Vol 5 Issue 11 Dec 2015

ISSN No : 2230-7850

International Multidisciplinary Research Journal

Indian Streams Research Journal

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RNI MAHMUL/2011/38595 **ISSN No.2230-7850**

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ISSN: 2230-7850 Impact Factor : 3.1560(UIF) Volume - 5 | Issue - 11 | Dec - 2015

Indian Streams Research Journal

THE RELATIONSHIP BETWEEN PERSONALITY AND AGE WITH RECKLESS DRIVING

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ABSTRACT

Road accidents are a common daily occurrence in developed as well as developing countries. According to a TOI report (jul.19th 2015) Indian roads were at their deadliest in 2014 claiming more than 16 lives every hour on average. Over 1.41 lakh people died in crashes, 3% more than the number of fatalities in 2013.

KEY WORDS: Road accidents,Relationship,Reckless Driving.

INTRODUCTION :

Latest data released by the National Crime Records Bureau (NCRB) revealed that speeding and dangerous driving were the biggest reasons for road fatalities. Accidents involving two-wheelers and trucks & Lorries accounted for nearly half of the lives lost in road crashes. While 13,787 two-wheeler drivers were killed in crashes, 23,529 other people were killed in accidents involving these vehicles, while close to 1.4 lakh people were left injured in them.

Speeding is the single largest factor responsible for the maximum number of deaths on Indian roads. Over-speeding accounted for about 1.7 lakh crashes and nearly 49,000 deaths and dangerous/careless driving or overtaking claimed other 42,000-plus lives in 1.4 lakh crashes. During 2014, 57,844 deaths – 41% of the total – were due to accidents caused by speeding.

THE TOP FIVE STATES -

Uttar Pradesh, Tamil Nadu, Maharashtra, Karnataka and Rajasthan - accounted for over 40% of the fatalities. The report notes how about one in six road crashes was reported at a place near a residential area both in rural and urban zones. It also records that 5.3% of road crashes were reported at places near schools, colleges or other educational institutions.

The relationship between driving violations and traffic accidents is well known. Previous

studies have reported that the frequency to commit driving violations is associated with certain demographic variables. It is reported that male drivers committed more driving violation than females, young drivers than older drivers, and that those who drive a high mileage violate traffic rules more often than those drive a low mileage (Blockley & Hartley, 1995; Parker, Reason et al., 1995; Reason, Manstead, Stradling, Baxter, & Campbell, 1990).

Elander et al., 1993 held that personality influences driving behavior and thus indirectly contributes to accidents. It was supported by other studies conducted in western countries (e.g. Parker et al., 1995 and Parker,Reason et al., 1995). For instance,

Sensation seeking, has been associated with risky, drunk and aggressive driving (Jonah et al., 2001; Dahlen et al., 2005).

Renner and Anderle (2000) found that traffic offenders scored higher on a measure of extraversion than individuals in a control group who had a clean driving record.

Renner and Anderle (2000) defined extraversion as a personality dimension that describes individuals that are easy going, “who do not keep their feelings as tightly under control as introverts do, who sometimes tend to act spontaneously and even aggressively, and are therefore less likely to comply with regulations” (p. 674)

- The typiical extravertiis sociable,, likes partiies,, has many friiends,, needs tto havepeoplle tto talk tto,, and does nott like readiing or studying by himsellf.. He craves excittementi,takes chances,, oftten sttiicks hiis neck out, actts on tthe spur of tthe moment, and iis generaly animpulsiive individual.. He is fond of practicall jokes,, allways has a ready answer and generaly likes change;; heis carefree,, easy--goiing,, optimistic,, and likes tto ''laugh and be merry''.. He prefers tto keep moviing and doiing things,tends tto be aggressiive and lose his temper quicklly; altogether his feelings are nott keptt under tight control,, and he iis not allways a reliable person.
- The typicall introvertt is a quiett,, retiring sortt of person,introspecttive,, fond of books rather than people; he iis reserved and disttantt except tto inttiimatte friends.. He tends tto plan ahead,'looks before he leaps'' and distrusts tthe impulse of tthe moment. He does nott like excitement,takes matters of everyday life with proper seriousness,, and likes a well ordered mode of life.. He keeps hiis feelings under close control,, seldom behaves in an agressiive maner,, and does not llose his temper easily.. He iis reliablle,, somewhat pessimistic, and pllaces great vallue on etthicall standards.

Eysenck and Eysenck (1985) included sensation-seeking (e.g., I sometimes like doing things that are a bit frightening) as components of extraversion in their three dimensional view of personality.

Sensation Seeking and its components have also been positively related with the extraversion scales measured with the Big-Five psychometric instruments. In fact one facet of Extraversion (Excitement-Seeking) is explicitly intended to measure the sensation seeking construct (Costa & McCrae, 1992; Costa, McCrae, & Dye,1991)

There is evidence that extraversion is positively associated with traffic accidents (La junen, 2004), road errors (Verwey and Zaidel, 2000), and violations of traffic rules. Theoretically, extraversion should be related to aggressive driving because it is marked by active and sometimes impulsive behaviors. Given that aggressive driving behaviors appear to be impulsive by nature, we expect that drivers with a high level of extraversion to be more prone to aggressive behavior while driving.

