



Aggressive thinking on the road. The mediation effect of aggressive thinking in the relationship between driving anger and aggression in Romanian drivers

Smaranda Raluca Bogdan-Ganea^{a,*}, David Herrero-Fernández^b

^a University “Alexandru Ioan Cuza”, Faculty of Psychology, Toma Cozma Street, No 3, Iasi 700554, Romania

^b Faculty of Health Sciences, Universidad Europea del Atlántico, C/Isabel Torres, 21, 39011 Santander, Spain



ARTICLE INFO

Article history:

Received 24 October 2016

Received in revised form 17 March 2017

Accepted 26 February 2018

Keywords:

Driving anger

Angry thoughts

Aggressive driving

ABSTRACT

Anger and aggression on the road have been pointed out as two of the main predictors of road accidents. However, while the emotional (anger) and behavioral (aggression) components of hostility have been deeply studied, the cognitive part has not received the same attention in this specific context. Thus, it is important to provide psychometric tools for assessing aggressive thoughts during driving, as the literature showed that cognitions play an important role in aggressive behavior. To this end, we asked Romanian drivers to answer three questionnaires: Driving Anger Thought Questionnaire (DATQ), the Driving Anger Scale (DAS) and the Driving Anger Expression Inventory (DAX), obtaining a total sample of 2133 answers. First, the psychometric properties of the DATQ were tested through a Confirmatory Factor Analysis, showing that the original 5-factor structure was maintained (Judgmental/Disbelieving Thinking, $\alpha = .93$ both in men and women; Pejorative Labeling/Verbally Aggressive Thinking, $\alpha = .90$ both in men and women; Physically Aggressive Thinking, $\alpha = .89$ in men and $\alpha = .86$ in women; Revenge/Retaliatory Thinking, $\alpha = .84$ in men and $\alpha = .81$ in women, and Adaptive/Constructive Expression, $\alpha = .84$ in men and $\alpha = .82$ in women). Then, we analyzed the mediation effect of angry thoughts between anger and aggression on the road, concluding that angry thoughts mediate this relationship. The main implications of the results are discussed.

© 2018 Elsevier Ltd. All rights reserved.

1. Introduction

Road accidents are one of the main death causes in the world. Specifically, in Romania, in 2013, there were 8555 road accidents resulting in 1861 deaths and 11,454 injured persons (Inspectoratul General al Poliției Române – Direcția Rutiera, 2014). Therefore, in order to prevent accident, we must first study the causes.

Human factors have been identified as the most important asset in the prediction of road accidents (Evans, 1991). More concretely, anger and aggression have been proposed as two of the most relevant variables within the human factor (Dahlen & Ragan, 2004; Deffenbacher, Deffenbacher, Lynch, & Richards, 2003). Anger and aggression have shown strong relationships with aggressive and risky behaviors, such as fast driving (Bone & Mowen, 2006; Deffenbacher, 2003; Pinto, 2001), speeding (Deffenbacher, Lynch, Oetting, & Yingling, 2001; Matthews et al., 1998), violations of traffic laws (Maxwell, Grant, & Lipkin, 2005), or reckless driving (Deffenbacher, Lynch, Oetting, et al., 2001; Deffenbacher, Lynch, Deffenbacher, et al., 2001).

* Corresponding author.

E-mail addresses: bogdan_smaranda@yahoo.com (S.R. Bogdan-Ganea), d_herrero@psicologos.com (D. Herrero-Fernández).

Anger is one of the most studied causes of crash involvement (Stephens & Groeger, 2011; Sullman & Stephens, 2013; Sullman, Stephens, & Kuzu, 2013). When speaking about anger, Berkowitz and Harmon-Jones (2004) consider that anger represents a relatively stable mixture among emotions, cognitions and physiological reactions, which are associated with the intention to punish the individuals triggering this state. Researchers have made a difference between trait anger, which is the general tendency to become angry without taking into consideration the situations (which, as any trait, is stable in time), and state anger, which refers to the predisposition of an individual to become angry in a given context (Deffenbacher, Oetting, Lynch, & Morris, 1996). Spielberger (1999) defined trait-anger as a predisposition to perceive a certain context as annoying or frustrating. Individuals with high levels of anger tend to interpret the majority of daily contexts as frustrating and provocative. There are many studies that have underlined the fact that the persons who are high on trait anger, besides the day to day situations, will also behave aggressively in traffic (Haje & Symbaluk, 2014; Kováčová, Rošková, & Lajunen, 2014; Sullman, 2015), and are also more prone to drive faster, more dangerously and to express their anger in dysfunctional ways (Deffenbacher, Deffenbacher, et al., 2003). Finally, six types of situations have been identified as anger triggers on the road: Hostile Gestures, Illegal Driving, Police Presence, Slow Driving, Discourtesy and Traffic Obstructions (Deffenbacher, Oetting, & Lynch, 1994).

