Contents lists available at ScienceDirect

Transportation Research Part F

Attachment as a predictor of driving performance

Omri Gillath *, Melanie Canterberry, Paul Atchley

University of Kansas, United States

ABSTRACT

The current study focuses on the value of attachment style—a personality trait most commonly associated with close relationships and affect regulation, but also with cognitive performance—as a predictor of both reported real-world driving and driving in a simulator. Participants completed a battery of self-report measures, including driving experience and violations (e.g., traffic violations, crashes), a cognitive task, and four driving scenarios where speeding, collisions, and lane violations were monitored. Attachment style, as well as driving style and performance on the cognitive task, were found to predict driving performance. The findings highlight the complex associations between personality, attention, and driving performance. Specifically, the results support the inclusion of personality variables such as attachment style in the study of driving performance or when planning interventions to improve driving.

© 2016 Elsevier Ltd. All rights reserved.

1. Introduction

Car crashes are one of the most common causes of injuries and death among adolescents and young adults (DeAngelo & Hansen, 2014; Williams, 2013). For many years, researchers have focused on predictors such as inattention to explain poor driving performance and driving-related crashes (Brookhuis, de Vries, & de Waard, 1991; Lemercier et al., 2014). In a relatively recent review of the literature on driving performance, however, Nichols and colleagues (Nichols, Classen, McPeek, & Breiner, 2012) urged researchers to consider other potential predictors—specifically, personality traits—to gain a fuller understanding of driving performance (see also Gadbois & Dugan, 2015; Winfred, Gerald, & Ralph, 1991 for a review). Following this proposition, in the current paper we examined the contribution of attachment style, a well-studied personality trait (for extensive reviews see Cassidy & Shaver, 2016; Gillath, Karantzas, & Fraley, 2016), to the understanding of driving performance.

Numerous studies have already demonstrated the importance of personality dimensions for the understanding of driving performance and outcomes. Traits such as the Big Five personality dimensions (Dahlen & White, 2006; Gadbois & Dugan, 2015), sensation seeking, and impulsivity (e.g., Jonah, 1997; Moan, Norström, & Storvoll, 2012) were shown to reliably predict outcomes such as accidents, risky driving, and driving citations (being reliable does not mean that personality traits are always strong predictors). Despite the many studies on personality and driving, and the known importance of relationships to the understanding of human behavior (e.g., Berscheid, 2004; Gillath, Adams, & Kunkel, 2012), relatively little work has been done on the role relational variables play in driving performance and outcomes.

Attachment theory incorporates evolutionary, developmental, and cognitive (e.g., attention and regulation) processes into one cohesive explanatory model of close relationships. According to the theory, people exhibit individual differences in their

---

* Corresponding author at: Department of Psychology, University of Kansas, Lawrence, KS 66045-7556, United States. Fax: +1 785 864 5696.
E-mail address: ogillath@ku.edu (O. Gillath).

relational approaches (thoughts, emotions, expectations), termed *attachment styles* (e.g., Ainsworth, Blehar, Waters, & Wall, 1978), which shape people's perceptions of themselves, others, and relationships in general (Simpson & Rholes, 2015). Attachment style is conceptualized as two dimensions of interpersonal insecurity—anxiety and avoidance. People high on attachment anxiety are preoccupied with thoughts about rejection and abandonment, and when under threat or stress, tend to be overwhelmed by emotions (e.g., Gillath, Bunge, Shaver, Wendelken, & Mikulincer, 2005). Conversely, people high on attachment avoidance, tend to avoid closeness and intimacy to-, and dependence on- close others, are compulsively self-reliant, and tend to downplay emotions and their importance (e.g., Collins & Feeney, 2004). Attachment anxiety and avoidance were found in numerous studies to successfully predict a variety of outcomes, including relationship-related and affect-regulation-related variables (Cassidy & Shaver, 2016; Gillath et al., 2016).

Recent findings, however, show that beyond its relevance to close relationships, attachment style is also a reliable predictor of cognitive processes and specifically attention (e.g., Fraley, Garner, & Shaver, 2000; Gillath, Giesbrecht, & Shaver, 2009). As driving involves attention, this raises the possibility that attachment style could also be a useful predictor of driving-related performance.

1.1. Attachment, attention, and driving-related outcomes

A few lines of research support the idea that attachment style can be a useful predictor of driving performance. First, in a series of studies, Gillath and colleagues (Edelstein & Gillath, 2008; Gillath et al., 2009) have found that attachment avoidance is associated with better performance on attention-related tasks. Avoidant individuals perform better because they can suppress task-irrelevant distracters or ignore interference and focus on the task at hand as compared with their non-avoidant counterparts. Conversely, attachment anxiety associates with hyper-sensitivity, and a lower ability to disengage from distracters. Although attachment anxiety does not predict performance on general cognitive tasks, anxiously attached people do tend to show cognitive biases in tasks involving stress, threats, or relational material (e.g., Mikulincer, Gillath, & Shaver, 2002). In such tasks, anxiously attached people are thought to become preoccupied with negative emotions and thoughts about rejection and abandonment, and experience emotional flooding or be overwhelmed by negative thoughts and emotions. Together these findings support the associations between attachment, cognition, and attention.

1.2. Attachment and reckless behavior

Further indirect support for the idea that attachment style is important for the understanding of driving-related outcomes originates from research showing that attachment insecurity is associated with reckless or dangerous behavior. For example, the constant concerns regarding the availability and acceptance of close others make anxiously attached individuals more likely to engage in reckless sexual behavior (e.g., engaging in unprotected sex; Davis, Shaver, & Vernon, 2004). Likewise, avoidantly attached individuals are more likely to cheat (both academically and relationally; Gillath, Sesko, Shaver, & Chun, 2010), and try to poach partnered people without considering the consequences (Schachner & Shaver, 2002). In general, insecurity seems to be a precursor of engagement in reckless behavior (Bell, Forthun, & Sun, 2000; Elgar, Knight, Worrall, & Sherman, 2003). Similar findings were obtained and are reviewed below with regard to attachment and driving.

1.3. Attachment and driving

Taubman-Ben-Ari and colleagues (e.g., Taubman-Ben-Ari & Mikulincer, 2007; Taubman-Ben-Ari, Mikulincer, & Gillath, 2004, 2005) have provided initial evidence to show that attachment style, and specifically attachment anxiety, is positively related to reckless driving. Reckless or dangerous driving is defined as a mental state in which the driver displays a disregard for the rules of the road. Taubman-Ben-Ari and Mikulincer (2007) have found that anxiously attached people were more likely to report engaging in reckless driving behaviors.

Although in line with our general proposition that attachment style is predictive of driving performance, Taubman-Ben-Ari and Mikulincer (2007) had little to say about the role attachment style might play in actual driving behavior. Further, their work focused mainly on risky driving rather than on driving performance in general. Thus, the scope of their study was relatively narrow, as it focused mainly on reported reckless driving and not actual reckless driving or general driving performance. The current research extends this earlier work by examining the associations between attachment style, attention, and driving performance.

1.4. Current study

In the study described below, we integrated different methods to improve the understanding of the associations between personality, attention, and driving performance. In addition to examining the associations between attachment style and driving, we used a cognitive task to directly examine people's attention and its associations with driving performance, and investigated whether attachment style predicts driving performance above and beyond attentional biases. Furthermore, based on previous work (Taubman-Ben-Ari et al., 2004, 2005) we examined the associations between people's self-reported *driving style* and driving performance, and again examined whether attachment style predicted driving performance when these associations are controlled for.