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Factors Affecting the Risk of Crash Involvement Amongst New Zealand Truck Drivers

A thesis presented in partial fulfilment of the requirements for the degree of Doctor of Philosophy in Human Resource Management at Massey University

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Abstract

Compared to countries such as Australia, England, Sweden and Finland, New Zealand has a relatively high rate of fatal road crashes. This high rate is not evenly distributed amongst the different groups of road users, with trucks being one group who are involved in a disproportionately high number of fatal crashes. Although truck drivers are an important group to study, if New Zealand is to reduce its relatively high road toll, very little research has investigated the role of human factors in the crash involvement of truck drivers.

Drawing upon research amongst private vehicle drivers and safety climate research from other industries, the current study investigated the relationship crash involvement has with two personality traits (driver selfishness and mild social deviance), four different types of aberrant driving behaviour (violations, errors, lapses and aggressive violations) and safety climate.

The violations factor was the only factor that directly predicted crash involvement amongst truck drivers. The relationship between violations and crash involvement was such that a one unit increase in the violations factor score increased the odds of being crash involved by 49%.

Tests for mediation effects revealed that a number of other variables indirectly increased the risk of crash involvement. One of the four different types of driver selfishness, mild social deviance and safety climate all indirectly affected crash involvement through their relationships with other variables.

The findings of this research highlight the important role human factors have in the risk of crash involvement amongst New Zealand truck drivers. Possible avenues for future research are discussed, along with the implications of the findings for decreasing truck drivers' crash involvement.
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Articles

The following articles based on this thesis were published or are currently in press (see Appendices 1-4).


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