Understanding the psychosocial factors influencing the risky behaviour of young drivers

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A B S T R A C T

Young people aged 17–24 years are at high risk of being killed in road crashes around the world. Road safety interventions consider some influences upon young driver behaviour; for example, imposing passenger restrictions on young novice drivers indirectly minimises the potential negative social influences of peers as passengers. To change young driver risky behaviour, the multitude of psychosocial influences upon its initiation and maintenance must be identified. A study questionnaire was developed to investigate the relationships between risky driving and Akers' social learning theory, social identity theory, and thrill seeking variables. The questionnaire was completed by 165 participants (105 women, 60 men) residing in south-east Queensland, Australia. The sociodemographic variables of age, gender, and exposure explained 19% of the variance in self-reported risky driving behaviour, whilst Akers' social learning variables explained an additional 42%. Thrill seeking and social identity variables did not explain any significant additional variance. Significant predictors of risky driving included imitation of the driving behaviours of, and anticipated rewards and punishments administered by, parents and peers. Road safety policy that directly considers and incorporates these factors in their design, implementation, and enforcement of young driver road safety interventions should prove more efficacious than current approaches.

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1. Introduction

The overrepresentation of young drivers in motor vehicle crashes is a persistent global road safety problem (Doherty, Andrey, & MacGregor, 1998) that was recognised more than half a century ago (Chliaoutakis, Darviri, & Demakakos, 1999). Car crashes are the leading cause of death for persons aged 15–24, who constituted 10% of the population in OECD countries in 2004, but represented 27% of all crash fatalities (OECD, 2006). Young drivers also tend to engage in risky behaviours (Durkin, 1995), for example young males report that speeding is a normal non-serious behaviour (Rothe, 1987b, as cited in Harre, Field, & Kirkwood, 1996). Whilst gaining a driver's licence is generally seen as a developmental rite of passage (Freund & Martin, 2002), safety concerns have led to 1 in 5 parents reporting attempts to delay their children obtaining a learner's permit (Sherman, Lapidus, Gelven, & Banco, 2004).

Epidemiological studies (e.g., ATSB, 2004a) from around the world have repeatedly demonstrated that crash risks are highest for the youngest drivers who are twice as likely to be killed as older drivers (OECD, 2006). Young passengers

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contribute half of all vehicle occupant deaths amongst this age group (Williams & Wells, 1995). A number of factors consistently emerge in the international literature as contributors to young driver crashes. Driver characteristics contributing to young driver crashes include age (e.g., TAC, 2007), gender (e.g., ATSB, 2004a), licence status (e.g., Lam, 2003), driving experience (e.g., Berg, Eliasson, Palmkvist, & Gregersen, 1999), consumption of alcohol (e.g., Isaac, Kennedy, & Graham, 1995), fatigue (e.g., Queensland Transport., 2005), inattention (e.g., Zhang, Fraser, Lindsay, Clarke, & Mao, 1998), and not wearing seat belts (e.g., Begg & Langley, 2000). Influential passenger variables are the age (e.g., Miller, Spicer, & Lestina, 1998), gender (e.g., Williams & Wells, 1995), and the number of passengers (e.g., Miller et al., 1998).

