

## **A STUDY OF FACTORS INFLUENCING ACCIDENTS ON LAHORE-ISLAMABAD MOTORWAY (M-2)**

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**ABSTRACT:** - Pakistan is facing multi-dimensional challenges of highway safety on roads, especially on motorways. The purpose of the present study was to identify factors influencing accidents on Lahore-Islamabad Motorway (M-2) according to motorway user's perspective. A comprehensive survey questionnaire was conceived, named as Factors Influencing Accidents (FIA). A sample size of 350 was selected to obtain the user's perspective using M-2 to generate data for analyzing the factors influencing accidents on M-2. Statistical Package for Social Sciences (SPSS) version 19 was used to carry out analysis. The findings of study indicated that the most influencing factors, with respect to road user's perspective, were Careless driving (mean score 3.60), Dozing off at wheel (mean score 3.56), Continuous yellow line crossing (mean score 3.49), Tyre burst (mean score 2.24), Brake failure (mean score 2.40) and Improper informatory signs (mean score 2.17).

**Keywords:** Factors Influencing Accidents (FIA), Motorway user's Perspective, Motorway M-2, Highway Safety, Careless Driving and Dozing off at Wheel.

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### **INTRODUCTION**

Transportation structure plays an important role in the development of any area and is dependent on several factors. The most important factors in land transportation structure are drivers, automobiles and roads. In Pakistan, substantial developments and investments have been made in the improvement of roads and automobiles, but unfortunately professional education of drivers and development of civic sense has been overlooked (Imran, 2009).

It is obvious from the facts that sufficient efforts have not been made regarding the education and awareness of motorists. It has also been acknowledged that at most of the times it is the road user, who is responsible of accidents rather than roads or vehicles. So, it is very important to educate the users to mitigate accidents (Nishida, 2009). Drivers usually show unusual manners while driving the automobiles because of numerous reasons. To explore the full picture behind such conduct of drivers, a distinctive approach has to be implemented which could assist in coming up with an improved solution to deal with violations (Zucker, 2009).

Major contributors of accidents are insufficiency of signage, insufficiency of driving skill, insufficiency of education, incompatible design of pedestrian facilities and geometric design hitches (Shah and Khattak, 2013).

Accident possibility and safety performance examination are most operative and practical approaches for improvement of road safety. It provides precise

statistics on accidents. It has been observed that trucks parked on highways decrease the width of carriage ways, which may lead to accidents (Jain *et. al*; 2011).

In a study Hussain *et. al*; (2011) analysed safety procedures taken by road users like helmets, seat belt, road crossing, etc., where incorrect use was witnessed in 27% users.

A study conducted by (Mohan, 2011) reported that road users casualty rates do not have a positive co-relationship with the country income level. It is fact that in a country like Pakistan, people who travel by roads are the key persons who are the backbone of family. These people are active, intelligent and progressive for the national economy.

It's envisaged that such a structure of contemporary roads would empower Pakistan to enter into the 21<sup>st</sup> century equipped with a paramount communication system. To deliver country wide link of restricted access high speed highway to bring most parts of the country together, which could result in faster economic development, marketable activity and trade with Economic Corporation Organization (ECO) countries of the world. But on the other side of picture, road traffic traumas are the eighth principal reason of deaths worldwide, and present trends advocate that by 2030 road traffic accident's fatality will be the fifth principal reason of death unless imperative action is taken. World Health Organization reported that around 1.24 million people expire in road traffic accidents annually. In addition to that, another 20 to 50 million

people sustain with nonfatal injuries due to road traffic crashes. These figures are alarming and cause irredeemable impact on the family members, their lives are transformed forever owing to these misfortunes. These misfortunes also influence the communities in which they live and work (WHO, 2013).

Present study was therefore planned to analyse the factors influencing accidents on M-2 in the eyes of road users that how will deregulation of authorities, improper traffic guidance, inappropriate control systems, careless driving, dozing at wheel, tyre burst, brake failure, no alarming system, no awareness of highway and motorway codes (HMC) disturbs the whole motorway system.

**MATERIALS AND METHODS**

A comprehensive survey questionnaire was conceived, named as Factor Influencing Accidents (FIA). A sample size of 350 motorway drivers was selected on the basis of average daily traffic on motorway M-2 to get the user’s perspective, by using survey questionnaire to generating data for analyzing the factors influencing accidents on motorway. The questionnaire was designed in two sections. First section (containing 7 questions) was designed to cover the personal statistics of the participants. Second segment of questionnaire (containing 18 questions) was designed to assess behavioral physiognomies during driving. The M-2 users were asked to fill the responses marked as strongly agree, Agree, Neutral, Disagree and Strongly Disagree against each question.

A comprehensive questionnaire about FIA was given to drivers of M-2, in resting areas of different beats, Toll Plazas on M-2 and Motorway Police drivers’

training school near Sheikhu Pura. A total of 350 questionnaires were got filled in a time span of one month. Each attribute in questionnaire was given a respective score on the basis of answers.

To determine the most influencing factors, mean scale scores were calculated for each factor of questionnaire by taking the mean of scores of all respondents regarding the same factor. Factors (n = 06) having the highest mean values were selected for subsequent analyses.

