



## Taking a look behind the wheel: An investigation into the personality predictors of aggressive driving

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### ABSTRACT

The present study evaluated a theoretical model of the relationships among six aspects of driver personality (i.e., driving anger and the Big Five personality factors), aggressive driving, and two outcomes of aggressive driving: motor vehicle crashes and moving violations. Data from 308 drivers recruited from two vehicle licensing offices were analyzed using structural equation modeling. As expected, aggressive driving predicted crashes and moving violations. Based on the zero-order correlations, emotional stability, agreeableness, and conscientiousness were related to aggressive driving in the expected directions; however, the picture changed when the joint effects of all variables were examined via structural equation modeling. A model in which driver personality predicted aggressive driving, which in turn predicted crashes and moving violations was supported. Drivers who were high on driving anger and low on agreeableness reported driving more aggressively. Implications for traffic safety professionals and researchers are discussed.

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### 1. Introduction

In the United States, motor vehicle accidents (MVAs) cost roughly \$230.6 billion annually and contribute to the category of unintentional injuries, which is the leading cause of death among persons between the ages of 1 and 44 (Heron, 2011; National Highway Traffic Safety Administration, 2007; Xu et al., 2010). The National Highway Traffic Safety Administration estimates that at least one-third of all MVAs in the United States can be partially attributed to aggressive driving (Martinez, 1997). This fits the general consensus in the research literature that aggressive driving increases the risk of MVAs (Chliaoutakis et al., 2002; Galovski et al., 2006). Given the massive cost of MVAs and the importance of aggressive driving as a contributing factor, efforts to understand and ultimately prevent aggressive driving are of vital importance.

The literature on MVAs and aggressive driving has identified many contributing factors, including environmental conditions (e.g., weather, poor engineering, lack of enforcement), demographic variables (e.g., sex, age), and psychological variables (e.g.,

impulsiveness, selective attention) among drivers (Arthur and Day, 2009; Elander et al., 1993; Ellison et al., 1995; Hennessy and Wiesenthal, 1999). Although individual differences in a number of human factors account for the most variance in MVAs (Evans, 2004; General Accounting Office, 2003), many individual difference variables have not been adequately researched in the context of aggressive driving. Driver personality is one such example, as research on the possible role of many aspects of driver personality has not advanced at the same pace as work on many other variables. Research on the relationships of individual aspects of driver personality (e.g., driving anger or conscientiousness) to aggressive driving has often studied variables in isolation, without examining more sophisticated multivariate models (Dahlen and White, 2006; Elander et al., 1993). Moreover, a majority of studies investigating the role of driver personality in aggressive driving have used college student samples, raising questions about the generalizability of results (e.g., Dahlen and Ragan, 2004; Deffenbacher et al., 2000, 2001, 2002; Knee et al., 2001).

The present study tested a model in which six aspects of driver personality (i.e., driving anger and the Big Five personality factors) served as predictors of two outcomes (i.e., crashes and moving violations) of aggressive driving in a representative sample of drivers (see Fig. 1). Driving anger, referring to the frequency and intensity of anger experienced while driving, is a robust predictor of aggressive driving, which in turn impacts driving performance

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