

Modeling Motorcyclists' Involvement in Road Accidents: The Mediating Effect of Mindfulness

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ABSTRACT: This study looks into the elements that relate mindfulness to road accidents, especially road fatalities among high-risk motorists. This study aims to analyze the literature on mindfulness to help shed light on high-risk road users, such as motorcyclists, on preventing themselves from being involved in road accidents through developing and promoting high-impact preventative countermeasures for long-term road safety. This study presents several significant characteristics relating to road user behavior that influence road accident occurrence. The findings revealed that motorcyclists' behavioral factors such as anger, attitude, and sensation seeking are among the critical predictors to mindfulness and road accident involvement. This study intuitions have consequences for Malaysian transportation authorities and agencies in implementing high-impact remedies to minimize road accident proneness among high-risk road users in Malaysia.

Keywords: *Mindfulness; Road accident; Sustainable transportation.*

1.0 INTRODUCTION

Road accidents in Malaysia continue to grow year after year, with minor signs of abating. According to [1], motorcycles are the most prone vehicle involved in road accidents. The number of fatalities involving motorcyclists is continuously increasing yearly, except in 2019, the number decreases slightly, but still in worrying condition, as shown in Table 1.

Table 1 Total death of motorcyclists involved in road accidents year 2015 to 2019.

Year	Total
2015	4,203
2016	4,485
2017	4,348
2018	4,128
2019	3,959

Source: Road Safety Department Malaysia, 2019

This issue has prompted academics and policymakers in Malaysia to reassess road safety countermeasure tactics for preventing road accidents. This endeavor is under Malaysia's 2020 Sustainable Development Goal (SDG) aim of a 50% reduction in traffic accident deaths. The researches on human behavior discovered several potential factors influencing

motorcyclists' involvement in road accidents, such as riding anger, imprudent attitude, sensation seeking, and mindfulness [1, 2].

2.0 LITERATURE REVIEW

Expressing anger while riding is practiced by most riders who engaged in at least one riding style such as throttle opening, yelling, or tailgating another driver could harm a rider's decision-making while riding and end in a road accident [3]. According to [4], motorcycle riders often partake in road violations or imprudent riding attitudes such as speeding, red light crossing, substance-impaired riding, and distracted riding, among many others. [5] indicated that motorcycle riders have more tendency to become sensation seekers on the road. Sensation seeking can be defined as a tendency to seek out new and different experiences or feelings in one's life. [5] added that sensation seeking reduces motorcycle rider's awareness while riding and cause them to involve in road accidents. Motorcyclists should practice mindfulness while riding by finding a safe environment and keep an eye on other vehicles on the road to prevent themselves from road accident [6].

Considerable research has been conducted to explain further the impact of human actions on road accident involvement [3], [4], [5], and [6]. However, mindfulness as a mediator predictor was not included in these studies. More research has been conducted on the impact of anger, sensation seeking, and attitude on road accident involvement; however, observational research on the consequence of mindfulness as the mediating role between anger, sensation seeking, and attitude with road accident involvement is minimal.

Thus, it designates the importance of knowing the impact of anger, sensation seeking, and attitude on overall road accident involvement through mindfulness. Figure 1 depicts the need for additional research on these relevant essential elements.

3.0 METHODOLOGY

This study will apply the cross-sectional design with a self-administered questionnaire that will be distributed to the motorcyclists aged between 18 to 25 years old covering several universities in Northern Malaysia. The random sampling procedure technique will be used to select the universities and the respondents will be selected based on the convenient sampling procedure. A pilot study will be conducted among 50 young motorcyclists in Kedah before the actual data collection

to ensure the survey instruments are valid and reliable.

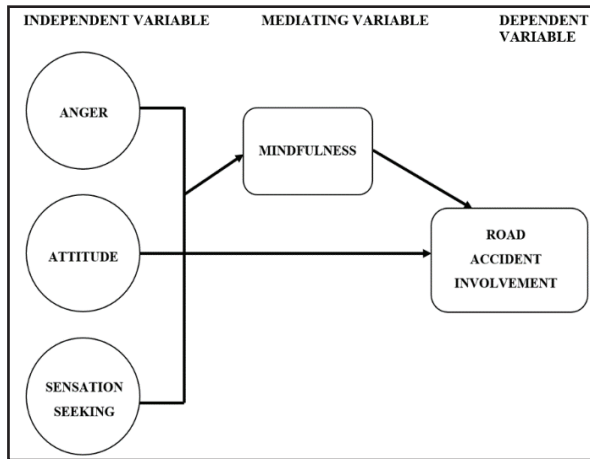


Figure 1 Proposed framework

4.0 ANALYSIS AND FINDINGS

The partial least square-structural equation modeling (PLS-SEM) analysis will be used to examine the valid data of this study. Firstly, the measurement model analysis will be conducted to ensure that the constructs of riding anger, riding attitude, sensation seeking, mindfulness, and road accident involvement fit for this study. Second, the structural model analysis will be conducted to examine the significant relationship and mediating effect of the constructs [7].

5.0 DISCUSSION

The research on the idea of mindfulness in Malaysian drivers was evaluated. A review of prior studies has found three variables that influence rider's mindfulness, including anger, sensation seeking, and imprudent attitude. Moreover, the influence of riding anger, imprudent attitude and sensation seeking cause motorcycle rider's mindfulness distracted while riding and cause them to involve in road accidents [8]. According to several of the literature studied, teenage riders have a higher proclivity to become irritated when confronted with irritating conditions on the road that can lead to an accident [9].

6.0 CONCLUSION

From the extensive review of the literatures, this study intends to explore the influence of motorcycle rider's anger, attitude and sensation seeking along with mindfulness on road accident involvement to reduce road accidents. It is recommended that the rider that portrays good riding behaviours will exhibits high mindfulness which then results to low road accident involvement. Therefore, this proposed framework is needed to be examined for further understanding. The proposed framework will be tested in research program conducted by first author in Malaysia. The result of the particular research is expected to provide further understanding of road accident involvement and aid the development of effective intervention in road safety.

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