

**SECONDARY ATTRIBUTES OF PSYCHOLOGICAL COMPONENTS TO ROAD TRAFFIC
ACCIDENT**



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2. Letter of Offer (Research Grant)



Surat Kami : 600-RMI/FRGS 5/3 (118/2013)
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Tuan

KELULUSAN SKIM GERAN PENYELIDIKAN FUNDAMENTAL (FRGS) FASA 2/2013

Tajuk Projek : *Secondary Attributes Of Psychological Components To Road Traffic Accident*
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Dengan hormatnya perkara di atas adalah dirujuk.

2. Sukacita dimaklumkan pihak Kementerian Pendidikan Malaysia (KPM) telah meluluskan kertas cadangan penyelidikan tuan untuk di biayai di bawah Skim Geran Penyelidikan Fundamental (FRGS) Fasa 2/2013.

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4. Peruntukan kewangan akan disalurkan melalui tiga (3) peringkat berdasarkan kepada laporan kemajuan serta kewangan yang mencapai perbelanjaan lebih kurang 50% dari peruntukan yang diterima.

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5. Untuk tujuan mengemaskini, pihak tuan adalah diminta untuk menandatangani perjanjian FRGS, melengkapkan semula kertas cadangan penyelidikan, mengisi borang setuju terima projek penyelidikan dan menyusun perancangan semula bajet yang baru seperti yang diluluskan. Sila lihat lampiran bagi tatacara tambahan untuk pengurusan projek.

Sekian, harap maklum.

"SELAMAT MENJALANKAN PENYELIDIKAN DENGAN JAYANYA"

Yang benar

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5. Report

5.1 Proposed Executive Summary

Background: The increasing number of road traffic accident (RTA) in Malaysia always becomes a major headline. Malaysian government through the relevant department and agencies has reviewed the curriculum as well as the processing of the driver's licensing. However, the result is not very promising. This can be proven by the increasing numbers of daily accident. **Literature review:** Current research had shown that, the introduction of pre-screening and rehabilitation component in the existing model may reduce the number of future accident. That new model is introducing a holistic view of independent drivers where it believes; driver's competency need to be re-evaluated and may need to be restored. **Objectives:** This research objectives are i) to develop deterministic model of RTA and ii) to identify attributes of possibility to involve (bnc) in accident and transmission coefficient (β) of current RTA due to secondary factors (during day and night driving). **Methodology:** This study will use mix method approach, focus on the drivers respond and the spatial factors will be excluded. Estimation of 300 drivers will participate in this study where each of them will undergo an interview followed by simulation testing using a standard driving simulator protocol. Participant need to undergo paper base test and virtual driving using driving simulation. The mathematical model specifically SEIR model will be simulated under different condition using Matlab and Berkeley Madonna modeling software. The bnc in accident and β will then be estimated from potential model. **Expected outcome:** At the end of this research, we expect to develop new bnc in accident and β using SEIR model approach. The bnc and β value can be used to assist the public health professionals and related agencies to create effective prevention action. To date, there is no current evidence of bnc in accident and β value for RTA dynamics locally.