**RESULTS AND DISCUSSIONS**

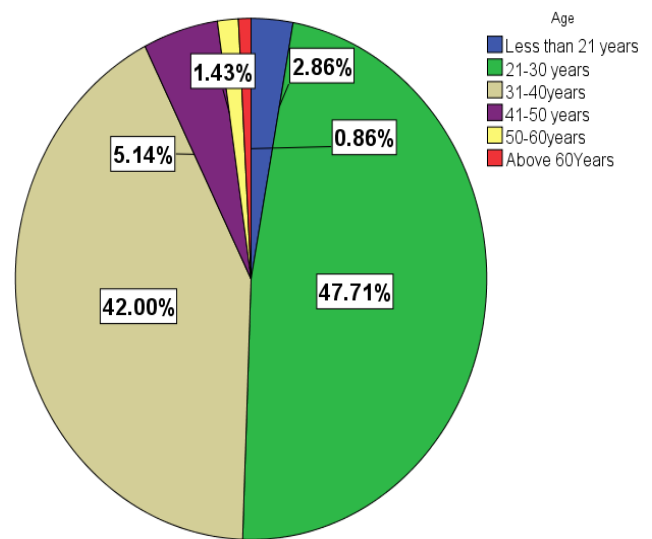
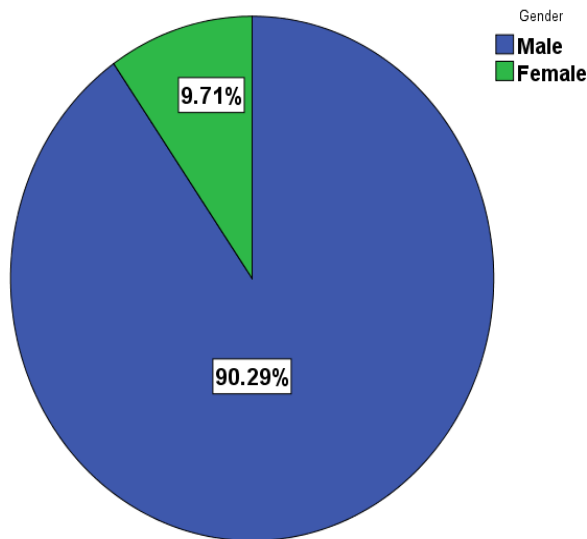
Reliability scale was calculated in term of Cronbach’s Alpha value. Cronbach’s alpha reliability coefficient generally varies between 0 and 1. Coefficient closer to 1.0 indicates greater internal consistency of the items (variables) in the scale.

**Table 1. Reliability Statistics**

Reliability Statistics			
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items	
0.772	0.787	18	

Cronbach’s Alpha had a value of 0.787 as is shown in Table 1, which indicated a high level of internal consistency for our scale and its items.

The first section of questionnaire provided information regarding the gender, age, educational level, house hold income, employment status, carrying driving license while driving and the number of driving years, is presented in the form of pie charts (Fig 1-7)



**Fig-1: Gender Distribution of Respondents in Percentage Fig-2: Percentage Distribution of Age Groups**

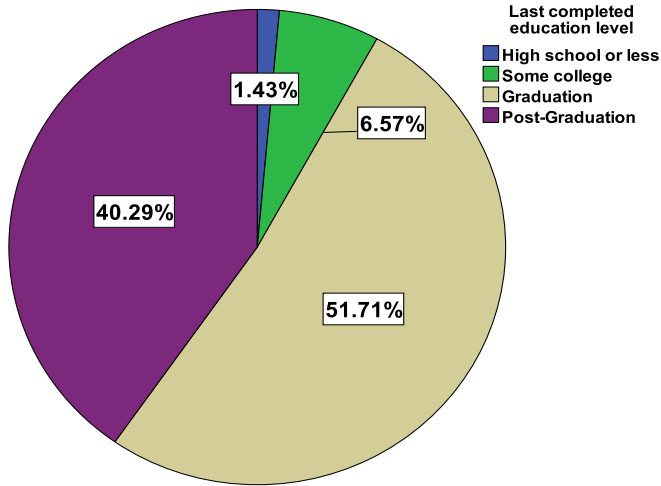


Fig-3: Percentage Distribution of Educational Level

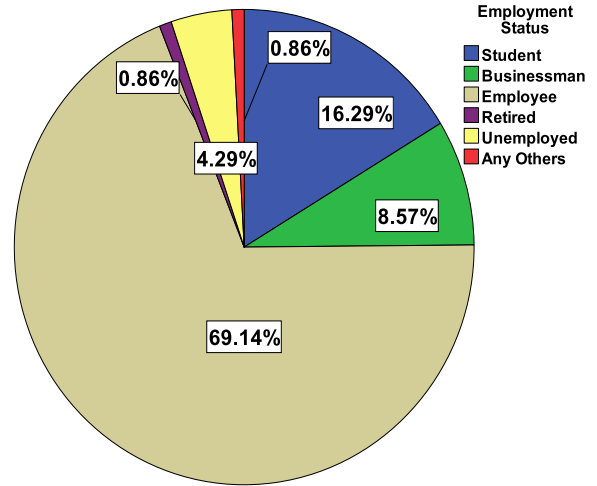


Fig-4: Employment Status of Respondents in Percentage

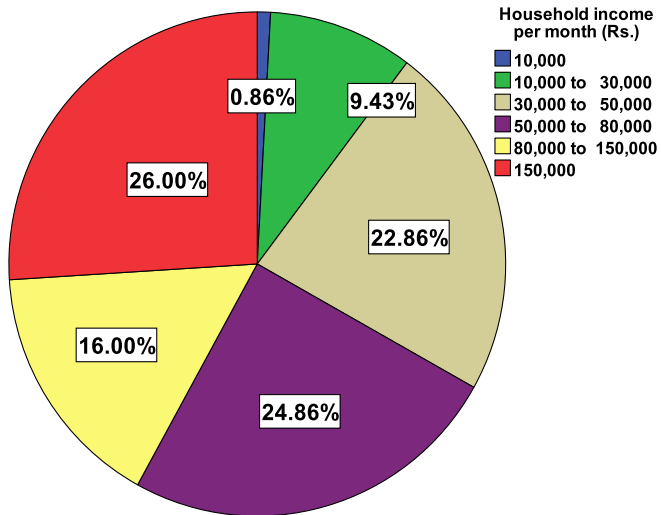


Fig-5: Percentage Distribution of Respondents in Terms of Household Income

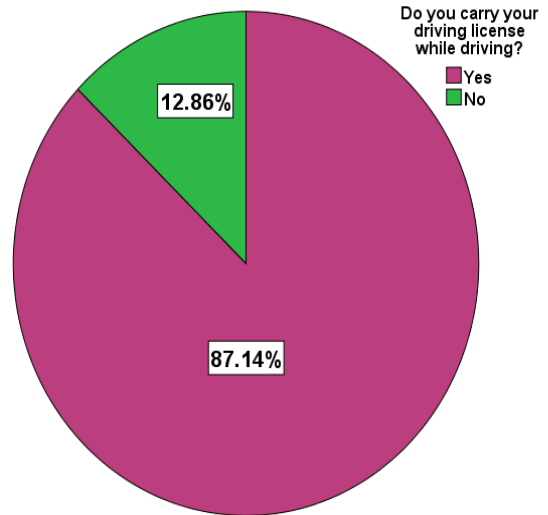


Fig-6: Percentage Distribution of Respondents Carrying Driving license while driving