2. Relevant theoretical perspectives

It is apparent that young driver crashes arise from a multitude of variables, the majority of which involve volitional factors. Throughout the young driver's lifetime, they are exposed to numerous powerful influences on driving attitudes and behaviours. These include parents, peers, schoolmates, and workmates (James, 2002), whose influence is mediated by further variables, for example, the behaviour of young drivers is likely to reflect that of their same-sex parent (Taubman-Ben-Ari, Mikulincer, & Gillath, 2005). Entrenchment of attitudes and motivations regarding road use are apparent long before obtaining a driver's licence (Boyes & Litke, 2002; Carcary, 2002). Adolescence is also a period characterised by developmental changes (of a physiological, cognitive, behavioural, and social nature) during which youths increase their reliance on peers in forming attitudes and behaviours (Sharpley, 2003). Road crash statistics indicate that as adolescents mature, deaths and fatalities decrease, reflecting physical and psychological maturation, the assumption of culturally- and age-appropriate behaviours (Jessor, Turbin, & Costa, 1997), and diminishing susceptibility to the negative influences of young passengers (Engstrom, 2003). In an attempt to ameliorate the pervasive problem of young driver risky behaviour, it is important that research into the psychosocial influences upon risky driving be informed by relevant psychological theory. Relevant psychological theory that has the potential to make a contribution includes Akers' differential-association-reinforcement theory and social identity theory. In addition, thrill seeking in the driving context has also been shown to be predictive of the risky behaviour of young people.

2.1. Differential-association-reinforcement theory (Akers' social learning theory)

Akers' differential-association-reinforcement theory (herein referred to as Akers' social learning theory, consistent with current psychological practice) extends Bandura's social learning theory principles (Bandura, Ross, & Ross, 2003) within the criminological domain. The theory was developed to account for the persistent finding that youth are more likely to indulge in proscribed behaviour if they differentially associate with peers who are accepting of and/or promote such deviance (Akers, Krohn, Lanza-Kaduce, & Radosevich, 1979; Hochstetler, Copes, & DeLisi, 2002). *Normative definitions* (attitudes[3]) are influenced by significant others and represent the individual's general and more specific beliefs about socially- and culturally-appropriate rules and values. The duration, intensity, frequency, and priority of *differential association* with parents and peers with whom adolescents interact varies, with greater association leading to greater influence. Whilst initial behaviour is primarily learned via *imitation*, continuing behaviours are influenced by *differential reinforcement*, which is the balance of actual and perceived reinforcement. *Rewards* – which include social and non-social sources of rewards – are likely to increase the frequency of the behaviour. Conversely, *punishments* – similarly from social and non-social sources – are likely to reduce the frequency of the behaviour (Akers & Sellers, 2004; Brezina & Piquero, 2003).

The constructs within Akers' social learning theory are traditionally measured as composite scales comprising a number of items exploring the variables of interest, with the data first being subjected to a descriptive analysis via correlations, following which multiple regression analyses are undertaken. Self-report questionnaires are typically used (e.g., see Akers et al., 1979) in which the participant ranks the frequency of the behaviour under investigation (e.g., 'how often do you use alcohol' scaled from 'never' to 'nearly every day'). Imitation is gauged by exploring the models liked by the participant, and by measuring the favourable and unfavourable attitudes of the participant and their imitated models. Differential association is measured by the participant scaling the perceived favourable, unfavourable and neutral attitudes held by these significant models. Differential reinforcement is quantified by exploring the anticipated social and non-social rewards received from performing the risky behaviour, as well as the anticipated social (including legal) and non-social punishment.

Akers' social learning theory has been used in a number of studies to explain risky behaviours among adolescent populations (Shinew & Parry, 2005). It has often been found to be better than other theoretical models in explaining substantial variance in deviant behaviour, for example accounting for 41% of variance in adolescent smoking (Krohn, Skinner, Massey, & Akers, 1985), 68% of marijuana use and 55% of alcohol use (Akers et al., 1979), and 67% of variance in Korean adolescents' substance use (Hwang & Akers, 2003). Differential association with peers has consistently emerged as the strongest predictor of adolescent psycho-active substance use in Italian populations (Bonino, Cattelino, & Ciairano, 2005), and the differential association variable 'change in friends' was the only significant predictor of smoking cessation in more than 300 adolescent New Jersey residents (Chen, White, & Pandina, 2001).

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[3] Whilst the concept of normative definitions encompasses a range of beliefs and orientations, the term "attitudes" will be used in this paper to refer to this construct in order to be consistent with current social psychological terminology (Watson, 2004).