In view of all the above mentioned studies, the present study aims to investigate the relationship between introversion-extraversion personality trait and reckless driving in male drivers of two wheelers in Aurangabad city.

IT WAS HYPOTHESIZED THAT

1. H°: There is statistically no significant association of age and driving behavior (reckless driving) of the driver.
2. H°: There is no association between personality and driving behavior (reckless driving) of the driver

INDEPENDENT VARIABLES

1. EXTRAVERSION/INTROVERSION:

The operational definition of extraversion was adopted from this above mentioned definition given by Eysenck & Eysenck (1975) and Renner and Anderle (2000). Individuals who are high on gregarious, assertive or forceful, energetic, excitement seeking, adventurous, impulsive and sensation seeking are considered as extroverts in the present study.

2. AGE: CHRONOLOGICAL AGE WAS TAKEN.

Dependent Variable

Reckless driving is often defined as a mental state in which the driver displays a wanton disregard for the rules of the road; the driver misjudges common driving procedures, often causing accidents and other damages.

Examples of Reckless Driving

- Driving in excess of the speed limit, in a dangerous way.
- passing red lights or stop signs, in circumstances that endanger others
- failure to yield a right-of-way
- failure to give hand or electronic signals, or to keep a lookout (such as while texting, talking on the phone, or fiddling with electronic music controls)
- not having proper lights
- changing lanes frequently, swerving and tailgating
- Playing loud music causing inconvenience to others
- Honking frequently to move other drivers out of their way

In other words, when a person drives a motor vehicle in violation of traffic rules, at the risk of harming others and with less than the full attention, focus and skill required of every driver, it can be called reckless driving.

METHOD

SUBJECTS:

Participants were 150 males, residents of Aurangabad, using motorcycles daily. The age categories taken were 18 years - 20 years and 30-40 years.

TOOLS:

1. Personal Data Sheet: This included name and age.
2. The Manchester Driving Behavior Questionnaire (DBQ) (Reason et al.,1990)

The Driving Behavior Questionnaire (DBQ) was used, which typically breaks down driving behavior into 4 factors.

a.) Errors are actions that fail to achieve the intended results and pose some risk for driver's safety.

b.) Lapses are failures in attention and memory, which are less likely to result in serious accidents,

c.) Violations are "deliberate deviations from the practices believed necessary to maintain the safe

operation of a potentially hazardous system" and correlate strongly with traffic accidents
d.) Violations have been further divided into "aggressive", which have an emotional/interpersonal component (e.g. sound the horn to indicate annoyance) and "highway code" / "ordinary" with no aggressive motive but still intentional.

In the present study the version of the DBQ used has 28 items and participants are asked to rate each item on a six point scale.

3. EYESENK PERSONALITY QUESTIONNAIRE REVISED-S

Eysenck, Eysenck and Barrett (1985) devised a short form of the EPQR for use among adults. In this form the four indices of Extraversion, Neuroticism, Psychoticism and the Lie Scale each contain 12 items. They report reliabilities for males and females respectively of 0.84 and 0.80 for Neuroticism, 0.88 and 0.84 for Extraversion, 0.62 and 0.61 for Psychoticism, and 0.77 and 0.73 for the Lie Scale.

PROCEDURES:

Undergraduate students from two colleges of Aurangabad (in the age group of 18-20 years) and staff members from various departments of BAMU(in the age group of 30-40 years) were contacted. They were given three questionnaires to fill. Altogether data was collected from 200

participants but post cleaning only 172 valid samples that could be used. The mean age of participants in 18-10 age group was

RESULTS:

TABLE 1 MEAN, STANDARD DEVIATION AND CRONBACH'S A OF THE DBQ

Scale	Mean	SD	Cronbach's α
Lapses	63.15	3.95	.76
Errors	43.50	3.54	.65
Ordinary Violations	24.68	2.70	.78
Aggressive Violations	25.94	2.91	.70

TABLE 2 MEAN, STANDARD DEVIATION AND CRONBACH'S A OF THE EPQR

Scale	M	SD	Cronbach's α
Extraversion	30.75	1.26	0.79
Neuroticism	39.01	3.67	0.86
Psychoticism	36.05	3.58	0.83

TABLE 3 MEAN AND S.D. OF ALL VARIABLES ACCORDING TO AGE

Scale		Young Drivers (18-20 years)		Middle Aged Drivers (30-40 years)	
M	SD	M	SD	F	
Extraversion	33.22	6.48	28.28	7.35	11.29**
Neuroticism	36.31	5.50	41.70	5.17	23.06**
Psychoticism	34.47	6.89	37.66	7.27	4.58*
Lapses	60.47	19.54	65.83	19.75	1.14
Errors	43.03	14.75	43.98	15.93	.08
Ordinary Violations	26.75	9.58	22.16	9.11	5.63*
Aggressive Violations	29.25	12.29	22.63	9.64	8.88

* = p <.05, ** p = <.01.