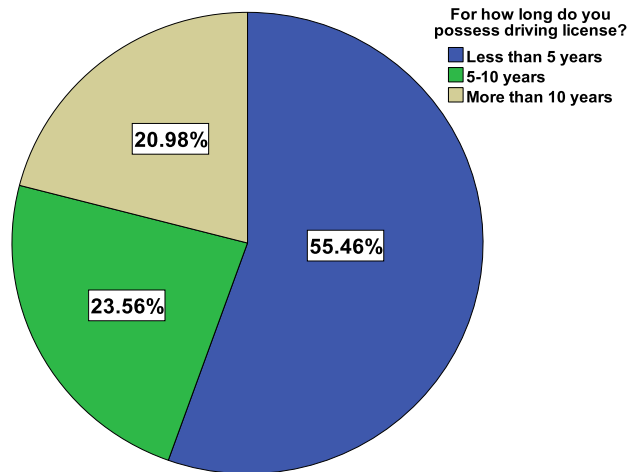


Fig-7: Period for possessing a driving license

Present survey was conducted exclusively amongst the road users of M-2. Figure-1 showed that 90.29% of road users were males and 9.71% were females. Figure-2 showed that the age of 47.71% of M-2 users was 21-30 years while 42% users were of 31-40 year of age. Age group statistics showed that the road users were mostly young and medically fit for driving. Fig-3 showed that 51.71% users were Graduate and 40.29% were Post Graduate. Figure-4 showed the employment status, where dominating group of M-2 users was employees 69.14%. All groups of the society used M-2 for travelling. Figure-5 showed that, 26% of road users had monthly household income greater than Rs. 150,000. The survey showed that road users on M-2 were

law abiding citizen. Figure-6 showed that 87.14% of road user carried driving license while driving.

Summarizing the demographic statistics, it was quite clear that 90% of the drivers were males out of the total commuting on M-2. Participants (92%) had educational level of graduate or above, 69% of the drivers were employees, and 87% carried driving license during driving.

The mean scale scores were calculated for each factor of questionnaire by taking the means of scores of all respondents regarding the same factor. Six factors having the highest mean values as is presented in Table-2 which were selected for subsequent analyses.

**Table 2. FIA Items Arranged In Descending Order of Mean Score.**

Sr.	Survey Questions	Opinion Type	Mean	SD
1	Careless driving is not the critical factor for accidents	Disagree	3.65	1.44
2	Dozing off at wheel has the least effect on accidents	Disagree	3.57	1.08
3	Continuous yellow line may be crossed while travelling	Disagree	3.51	1.28
4	Brake failure often occurs in salt range area (hilly area)	Agree	2.40	1.05
5	Tyre burst would be the main reason for severe injuries	Agree	2.24	1.02
6	Improper informatory signs is responsible for accidents	Agree	2.19	0.94
7	Inappropriate traffic law enforcement majorly causes accidents	Agree	2.15	1.02
8	While driving at night time, light beam from opposite direction is a cause of accident	Agree	2.15	0.99
9	Walking on motorway without emergency is not suitable general instructions	Agree	1.70	1.16
10	White dashed lines are helpful for safe travel	Agree	1.57	0.74
11	You must not exceed any temporary maximum speed limit Road Works	Agree	1.57	0.64
12	Driving fast in rainy conditions is cause of accident	Agree	1.53	0.77
13	Footbridges are comparatively safer way to cross the motorway Road crossing	Strongly Agree	1.41	0.72
14	Drive at a speed that will allow you to stop well within the distance you can see clear. Stopping distances	Strongly Agree	1.40	0.72
15	Using mirror before entering the motorway is recommended Basics of Driving	Strongly Agree	1.36	0.57
16	While overtaking a suitable distance should be maintained	Strongly Agree	1.33	0.56
17	Wearing seat belts saves lives and reduces the risk of serious injury in an accident Seats Belts	Strongly Agree	1.21	0.56
18	Driver should be more careful in fog or poor visibility	Strongly Agree	1.14	0.38

Key to Opinion Type; 1 = Strongly Agree, 2 = Agree, 3 = Neutral, 4 = Disagree, 5 = Strongly Disagree

The ANOVA was performed on top six selected FIA scale scores from Table 2, to investigate the effects of age, education level, employment status and carrying driving license while driving.

Participants belonging to age group 31-40 (mean scale score 3.87) gave opinion that careless driving was the critical factor on the motorway. The age group 21-30 also had similar view (mean scale score 3.58). Age groups (21-30, and 31-40) were significantly sensitive towards factors influencing accidents on M-2 than the other age groups (Figure 2). The senior citizens of survey

belonging to age group 50 – 60 (mean scale score 4.40) considered occasional crossing of yellow line as an attribute to accidents, whereas young participants remained neutral (mean scale score 2.71) to this question as shown in figure 8.

Analysis which revealed that careless driving mean value was 3.76, dozing off at wheel mean value was 3.70, Tyre burst mean value was 2.27, brake failure in hilly areas mean value was 2.36, continuous crossing of yellow line mean value was 3.66 whereas the improper

informatory signs mean score was 2.11 were major attributes of accidents in the opinion of graduates (Fig-9).

