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Hurried driving: Relationship to distress tolerance, driver anger, aggressive and risky driving in college students

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ARTICLE INFO

Article history: Received 7 August 2012 Received in revised form 14 September 2012 Accepted 18 October 2012

Keywords: Hurried drivers Distress tolerance

ABSTRACT

Being a hurried driver is associated with a variety of risky driving behaviors, yet the mechanisms underlying this behavior remain unknown. Distress tolerance, defined as an individual's capability to experience and endure negative emotional states, was examined as a predictor of hurried driving among 769 college students. Results indicate that after controlling for age, gender, race, ethnicity, the student's year in school, their grade point average, driving frequency, angry driving, aggressive driving as well as other forms of self-reported risky driving; hurried driving was significantly associated with lower levels of distress tolerance. Hurried drivers also reported greater levels of frustration and impatience with other drivers, suggesting that they have difficulty in withstanding or coping with negative psychological states when driving. Traditional traffic safety campaigns that emphasize enforcement may be less successful with these drivers. The need to develop campaigns that address the affective coping abilities that contribute to this behavioral pattern is discussed.

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1. Introduction

Motor vehicle collisions are a leading cause of death and disability for people under the age of 25. According to the National Highway Transportation Administration (NHTSA), over 7000 people between the ages of 16-24 were killed and almost 560,000 were injured in a motor vehicle collision in 2009 (NHTSA, 2009). Understanding the factors that impel young drivers to engage in risky driving is critical to developing effective countermeasures that can reduce this problem. Recently, research has been conducted to identify certain types of driver dispositions that are associated with risky driving. Driver dispositions refer to a person's natural tendencies or inclinations to engage in certain driving practices, especially in relation to others and are seen as more enduring trait-like characteristics rather than event-specific state-like characteristics (Beck et al., 2012). As such, a person may experience a variety of dispositions (e.g., impatience, frustration) when driving. One disposition, being a hurried driver (e.g., "I get in a hurry when I drive), has been found to be related to a variety of risky driving behaviors, such as driving over the speed limit, driving in a self-reported aggressive manner, driving after drinking and being ticketed for a moving violation (Beck et al., 2012). In a population-based survey of licensed drivers, self-defined hurried drivers were significantly more likely to report engaging in these behaviors than non-hurried drivers. This research also showed that hurried drivers report more frustration and impatience with other drivers, along with a tendency to admit to engaging in aggressive driving (Beck et al., 2012).

Despite evidence that hurried driving is associated with risky driving behavior; little is known about the individual characteristics that predict hurried driving. This knowledge is critical in order to develop effective safe driving prevention and intervention programs. One psychological trait that has potential for distinguishing hurried from non-hurried drivers is distress tolerance, defined as an individual's capability to experience and endure negative emotional states (Simons and Gaher, 2005, p. 83). Individuals with lower levels of distress tolerance are more likely to respond maladaptively to certain situations that elicit stress (Leyro et al., 2010) and frustration (Zvolensky et al., 2010). Extant empirical studies show that individuals with low distress tolerance engage in risky behaviors, including higher frequency of alcohol use (Buckner et al., 2007; Gorka et al., 2012; O'Cleirigh et al., 2007), nicotine dependence (Leyro et al., 2011), show stronger substance use motives and substance use coping (Howell et al., 2010; O'Cleirigh et al., 2007; Simons and Gaher, 2005; Zvolensky et al., 2009), and are more likely to binge eating and purging (Anestis et al., 2007).

Given that the inability to withstand negative emotional states is related to an individual's involvement in risky behaviors, it is likely that exhibition of hurried driving is related to low tolerance of distress. In other words, hurried drivers who experience more impatience and frustration with other drivers and engage in high risk and aggressive behaviors may also lack the ability to cope with aversive conditions, such as driving in congested traffic or when they encounter slower drivers. It has been suggested that drivers with higher levels of distress tolerance can deal with

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these traffic annoyances and can appraise their own capacity to absorb such events with less disruption or display of inappropriate emotional (impatience, frustration) and behavioral (speeding, aggressive driving) reactions (Beck et al., 2012). Thus, the purpose of this investigation was to examine the relationship between hurried driving and distress tolerance. It was hypothesized that self-defined hurried drivers would be significantly more distress intolerant than non-hurried drivers.

2. Method

2.1. Participants

Undergraduates at a large east coast university in the Washington DC metropolitan area were invited to participate in an anonymous web-based survey that contained a number of scales measuring past and current driving behaviors, driving dispositions, psycho-social traits such as distress tolerance and mood states, as well as questions measuring substance use. For purposes of this investigation, substance use was not examined. Students who participated received either a research experience credit as required by their department, or extra credit in their coursework. All participants provided electronic informed consent, and all aspects of the study were approved by the University Institutional Review Board. Due to concerns about the validity and thoughtfulness of their responses, students who took less than $10 \min (n = 63)$ or more than 273.77 min (n=5) time to complete the survey were eliminated, as were those who said they never drive a car (n = 16). The time criteria for elimination were determined by examining the distribution of completion times for the entire sample (M = 24.87 min, $SD = 76.5 \, \text{min}$) and noting extreme outliers. Those under 10 min fell in the bottom decile of completion times. Those that took more than 273.77 min were clearly in a group by themselves in the upper extreme and it was felt that their length time provided too much opportunity for change in their dispositions and psychological traits being measured. Comparisons between those who were retained versus eliminated showed no significant differences for any of the demographic factors, except that Asian students were more likely to be eliminated (28.3%) than retained (15.3%), $X^2 = 6.52$, p < .05.

