

Dangerous Driving: A Dangerous Behaviour **H.K. Chhabra* and Neetu Dalal****

Abstract

Driving, or navigational behaviour, is the most complex and risky of all the systems that individuals engage with on a regular basis around the world. Sensation-seeking is understood as “the looking for diverse, new, complex, and extreme level of sensations and the motivation to take physical, social, authorized, and economic risks” (Zuckerman,2008). Locus of control is the “perception that events are determined by one's own behaviour (internal control) or by such outside forces as other people or fate (external control)” (Covington, 2007). The above variables seem to determine dangerous driving behaviour. Dangerous driving behaviour has been measured using the Dula Dangerous Driving Index (Dula, 1999), sensation-seeking has been measured using the Sensation-seeking Scale (Zuckerman-Kuhlman, 1993) and locus of control has been measured using the Locus of Control Scale (Rotter, 1966). The sample comprised 78 (48 males and 30 females) subjects with a mean age of 26.05 years. Care was taken that all the subjects of the sample possessed a driving license for at least two years. t-test and Pearson's product-moment correlation was used to analyse the data. Dangerous driving behaviour was found to vary with the levels of sensation-seeking and locus of control, respectively. The study has also brought out non-significant differences across gender. The study has important implications for the development of traffic training safety modules.

Keywords: sensation seeking, locus of control, dangerous driving behaviour

Malta (2004) defined dangerous driving behaviour as a deliberate deviation in behaviours from safe driving and tends to include on road violations like overtaking, speeding, tailgating etc. Dangerous driving also encompasses negative emotions and cognitions, aggression and frustration (Willemsen et al., 2008). Research from traffic safety literature points out that this can add to impaired driving performance leading to unsafe roads (Matthews et al., 1998). Driving is the most complex and risky of all the systems that individuals engage with on a regular basis around the world. Driving is a higher-order mental task requiring multiple skills and is affected by the psychological built up of an individual. Sensation-seeking is defined as “the looking for diverse, new, complex, and extreme level of sensations and the motivation to take physical, social, authorized, and economic risks” (Zuckerman,2008).Research has indicated sensation-seeking to be linked with several risky behaviours such as over-speeding and traffic law violations (Zuckerman, 1983). Individuals with high levels of sensation-seeking have been found to enjoy intense and unpredictable experiences which might be dangerous in nature (Bui & Kiatkawsin, 2020).Sensation-seeking has also been reported to be associated with driving behaviour (Lancaster and Ward, 2002). Drivers high on sensation-seeking have also been found to be more prone to make errors while driving and tend to overestimate their abilities to drive (Ayvaşok et al., 2005; Ullerberg et al., 2003). Gender studies reveal males to be higher in sensation-seeking as compared to females (Dhami & Garcia-Retamero, 2012). The concept of locus of control was introduced by Rotter (1996). The locus of control is a construct that indicates how much an individual is accountable for events that occur around him, and it has an impact on

one's ability to modify behaviour accordingly (Rotter, 1966). Locus of control refers to the “perception that events are determined by one's own behaviour (internal control) or by such outside forces as other people or fate (external control)” (Covington, 2007).The Locus of control has two dimensions: internal and external. Individuals perceiving events to be under their control have an internal locus of control. On the other hand, individuals who attribute outcomes of events happening around them to luck, fate etc. have an external locus of control.

Studies suggest individuals having an external locus of control indulge more in dangerous driving behaviour in comparison to individuals having an internal locus of control (Boyce, 1999; Hansen, 1988). According to research, having an external locus of control is linked to a lack of caution and a failure to take preventative measures to avert unfavourable outcomes (Hoyt, 1973; Phares, 1976; Williams, 1972). The prevention and promotion of safety seem to be an interplay of the factors involved in driving behaviour.It becomes vital to explore the behaviour behind dangerous driving.

Objectives

1. To study the relationship between sensation-seeking and dangerous driving behaviour.
2. To study the relationship between locus of control and dangerous driving behaviour.
3. The gender differences between various variables shall be explored with regard to dangerous driving behaviour.

Hypotheses

1. A positive correlation is expected between sensation-seeking and dangerous driving behaviour.
2. The external locus of control individuals are expected to have a more dangerous driving behaviour and vice versa.

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3. Gender shall be explored for differences with regard to variables under study.

Method

Sample: A sample of 78 (48 males and 30 females) subjects in the age range of 20-28 years (Mean age of the sample -26.05 years) was taken.

Inclusion Criteria

It was made sure that all the participants had a driving license.

Exclusion Criteria

1. Psychopathological cases were excluded.
2. Subjects with a history of major accident were excluded.

Tools

A. Dula Dangerous Driving Index (Dula, 1999): It is a 28 item self-report scale measuring dangerous driving behaviour. Each item is rated on a 5-point Likert Scale ranging from “Never” to “Always” according to how often each behaviour (i.e., item) occurs while driving. Higher scores indicated higher levels of dangerous driving behaviour.

B. Sensation-seeking Scale (Zuckerman-Kuhlman, 1993): It is a 19 item self-report scale measuring sensation-seeking dispositions. Each item requires to be marked as either true or false and scored as per the manual. Higher scores indicate higher levels of sensation-seeking and vice-versa.

C. Rotter’s Locus of Control Scale (Rotter, 1966): This is a forced-choice instrument with 29 statement pairs and two phrase options for each item. The subject must choose one statement from each pair in which he or she has a stronger belief. Scoring is done as per the scoring manual and higher scores indicate high externality and vice-versa.

