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The relationship between drivers' illusion of superiority, aggressive driving, and self-reported risky driving behaviors

Cornelia Măirean *, Corneliu-Eugen Havârneanu

Alexandru Ioan Cuza University of Iasi, Romania
Faculty of Psychology and Educational Sciences, Toma Cozma Street, No. 3, Iasi 700554, Romania

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ABSTRACT

This study evaluated the relationships between the better-than-average effect, aggressive driving, and risky driving behavior. We also investigated the moderating role of aggressive driving in the relationship between the better-than-average effect and risky driving behavior. The sample included 366 drivers (50.8% were women; *M*age = 39.13, *SD* = 13.63 years). The participants completed scales measuring the better-than-average effect, aggressive driving, and risky driving behavior, as well as demographic information. The results showed that the better-than-average effect was significantly positively associated with risky driving behavior, as well as with verbal and physical aggression and with the use of the vehicle to express anger. Further, the positive association between the better-than-average effect and risky driving behavior was moderated by the use of the vehicle to express anger. The implications for traffic safety and future research are discussed.

1. Introduction

People often believe they are more capable, competent, and talented (for reviews, see Brown, 2007) and also less biased and prone to errors than others (Pronin, Gilovich, & Ross, 2004). These beliefs are considered illusory because it is unlikely for a majority of people to be above average in every domain (e.g., Taylor & Brown, 1988). Robust "better-than-average" effects (BTA) have been found in different domains, including driving (Horswill, Taylor, Newnam, Wetton, & Hill, 2013; Lajunen & Summala, 1995; Svenson, 1981; Waylen, Horswill, Alexander, & McKenna, 2004). Thus, previous studies found that drivers tend to consider themselves superior to other drivers on several dimensions such as reflexes (Delhomme, 1991; Matthews & Moran, 1986), judgment (Glendon, Dorn, Davies, Matthews, & Taylor, 1996; Matthews & Moran, 1986), driving skills (Glendon et al., 1996; Horswill, Waylen, & Tofield, 2004; Matthews & Moran, 1986; McKenna, Stanier, & Lewis, 1991), and safety behaviors (Delhomme, 1991; Horswill et al., 2004).

Drivers' overestimation of their own abilities combined with the lack of understanding of personal limitations is considered a critical safety factor in traffic (Gregersen, 1996). However, while a number of studies showed that it contributes to excessive risk-taking behind the wheel (Svenson, 1981; Williams, 2003), other studies found little evidence for this relation (Horswill et al., 2004). A few other studies sustain that the tendency to overestimate personal driving abilities can determine a driver to engage in aggressive driving behaviors (Stephens & Ohtsuka, 2014). Therefore, further studies are needed in order to understand the relationships between the BTA effect and different types of driving behaviors. Studying the BTA effect is

* Corresponding author.
E-mail addresses: cornelia.mairean@uaic.ro (C. Măirean), hcornel@uaic.ro (C.-E. Havârneanu).

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necessary, having in view its implications for traffic safety. To advance in the literature, the first aim of the present study is to assess the direct relationship between the BTA effect and risky driving, while our second goal is to test the associations between the BTA effect and aggressive driving. Further, the third aim of the present study is to explore whether the relationship between the BTA effect and a risky driving behavior is moderated by aggressive driving.

1.1. The better than average effect and risky driving behavior

The BTA effect may be motivated by self-enhancement needs (Brown, 1986). Specifically, people hold more positive opinions about themselves than about others because the belief they are above average generates positive emotions. The lack of information about the others and having more information about oneself is another explanation for the fact that many people tend to regard themselves as better than others (Fiedler, 2000; Moore & Small, 2007; Svenson, 1981).

