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The effect of affect induction and personal variables on young drivers' willingness to drive recklessly [★]



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ABSTRACT

In an effort to increase understanding of risky driving among young drivers, with a special focus on the influence of affect, the study examined the contribution of the factors in the Theory of Planned Behavior (TPB), in addition to affect induction and personal variables (relevance of driving to self-esteem, sensation seeking), to the willingness of young drivers to take risks on the road. The sample consisted of 500 male and female drivers aged 18-22 (M=18.94, SD=0.77) who were randomly divided into four affect conditions: relaxed positive affect; aroused positive affect; negative affect; and neutral affect.

The findings show a significant effect for emotional state and personal variables, beyond the effect of the TPB factors. As predicted, following relaxed positive affect induction, the participants expressed lower willingness for reckless driving than in the other three conditions, while the aroused positive and negative affect inductions were followed by a higher willingness for this behavior. In addition, high relevance of driving to self-esteem and a higher level of sensation seeking were associated with higher willingness to drive recklessly. The results point to the need for a multidimensional model that relates not only to the factors in the TPB model, but also to emotional state and personal variables. Moreover, they demonstrate the potential of employing relaxing positive affect to reduce young driver's propensity for risky driving, as well as the harmful effects that may result from using negative affect. The study thus indicates that taking into account a range of emotional, personal, motivational, and cognitive factors may lead to the design of more effective safety messages.

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1. Introduction

Young people drive more recklessly and are involved in more traffic crashes than any other age group (Vassallo et al., 2008). In fact, car crashes are the major cause of injury, disability, and death among youngsters (Elliott & Armitage, 2009). As men engage in reckless driving more than women, young males are at the greatest risk (Rhodes & Pivik, 2011).

In recent years, a great deal of effort has been invested in investigating dangerous driving and car crashes among young drivers. Several factors have been found to account for their driving style, including: driving patterns characterized by over-exposure to dangerous situations; personality traits such as sensation seeking (Ulleberg & Rundmo, 2003), impulsivity

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(Byrnes, 2005), egocentricity (Greene, KrcMa, Walters, Rubin, & Rubin, 2000), external locus of control (Mercer & Jeffery, 1995), and aggressiveness (Turner & McClure, 2004); emotional state, with negative affect leading to increased risk-taking (Mittal & Ross, 1998); motivation, whereby reckless driving provides youngsters with secondary benefits and meets certain needs (Boyer, 2006); situational variables such as time pressure and congestion (Shinar & Compton, 2004); and social environment. Friends figure strongly in shaping the behavior of the young individual through the setting of driving norms, imitation, and peer pressure. Indeed, the presence of teenagers in the car has been found to increase the likelihood of a traffic crash (Simons-Morton, Lerner, & Singer, 2005). The current study examined several of the factors that may contribute to the willingness of young drivers to take risks on the road through the lens of the Theory of Planned Behavior (Ajzen, 1985), which attempts to explain behavior of various kinds, and for many years has also been applied to the realm of driving.

1.1. Theory of Planned Behavior

For several decades, the Theory of Planned Behavior (TPB; Ajzen, 1985) has been at the forefront of research seeking to predict and understand social behavior, and has provided a model for the design of interventions aimed at modifying behavior (Rutter & Quine, 2002). The basic assumption of the theory is that actual behavior is determined by behavioral intentions, that is, the degree to which the individual wishes to perform a given behavior and how much they are willing to invest in doing so (Ajzen, 2002). Behavioral intentions are the product of three factors: attitudes, that is, the positive or negative evaluation of self-performance of the behavior; subjective norms, or the perceived social pressure to perform the behavior; and perceived behavioral control, i.e., perception of the ease or difficulty of performing the behavior (Elliott, Armitage, & Baughan, 2005). The more positive the attitudes and subjective norms and the higher the sense of behavioral control, the more likely the individual is to engage in the behavior (Ajzen, 2002). Each of the three factors underlying behavioral intentions derives from relevant beliefs. Thus, attitudes stem from behavioral beliefs, that is, beliefs regarding the probability that the behavior will produce a given outcome and assessment of that outcome as positive or negative. Subjective norms derive from normative beliefs, or beliefs relating to social pressures and the expectations of relevant others regarding the individual's performance of the behavior. Behavioral control arises from control beliefs, that is, belief in the presence of factors that may facilitate or impede performance of the behavior (Elliott et al., 2005). The model proposed by the Theory of Planned Behavior has been examined in respect to a variety of domains, including driving behaviors such as speeding (e.g., Elliott & Armitage, 2009) and dangerous overtaking (Forward, 2009). Studies report that the model is capable of explaining a large proportion of the variance in a given behavior, and may be of considerable value in designing interventions aimed at modifying it (Stead, Tagg, MacKintosh, & Eadie, 2005). The current study looked at this model in the context of young drivers' propensity for risky driving.

1.1.1. Behavioral beliefs

An individual's attitude toward a given behavior derives from the perception of its consequences. Cognitive assessment of the potential harm and/or benefit that will ensue from performing the behavior consists of two elements: primary appraisal, which answers the question of whether the behavior is relevant to the individual, and if so, whether it will have a positive or negative effect on their emotional well-being, self-esteem, or social image; and secondary appraisal, or assessment of the personal resources available to cope with the consequences of the behavior (Folkman & Lazarus, 1985). Applying this model to risky driving among teens, Taubman – Ben-Ari, Mikulincer, and Iram (2004) were able to show how each of the elements was reflected in the decision to drive recklessly.

In respect to primary appraisal, assessment of risky driving as a threat means that the driver perceives it to have the potential to cause harm. Not surprisingly, it was found that a lower perception of the negative consequences was associated among young drivers with a higher frequency of reckless driving, while those who perceived risky driving more as a threat reported engaging in it less frequently (Taubman – Ben-Ari et al., 2004).

On the other hand, assessment of risky driving as a challenge means that the driver perceives performance of this behavior to have positive consequences, such as affording a sense of control, thrill, and sensation (Evans, 1991). Indeed, young drivers who viewed risky driving as challenging reported a higher frequency of reckless behavior on the road (Taubman – Ben-Ari et al., 2004).

1.1.2. Normative beliefs

The perceived social pressure to perform a given behavior derives from the individual's beliefs regarding the expectations of significant others and the accepted norms of the people around them. In the case of driving, this means that the individual responds to the group culture and is influenced by group processes and norms concerning issues such as responsibility, friendship, the value of life, and the attitude toward risk-taking (Taubman – Ben-Ari & Katz-Ben-Ami, 2013), as well as to media messages that encourage risky driving (Beullens, Roe, & Van den Bulck, 2011; Rhodes, Brown, & Edison, 2005). Thus, the driving culture of the young driver's environment influences the manner in which they choose to drive (Hakkert, Gitelman, Cohen, Doveh, & Umansky, 2001).

1.1.3. Control beliefs

Assessment of the ease or difficulty of performing a behavior is parallel to the perception of self-efficacy, defined as the degree to which the individual believes in their ability to perform a specific behavior or series of behaviors that leads to a

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