The final sample contained 769 respondents, of which there were 550 females (71.5%) and 212 males (28.5%). The ages ranged from 18 to 23 and older with most being 18–22 (95.7%). The sample was predominately White (61.9%) with the rest being African American (15.7%), Asian (1.2%), or "Other" (8.2%). Slightly over 8 percent identified themselves of Spanish/Hispanic ethnicity. The distribution across year in school was equal (freshman – 21.8%, sophomore – 26.5%, junior – 26.7% and senior – 25.0%). The mean grade point average (GPA) was 3.2 (SD = 0.61). Finally, the distribution across frequency of motor vehicle usage was relatively equal; 30.7% said they drive every day, 29.9% said several days a week, 16.3% said once a week or less and 23.1% said they drive and only certain times a year (Table 1).

2.2. Measures

2.2.1. Demographic information

Information was obtained about the participant's gender, age, race (White, African American, Asian, Native American, other), Spanish/Hispanic ethnicity, self-reported grade point average (GPA), year in school (i.e., freshman, sophomore, junior, or senior) and how often do they usually drive a car or other motor vehicle (every day, several days a week, once a week or less, only certain times a year and never). Those who said *never* drive were eliminated.

Table 1 Participant demographic information.

	Males (n = 219)	Females (<i>n</i> = 550)	Full sample (<i>n</i> = 769)
Age (%)			
18	25.6	20.7	22.1
19	21.9	24.2	23.5
20	23.7	26.9	26.0
21	15.5	19.3	18.2
22	6.4	5.6	5.9
23+	6.9	3.3	4.4
Race (%)			
White	59.4	62.9	61.9
African American	12.3	17.1	15.7
Asian	21.0	11.5	14.2
Native American	0.0	0.4	0.3
Other	7.3	8.2	7.9
Spanish/Hispanic Ethnicity (yes)	7.8	9.3	8.8
How often do you usually drive (%))		
Every day	33.8	29.5	30.7
Several days a week	28.3	30.5	29.9
Once a week or less	15.1	16.7	16.3
Only certain times a year	22.8	23.3	23.1
Mean GPA (SD)	3.10 (0.61)	3.24 (0.61)	3.20 (0.61)

2.2.2. Driver dispositions

Three negative (frustrated, impatient and hurried) and three positive (courteous, calm and careful) questions were utilized to assess driver dispositions. The stem to each item was worded "I get in a hurry (impatient, frustrated by other people's driving) when I drive." Each question was followed by an 11-point scale ranging from $strongly\ disagree\ (1)$ to $strongly\ agree\ (11)$. Scores ranged from 1 to 11 (M = 6.25, SD = 2.52). This was similar to how these driving dispositions were measured in previous investigations (Beck et al., 2006, 2012).

2.2.3. Driver anger

This was assessed by the short version of the driver anger scale (Deffenbacher et al., 1994). Sample items on this 14-item scale asked about the amount of anger that would be provoked if: "someone is weaving in and out of traffic," "someone backs in right out in front of you without looking," "someone runs a red light or stop sign," etc. Each item had a 5-point response option ranging from none at all (1) to very much (5). Scale scores ranged from 14 to 70 (M=44.73, SD=9.39) and were determined by taking the sum of each item. Higher scores indicated greater driver anger. This scale demonstrated acceptable reliability (α = .854).

2.2.4. Risky driving

A series of risky driving behavior questions were asked. Respondents indicated how often in the past month they had driven: while using a cell phone, while drowsy, 10+ MPH over the speed limit, 20+ MPH over the speed limit, after a few drinks, and when they know they have had too much to drink. The 5-point response options were never(1), $one\ time\ (2)$, $once\ a\ week\ (3)$, $2-3\ times\ a\ week\ (4)$ and $daily\ (5)$. Scales scores were determined by summing each of these items, and ranged from 6 to 30 (M = 12.96, SD = 4.09), with higher scores indicating greater risky driving. A principle components factor analysis confirmed that these items loaded on a separate factor and demonstrated acceptable reliability (α = .775). There were no gender differences.

2.2.5. Aggressive driving

This series of additional driving behavior questions also contained items that were designed to measure aggressive driving. These were derived from the literature and from the various highway traffic safety organizations (AAA Foundation, 2010; Maryland Motor Vehicle Administration, 2010). Specifically, the items asked

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