The Relationship between Sensation Seeking and Risky Driving Behavior in Mashhad

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Extended Abstract

1. Introduction

A driver's personality traits have a significant influence on his driving behavior. In Tillman and Hobbes (1994, cited in Jonah, 1997) words, people drive as the same way they live. Sensation seeking is a personality trait whose role in risky driving behavior has been of interest. Zuckerman (1994, cited in Jonah, 1997) defines sensation seeking as varied, novel, complex, and intense sensations and experiences and the willingness to take risks for the sake of such experiences. The high rate of driving violations in Mashhad requires a nuanced study of the factors leading to risky driving behavior in this city. The present study, through emphasizing and accentuating sensation seeking, aims to analyze risky driving behavior in Mashhad and reveal their interdependence.

2. Theoretical Framework

Elander, West, and French (1993, cited in Özkan & Lajunen, 2005) consider driving as a behavior which is chosen by drivers as a pattern for their driving, such as the speed, degree of focus, and keeping a safe distance between cars. Such behaviors include two types of positive and negative behaviors. In driving, negative behaviors are referred to as aggressive or negative driving. Sensation seeking, or individual’s willingness for novel experiences and sensations, is a major personality trait influencing dangerous driving behavior.

The main hypothesis of the research, based on Zuckerman's (1994) definition of sensation seeking, which consists of the two aspects of thrill-seeking and variety-seeking, and also the definition of risky driving behavior provided by Reason, Manstead, Stradling, Baxter, and Campbell (1990), which consists of error and driving violation, is as follows: While a driver’s sensation seeking is in itself a

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function of both thrill-seeking and variety-seeking in driving and risky driving behavior is a function of errors and driving violation, the two functions are interdependent and changes in one necessitates changes in the other.

3. Method
The data used for this study is based on a survey conducted in 2010 in Mashhad on 160 drivers who were at least 18 years old, and were chosen using multistage sampling prior to the interview. The scale used for measuring risky driving behavior is based on the Manchester Driver Behavior Questionnaire, which includes the three factors of lapse, errors and violations. To measure sensation seeking in the present study, the Arnett Inventory of Sensation Seeking was used. This scale includes two factors of thrill-seeking and variety-seeking.

To test the main hypothesis of the research (i.e., the relationship between sensation seeking and risky driving behavior), canonical correlation analysis was used. This technique is used to measure the association among two sets of variables (i.e., functions). In the present study, sensation seeking is a function of excitement-seeking ($X_1$) and variety-seeking ($X_2$) and risky driving behavior is a function of straying and loss of orientation ($Y_1$), error ($Y_2$), and violation ($Y_3$), and the objective is to reveal the association between the two functions. Canonical correlation analysis makes identification of linear combinations of these sets of variables that have the highest possible correlation.

4. Findings
The results of the canonical correlation analysis revealed a covariation of roughly 0.53 between the canonical variables of sensation seeking and risky driving behavior. The square root of this coefficient (0.28) denotes a covariation between these two sets of variables (linear combination). Accordingly, canonical variable of sensation seeking predicts 28 percent of the variation in the canonical variable of risky driving behavior.

As for the weight of the canonical variables, which reveals the share of each main variable in the canonical correlation, the findings showed that among the functions of risky driving behavior, the biggest weight (-0.71) belongs to the error variable and in the function of sensation seeking, the biggest weight belongs to the intensity of driving excitement (-0.63).

In this analysis, canonical weights reveal the share of each main variable in formation of their respective canonical variable. Therefore, the findings of the research revealed that in forming the canonical variable of risky driving behavior, the biggest weight belongs to violations (-0.89) and in the forming canonical variable of sensation seeking, the biggest weight belongs to the drivers’ excitement-seeking (-0.92).
5. Discussion and Conclusion

Personality is a combination of feelings, thoughts, and specific behavioral patterns which determine the way people perceive events and incidents and reply to them. While driving, a driver's personality affects his driving approach and behavior. Sensation seeking is among the personality traits influencing risky driving behavior. The three aspects of risky driving behavior that are lapse, errors, and violations are influenced by sensation seeking, which itself is comprised of excitement-seeking and novelty-seeking.

An analysis of the relationship among sensation seeking and risky driving behavior in Mashhad revealed that firstly, subjects’ overall sensation seeking is in the middle range (49.6) and their risky driving behavior is in the lower range (21.9). Secondly, a high ($\rho = 0.53$) and statistically significant correlation exists between the two sets of variables pertaining to sensation seeking and risky driving behavior. In the formation of this correlation, the variable of intensity of excitement in sensation seeking and that of driving error in risky behavior have the major shares. Thirdly, in the main (canonical) variable of sensation seeking, intensity of excitement has a higher share than variety-seeking and in the main variable of risky driving behavior, the biggest share belongs to variable of violation, followed by error, and lapse, respectively.

Keywords: Sensation seeking, Risky driving behavior, Error, Lapse, Violation, Intensity of excitement, Variety-seeking

References (in Persian)

**References (in English)**


