

Characteristics Identifying Young Drivers at a Higher Risk of Crashing

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January 2007

This thesis is dedicated

in loving memory

of

Ivy Wundersitz

and

Clarence Herrmann

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ABSTRACT

In Australia and other developed countries, young drivers are more likely to be involved in crashes than older, more experienced drivers. However, not all young drivers are crash involved. There is increasing evidence within road safety literature suggesting the existence of a subgroup of young drivers with an elevated risk of crashing. The aim of this thesis was to examine characteristics of young drivers (aged 16 to 24 years) that identify those with an elevated risk of crash involvement and to validate high-risk driver subtypes among different young driver populations. Young driver interventions might be more effective if tailored to the needs and motivations of these specific subgroups of young drivers identified as being at a higher risk of crash involvement.

The first of four studies examined the ability of previous driving behaviour, reflected in driver records, to identify high-risk drivers, that is, drivers deemed culpable for a fatal crash. The official driver records, both crashes and traffic offences, of drivers involved in a multiple vehicle fatal crash were tracked for five years prior to the fatal crash ($N=388$). This analysis was repeated for a subset of young drivers aged 16 to 24 years ($n=82$). Although driver records (i.e., prior drink driving offences) had some value in identifying high-risk drivers, they were not useful in identifying the subset of high-risk young drivers.

The second study involved an examination of personality characteristics, motivations, driving related attitudes, and behaviours to ascertain whether they could differentiate young traffic offenders ($N=336$), drivers detected engaging in risky driving, from other young drivers (i.e., university students $N=270$). Based on a wide variety of questionnaire measures, the profile of characteristics for the offenders indicated that they were well adjusted and generally did not differ greatly from the students. However, there were notable differences on some measures related to aggression. In addition, offenders generally had less safety-oriented attitudes towards road safety issues than students.

Considering that young drivers are not a homogenous group, the third and fourth studies examined whether personality characteristics and attitudes could identify different subtypes of young drivers, specifically subtypes with an elevated crash risk. The existence of subtypes was examined and validated among the two young driver populations: university students ($N=270$) and young traffic offenders ($N=336$). Based on questionnaire measures, cluster analysis identified four meaningful young driver subtypes in each of the young driver populations. High-risk young driver subtypes were more clearly differentiated among young drivers already identified by their driving record as high-risk (i.e., traffic offenders). Of significance, the high-risk young driver subtypes had a similar profile (i.e., “emotional, hostile” and “thrill-seeking”) to those found in previous research. Interventions that matched the needs of these high-risk subtypes were discussed.

A 12-month follow up of driver records showed that high-risk subtypes continued to be detected for more traffic offences than other subtypes, and there was a trend of greater crash involvement. It is recommended that further research follow these driver records for a number of years to allow comprehensive validation of these subtypes.

DECLARATION

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text.

I give consent to this copy of my thesis, when deposited in the University Library, being made available in all forms of media, now or hereafter known.

Lisa Wundersitz

Date

ACKNOWLEDGEMENTS

The completion of this thesis would not have been possible without the assistance of the following people:

- My supervisor Dr Nicholas Burns from the School of Psychology at the University of Adelaide. I sincerely thank you for your guidance and for making many insightful comments throughout the development of my thesis. In particular, I appreciated your valuable suggestions about statistical procedures. Thank you also for taking the time to read my draft chapters more than once.
- My co-supervisors: Dr Michael White from the Department of Transport, Energy, and Infrastructure and Professor Jack McLean from the Centre for Automotive Safety Research (CASR) at the University of Adelaide. I appreciate the suggestions that were offered when designing the study and useful comments provided on my draft chapters.
- Steve Lippett and Pam Dearden from the Traffic Information Management Systems at the Department of Transport, Energy, and Infrastructure for tracking and collating the crash and traffic offence histories of driver's involved in a fatal crash. I am also very grateful for the assistance given in accessing the DRIVERS database.
- John Walker, former Manager of the Driver Intervention Program (DIP) at the Department of Transport, Energy, and Infrastructure, and Daryl Taylor, coordinator of DIP for providing access to DIP attendees; your cooperation and assistance made a unique dataset possible. I would also like to thank all of the DIP facilitators who cheerfully gave me time to recruit participants before each session.
- Steve Buss from Registration and Licensing at the Department of Transport, Energy, and Infrastructure for organising access to DRIVERS and providing training to use it.

- Bob Willson from the School of Psychology for assisting me in writing and setting up the Internet-based questionnaire.
- Dr Michael Lee and Dr Paul Defabbro from the School of Psychology for providing sound statistical advice. In particular, thank you Michael for your assistance with the cluster analysis decision rule algorithms and visualisations.
- CASR for providing financial assistance for conference attendance, computing resources, and much in-kind support. In particular, I would like to thank Andrew Meier, CASR information officer, for promptly alerting me to any relevant young driver literature. I am also grateful to Craig Kloeden who provided help with computer and crash database issues and Dr Paul Hutchinson for providing useful comments on some chapters.
- Thank you to all of the young drivers involved in this research project who took the time to complete the questionnaire.
- Finally, thank you to my family and friends for keeping me sane during my candidature. In particular, I would like to thank my partner Danny Lee for all the understanding, support, and encouragement he has given me during the past four busy years.

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