

# **A STUDY OF BEHAVIOUR AND AWARENESS PATTERN REGARDING ROAD SAFETY MEASURES IN AMBALA DISTRICT AND ROAD ACCIDENTS IN INDIA**

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## **Abstract:**

In most areas of the world the world epidemic of visitor's accidents is nevertheless increasing. In India motor car populace is developing at a quicker price than the monetary and populace growth. It has been estimated that until instant motion is taken, avenue deaths will upward push to the fifth main reason of deaths through 2021.

Road safety is the prevention and protection of road accidents by using all the road safety measures. It is to secure people while traveling on the roads. It is to make safe all the road users such as pedestrians, two-wheelers, four-wheelers, multi-wheelers, and other transport vehicle users. The present study was aimed to assess the level of awareness regarding road safety among the study participants and to study the behavior patterns while using motorized vehicles among the study participants.

**Keywords:** Road safety measures, Road Accidents, Awareness, Behavioral patterns

## **Introduction:**

Road safety means safety for all road users. Accident risks on the road, during both work-related driving and leisure time driving, involve risks to the driver, passengers and other road users. Today's continuously changing

traffic environment requires constant alertness on the part of road users. Speed is one of the cities' road safety challenges and it is not the only risk on the roads and throughout the city streets. The increase in modes of transport like bikes and scooters has brought an increase in dangerous behavior. While roads and streets cannot be stretched, local authorities have to find solutions to get all the users to live together. The awareness of rules and regulations of Road Traffic, knowledge about them and the measures practiced by the students was being studied.

### **Objectives of the Study:**

- To study about the trends of road accidents in India
- To study about initiative taken by Government of Haryana road safety Education
- To study about Behavioural and awareness regarding road safety measures

### **Research Methodology:**

- ✓ **Research Design:** Descriptive and analytical research design was used for sort out the research problems
- ✓ **Data:** For the purpose of the study primary and secondary data has been used.
- ✓ **Collection of Data:** The present cross-sectional study was conducted in Ambala District. All Undergraduate/ post graduate students were included in the study. A total of 200 students were studied. They all drive either their own vehicles or others' vehicles. They were aged from 17-25 years. The secondary data was collected from various reports and documents of various organizations. Various books, Journals, articles, Newspapers, and websites were consulted and used wherever required for the present study.

### **Road Accidents: An Overview**

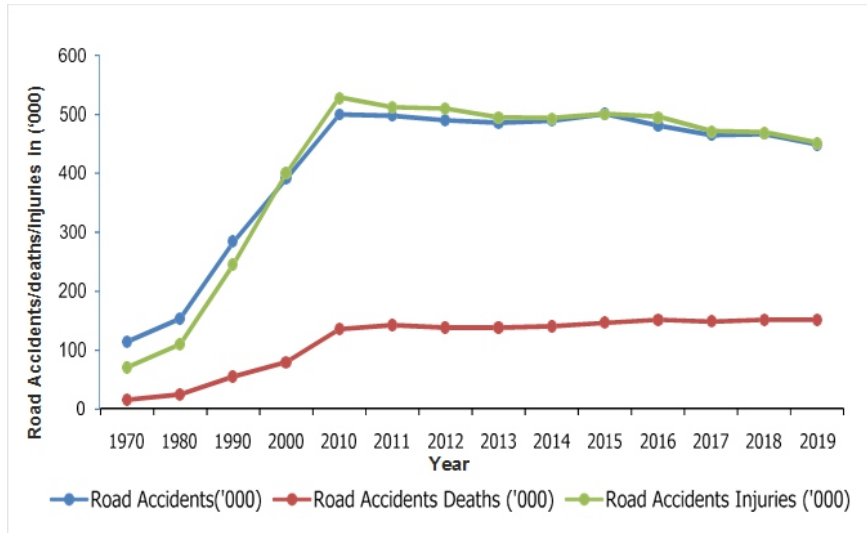
- A road traffic accident (RTA) is any injury due to crashes originating from, terminating with or involving a vehicle partially or fully on a public road. It is projected that road traffic injuries will move up to the third position by the year 2022 among leading causes of the global disease burden

- The third Global Ministerial Conference on Road Safety was held in Stockholm, Sweden on 19 and 20 February, 2020. At this conference, all the participants including India, reaffirmed their strong commitment for achieving the goals of reducing road accident-related deaths by at least 50% by 2030.
- Road accidents in India kill almost 1.5 lakh people annually. Accordingly, India accounts for almost 11% of the accident related deaths in the World.

