat kerja, walaupun tanpa mempunyai langkah-langkah keselamatan yang terdapat di atas jalan raya bagi penunggang motosikal.</i>	1	2	3	4	5	6
4	My employer considered advising to me that work irregular hours can cause the dangers of driving home to or return from workplace when I have excessively tired. <i>Apabila saya menghadapi kelelahan yang berlebihan, majikan akan memberi nasihat kepada saya bahawa bekerja pada masa yang tidak tetap akan menyebabkan bahaya apabila memandu pulang ke rumah sama ada dari atau ke tempat kerja.</i>	1	2	3	4	5	6
5	I am the type of person who can get distraction to focus on road safety while I am driving for long distance. <i>Saya adalah orang yang mudah mendapat gangguan fokus di atas jalan raya apabila saya memandu pada jarak yang jauh.</i>	1	2	3	4	5	6
6	I do feel that overall the advantages of my shift system outweigh the disadvantages. <i>Saya merasakan sistem jadual kerja adalah lebih baik daripada keburukan.</i>	1	2	3	4	5	6
7	To what extent do you agree with the following statements about travelling to work by motorcycle can be more expose with the accident on the road compare by using other type of vehicles? <i>Sejauh manakah anda bersetuju pada kenyataan bahawa menunggang motosikal di tempat kerja boleh terjebak pada kemalangan jalan raya berbanding dengan menggunakan kendaraan yang lain.</i>	1	2	3	4	5	6
8	My health been affected by working shifts which may cause accident when I have to commute to or return from workplace. <i>Kesihatan saya terjejas dengan bekerja shift yang boleh menyebabkan kemalangan apabila berulang-alik ke atau dari tempat kerja.</i>	1	2	3	4	5	6
9	Are you agree that the motorcyclist will not be put at risk from commuting accident caused by driving excessive distances without appropriate breaks? <i>Adakah anda bersetuju bahawa penunggang motorsikal tidak akan berada dalam keadaan berisiko terhadap kemalangan perjalanan kerana memandu dalam jarak yang jauh tanpa rehat yang betul.</i>	1	2	3	4	5	6
10	I have been involved in a 'near hit' where I felt that my safety, or the safety of my colleagues or the public especially on the road, was at risk because of some aspect of shift work. <i>Saya terlibat dengan hampir berlakunya kemalangan dimana saya merasakan keselamatan diri saya atau keselamatan rakan sekerja saya atau orang awam terutamanya di atas jalan raya adalah berisiko disebabkan oleh sebahagian daripada aspek bekerja shift.</i>	1	2	3	4	5	6

--	--	--	--	--	--	--

## Section D: Environmental Factors

### Bahagian D: Faktor-Faktor Alam Sekitar

1	I do have considered that poor weather conditions, such as heavy rain or foggy, when I am planning the journeys. <i>Saya menitiberakan aspek cuaca yang teruk dalam merancang perjalanan saya seperti hujan lebat atau kabus.</i>	1	2	3	4	5	6
2	Are you satisfied that sufficient time is allowed to complete journeys safely? <i>Adakah anda berpuas hati jika mempunyai masa yang mencukupi untuk pejalanan yang lengkap dan selamat?</i>	1	2	3	4	5	6
3	I have checked my motorcycle frequently in terms of properly equipped to operate in poor weather conditions, for example my tires are fitted on the slippery road. <i>Saya kerap memeriksa motosikal untuk memastikan berada dalam keadaan beroperasi yang baik dalam cuaca yang buruk contohnya tayar motosikal saya selamat ketika berada di atas jalan raya yang licin.</i>	1	2	3	4	5	6
4	I try to avoid periods of peak traffic flow. <i>Saya cuba untuk mengelakkan kesesakkan lalu lintas semasa tempoh yang sibuk.</i>	1	2	3	4	5	6
5	Are you agree if your journey times and routes can be adjusted to take account of poor weather conditions to avoid from accident occurred? <i>Adakah anda bersetuju jika perjalanan dan masa anda boleh di ubah apabila berlakunya cuaca yang buruk untuk mengelakkan daripada berlakunya kemalangan?</i>	1	2	3	4	5	6
6	Do you feel pressured to complete journeys where wheather conditions are exceptionally difficult because the number of traffic congested is keep increasing at certain period of time? <i>Adakah anda mengalami tekanan bagi men lengkapi perjalanan semasa cuaca buruk yang tidak dapat dilakukan kerana kesesakkan trafik yang semakin meningkat dari semasa ke semasa?</i>	1	2	3	4	5	6
7	Commuting accident can be caused by bad weather if the driver does not understand, how to reduce risk such as should take extra care if driving in strong winds or heavy rains. <i>Kemalangan perjalanan boleh disebabkan oleh cuaca yang buruk jika pemandu tidak memahami untuk mengurangkan risiko seperti mengambil perhatian yang lebih jika memandu dalam keadaan angin kencang atau hujan lebat.</i>	1	2	3	4	5	6
8	Do you agree, when traffic is congested between your house to or return from your workplace can cause you to have an accident? <i>Adakah anda bersetuju, jika kesesakkan trafik antara rumah anda ke atau dari tempat kerja anda boleh menyebabkan kemalangan?</i>	1	2	3	4	5	6