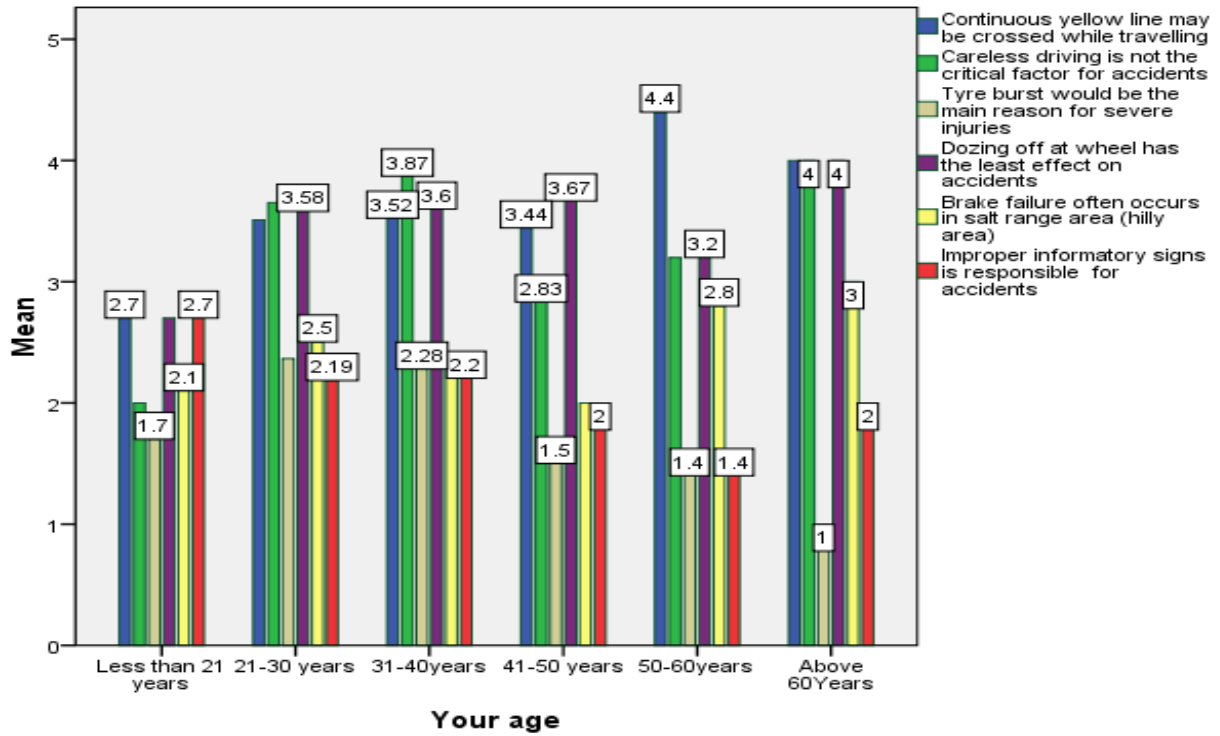


Fig-8: Age ~ Mean of Top Six FIA

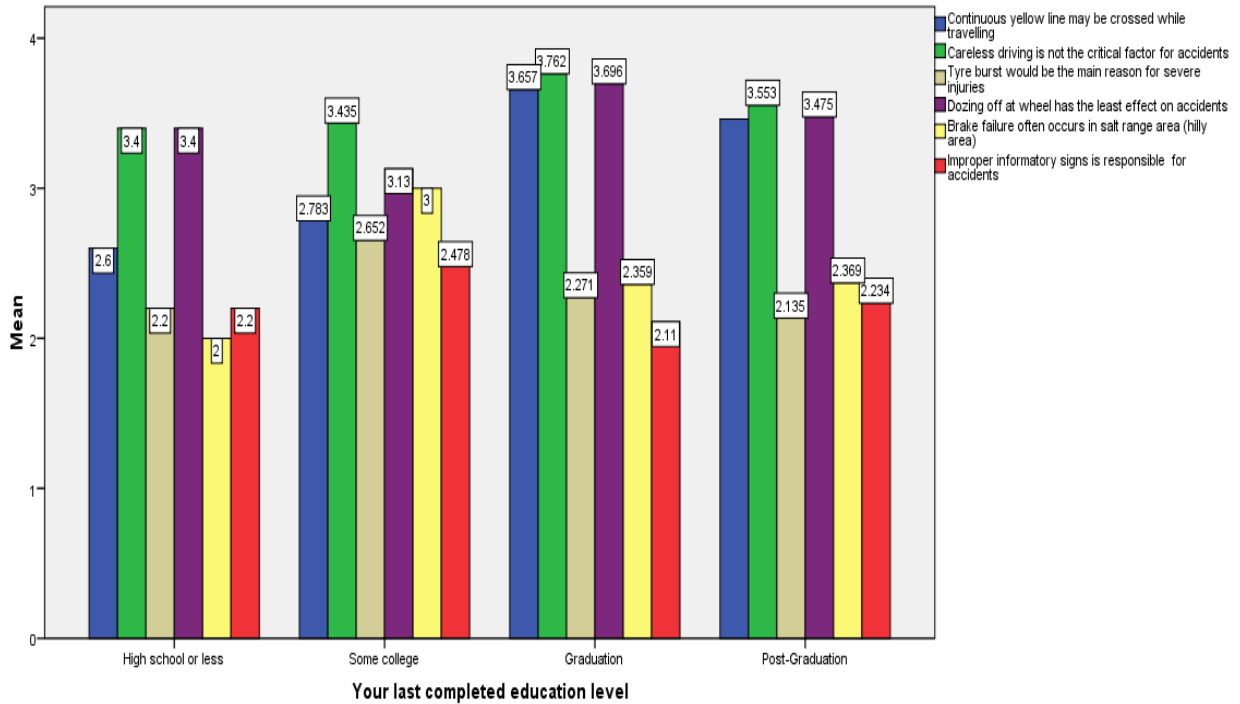


Fig-9: Last completed Educational Level ~ Top Six FIA

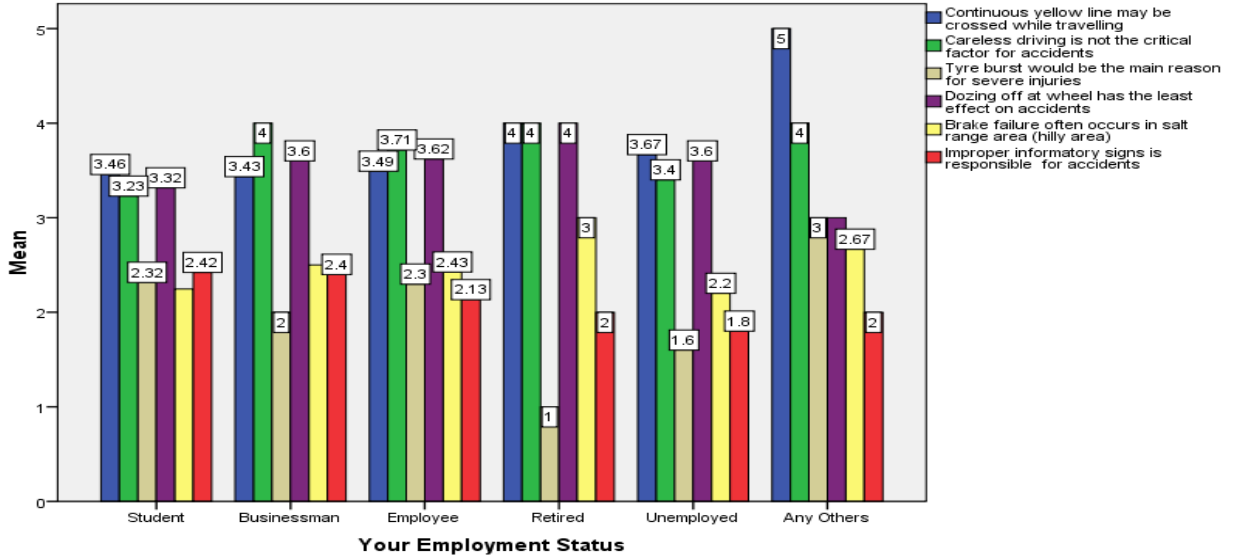


Fig-10: Employment Status ~ Top Six FIA

The results of the analysis presented in figure-10 showed significant differences between all employment status groups.

The Employees were significantly more sensitive towards factors influencing accidents than the other group members, as 69.14% of survey respondents were employees Figure-4. The careless driving mean value was 3.71, dozing off at wheel showed a mean value of 3.62, Tyre burst mean value was 2.30, continuous crossing of yellow line showed a mean value of 3.49 and improper informatory signs mean score was 2.13 which attributed the accidents in the opinion of employees as is

shown in figure-10. Differences among drivers holding, driving license were evaluated on FIA scales. The results of the analysis are summarized in figure-11. The drivers who possessed, driving