**Table 1 : Road Accidents, Registered Vehicles and Road Length in India (1970-2019)**

Year	Road Accidents ('000)	Road Accidents Deaths ('000)	Road Accidents Injuries ('000)	Registered Vehicles ('000)	Road Length (000 km)	Fatality rate (no. of accident deaths per 10,000 vehicles)	Vehicle density (no. of vehicles per km of road)
1970	114	15	70	1401	1,189	103.5	1.18
1980	153	24	109	4,521	1,492	53.1	3.03
1990	283	54	244	19,152	1,984	28.3	9.65
2000	391	79	399	48,857	3,316	16.2	14.73
2010	500	135	528	1,27,746	4,582	10.5	27.88
2011	498	142	511	1,41,866	4,677	10	30.33
2012	490	138	509	1,59,491	4,865	8.7	32.78
2013	486	138	494	1,81,508	5,232	7.6	34.69
2014	489	140	493	1,90,704	5,402	7.3	35.3
2015	501	146	500	2,10,023	5,472	7	38.38
2016	481	151	495	2,30,031	5,603	6.6	41.05
2017	465	148	471	2,53,311	5,898	5.8	42.95
2018	467	151	469	2,72,988^	6,215	6.2	39.78
2019	449	151	451	2,97,190^	N.A	5.7	NA
<b>CAGR 2010-19</b>	<b>-1.2</b>	<b>1.3</b>	<b>-1.7</b>	<b>9.8</b>	<b>3.6<sup>§</sup></b>		

**(Source: Data retrieved from website of Ministry of Road Transport and Highway, Government of India)**



The above graph reveals a consistent increase in road accidents, accident-related deaths and road injuries up to 2010 after which all three categories of accidents, deaths and injuries have stabilized with marginal fluctuations and slight decrease in 2019.

**Table:2 Trends of Road accidents, person killed and injured by road category during 2015 to 2019**

Year	National Highways (including Expressways)			State Highways			Other Roads			Total all roads		
	Road Accidents	Persons killed	Persons Injured	Road Accidents	Persons killed	Persons Injured	Road Accidents	Persons killed	Persons Injured	Road Accidents	Persons killed	Persons Injured
2015	1,42,268	51,204	1,45,341	1,20,518	40,863	1,31,809	2,38,637	54,066	2,23,129	5,01,423	1,46,133	5,00,279
2016	1,42,359	52,075	1,46,286	1,21,655	42,067	1,27,470	2,16,638	56,643	2,20,868	4,80,652	1,50,785	4,94,624
2017	1,41,466	53,181	1,42,622	1,16,158	39,812	1,19,582	2,07,286	54,920	2,08,771	4,64,910	1,47,913	4,70,975
2018	1,40,843	54,046	1,40,622	1,17,570	40,580	1,21,579	2,08,631	56,791	2,07,217	4,67,044	1,51,417	4,69,418
2019	1,37,191	53,872	1,37,549	1,08,976	38,472	1,11,831	2,02,835	58,769	2,01,981	4,49,002	1,51,113	4,51,361
CAGR 2015-2019	-0.90	1.28	-1.37	-2.49	-1.50	-4.03	-3.98	2.11	-2.46	-2.72	0.84	-2.54

(Source: Data retrieved from website of Ministry of Road Transport and Highway, Government of India)

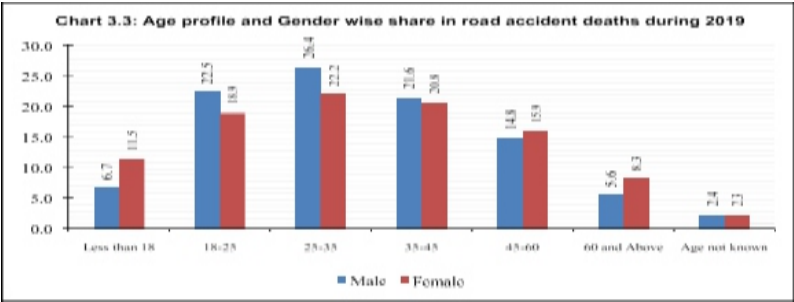
The data in Table 2 on National highways reveals that between 2015 and 2019, road accidents have decreased @ CAGR of 0.90 percent, persons killed increased at a CAGR of 1.28 percent and persons injured decreased at a CAGR of 1.37%. State Highways on the other hand have registered a negative growth rate in all three categories during this period.