5.2 Enhanced Executive Summary

Research Background: Road traffic accident (RTA) in Malaysia frequently involves multi-level society and this has become a demanding community issue where more serious community participation is needed to improve the future. Some literature shows that these accidents were caused by human error. Accident involving road transport has a significant impact on person quality of life and financial burden to the government and Malaysian society. It is not solely the government responsibility to improve the quality of life and to achieve the status of developed country. Public participation is to a large extent were needed in shaping a better future in the road and transportation system in Malaysia. Unfortunately, there is no local evidence available that support the elements of attitudes related with driving behavior. **Objectives:** The main purpose of this study is to develop and validate Attitude towards Save Driving Scale (ASDS). This evaluation can be used in screening and re-evaluation process of licensing in Malaysia. **Methodology:** This research will embark in sequential mix-method study design where qualitative and quantitative will be employed. Descriptive research will be used to describe the characteristics of each individuals in specific populations. This approach involves questionnaires, interviews or direct observation. This study will engage in three critical stages; 1) qualitative process, 2) questionnaire development and 3) driving simulation experiment. **Results:** The data on one-to-one interview will be analyzed based on thematic analysis. Theme emerges will be further explore and interview will be discontinued once the theme has saturated. Atlas.ti. Software will be used in the process of transcribe interview, segmentation and coding as well as building of conceptual network. For the second stage of data analysis, questionnaires validity will be analyzed using Rasch model. The items and individual separation index will be further used in analyzing the fit item with individual. In order to identify low or high risk drivers, receiver operating characteristic (ROC) curves will be used to determine a cutoff value. The final stage of data analysis will involve SPSS. It will correlate the paper based score with participant performance in driving simulation test. **Implications:** Final expected outcome from this research is an assessment that will be able to measure save attitude among young Malaysian drivers. This evaluation can be used in

screening and re-evaluation process of licensing in Malaysia. This evaluation also will be able to help the government in producing a better road society in the future.

5.3 Introduction

Driving play an important role in our life as people travel from one place to another place by using several mode transportation such as personal or public transportation. This makes traveling become a very important aspect in the quality of life (QOL). As an occupational therapist, we were involved in educating, promote, evaluate, modify and rehabilitate people to become an Independence individual since driving can be part of the important component in the occupational performance area. This topic is relevant to the occupational therapist with regards of the profession itself as a health prevention, health promotion, and health education. This study was conducted among UiTM Puncak Alam students population, and the results will be able to explain the perception of educated young adult drivers in Puncak Alam towards speeding and associated risk. The results could be used to provide information to the targeted population regarding the issues. Hence appropriate intervention and strategies can be planed to reduce the road crashes. Thus, from this study, the outcomes of this study will give benefits to the people and country so that the accidents rate can be decreased and save more life.

Road traffic accident (RTA) will give a huge impact to the individual and communities that include socio life, economic and also may cause damage to the property. The impact of the road traffic accident to the person may be fatal or non-fatal injuries that may lead to disability. Road traffic accident will cause a lost to country due to the government need to spend the money for the cost of treatment and rehabilitation for the injured person. Therefore, a proactive measure needs to take account to reduce the rate of road traffic accident. This present study will identify the prevalence use of text messaging while driving among young adults and their risk perception towards that's behavior. Road traffic accident has become a great issue and health problem in worldwide. Currently ranked eight, it has been estimated that by 2030 road traffic accident will become the fifth leading cause of death in the world. According to World Health Organization, (2013), over 1.2 million people die annually on the world's road and between 20 and 50 million sustain non-fatal injuries due to road traffic crash. Based on research conducted by the University of Michigan, "Malaysia was ranked as the top of 25 most dangerous countries in the world road accident", with estimated that 30 fatalities per 100,000 individual (The Star, 2014). Besides, the number of the road accident and fatalities are an increase compared with last year in 2014 with 1557 people involve in the road accident, and 1696 were killed (Official Portal of Royal Malaysia Police, 2015). This high number of the road accident is quite worrying as this death and injury will give the negative impact on the family, community and also the country. These numbers of injuries keep arising every year and had become a frightening issue in health and may contribute to significant effect on people quality of life (Wan Ahmad Kamal, Masuri, Dahlan, & Md Isa, 2015).

RTA frequently involves multi-level society, and this has become a demanding community issue where more serious participation is needed to improve driver's attitude in the future. RTA has a significant impact on quality of life and financial burden to the government and Malaysian society. The number of road traffic accidents among young adult is an alarming issue in Malaysia. Malaysian governments through relevant agencies have worked very hard to enforce all relevance acts related to it. One of the prime government objectives is to ensure safer Malaysian drivers in the future. To date, there were still a limited number of local research and evidence supporting the elements of driver's attitudes and behavior analysis had been conducted.

Driving is one of the most critical activities of daily living that involves the active eye, hand, and foot coordination. Drivers that is not proficient or fail to organize and interact with their