



The influence of social factors and personality constructs on drink driving among young licenced drivers



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ABSTRACT

Young adults continue to be overrepresented in alcohol-related crashes on Australian roads. Social factors are important factors associated with drink driving behaviours among young adults and have been the focus of several intervention efforts. However, research also demonstrates that personality constructs are associated with an increased likelihood of engaging in harmful drinking and risky driving behaviours. To better understand the influence of both social and personality constructs with drink driving, 390 male and female licenced drivers aged 18–24 years completed a questionnaire that assessed Akers' social learning theory constructs and the personality constructs of Behavioural Inhibition System (BIS) and Behavioural Approach System (BAS) for their association with drink driving in the past 12 months. Result indicated that a relatively large proportion (36.67%) of participants engaged in drink driving. A sequential logistic regression analysis further found that several social and personality variables were associated with drink driving. Specifically, the Akers' social learning theory constructs of Personal Definitions, Differential Reinforcement–Punishment (High), Differential Association Drink Driving–Friends, and Imitation–Friends variables and the BAS constructs of Fun Seeking and Drive were associated with drink driving. While these findings highlight the importance of targeting the social context around drink driving, the impact of personality constructs also warrants consideration with intervention efforts.

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1. Introduction

Alcohol is a major contributor of serious road crashes resulting in significant injuries, fatalities and property damages (Connelly & Supangan, 2006; Department Transport, 2012). In Australia alone, the costs of drink driving is an estimated 3.66 billion dollars (AU) per annum (Manning, Smith, & Mazerolle, 2013). Young drivers are found to be at an increased risk of crash involvement, with those aged 17–25 years making up 25% of all drivers seriously injured or killed as a result of risky driving behaviour (Australian Transport Council, 2011). The Graduated Driver Licensing (GDL) system and other initiatives have been introduced in Australia in an attempt to reduce the high incidence of young drivers involved in crashes (Bates, Watson, & King, 2008). Despite intervention attempts, however, research shows that the high prevalence of driving over the legal Blood Alcohol Concentration (BAC) remains an issue among young people (Australian Transport Council, 2011).

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Given the high involvement in drink driving among young people, it is necessary to understand the specific factors linked to increases in this behaviour. Research suggests that there are a number of drink driving risk factors that are more common among young drivers than among other age groups of drivers. These factors include risky drinking, favourable attitudes toward risky driving behaviour, disregard for traffic rules, and a general inclination toward high-risk activities (Palamara, Legge, & Stevenson, 2001; Steinberg, 2004; Watling & Watling, 2015). Further investigations of these influences on drink driving among young drivers are therefore necessary to develop a sound knowledge base for interventions targeting young drivers. Akers' social learning theory and Gray's Behavioural Inhibition System (BIS) and Behavioural Approach System (BAS), two theories that capture many of the above construct, may be of particular use in understanding drink driving among young people.

1.1. Akers' social learning theory

Akers' (1990) social learning theory is a psychosocial-based perspective that focuses on factors that motivate or inhibit behaviour in order to explain deviant and criminal activity (Akers, Krohn, Lanza-Kaduce, & Radosevich, 1979; Akers & Sellers, 2009). Akers' social learning theory is comprised of four inter-linked theoretical constructs: Differential Association (Behaviour/Normative), Personal Definitions, Differential Reinforcement (Punishment/Reward), and Imitation. Social learning perspectives (e.g., Akers & Sellers, 2009) posit that a person will learn behaviour through their own experiences, and importantly, through differential association with significant others (e.g., family, friends) or distant reference groups (e.g., school, church). Young adults may construct beliefs about drink driving and its potential consequences both through personal experiences as well as observation of others' drink driving behaviour and their normative approval or disapproval of this behaviour. Differential association with others thus consists of both a behavioural and normative aspect which can be measured for groups of decreasing proximity (e.g., family, friends, others). Personal experiences and differential association, in turn, shape a person's personal definitions (i.e., attitudes), creates expectancies of social reinforcement or punishment for behaviour and provides behavioural models (of decreasing proximity) to imitate. Together these constructs can form a "high risk" social environment where drink driving is approved of and modelled by significant others, and where in turn, expectations of social punishment are low, expectations of social reward are high, and attitudes are positive.

A number of studies have used Akers' social learning theory or similar constructs to examine risky driving behaviour including drink driving, speeding, drug driving, sleepy driving and unlicensed driving (Armstrong, Wills, & Watson, 2005; Chen, Grube, Nygaard, & Miller, 2008; Davey, Davey, & Obst, 2005; Fleiter, Lennon, & Watson, 2010; Watling, 2014; Watson, 2004). These studies have shown that other's perceived engagement in and approval/disapproval of these risky driving behaviours, as well as positive personal definitions (attitudes), perceived social and nonsocial punishment and rewards, and parental/peer modelling (a concept related to imitation) are all risk factors. Overall, this literature indicates that social learning variables are important predictors of risky driving. However, research that investigates the combined impact of all Akers' social learning constructs on drink driving is largely lacking. Additionally, Akers' social learning constructs, although important predictors of risky and delinquent behaviour, largely ignore the impact of the individual. Personality traits such as those that sensitise individuals to either punishments or rewards have however been shown to influence risk taking behaviours (Franken & Muris, 2006; Harbeck & Glendon, 2013; Voigt et al., 2009). Moreover, a focus that is limited to social factors fail to illustrate the relative importance of social versus individual factors for behaviours that are frequent targets of intervention efforts. Such information is of importance as personality factors, unlike social influences, are regarded as non-modifiable.

1.2. BIS/BAS

One theoretical model that measure individuals' sensitivity toward reward or punishment are the BIS and BAS personality constructs proposed by Carver and White's (1994). This model is based on the premises of Gray's (1970) sensitivity theory which postulates that an individual's behaviour can be explained in terms of two separate neuropsychological systems: BIS and BAS. BIS refers to punishment sensitivity, a tendency toward anxiety or concern regarding anticipated punishment. BAS refers to reward sensitivity, which is demonstrated through an orientation toward rewarding experiences. The latter system includes three separate subsystems: Drive, Reward Responsiveness, and Fun Seeking (Carver & White, 1994). Drive refers to persistence in pursuing desired goals, Reward Responsiveness the degree to which rewards elicit positive responses, and Fun Seeking to the desire for rewards and willingness to seek them out on the spur of the moment. Higher levels of BIS are linked to anticipation of negative or painful consequences and may also be responsible for feelings of anxiety, frustration, and sadness. In contrast, higher levels of BAS are linked to heightened levels of reward sensitivity, sensation seeking, and risk-taking behaviour (Carver & White, 1994; Smillie, Jackson, & Dalgleish, 2006).

The BIS/BAS personality characteristics has been used as a conceptual basis for exploring a range of risky health behaviours, including risky driving and substance use (Franken & Muris, 2006; Franken, Muris, & Georgieva, 2006; Harbeck & Glendon, 2013; Jorm et al., 1998; Loxton & Dawe, 2001; Voigt et al., 2009). The research findings on the BIS/BAS personality dimensions for composite measures of risky driving behaviours have been mixed particularly for BIS. For instance, while one study (Harbeck & Glendon, 2013) has found that higher levels of BIS are indirectly associated (via increase risk perception) with reduced risky driving behaviour, another study (Voigt et al., 2009¹) found it to be positively associated with risky driving.

¹ Risky driving is measured as part of a subscale tapping safety behaviour in general.

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