**Table 3: Gender-wise age profile of accident related deaths victims in 2017 to 2019**

Age-group	2017		2018		2019		% -age change in 2018 over 2017		% -age change in 2019 over 2018	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Less than 18	7,443	1,965	7,817	2,160	8,652	2,516	5.0	9.9	10.7	16.5
% share in total	5.8	9.8	6.0	10.2	6.7	11.5				
18-25	30,148	4,096	28,835	3,942	29,078	4,128	-4.4	-3.8	0.8	4.7
% share in total	23.6	20.4	22.2	18.5	22.5	18.9				
25-35	34,728	4,821	34,943	5,017	34,194	4,829	0.6	4.1	-2.1	-3.7
% share in total	27.2	24.0	26.8	23.6	26.4	22.2				
35-45	28,538	4,250	28,210	4,462	27,967	4,542	-1.1	5.0	-0.9	1.8
% share in total	22.3	21.2	21.7	21.0	21.6	20.8				
45-60	19,235	3,227	19,343	3,455	19,140	3,472	0.6	7.1	-1.0	0.5
% share in total	15.0	16.1	14.9	16.2	14.8	15.9				
60 and Above	7,696	1,688	7,343	1,732	7,201	1,803	-4.6	2.6	-1.9	4.1
% share in total	6.0	8.4	5.6	8.1	5.6	8.3				
Age not known	67	11	3,653	505	3,087	504	5,352.2	4,490.9	-15.5	-0.2
% share in total	0.1	0.1	2.8	2.4	2.4	2.3				
Total	1,27,855	20,058	1,30,144	21,273	1,29,319	21,794	1.8	6.1	-0.6	2.4
Share of male and female	86.4	13.6	86.0	14.0	85.6	14.4				

(Source: Data retrieved from website of Ministry of Road Transport and Highway, Government of India)

The data in Table 3 also reveals that during the calendar years 2017 to 2019 the share of males in number of total accident deaths hovered around 85% to 86% while the share of females hovered around 13-14 percent. Age profile and gender-wise share in road accidents related deaths during 2019 is depicted in Chart



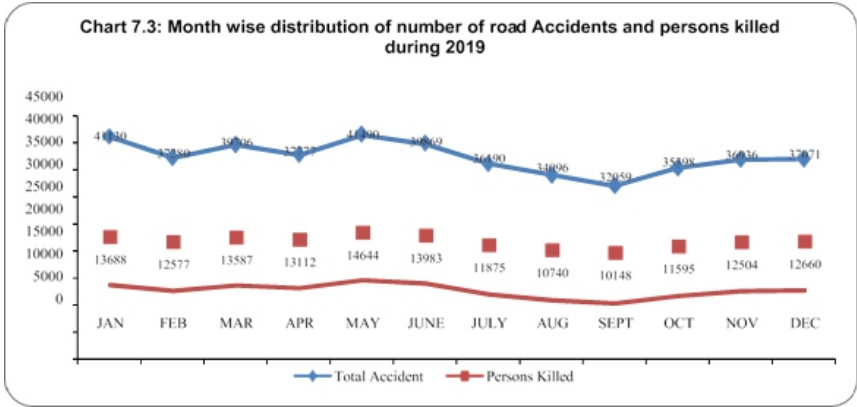
**Trends in Month-wise distribution of road accidents**

Table 4 : Trends of month wise distribution of Road accidents from 2015-2019

Year	2015		2016		2017		2018		2019	
Month	Total Accident	Persons Killed	Total Accident	Persons Killed	Total Accident	Persons Killed	Total Accident	Persons Killed	Total Accident	Persons Killed
JAN	42,661	11,922	41,749	12,702	39,824	12,416	41,780	13,196	41,130	13,688
FEB	40,661	11,599	40,765	12,638	36,742	11,656	38,238	12,030	37,280	12,577
MAR	42,842	12,651	42,843	13,671	40,394	13,013	40,640	13,205	39,706	13,587
APR	42,432	12,740	42,010	13,856	38,966	12,665	40,841	13,420	37,777	13,112
MAY	46,247	14,354	43,368	14,091	42,799	14,417	42,730	14,368	41,490	14,644
JUNE	42,065	12,490	39,489	12,507	39,397	12,891	39,176	13,249	39,869	13,983
JULY	39,694	11,049	37,881	11,667	36,380	11,183	36,991	11,742	36,190	11,875
AUG	39,126	10,776	37,729	11,239	36,294	11,116	35,845	11,053	34,096	10,740
SEPT	39,761	11,101	36,929	11,050	36,093	10,983	35,387	10,867	32,059	10,148
OCT	42,089	12,097	39,952	12,430	38,527	12,402	38,238	12,172	35,398	11,595
NOV	41,018	12,323	38,505	12,217	39,701	12,515	38,417	12,710	36,936	12,504
DEC	42,827	13,031	39,432	12,717	39,793	12,656	38,761	13,405	37,071	12,660
Total	5,01,423	1,46,133	4,80,652	1,50,785	4,64,910	1,47,913	4,67,044	1,51,417	4,49,002	1,51,113

(Source: Data retrieved from website of Ministry of Road Transport and Highway, Government of India)

The month wise data on road accidents presented in **Table 4** reveals that over the period of five years (2015 to 2019) the months in which the maximum number of accidents and maximum number of road accident deaths occur are May, June, March, January and December. The month-wise distribution of total accidents and person killed for the year 2019 is depicted in **Chart**.



