

**SELF-REGULATION OF THE DRIVING BEHAVIOUR OF OLDER
DRIVERS**

MATTHEW R.J. BALDOCK

Department of Psychology
and
Centre for Automotive Safety Research

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ABSTRACT

The aim of this thesis was to examine the extent, and correlates, of self-regulation of driving behaviour among a sample of South Australian older drivers (aged 60 or more). The first of four studies was an analysis of official crash statistics in South Australia over a period of five years. The patterns of crash involvement for South Australian older drivers were found to resemble those reported in the literature for other jurisdictions. Lower levels of crash involvement for older drivers in difficult driving situations (peak hour, rain, darkness) were interpreted as indirect evidence for self-regulation of driving behaviour.

The second study involved pilot testing a measure developed specifically for assessing the visual attention of older adults (the Computerised Visual Attention Test - CVAT). The CVAT assesses visual attention by measuring target detection and reaction time for central and peripheral stimuli, and in conditions requiring selective and divided attention. The third study involved assessing the test-retest reliability, construct validity and predictive validity of the CVAT. It was concluded that the CVAT is a reliable measure of abilities including, but not restricted to, attention, and that it is correlated with on-road driving ability.

The fourth study involved an examination of the driving behaviour and attitudes of 104 drivers aged over 60, with avoidance of difficult driving situations providing an index of self-regulation. These drivers also completed a battery of tests measuring psychological factors, vision, physical functioning, various cognitive abilities, and attention (the CVAT). Ninety participants additionally completed an on-road assessment of driving ability. It was found that older drivers most often avoided reverse parallel parking and driving at night in the rain, while driving alone was avoided least often. Measures of visual attention, medication use and visual acuity were most predictive of levels of self-regulation, while poorer driving ability was only associated

with avoidance of a small number of specific situations. Functional deficits related to poorer driving ability but not to self-regulation included poorer contrast sensitivity, speed of information processing and spatial memory. Such deficits could identify drivers who may need to restrict their driving more than they do.

STATEMENT

This work 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 available for loan and photocopying.

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