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## Minimising risks and distractions for young drivers and their passengers: An evaluation of a novel driver–passenger training program

Michael G. Lenné<sup>a,\*</sup>, Charles C. Liu<sup>a</sup>, Paul M. Salmon<sup>a</sup>, Marnie Holden<sup>b</sup>, Simon Moss<sup>b</sup>

<sup>a</sup> Accident Research Centre, Monash University, Australia

<sup>b</sup> School of Psychology & Psychiatry, Monash University, Australia

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### ABSTRACT

The purpose of the present study was to evaluate a pilot program designed to teach communication skills to young drivers and passengers. Sixty-two young males recruited as 31 pairs of friends, all aged between 18 and 21 years and holding a probationary drivers licence, were randomly assigned to a training or no-training condition. A training program was developed based upon elements of existing team training programs. Driver and passenger pairs operated a driving simulator through scenarios designed to measure aspects of safe driving behaviour and hazard response. Communications between driver and passenger were also measured. All participants were administered the Driver Behaviour Questionnaire before and approximately 2 months after simulator testing. Compared to the untrained group the trained participants exhibited a larger following distance, reduced speed significantly when faced with an unexpected hazard on the road, and exhibited more safe communications. Although current passenger restrictions are warranted, the present results reveal an alternative view of adolescent passengers: rather than being a negative influence on drivers, adolescent passengers can potentially be trained to become a positive influence.

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### 1. Introduction

Young drivers are over-represented in road crash statistics, and road crashes are the major cause of death for people aged 15–24 in OECD countries (Organisation for Economic Co-operation and Development, 2006). One important risk factor for young drivers is the presence of passengers, although evidence indicates that the presence of certain types of passengers, in particular, older passengers and female passengers, enhances driving behaviour (Engstrom, Gregersen, Granstrom, & Nyberg, 2008; Geyer & Ragland, 2005; Rice, Peek-Asa, & Kraus, 2003; Vollrath, Meilinger, & Kruger, 2002). There is considerable evidence however that young drivers are more likely to crash when passengers are present (e.g., Chen, Baker, Braver, & Li, 2000; Doherty, Andrey, & MacGregor, 1998; Geyer & Ragland, 2005; Preusser, Ferguson, & Williams, 1998). For drivers under 25 years in Australia, carrying two or more peer age passengers is associated with an increased risk of crash, whereas no such association is observed for drivers who were 25 years and older (Lam, Norton, Woodward, Connor, & Ameratunga, 2003).

\* Corresponding author. Address: Accident Research Centre, Monash University, Clayton campus, Building 70, VIC 3800, Australia. Tel.: +61 3 9905 4669; fax: +61 3 9905 4363.

E-mail address: [Michael.Lenne@monash.edu](mailto:Michael.Lenne@monash.edu) (M.G. Lenné).

### 1.1. Passenger influences on young drivers

In the literature noted above the influence of young passengers in distracting young drivers is often acknowledged. Potential distractions may be visual (when drivers shift their eyes from the road to passengers), auditory (when passengers adjust the radio), or cognitive (when drivers and passengers converse). Compounding this vulnerability to distractions are the findings that, compared to experienced drivers, young drivers utilise less efficient hazard detection strategies and processing abilities, exhibit an impaired capacity to attend to passengers and other distractions, as well as demonstrated limited awareness of when to moderate passenger interaction in line with the demands and context of the driving situation (Crundall, Bains, Chapman, & Underwood, 2005; Deery, 1999; Underwood, 2007).

Another major factor contributing to the negative effect of passenger carriage on young drivers is risk taking behaviour (Williams, Ferguson, & McCartt, 2007). Young drivers, particularly male drivers, have been observed to take greater driving risks, such as speeding and close following, when accompanied by young male passengers; in contrast, the presence of female and adult passengers has been observed to curb the risky behaviour of young drivers (McKenna, Waylen, & Burkes, 1998; Simons-Morton, Lerner, & Singer, 2005). Risk taking behaviour has also been linked to higher offence and accident rates in young male drivers compared to their female counterparts (Laapotti, Keskinen, Hatakka, & Katila, 2001). Young male drivers report engaging in riskier behaviour when driving with young male passengers compared to females or adults (Regan & Mitsopoulos, 2001; Ulleberg, 2004; Williams et al., 2007), and young male passengers report that they may explicitly encourage risk taking in their male friends (Regan & Mitsopoulos, 2001).

### 1.2. Managing the risks associated with passengers

Several approaches to the management of these passenger risks are discussed in the literature (see Williams et al. (2007) for a review). Many countries, including the US, New Zealand, and Australia, have introduced legal restrictions on the number and age of passengers that a young driver is allowed to carry. In the state of Victoria in Australia, for example, drivers who are within 1 year of having obtained their probationary licence will be permitted to carry, at most, one passenger aged 16–21 years (Arrive Alive Action Plan, 2008).

Such restrictions can be complemented with education and training programs. For example, passenger and peer influences were targeted in a traffic safety campaign in Norway, intended to generate positive traffic safety attitudes and awareness of risky driving practices. The campaign included a specific strategy termed 'Speak Out!' designed to empower young passengers to declare unsafe driving and to refuse lifts with unsafe drivers. This educational component of the campaign was accompanied by an increase in police enforcement, which targeted speeding and drunk driving in young drivers. Elvik (2000) found evidence of a reduction in passenger injuries; however, because the campaign consisted of both education and police enforcement, the resulting improvements in safety cannot be attributed to education alone.

More recently in the US, a 10-week training program, involving interactive lessons, small-group discussions, and role plays, entitled 'You Hold the Keys', was implemented among teens in high school to increase safe driver and passenger behaviours (King, Vidourek, Love, Wegley, & Alles-White, 2008). One of the unique features of the program was the student exposure to the experiences of crash victims who had been victimised by unsafe drivers. In the immediate follow-up, students reported being more likely to engage in safe behaviours, such as wearing seatbelts, and were more likely to avoid drink driving and travelling with another drunk driver. Many of the reported improvements were maintained even 6 months after the first evaluation (King et al., 2008).

This study extends existing research by providing a training program to promote safe behaviours between driver–passenger pairs, thereby providing a means to support moderation of behaviour, and by assessing the impact of this initiative through both self-reported behaviours and behavioural observation in a driving simulator. The content of the program encompassed elements of previous programs that encouraged teenage passengers to voice their disagreements with drivers when they were driving dangerously (Elvik, 2000; King et al., 2008). Young male drivers and passengers were chosen given that previous research confirms the negative influence of young male passengers on young drivers, the reluctance of young males to inform the driver when they feel unsafe (Ulleberg, 2004), and higher crash risk. It was hypothesised that the training program, delivered to young male pairs, would improve driver–passenger communications, reduce risky driving (car following and speed), and would enhance hazard detection and response.

## 2. Method

### 2.1. Participants

Participants were 62 young males, recruited as 31 pairs of friends, aged between 18 and 21 years and holding a probationary drivers licence. Participant pairs were randomly assigned to one of two conditions: a training condition or control group. Sample demographics are presented in Table 1, with the two groups differing on the time reported driving per week ( $p < 0.05$ ). The study was approved by the Monash University Human Ethics Committee.

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