license and did not possess driving license while driving reported that all the top six factors were cause of accidents on M-2. The careless driving mean value was 3.60, dozing off at wheel mean value was 3.56, the continuous yellow line crossing mean value was 3.49, the tyre burst mean value was 2.24, brake failure mean value was 2.40 and improper informatory signs mean value was 2.17, these factors attributed to the accidents on M-2 motorway.

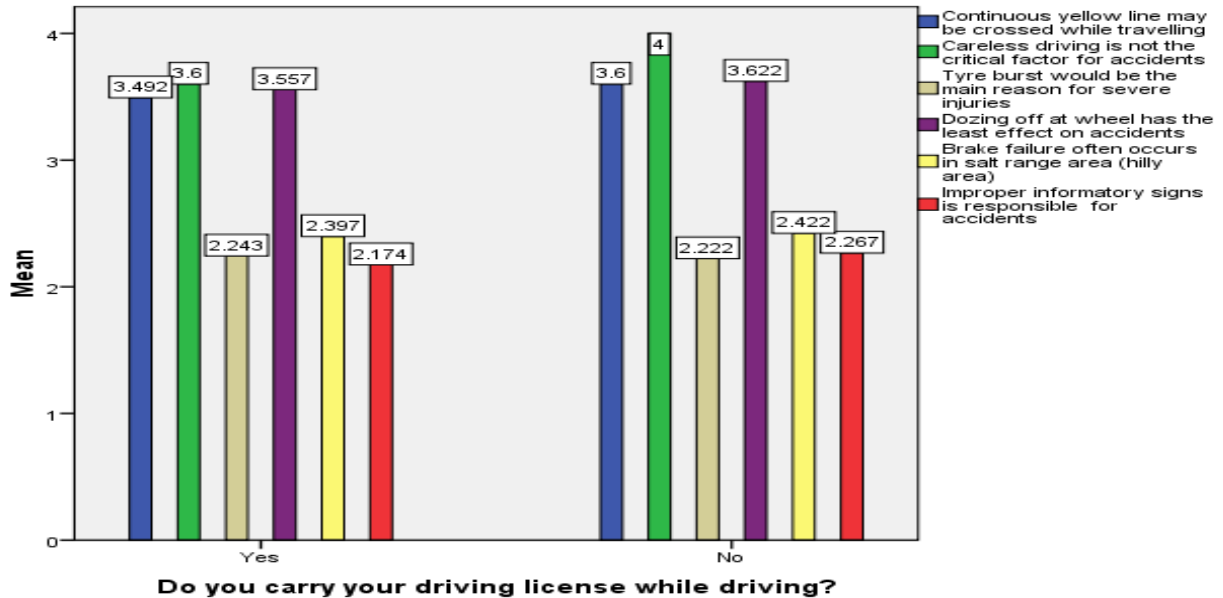


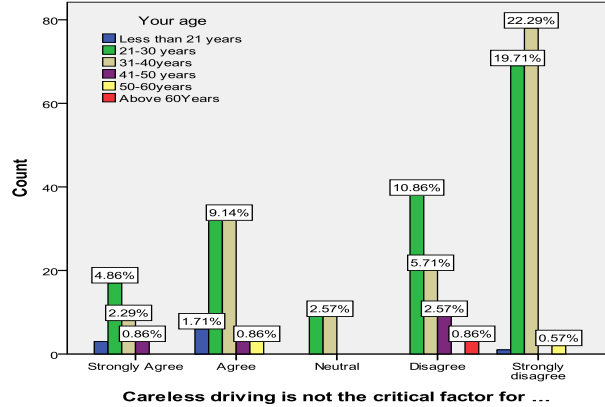
Fig-11: Carry your driving license while driving ~ Top Six FIA

In next step the sample data was analyzed by running cross tabulation between demographic characteristics of participants and factors influencing accidents on M-2. It was noted that the percentage values given in Tables showed the collective opinion of

motorway users between a particular group against specific question asked in survey. The Figures given in the section showed overall response of user for displayed certain opinions.