9	I know who to contact if I have to cancel a journey to or return from workplace because of poor weather conditions. <i>Saya tahu untuk menghubungi pihak yang berkenaan jika saya ingin membatalkan perjalanan pergi atau balik dari tempat kerja semasa cuaca yang buruk.</i>	1	2	3	4	5
10	During the traffic congested, my route planning take account into safety consideration such as speed limit, minor road provided for motorcyclist, safety place where can stop during emergency like poor weather or other safety aspects on the road. <i>Semasa kesesakan trafik, saya akan memastikan langkah-langkah keselamatan dalam perjalanan diambil kira seperti kelajuan had laju, jalan untuk penunggang motosikal, tempat selamat yang boleh berhenti semasa keadaan kecemasan contohnya cuaca yang buruk atau lain-lain aspek keselamatan di atas jalan raya.</i>	1	2	3	4	5

#### Section E: Commuting Accident To or Return from Workplace by Motorcyclist

##### Bahagian E: Kemalangan Perjalanan Pergi dan Balik dari Tempat Kerja bagi Penunggang Motosikal

1	Motorcyclists should travel in which of the following positions within a lane? <i>Penunggang motorsikal seharusnya menunggang mengikut posisi dalam garis lurus yang betul.</i>	1	2	3	4	5	6
2	Motorcycles are easy to spot, even against a cluttered background. <i>Penunggang motorsikal adalah senang untuk dilihat walaupun berlatarbelakang yang serabut atau tidak tersusun di atas jalan raya.</i>	1	2	3	4	5	6
3	The motorcycle test is easier than the driving test. <i>Ujian memandu motorsikal adalah lebih senang berbanding ujian memandu yang lain.</i>	1	2	3	4	5	6
4	When driving in interweaving traffic, I am aware that motorcycles are harder to spot. <i>Apabila memandu dalam keadaan trafik yang yang berhubung seperti kesesakan trafik, keadaan laluan motorsikal adalah sukar bagi saya untuk melihat.</i>	1	2	3	4	5	6
5	The average motorcyclist takes greater precautions than the average driver in wet weather condition. <i>Secara purata, penunggang motorsikal adalah perlu untuk mengambil lebih terhadap langkah keselamatan berbanding purata bagi pemandu yang lain semasa berada dalam keadaan cuaca yang buruk.</i>	1	2	3	4	5	6
6	It is easier for motorcyclists to make sudden swerves to avoid an accident than car drivers. <i>Penunggang motorsikal adalah lebih mudah untuk membuat lencongan atau pertukaran arah secara mendadak bagi mengelakkan kemalangan berbanding dengan pemandu kereta.</i>	1	2	3	4	5	6
7	Motorcycles are as easy to see at night as cars.	1	2	3	4	5	6

	<i>Penunggang motorsikal adalah lebih mudah untuk dilihat pada waktu malam seperti pemandu kereta.</i>					
8	You can suddenly be surprised by the appearance of a motorcycle coming from behind. <i>Kehadiran motorsikal dari arah belakang boleh menyebabkan anda terkejut secara tiba-tiba.</i>	1	2	3	4	5
9	I perform all appropriate visual checks on my motorcycles. <i>Saya memeriksa semua hal yang berkaitan dengan alat penglihatan pada motorsikal.</i>	1	2	3	4	5
10	Other drivers should take more care to look out for motorcycles. <i>Selain daripada penunggang motorsikal, mereka perlu memastikan penglihatan yang lebih terhadap laluan atau pergerakan motorsikal.</i>	1	2	3	4	5

**END OF QUESTIONNAIRE/ TAMAT SOAL SELIDIK**  
**THANK YOU/ TERIMA KASIH**

