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Trait emotional intelligence, personality traits and social desirability in dangerous driving

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A R T I C L E   I N F O

A B S T R A C T

The aim of this study is to analyze the relationship between impulsiveness, sensation seeking, social desirability, trait emotional intelligence (trait EI) and self-reported dangerous driving behaviors, as measured by both the Dula Dangerous Driver Index (DDDI) and the number of tickets for dangerous driving. A sample of 285 Italian university students (aged between 20 and 46 years) completed an online survey. Results showed that trait EI did not contribute significantly to the prediction of the DDDI dimensions over and above gender, personality traits and social desirability, while it was the sole incremental predictor of a lower the number of tickets for dangerous driving. The role of trait EI on dangerous driving behavior and intervention programs aimed to reduce dangerous driving is discussed, and implications for future research are presented.

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1. Introduction

Despite the efforts to improve driving safety, road traffic injuries are the eighth leading cause of death globally (World Health Organization, 2013). Human factors, including behaviors and the emotional state of drivers, appear the most relevant contributors to motor vehicle accidents. The psychological literature on this issue focuses mainly on the role of two dimensions of driver's dangerous behavior, namely aggressive and risky driving (Dula & Geller, 2003). On the one hand, aggressive driving can be defined as "behavior based in anger and/or behavior the goals of which are to harm, intimidate, threaten, dominate, retaliate upon, frustrate, or otherwise express displeasure with another driver or user of the roadway" (Deffenbacher, Richards & Lynch 2004, p. 116). Aggressive driving behaviors include headlight flashing, yelling at other drivers, profanity and obscene gestures and physical fighting (Ellison-Potter, Bell, & Deffenbacher, 2001). On the other hand, risky driving is defined as any driver's behavior that puts the individual or others at increased risk for injury and crash. These behaviors are characterized by ordinary violations such as speeding and overtaking on the inside.

It seems that demographic variables like age and gender may play a role in both risky and aggressive driving behaviors. For instance, men tend to display higher levels of risky and aggressive driving compared to women (Dula & Ballard, 2003; Mizell, 1997), and an increase in age corresponds to a decrease in less adaptive driving styles (i.e., risky and aggressive), as well as to an increase in more adaptive ways of driving (i.e., careful driving; Jonah, 1990; Krahé, & Fenske, 2002).

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1.1. Psychological features of driving behaviors

There is growing evidence about the role of personality traits, particularly sensation seeking and impulsiveness (Dahlen, Martin, Ragan, & Kuhlman, 2005; Deffenbacher, Deffenbacher, Lynch, & Richards, 2003; Deffenbacher, Lynch, Filetti, Dahlen, & Oetting, 2003; Jonah, Thiessen, & Au-Yeng, 2001; Smorti & Guarnieri, 2016; Ulleberg & Rundmo, 2003), along with affective factors, in self-reported driving behaviors. Current literature suggests a positive correlation between sensation seeking and driving under the influence of alcohol and marijuana, exceeding the speed limit, racing other drivers, and a variety of other risky driving behaviors (Fernandes, Job, & Hatfield, 2007; Fernandes, Hatfield, & Job, 2010; Jonah et al., 2001; Smorti & Guarnieri, 2014; Ulleberg & Rundmo, 2003), including aggressive driving, aggressive driver anger expression, both verbally and physically, and the use of vehicle as a mean to express anger (Dahlen et al., 2005). It also seems that poor impulse control predicts risky driving (Iversen & Rundmo, 2002; Paaver, Eensoo, Pulver, & Harro, 2006) and higher accident rates (Stanford, Greve, Boudreanx, Mathias, & Brumbelow, 1996). Moreover, given that impulsiveness tends to elicit a rapid reaction to external stimuli, if a driver interprets the behavior of other drivers as a provocation it is possible that he or she will react aggressively, justifying the responses as proportionate to the other driver's behavior (Ramírez &Andreu, 2005). In fact, current studies highlight that impulsiveness influences aggressive driving style on the road (Berdoulat, Vavassori, & Muñoz Sastre, 2013; Dahlen et al., 2005; Lajunen & Parker, 2001).