**Table: 3. Careless driving was not critical factor for accidents ~ age.**

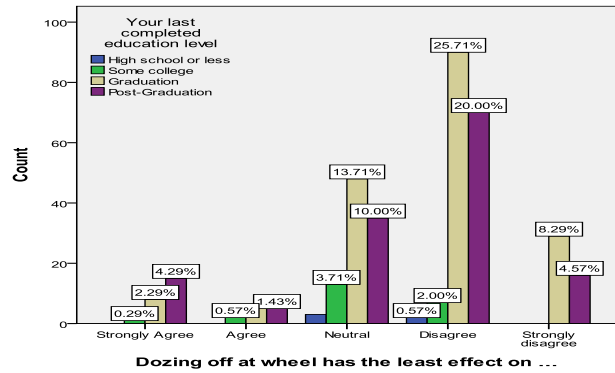
	Your Age					
	Less than 21 Years	21-30 Years	31-40 Years	41-50 Years	50-60 Years	Above 60 Years
Strongly Agree	30.0%	10.2%	5.4%	16.7%		
Agree	60.0%	19.8%	21.8%	33.3%	60.0%	
Neutral		6.0%	6.1%			
Disagree		22.8%	13.6%	50.0%		100.0%
Strongly Disagree	10.0%	41.3%	53.1%		40.0%	
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



**Fig-12. Cross Tabulation Graph of Careless Driving Was Not Critical Factor For Accidents ~ Age**

**Table: 4. Dozing off at wheel had least effect on accidents ~ last completed educational level**

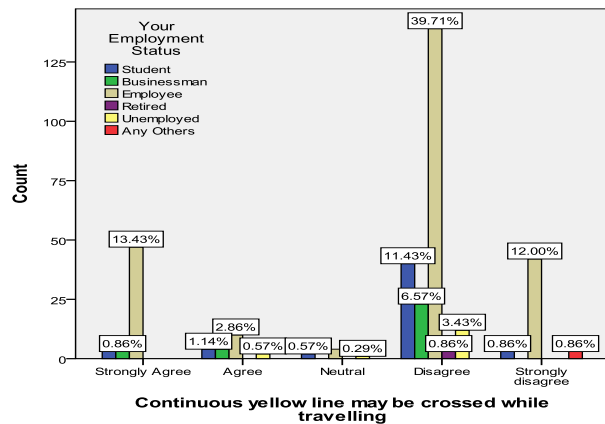
	Your Last Completed Education Level			
	High school or less	Some College	Graduation	Post-Graduation
Strongly Agree		4.3%	4.4%	10.6%
Agree		8.7%	3.3%	3.5%
Neutral	60.0%	56.5%	26.5%	24.8%
Disagree	40.0%	30.4%	49.7%	49.6%
Strongly Disagree			16.0%	11.3%
Total	100.0%	100.0%	100.0%	100.0%



**Fig-13. Cross Tabulation Graph of Dozing Off At Wheel Had Least Effect on Accidents ~ Last Completed Educational Level**

**Table: 5. Continuous yellow line may be crossed while travelling ~ employment status**

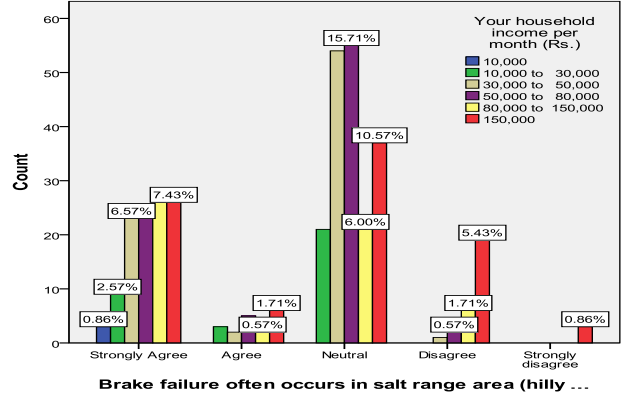
	Your Employment Status					
	Student	Businssman	Emplouyee	Retired	Unemp loyed	Any Others
Strongly Agree	14.0%	10.0%	19.4%			
Agree	7.0%	13.3%	4.1%		13.3%	
Neutral	3.5%		1.7%		6.7%	
Disagree	70.2%	76.7%	57.4%	100.0%	80.0%	
Strongly Disagree	5.3%		17.4%			100.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



**Fig- 14. Cross Tabulation Graph of Continuous Yellow Line May Be Crossed While Travelling ~ Employment Status**

**Table: 6. Brake failure in hilly areas is a cause of accidents ~ household income per month**

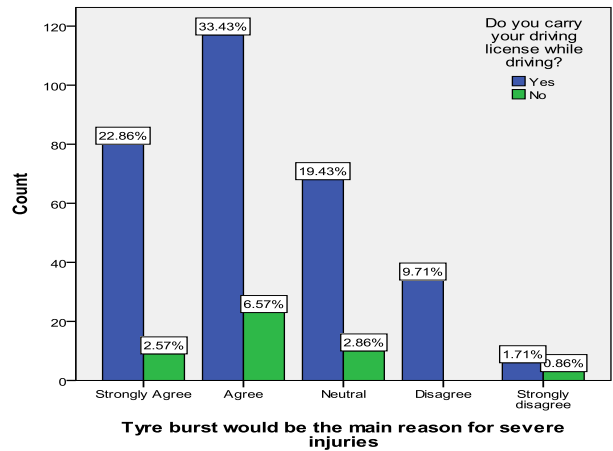
	Your Household Income Per Month (Rs.)					
	Less than 10,000	10,000 to 30,000	30,000 to 50,000	50,000 to 80,000	80,000 to 150,000	Greater than 150,000
Strongly Agree	100.0%	27.3%	28.8%	28.7%	48.2%	28.6%
Agree		9.1%	2.5%	5.7%	3.6%	6.6%
Neutral		63.6%	67.5%	63.2%	37.5%	40.7%
Disagree			1.3%	2.3%	10.7%	20.9%
Strongly Disagree						3.3%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



