

Non-use of seat belts and associated risk taking behaviours among drivers involved in a serious injury crash in metropolitan, regional and remote Western Australia

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Abstract

Previous research has identified that drivers who fail to wear a seat belt are also more likely to engage in behaviours that increase the risk of crash involvement (eg drink driving). The combination of these pre-crash and crash level risk factors provides some explanation for the observed over-representation of unbelted drivers in serious injury crashes. The aims of this study were to investigate the association of the non-use of seat belts by Western Australian drivers involved in a serious injury crash with other risk taking behaviour and to investigate variation in the association by location of the crash. Police records of motor vehicle crashes occurring in Western Australia during the period 2005-2009 resulting in death or hospitalisation (serious injury) were selected for analysis. Crash involved drivers were stratified by location of crash and their seat belt use (worn versus not worn) analysed using multivariate logistic regression to determine the association with other reported risk behaviours such as unlicensed driving and drink driving. Non-use of a seat belt by motor car drivers was highest among those crashing in the rural (5.13%) versus regional (2.05%) and metropolitan areas (1.18%) of Western Australia. Adjusting for driver age, across all three locations a significant increase in the odds of being unbelted was found for male drivers (OR 1.56 to 2.64), drivers with increasing positive levels of blood alcohol concentration (OR 2.60 to 4.59), and unlicensed drivers (OR 2.06 to 4.15). The increased risk associated with drink driving and unlicensed driving was mostly higher for drivers crashing in regional and remote Western Australia compared with metropolitan Perth. The findings confirm the previously identified relationship between driver factors that increase the risk of crash involvement (pre crash factors) and risk of injury (crash factors). The findings also highlight the need to develop countermeasures that acknowledge the concomitant nature of these risky behaviours, particularly among drivers in the non-metropolitan areas.

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