The data on month wise distribution of road accidents and number for person killed during the year 2019 as plotted in **Graph** reveals that peak month for road related deaths is May followed by June, January, March & April. The period July to September has lesser number of accidents and road accident related deaths







**Behavioural and awareness regarding road safety measures**

Table5: Behavioural patterns of study participants.

Behavioural patterns	Frequency	Percentage (%)
Having a driving license	142	71
Do not wear helmet while riding	52	26
Exceeding speed limits while driving	24	12
Using mobile phones while driving	28	14
Caught by police for wrong drive and over speeding	22	11
Do not follow lane rules while driving	20	10

Out of 200 participants, 142 (71%) had driving license, 52 (26%) don't wear helmet while riding, 24 (12%) exceed the speed limits while driving, 28 (14%) use mobile phones while driving, 22 (11%) were caught by police for wrong drive and over speeding & 20(10%) do not follow lane rules while driving as in Table5

Table 6: Sign boards interpretation by study participants.

Traffic sign boards	Interpretation of sign	Frequency	Percentage (%)
	No entry	163	81.5
	No overtaking	185	92.5
	No U-turn	196	98
	Pedestrian crossing	190	95
	Inclination ahead	172	86
	Gap in median	61	30.5

Out of 200 participants, interpretation of signboards was done right by 163 (81.5%) for no entry, 185 (92.5%) for no overtaking, 196 (98%) for no U-turn, 190 (95%) for pedestrian crossing, 172 (86%) for inclination ahead & only 61(30.5%) for gap in median as in **Table 6**. Out of 200 participants, only 61(30.5%) interpreted gap in-median correct and 139 (69.5%) interpreted it wrong.

### Steps Taken by Government of Haryana regarding Road Safety Education

- Haryana Road Safety Policy has been formulated on 31.03.2016.
- State Government has set up Lead Agency to act as the „Secretariat of the State Road Safety Council“ to coordinate all activities relating to the road safety in the State, which would include the functions of different Department like, Public Works (B&R), Education, Local Bodies, Haryana Police and Non-Government Organization and other Govt. departments/Organization concerned with the road safety from the office of the Transport Commissioner.
- Road Safety Fund has been created under the Haryana Road Safety Fund Rules, 2018. In which, provision has been made to utilize 50% of the amount collected by the enforcement agencies as compounding fee in the previous financial year.
- Fund Management Committee has been formulated for management/monitoring the Haryana Road Safety Fund under the chairmanship of Chief Secretary, Haryana.
- State Road Safety Council has been re-constituted under the Chairmanship of Transport Minister.

- District Road Safety Committees have been constituted in each district under Deputy Commissioner
- A MoU has been signed by the Transport Department on behalf of State Government with WRI & NASSCOM on Haryana Vision Zero, Road Fatalities Initiative on 02.05.2017. Road Safety Associates have been deployed under Haryana Vision Zero project in 10 districts i.e. Gurugram Panipat, Karnal, Jhajjar, 8 Ambala, Hisar, Kurukshetra, Sonipat, Rohtak & Rewari w.e.f. July, 2017 for performing the Road Safety activities.
- A MoU has been signed by the Transport Department on behalf of State Government with SABMiller India Ltd. for “Safer Roads Initiative” in Gurugram district.
- A Separate Road Safety wing has been established in the Transport Commissioner's office.

### **Conclusion:**

The awareness regarding road safety measures among the study participants was satisfactory but interpretation of traffic signs was poor-only 30.5% interpreted gap-in median correct. Awareness generation and orientation towards road safety issues among the students should be done through periodic trainings. Strict enforcement of laws and periodic organization of traffic awareness campaigns are essential for checking out risky practices in driving and thereby can result in decreasing the burden of road traffic accidents. It was concluded that the students were well-aware of the rules and regulations of road traffic but did not practice these measures. They had the knowledge about the safety equipment and the causes of road traffic accidents. Majority of the students agreed on the development of road safety initiatives by the government and the community. So strict road traffic laws, rules and regulations must be made and must be followed by the people.

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