The fact that drivers tend to rate themselves as more skillful than other drivers (Dogan, Steg, Delhomme, & Rothengatter, 2012; Horswill et al., 2013; Stephens & Ohtsuka, 2014) has important implications for traffic safety and risk-taking behind the wheel (Horswill et al., 2004). Risky driving includes different types of dangerous driving behaviors, such as speeding, tailgating, driving under the influence of drugs or alcohol, red-light running, drowsy driving, multi-tasking, and disuse of safety belts (Dula, Geller, & Chumney, 2011; Harre & Sibley, 2007; Horswill & McKenna, 1999). Several studies found that drivers that underestimate their driving skills and degree of control in traffic situations are more likely to adopt risky driving behaviors and to be more optimistic about the risk of being involved in an accident (Fernandes, Job, & Hatfield, 2007; Harre & Sibley, 2007; Morgan & Job, 1995; Sümer, Özkan, & Lajunen, 2006). Moreover, there is some evidence for the fact that the participants with an overconfidence in their personal driving abilities and that hold the belief that they are safer than average, also tend to consider that traffic safety campaigns do not apply to them (Ulleberg, 2002; Walton & McKeown, 2001). This is paradoxical given the fact that drivers with high skills may be at greater risk because of the tendency to take risks in traffic. However, another study found no significant link between the self-evaluations bias, concerning driving skills, hazard-perception skills, vehicle-control skills, and the engagement in risky driving behavior (Horswill et al., 2004). The authors only found a marginal relationship between the self-assessment score for overall skills and photographic speed, concluding that drivers who consider themselves more skillful compared with the average drivers manifested a slight tendency to prefer going faster. Based on these results, it can be concluded that more research is needed in order to understand how the BTA effect is related to risky driving behavior. In order to add some evidence for the direct implications of the BTA effect in traffic, the first goal of the present study was to assess the relationship between the BTA effect and an overall measure of risky driving behavior.

1.2. The role of aggressive driving behavior

Aggressive driving includes several forms of behavioral manifestations, expressed verbally, physically, or through the use of one's vehicle (Deffenbacher, Lynch, Oetting, & Swaim, 2002), produced with the intention to cause physical and/ or psychological harm to other traffic participants, including pedestrians or other drivers (Dula et al., 2011). Previous studies suggest that the driver's overconfidence, operationalized by the illusion of high control or self-enhancement bias, predicts aggressive driving (Stephens & Ohtsuka, 2014; Sümer et al., 2006). Feelings of control can trigger anger (e.g. Berkowitz, 1990), which is expressed through aggressive behavior (Bogdan, Măirean, & Havârneanu, 2016). Moreover, feelings of anger and its expressions are more probably to appear when the achievement of a goal is blocked by another person (Berkowitz, 1990). Applied to traffic situations, this assumption suggests that participants with self-enhanced perceptions related to skill and control may be more likely to view obstructions as the result of another driver. Consequently, the perception that the others' driving skills are deficient and the illusion of one's superiority can determine a driver to engage in aggressive behaviors (Stephens & Groeger, 2014). However, the evidence concerning the relationship between the BTA effect and aggressive driving is limited. Therefore, the second goal of the present study was to assess the relation between the BTA effect and three expressions of aggressive driving – verbal and physical aggression, the use of the vehicle to express anger, and adaptive aggression.

Many previous studies confirmed the fact that aggressive driving is positively related to risky driving behavior (Beck, Daughters, & Ali, 2013; Dahlen, Edwards, Tubré, Zyphur, & Warren, 2012; Jovanović, Lipovac, Stanojević, & Stanojević, 2011; Richer & Bergeron, 2012; Sullman, Stephens, & Kuzu, 2013). Moreover, the adaptive expression of aggressive driving was negatively related to speed, a form of risky driving (Sullman, 2015; Sullman et al., 2013). Given the fact that aggressive driving can exacerbate risky driving behavior, we can assume that the relationship between BTA and risky driving is moderated by aggressive driving. However, according to our knowledge, it was not examined how BTA and aggressive driving work together in accounting for variations in risky driving behavior. Therefore, the third goal of the present study was to assess the moderating role of aggressive driving in the relation between the BTA effect and risky driving. The entire set of hypotheses is integrated in the model displayed in Fig. 1.