Mean and SD for all variables are presented in table 1 according to age. One way MANOVA performed showed that in terms of personality factors there is a significant variance by age for extraversion, neuroticism and psychoticism. On DBQ, there is a significant variance by age on ordinary violation and aggressive violation but there is no significant variance for lapses and errors.

Young drivers in the age group of 18029 were higher on extraversion (M=33.22) than older drivers in the age group of 30-40 (M=28.28). However, older drivers were higher on neuroticism (M=41.70) and on psychoticism(M=37.66) than younger drivers. The younger drivers committed more ordinary violations(M=26.75) and aggressive violations(M=29.25) than older drivers.

Table 2 Correlation between Personality and Driving Behavior of the Drivers

A 0.05 alpha level was used to assess all Pearson correlation analyses to test the hypotheses that there is no association between personality and driving behavior.

	1	2	3	4	5	6	7
1. 1. Extraversion	1.00						
2. Neuroticism	.54**	1.00					
3. Psychoticism	.19**	.17	1.00				
4. Lapses	.12	.19**	-.06	1.00			
5. Errors	.23*	.60**	.54**	.60**	1.00		
6. Ordinary Violations	.33**	.89**	.37**	.25*	.37**	1.00	
7. Aggressive Violations	-.10	.25*	.37**	.17	.12	.22*	1.00

* = p <.05, ** p = <.01.

In table 2 bivariate correlations between all variables was done. There was a significant correlation between extraversion and neuroticism (r=.54,p=<.01), between extraversion and psychoticism (r=.19,p=<.01), between extraversion and two factors of DBQ, viz., errors (r=.23,p=<.05) and ordinary violations(r=.33,p=<.01)There was a non significant but negative correlation between extraversion and aggressive violations(r=-.10). Neuroticism had significant association with lapses (r=.19,p=<.01),errors (r=.60, p=<.01), ordinary violations (r=.89,p=<.01) and aggressive violations (r=.25,p=<.01). Psychoticism showed significant association with errors (r=.54,p=<.01), ordinary violations (r=.37,p =<.01) and with aggressive violations (r= .37,p=<.01). There was no significant association between aggressive violations and lapses as well as with errors.

DISCUSSION:

Drivers in both age groups reported lapses such as :

- They try to drive away from the traffic lights in third gear. In other words, they don't slow down when the traffic lights are turning red but try to beat the signal by speeding away.
- Very often, while reversing they don't see behind them and tend to hit something or the other while reversing.
- They also tend to misread the signs and exit from a roundabout on the wrong road.
- They may have planned to go to a particular destination but absent mindedly turn into the direction of the road that they routinely have been taking.
- They also report frequently getting into wrong lane while approaching a junction or cross road.
- They also frequently tend to commit errors such as :
- They try to overtake someone who is signaling that he is going to take a right turn.
- While entering into a street from a main road, they fail to notice that a pedestrian may be crossing the road.
- While turning left they may nearly hit a cyclist who may come up on their side.
- While coming on the main road, they may be paying such close attention to the traffic that they nearly miss the vehicle in front.
- They sometimes underestimate the speed of an oncoming vehicle while overtaking.
- They tend to ignore other people giving sign to give way to them. They tend to fail looking into their rear mirror before changing lanes.
- Sometimes they brake too quickly on a slippery road.

HOWEVER, COMPARE TO YOUNGER DRIVERS REPORTED COMMITTING MORE OF ORDINARY VIOLATIONS SUCH AS:

- Overtaking a slow driver from the wrong side.
- Driving especially close to a vehicle in front as a signal to its driver to go faster or get out of the way
- Crossing a junction knowing fully well that traffic lights have already turned red for them.
- Disregard the speed limit on residential road.
- Driving even though they may have consumed alcohol over legally permissible limit.

Though age wise there was not much significant difference on aggressive violations but mean values show that younger drivers tend to indulge more frequently in aggressive violations than older drivers. For instance,

- Younger drivers honk more to indicate their annoyance to another road user.
- Get angry with another driver's behavior and give a chase with the intention of giving him a piece of their mind.
- At signal, even if they want to go straight, they tend to park themselves in right turn lane, thus obstructing the driver behind in such a way that even though he has right of way, he has to stop and let the driver in front go first.
- They tend to stay in a lane that they know will be closed ahead until the last minute before forcing their way into another lane.
- They tend to get into unofficial race with other drivers.

LIMITATIONS:

One of the limitations of this study is the use of self report instruments to measure the personality and driving behavior. This allows the scope of social desirability factor to creep in.

Another restriction is that study restricted itself to drivers of only two wheelers (only motorcycles) and other demographical variables such as gender were also not considered.
Further study needs to be done to remove these limitations.

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