**Fig-15. Cross Tabulation Graph of Brake Failure in Hilly Areas is a Cause of Accidents ~ Household Income Per Month**

**Table: 7 Tyre burst would be main reason for severe injuries ~ carry your driving license while driving**

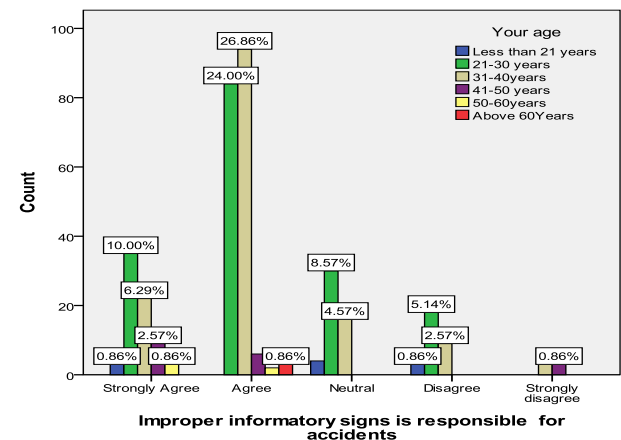
	Your Employment Status					
	Student	Businssman	Emplo yee	Retired	Unemp loyed	Any Others
Strongly Agree	26.3%	30.0%	23.1%	100.0%	40.0%	
Agree	42.1%	40.0%	39.3%		60.0%	
Neutral	10.5%	30.0%	24.8%			100.0%
Disagree	15.8%		10.3%			
Strongly Disagree	5.3%		2.5%			
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



**Fig-16. Cross Tabulation Graph of Tyre Burst Would Be Main Reason For Severe Injuries ~ Carry Your Driving License While Driving**

**Table: 8. Improper informatory signs are responsible for accidents ~ age**

	Your Age					
	Less than 21 Years	21-30 Years	31-40 Years	41-50 Years	50-60 Years	Above 60 Years
Strongly Agree	30.0%	21.0%	15.0%	50.0%	60.0%	
Agree		50.3%	63.9%	33.3%	40.0%	100.0%
Neutral	40.0%	18.0%	10.9%			
Disagree	30.0%	10.8%	6.1%			
Strongly Disagree			4.1%	16.7%		
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



**Fig-17. Cross Tabulation Graph of Improper Informatory Signs Are Responsible For Accidents ~ Age**



The table-3 showed that 53.1% of motorway users between age 31-40 years and 41.3% between the ages of 21-30 years disagreed with this opinion that Careless driving is not critical factor for accidents. Figure-12 confirmed the fact that the majority of respondents were between age group 31-40 years and 21-30 years disagreed with violation of yellow line. Table-4 showed that 49.7% of motorway users had educational level of Graduate and 49.6% Post Graduate disagreed with this opinion that Dozing of Wheel had least effect while driving. Figure-13 confirmed the fact that the majority of respondents were Graduates and Post Graduates who disagreed with the opinion. Table-5 showed that the 57.4% of motorway users had employment status as employees disagreed with this opinion that Continuous Yellow line may be crossed while travelling. Figure-14 confirmed the fact that the majority of respondents were employees who disagreed with violation of yellow line. Table-6 showed that the 63.2% of motorway users had house hold income of Rs. 50,000 – 80,000 and 67.5% had Rs. 30,000 - 50,000 remained neutral with this opinion that Brake failure in hilly areas was the cause of accidents. Figure-15 confirmed the fact that the majority of respondents had house hold monthly income of Rs. 50,000 – 80,000 and Rs. 30,000 - 50,000 remained neutral with the opinion. Table-7 showed that the 38.4% of motorway users carried driving license while driving agreed with this opinion that Tyre burst would be the main reason for severe injuries. Figure-16 confirmed the fact that the majority of respondents carried driving license and agreed with this opinion. Table-8 showed that the 50.3% of motorway users between age group of 21-30 years and 63.9% between 31-40 years agreed with this opinion that improper informatory signs were responsible for accidents. Figure-17 confirmed the fact that the majority of respondents were between age group 21-30 and 31-40 and agreed with the opinion.

Similarly, the top six factors on FIA scale score were analyzed against demographical characteristics of respondents i.e., age, last completed education level, employment statuses, house hold income and carry driving license. The results from those analyses were quite similar to the results already mentioned.

The results of the present study were in-line with the findings of (Shah, and Khattak, 2013). Whose study was based on data acquired from accident recording mechanism of motorway police. The data in the study included accidents occurred during year 2009 to year 2011 on M-2. After the analysis, the results were careless driving 25%, dozing at wheel 23%, tyre burst 18%, brake failure 9% and pedestrian crossing 6%.

The results of the present study were also supported by (Gulzar *et. al*; 2012) who concluded that road traffic accidents in Pakistan from the year 2000 to 2010 resulted into maximum number of accidents due to

carelessness which must have been avoided through careful driving.

