Emotional intelligence and risky driving behaviour in adults

Amie C. Hayley, Byron de Ridder, Con Stough, Talitha C. Ford, Luke A. Downey

Centre for Human Psychopharmacology, Swinburne University of Technology, Hawthorn, Australia
Institute for Breathing and Sleep, Austin Hospital, Melbourne, Australia

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Abstract

Background: Risky driving is considered a key predictive factor in road traffic accidents resulting in morbidity and mortality. Intra-individual emotional and personality factors have been shown to influence risk-taking behaviours among drivers. Despite this, there is limited research investigating the individual dimensions of these constructs and their relationship to risky driving behaviour (RDB). The current study therefore aimed to assess whether the individual dimensions of Emotional Intelligence (EI) were implicated in RDB.

Methods: The sample comprised 179 adults (55% male) aged between 18 and 64 years (M = 29.85, SD = 11.46) and who currently held a valid driver’s licence completed an online survey. Emotional Intelligence was assessed via self-report using the Swinburne University Emotional Intelligence Test (SUEIT), and RDB was measured using both the Brief Distracted Driving Scale (BDDS) and the Dula Dangerous Driving Index (DDDI).

Results: Regression analyses revealed that ‘Risky Driving’ was related to greater levels of Emotional Recognition and Expression and lesser Age \[F(6, 172) = 2.27, p < 0.05; R^2 = 7.3%\], and the Negative Emotions sub-scale of DDDI, was significantly predicted by Emotional Control and Age \[F(6, 172) = 6.41, p < 0.05; R^2 = 18.3%\]. A mediation model incorporating Age, Emotional Control scores and the Negative Emotions driving behaviour score indicated that a significant indirect effect of Age through Emotional Control (\(K^2 = 0.08, 95\% CI [-0.02, -0.03]\)). \(H (3) = 10.98, p = 0.012\).

Conclusions: Lower scores on specific indices of EI are associated with increased rates of RDB, suggesting that poor emotional control may impede an individuals’ ability to make safe behavioural decisions when driving. The effect sizes for these models were small, however, and further research is needed to explore the contributory components in this association. Greater awareness of the role of emotional regulation and driving behaviours may be useful in preventing RDB in adults.

1. Introduction

Road traffic accidents constitute a significant source of morbidity and mortality among the general population, and both the economic and personal costs of these events are considerable. Engagement in risky driving behaviour (RDB) is a leading cause of preventable road-traffic incidents, and is recognised to increase the likelihood of accidents and crashes leading to both injuries and material damage for both the driver and other road users. The role of a number of external contributory factors in engagement in RDB have been examined in some detail; however, emerging research has highlighted the possible...
modifiable role of individual differences (e.g., emotional intelligence) as a determinant of these behaviours (Rivers, Brackett, Sickler, & Salovey, 2013; Wozniak, 2013). Characterising the role of individual differences in producing risky driving behaviours may have implications for future assessments of estimated crash risk among these individuals.

Risky driving behaviours are defined as any that may increase the probability of a car accident on the road (Dula & Geller, 2003). This includes aggressive driving, speeding, tailgating, failing to wear a seatbelt, driving under the influence of alcohol or other drugs, and driving while fatigued or distracted (Scott-Parker, 2012). Road accidents can sometimes be unavoidable, such as those caused by low driver skill, inexperience, mechanical failure, or environmental factors (Laflamme, Hasselberg, Kuligren, & Vaez, 2006; Scott-Parker, 2012), however, many fatal accidents are caused by both intentional and unintentional risk-taking. A recent analysis conducted by Beanland, Fitzharris, Young, and Lenné (2013) examined the prevalence of high risk choices leading to serious road accidents for 340 randomly selected, serious car crashes in Victoria and New South Wales. All incidents observed in the research involved hospitalisation due to crash related injuries, with many involving fatalities. Using data obtained from forensic examination of fatal crash scenes, anonymous witness accounts, and police reports between the years 2000 and 2011, Beanland and colleagues reported that 57.6% of car crashes involved some form of driver inattention or distraction. Driver intoxication (13.5%), driver falling asleep (11.8%), and driver fatigue (10.9%) were the three most commonly cited causes of car accidents – these are all examples of preventable risky driving behaviours (Beanland et al., 2013; Lam, 2003; Scott-Parker, 2012; Willemsen, Dula, Declercq, & Verhaeghe, 2008).

