

Injury Patterns Among Drivers Involved with Multiple Passenger Vehicles Frontal Crashes in Malaysia

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ABSTRACT

Motor vehicle accidents in Malaysia have shown an increment trend involving multiple-vehicle crashes. Different frontal crash configurations may result in different levels of injury severity. This study aims to analyze the injury pattern of the driver focusing on multiple-vehicle frontal crashes. Police reported accident cases from 2015–2019 were obtained from Royal Malaysia Police. The frontal crashes were recorded under full-width & offset as well as sideswipe configurations. The injuries were categorized under fatal, severe injury, injury, and no injury. 7232 drivers meet the selection criteria. The most frequent injury sustained by fatal drivers was multiple body parts injury for both configurations. The chi-square test was used to study the association between the crash configuration and injury severity category. The p -values of less than 0.05 imply a significant effect between frontal crash configuration and injury severity category. Based on the calculated odds ratio, full-width & offset configuration is 5.70 more likely to fatal than sideswipe.

KEYWORDS: Frontal crash, Multiple-crash, Driver injury, Occupant vehicles

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