Results and Discussions

The aim of the study was to assess the role of sensation-seeking and locus of control in dangerous driving behaviour. The subjects were administered with sensation-seeking scale, a locus of control scale along with the dangerous driving behaviour questionnaire. The data was analysed using the t-test and Pearson's product-moment correlation. The interpretation was made using Pearson’s product-moment correlation. The results of the study are presented in the tables.

Table 1 Correlation between Sensation-seeking and Dangerous Driving Index (DDI)

Correlation		DDI
Sensation seeking	Pearson Correlation	.55**
	Sig.(2-tailed)	0.01
	N	78

****significant at the 0.01 level**

As may be seen from Table No. 1, a positive significant correlation is found between sensation-

seeking and DDI score ($r = .55^{**}$). In the study at hand, sensation-seeking was positively correlated with dangerous driving index (DDI). Thus, individuals who are high on sensation-seeking will indulge in dangerous driving behaviour more in comparison to those who are low on sensation-seeking drive.

Table 2 Mean, SD and t-value of DDI Score in two levels of Locus of Control

Score of LOC		N	Mean	Std. Deviation	t-value
DDI Score	Internal	44	51.73	13.38	3.84**
	External	34	62.88	11.79	

****significant at 0.01 level**

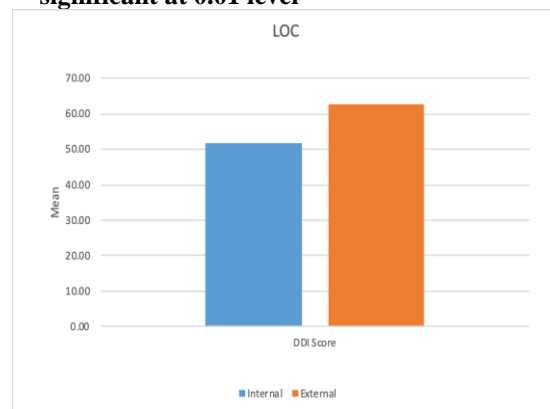


Figure 1 Showing mean trends of DDI Scores in two levels of locus of control

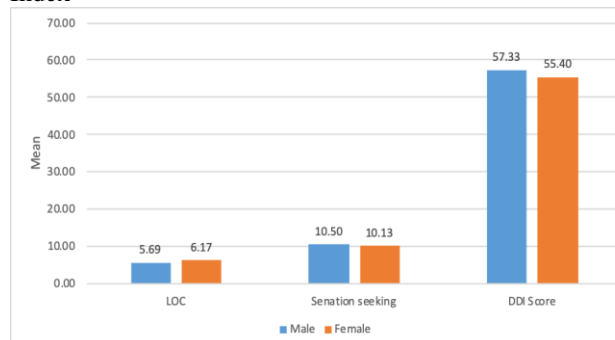
The means, SDs, and t-values of DDI scores of subjects belonging to two categories of LOC i.e. external LOC and internal LOC are shown in Table 2 and Figure 1. The subjects with external Locus of control have a higher mean score in DDI (62.88) than those subjects with internal Locus of control (51.73). At 0.01 levels, the t-value is 3.84, which is significant. This demonstrates that the two groups of locus of control have a significant difference in dangerous driving behaviour. Therefore, an individual with an external locus of control will indulge in dangerous driving behaviour more frequently as compared to those having an internal locus of control.

This is also supported by various studies in the literature (Boyce, 1999; Hansen, 1988) which suggest that individuals having an external locus of control tend to engage more frequently in dangerous behaviours which are harmful.

Table 3 Mean, SD and t-value for LOC, sensation-seeking and DDI scores across Gender

Gender		Mean	Std. Deviation	t-value
LOC	Male	5.69	2.54	.771
	Female	6.17	2.88	
Sensation seeking	Male	10.50	3.72	.420
	Female	10.13	3.80	
DDI Score	Male	57.33	14.17	.599
	Female	55.40	13.35	

LOC- Locus of Control, DDI- Dangerous Driving Index



LOC- Locus of Control, DDI- Dangerous Driving Index

Figure 2 Showing mean trends of LOC, Sensation-seeking and DDI score across Gender

Table No. 3 and Fig No 2 depict the mean, SD and t-value of LOC, sensation-seeking and DDI across two gender groups i.e. males and females. Females have been found to have a higher mean score in LOC (6.17) than that of males (5.69), but the t-value of .77 has come out to be non-significant. Females have been found to have a lower mean score in sensation-seeking (10.13) than that of males (10.5), but the t-value of .42 has come out to be non-significant. Females have been found to have lower mean score in DDI (55.40) than that of males (57.33), but the t-value of .59 has come out to be non-significant.

This shows that though there is a difference in males and females on LOC, sensation-seeking and DDI, males have scored higher means on both sensation-seeking and DDI, these differences are not significant in the study. The study at hand has great implications for traffic-safety training modules. It can be used to study driving behaviour. With a thorough understanding of the underlying causes of unsafe driving, effective countermeasures can be devised and executed.

Implications of the study

1. The results of the data can give direction to traffic training safety modules.
2. Results can be used for further study of driving behaviour.

Limitations of the study

1. A laboratory study could shed better light on the data.
2. Real-time evaluation of driver behaviour would give a clearer picture of dangerous driving.
3. The sample size of the study could have been larger.

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