Other studies, displaying that emotions modulated drivers' attention reorienting away from task driving to emotional stimuli, resulting in decreased attention and information processing critical for driving (Hu, Xie & Li, 2013), suggested the relevant role of emotion regulation skills in modulate the mood state while driving (Trógolo, Melchior, & Medrano, 2014; Hayley, de Ridder, Stough, Ford, & Downey, 2017). In psychological terms, the set of abilities or dispositions concerning the way individuals identify, make use of, deal with, and process emotions can be defined Emotional Intelligence (EI). Though little is known about the role played by EI in driving behaviors, the literature shows a negative link between EI and other affective factors which have a well-proven association with risky driving behaviors, such as higher stress and anxiety levels. Specifically, it seems that individuals with poor emotional skills are more likely to ineffectively deal with stressful situations, which may increasingly lead them to acting out in an aggressive manner by breaking rules or adopting risk behaviour (Downey, Johnston, Hansen, Birney & Stough, 2010).

Hence, higher EI can be presumed to be related to less emotional interferences with driving and, in turn, to a greater road safety (Arnau-Sabatés, Sala-Roca, & Jariot-Garcia, 2012; Falahi & Goudarzi, 2015; Hayley et al., 2017).

Even though a lively debate on the nature of the EI construct is still open (e.g., Murphy, 2007), after almost three decades from the first formal definition of the construct (Salovey & Mayer, 1990), scholars of the field recognize the coexistence of two conceptualizations of EI, namely ability and trait EI (e.g., Austin, 2010). While ability EI refers to emotion-related cognitive abilities which ought to be assessed via maximum-performance tests, trait EI comprises emotion-related dispositions and self-perceptions and should be measured through self-report questionnaires (Petrides & Furnham, 2000, 2001). Particularly, the model of trait EI intends EI as part of the mainstream of personality dimensions, thus recognizing the subjective nature of human emotional experience (Pérez-González & Sanchez-Ruiz, 2014; Petrides, Pita, & Kokkinaki, 2007).

Current literature on safe driving focuses mainly on the model of ability EI, and shows that the construct negatively correlates with variables commonly associated with dangerous driving behaviors, including illegal drug use and alcohol consumption (Brackett, Mayer, & Warner, 2004; Trinidad & Johnson, 2002), and with variables more in line with the construct of risky driving, such as physical fights (Brackett et al., 2004). However, to date only few studies specifically investigated the relationship between EI and outcomes representing the actual driving behaviors (Arnau-Sabatés et al., 2012; Falahi & Goudarzi, 2015; Hayley et al., 2017). For instance, it seems that risky drivers have lower EI levels than safe drivers (Falahi & Goudarzi, 2015), and that low levels of EI are positively related with self-reported risk driving behaviors such as speeding, risk-taking tendency, alcohol and other drugs use (Arnau-Sabatés et al., 2012). In addition, findings from a recent study showed that the inability to accurately recognize emotions, which is among the dimensions of EI, produces risky behaviors behind the wheel such as speeding, weaving in and out of traffic, or drink driving (Hayley et al., 2017). On the whole previous studies suggest to taking into account EI in predicting self-reported risky driving (Arnau-Sabatés et al., 2012; Hayley et al., 2017). The only available study taking into account the construct of trait EI and its association with dangerous driving measures EI with BarOn's Emotional Quotient Inventory (EQI; Bar-On, 1997), a self-report questionnaire assessing multiple dimensions of EI (Arnau-Sabatés et al., 2012). Nevertheless, throughout the article the authors refer to the construct as a set of emotional abilities rather than as a personality disposition (Arnau-Sabatés et al., 2012). Though such confusion is common in the field of EI and has been even recently pointed out elsewhere by many authors (e.g., Petrides, Siegling, & Saklofske, 2016), the clear distinction between the two models it is crucial for both theory and practice, as it implies a different conceptualization and operationalization of the construct, as well as different interpretation of a study results.

Finally, investigations on driving behavior extensively use self-report questionnaires because of their well- known advantages (Sullman & Taylor, 2010). However, as suggested by Paulhus (1991), self-reported measures present also great criticisms as they are more subjected to the phenomenon of social desirability. Social desirability is defined as the tendency to over-report "good" and under-report "bad" behaviors and characteristics, so others will view people favorably (Crowne & Marlowe, 1960), hence, it can result in a conformism to socially acceptable values (King & Bruner, 2000). Although relevant, only few studies analyzed the role of social desirability on self-reported driving behavior (see Sullman and Taylor, 2010 for a review; Barraclough, af Wåhlberg, Freeman, Davey, & Watson, 2014). Particularly, a small amount of studies found