However, studying trait anger is not enough, due to the fact that two individuals driving under the same anger level can behave differently (Deffenbacher, Lynch, Oetting, & Swaim, 2002). Therefore, it is also necessary to study aggression, which can be defined as any type of behavior intended to hurt another person at a physical or psychological level (Baron & Richardson, 1994). Similarly, aggressive driving behavior can be conceptualized as any type of driving behavior intended to injure another driver or road user at a physical or psychological level (Deffenbacher, Lynch, Deffenbacher, & Oetting, 2001; Deffenbacher et al., 2002; Dula & Geller, 2003). Reviewing the literature, Tasca (2000) concluded that aggressive driving is a deliberate behavior, likely to increase the risk of crashes and injuries, motivated by hostility, impatience, annoyance, or an attempt to save time. Previous studies have shown that aggressive driving is one of the risk factors in car crashes and their related conditions (Stephens & Sullman, 2014; Sullman, 2015), and that being the target of aggressive behavior can incite the drivers to behave aggressively, which can increase the risk of accidents (Clapp et al., 2011; Herrero-Fernández, 2016).

Traffic related aggressions vary from less aggressive forms of expression (honking, running stop signs, running red lights, flashing, etc.) to extreme forms of expression such as car ramming, speeding, physical attacks or unsafe lane changing (Özkan, Lajunen, Parker, Sümer, & Summala, 2010). More concretely, there have been identified four main types of expressing anger behind the wheel: verbal (calling names aloud), physical (physical aggressions like leaving the car and becoming physical with the other driver), using the vehicle to express anger, and adaptive/constructive (referred to those adaptive ways of expressing anger, like thinking things through before responding) (Deffenbacher et al., 2002; Herrero-Fernández, 2011b). This original classification, measured with the Driving Anger Expression Inventory, has been analyzed in samples from different countries. In some cases, including the Romanian version of the questionnaire (Sărbescu, 2012), there have been identified three factors of aggressive behavior instead of the four original ones, because verbal and physical aggressions are considered as being part of the same factor.

Although the relationship between anger and aggressive behavior has been well documented and studied (Li, Yao, Jiang, & Li, 2014; Nesbit, Conger, & Conger, 2007; Stephens & Ohtsuka, 2014; Sullman, 2015; Sullman & Stephens, 2013), the results are not consistent: some studies revealed that the relationship between anger and aggressive driving is weak (Sullman et al., 2013), some suggest that this relationship is moderate (Bogdan, Măirean, & Havârneanu, 2016; Herrero-Fernández, 2013; Suhr & Nesbit, 2013), and others suggest that this relationship is very strong (Edwards, Warren, Tubré, Zypur, & Hoffner-Prillaman, 2013; Nesbit, Blankenship, & Murray, 2012). These differences could be explained by cultural aspects along with the influence of other variables that mediate the relationship between driving anger and aggression. In other words, one of the questions that arise when observing the high differences in aggressive expression, between two drivers experiencing the same amount of anger, refers to which are the variables that explain this difference (the mediation effect). One of the most important variables could be the cognitive processing of anger or angry thoughts (Blankenship, Nesbit, & Murray, 2013; Deffenbacher, Petrilli, Lynch, Oetting, & Swaim, 2003; Deffenbacher et al., 2002; Suhr, 2016), because according to the general aggression model, both affective and cognitive appraisal of the stimulus or situation would be essential in order to predict the driver's behavior (Anderson & Bushman, 2002). This type of cognitive processing can lead to an elevated level of arousal, triggering hostile gestures, verbal aggressiveness, and use of the car to express anger and get revenge. These cognitive processes can lead to two types of situations: (1) anger and acting accordingly to one's feelings, which results in aggressive driving behaviors or (2) coping strategies in order to relax and focus on driving safely (Deffenbacher, Lynch, Deffenbacher, & Oetting, 2001; Deffenbacher et al., 2002). In conclusion, to this day most of the researchers have explored the direct relationship between driving anger and driving aggression, without considering different potential mediators. In addition to that, the premises of the general aggression model should be empirically analyzed in the specific field of driving.

The concept of angry thoughts was introduced in transportation psychology by Deffenbacher, Deffenbacher, et al. (2003), Deffenbacher, Filetti, Richards, Lynch, and Oetting (2003), and Deffenbacher, Petrilli, et al. (2003), who developed a questionnaire to measure it: the Driving Anger Thoughts Questionnaire (DATQ). This questionnaire is composed of five dimensions, as follows: Judgmental/Disbelieving Thinking (it refers to questioning other drivers and their driving, how other drivers should not be allowed to drive, rhetorical questions about others' driving skills), Pejorative Labeling/Verbally Aggressive Thinking (it refers to harsh and negative statements about other drivers, calling names and even thinking about how angry the driver is

Download English Version:

<https://daneshyari.com/en/article/7257851>

Download Persian Version:

<https://daneshyari.com/article/7257851>

[Daneshyari.com](https://daneshyari.com)