**Conclusion:** The following conclusions were drawn out from the research work:

Factors influencing accidents on motorway M-2 according to road user were careless driving, dozing off at wheel, continuous crossing of yellow line while driving, brake failure in hilly areas (salt range), tyre burst and improper informatory signs on M-2. Motorway users were well aware of the traffic laws; people belonging to age group of 31-40 years gave opinion that road violations like careless driving and continuous yellow line crossing were attributes of accidents. Brake failure, dozing off at wheel, tyre burst and improper informatory signs were other factors in the opinion of age group of 21-30 years and 31-40 years influencing the accidents. Employees and highly educated people such as Graduates and Post Graduates cited factors mentioned above as attributes of accidents on M-2. The results predicted that Careless driving can cause brake failure in hilly areas (salt range), Continuous crossing of Yellow line could also increased accidents tendency according to the views of Graduates. Dozing off at wheel influenced the accidents in the opinion of Graduates, Employee and the road users carrying driving license while travelling. Improper informatory signs influenced accidents on M-2 according to Employees, Drivers carrying license and Graduates.

**Recommendations:** Law enforcing strategies should be reviewed and executed strictly i.e. installation of permanent surveillance cameras at very reasonable distance in order to monitor drivers as well as the officials concern on motorway. Measures may be taken i.e. usage of print and electronic media, for proper guidance of traffic rules for drivers before entering to motorway. This will ensure less traffic violations like careless driving and crossing of yellow line. The surface of both inner and outer shoulders may be made rough to create noise when yellow line is crossed. Road users may be strictly advised to get their automobiles periodically checked for fitness to avoid mechanical failures during travelling i.e. tyre burst and brake failure. Geometric realignment of M-2 may be undertaken in hilly areas to avoid brake failures. Grooves on asphalt surface should be introduced at every 60 km interval for creating noise to alert the driver feeling sleepy. National Highway Authority (NHA) had provided grooves at section 281-282 km Northbound. Rest Areas and recreational spots may be developed along M-2 at reasonable distances for refreshment of drivers and quality of service on existing rest areas and service centers should be ensured. It will help drivers to overcome fatigue in order to avoid dozing off at wheel. Informatory signs may be digital and controlled from central operation room in order to broadcast important information for road users. The

overspending drivers must be heavily punished to avoid fatal accidents. Multidisciplinary approach is required to reduce number of accidents on motorways and the contribution of private sectors should also be synchronized with the public sector in order to achieve the goal.

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**ANNEXURE-A**

**Survey Questionnaire for Masters in Transportation Engineering at U.E.T Lahore**

**Research Topic:**

**Factors Influencing Accidents on Lahore-Islamabad Motorway (M-2)**

**Purpose:** Student from the University of Engineering and Technology Lahore designed this survey form for research work as a part of Master’s degree in Transportation Engineering to gather real life experience in statistics.

**Important Note:** The information provided doesn’t include any specific personal information i.e. name, address and shall be used for research purposes only. All the data shall be kept anonymous.

<b>1. Your gender:</b>	<input type="checkbox"/> <b>MALE</b>	<input type="checkbox"/> <b>FEMALE</b>			
<b>2. Your age:</b>	<input type="checkbox"/> Less than 21 years <input type="checkbox"/> 41-50 years	<input type="checkbox"/> 21-30 years <input type="checkbox"/> 50-60years	<input type="checkbox"/> 31-40years <input type="checkbox"/> Above 60Years		
<b>3. Your last completed education level:</b>	<input type="checkbox"/> Illiterate <input type="checkbox"/> Graduation	<input type="checkbox"/> High school or less <input type="checkbox"/> Post-Graduation	<input type="checkbox"/> Some college <input type="checkbox"/> Any Others		
<b>4. Your household income per month (Rs.):</b>	<input type="checkbox"/> 10,000 ≤ <input type="checkbox"/> > 50,000 to ≤ 80,000	<input type="checkbox"/> > 10,000 to ≤ 30,000 <input type="checkbox"/> > 80,000 to ≤ 150,000	<input type="checkbox"/> > 30,000 to ≤ 50,000 <input type="checkbox"/> > 150,000		
<b>5. Your Employment Status:</b>	<input type="checkbox"/> Student <input type="checkbox"/> Retired	<input type="checkbox"/> Businessman <input type="checkbox"/> Unemployed	<input type="checkbox"/> Employee <input type="checkbox"/> Any Others		
<b>6. Do you carry your driving license while driving?</b>	<input type="checkbox"/> <b>Yes</b>	<input type="checkbox"/> <b>No</b>			
<b>7. For how long do you possess driving license?</b>	<input type="checkbox"/> Less than 5 years	<input type="checkbox"/> 5-10 years	<input type="checkbox"/> More than 10 years		
<b>Tick the box which most closely relates to your opinion</b>	<input type="checkbox"/> <b>Strongly</b>	<input type="checkbox"/> <b>Agree</b>	<input type="checkbox"/> <b>Neutral</b>	<input type="checkbox"/> <b>Disagree</b>	<input type="checkbox"/> <b>Strongly</b>

	<b>Agree</b>				<b>disagree</b>
1. Walking on motorway without emergency is not suitable <b>general instructions</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Footbridges are comparatively safer way to cross the motorway <b>Road crossing</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using mirror before entering the motorway is recommended <b>Basics of Driving</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wearing seat belts saves lives and reduces the risk of serious injury in an accident <b>Seats Belts</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drive at a speed that will allow you to stop well within the distance you can see clear. <b>Stopping distances</b> (Adequate sight Distance)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Driver should be more careful in <b>fog or poor</b> visibility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Driving fast in <b>rainy conditions</b> is cause of accident	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
You must not exceed any temporary maximum speed limit <b>Road Works</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
While <b>overtaking</b> a suitable distance should be maintained	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>White dashed lines</b> are helpful for safe travel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Continuous yellow line</b> may be crossed while travelling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. <b>Careless driving</b> is not the critical factor for accidents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Tyre burst</b> would be the main reason for severe injuries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Dozing off at wheel</b> has the least effect on accidents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Brake failure</b> often occurs in salt range area (hilly area)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. <b>Improper informatory signs</b> is responsible for accidents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Inappropriate traffic law enforcement</b> majorly causes accidents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>