Extant research on how risk-taking is related to driving behaviour suggests that risk-taking is at its highest with young drivers, and decreases as drivers become older (Jessor, Turbin, & Costa, 1997; Vassallo et al., 2013). This coincides with patterns in road fatality rates, with the likelihood of fatal car accidents reducing as driver age increases (Bureau of Infrastructure, 2013). Although driver age and driver experience a tightly linked, the parallels between risk-taking behaviour of young adults both on and off the roads and national fatality rates suggests that risk-taking is a contributing factor in the over-representation of young adult road fatalities (Beanland et al., 2013; Bingham, Shope, Zakrjashek, & Raghunathan, 2008; Vassallo et al., 2013; Jessor et al., 1997; Jonah, 1986). RDBs, such as reckless speeding and using mobile phones while driving, is mostly a deliberate driver choice (Scott-Parker, 2012); and these behavioural choices seem more prevalent in younger drivers. Emerging adulthood is therefore a period of life associated with heightened risk of physical injury (Bingham et al., 2008); gravely demonstrated by the over-representation of 18 to 25 years olds in road fatalities. This risk of physical injury from general risk-taking declines with age due to a variety of factors, such as engagement in adult roles (Schulenberg, Sameroff, & Cicchetti, 2004), and the maturation of brain, cognitive and emotional facilities (Rivers, Brackett, Sickler, & Salovey, 2013). Whilst people’s age is a significant predictive factor in risk-taking behaviour on the road, it must be acknowledged that factors such as driving experience and other individual differences that impact risk-taking propensity can influence the types of actions and behaviours people display on the road.

Studies have demonstrated a relationship between age (Jonah, 1986), emotional and/or personality factors (Ulleberg & Rundmo, 2003) and the likelihood of engaging in risky driving behaviours as strong predictors of future accident risk (Norris, Matthews, & Riad, 2000). Such studies typically focus on the role of overt personality traits, such as excitement or adventure-seeking (Iversen & Rundmo, 2002; Machin & Sankey, 2008), temperament (Vassallo et al., 2007), or more transient emotional states, such as anger (Dula & Ballard, 2003), anxiety (Ulleberg, 2001), and positive affect towards traffic violations (Lawton, Parker, Manstead, & Stradling, 1997) as indicators of past, present and future accident risk. At present, a limited, albeit increasing, amount of research has suggested the possible mediating role of the expression of emotion with regard to relative accident risk (Deery & Fildes, 1997) and driving performance (Hancock, Hancock, & Janelle, 2012). This indicates the usefulness of characterising emotional regulation and expression as a marker of an individuals’ likelihood of engaging in risk-taking behaviour whilst driving.

How drivers react to transient mood states whilst driving (e.g., anger, frustration, anxiety or nervousness) may depend upon the emotional regulation skills encompassing emotional intelligence (EI: Gohm, 2003). EI refers to the skills and attributes that enable someone to monitor personal and other people’s emotions, discriminate between different emotions, label emotions, and use emotions to guide behaviour or thinking (Salovey & Mayer, 1989). Research has demonstrated that higher levels of EI are associated with greater skill in anger control and improved ability to appropriately moderate immediate mood states and subsequent behaviour (Sahin Baltaci & Demir, 2012). Complementary, albeit limited studies have similarly indicated that levels of EI are related to an individual’s propensity to engage in risky behaviours, specifically emotional regulation and/or control (Hancock et al., 2012), with lower levels of EI often associated with greater engagement in risk taking (Rivers et al., 2013; Wozniak, 2013). Furthermore, EI appears to develop with age (Luebbers, Downey, & Stough, 2008), which is a known mediator of risk-taking behaviour (Jonah, 1986). One potentially predictive aspect of EI is the dimension of emotional control; which is defined as one’s ability to control strong emotions, such as anger and frustration. A reduced ability to control strong emotions whilst driving may predispose people to act in an ill-conceived or risky manner; whether by driving more dangerously, or engaging in unnecessarily aggressive driving behaviours. This conceptualisation shares some overlap with previous studies examining the predictive role of impulsivity in relation to driver behaviour and accident involvement (e.g., Pearson, Murphy, & Doane, 2013), where greater levels of impulsiveness have been found to be associated with reduced levels of emotional control whilst driving, and increased levels of dangerous activities (e.g., mobile phone usage) and outcomes (e.g., poorer driving ability, traffic fines and collisions) whilst driving. In sum, given the existing evidence, it is possible that better emotional regulation, thus higher EI, may reduce risky driving behaviours whilst driving.

To date, extensive literature suggests a strong relationship between risk-taking behaviour and driver-related road-traffic accidents (Beanland et al., 2013; Lam, 2003; Scott-Parker, 2012; Willemsen et al., 2008), and between risk-taking behaviour
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