

Extent of Road Traffic Accidents in Mangaluru City, Karnataka, India



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Abstract

Traffic congestion is contributed due to increase of motor vehicles for travel, increase of population in urban areas and increased popularity of motor vehicles and they are purchased by people of even ordinary means. The road accidents were caused mainly due to rash and negligence driving as they do not follow the traffic rules and laws. The road accidents had occurred during weekends and during peak hours of time as everyone rushes to work or school.

Keywords: Road Accident; Rules; Laws; Rash; Negligence

Introduction

Road traffic accidents take place on all continents and in every country of the world. In the modern era, there is an increase of vehicles, which has lead to the increase of road traffic accidents. There are numerous accidents taking place in Mangaluru in Karnataka, India, so it is necessary to understand the major causes of the accidents and if there is a way that road accidents can be reduced. A road traffic accident can be defined as "An event that occurs on a way or street open to public traffic, resulting in one or more persons being injured or killed, where at least one moving vehicle is involved." As per the Comparative Crime Statement of the years 2015 and 2016 released by Mangaluru Traffic Police Station States that in the year 2015 there was 715 cases of reported traffic accidents in that 499 were convicted and in the year 2016 there were 699 cases of reported traffic accidents in that 439 were convicted [1].

The major causes of accidents are drunk driving, driving over the speed limit, not using helmets and seat belts, rash and negligence driving, failure to maintain lanes, brake failures, due to bad road conditions and rash driving in Ghats and curvy roads, etc. Strict action is taking against the rule breakers then people will start taking caution when driving which may not completely stop road collisions from happening but it could definitely reduce the amount of accidents that take place. Accidents do not just happen because of ignorance but also due to over confidence, carelessness and thoughtlessness. They also can be collisions between vehicles, between vehicle and pedestrian, between vehicle and animal, or between a vehicle and an architectural obstacle [2,3].

There are only 28 countries that have ample laws that tackle all five behavioral risk factors like speed, drunk-driving, helmets, seat belts and child restraints. The World Health Organization (WHO) has been concerned with road safety for four decades and has discussed the severity of the problems. Indian roads are unsafe even for pedestrian's i.e. 15,796 deaths in 2016. The number of pedestrian deaths has increased from 2015 to 2016 in India.

There are punishments mentioned under the Indian Motor Vehicle Act, 1988 and Indian Penal Code for various motor vehicle related offenses.

Punishment for traffic accidents are mentioned in the Indian Penal Code under the following sections:

- a) Section 279 of IPC: Rash driving or riding on a public way – whoever drivers or rides any vehicle in a rash and negligent manner endangering human life or likely to cause hurt or injury to any other person, shall be punished with imprisonment which may extend to six months or with fine of thousand rupees or both.
- b) Section 337 of IPC: Causing hurt by an act that endangers life or personal safety of others. Causing hurt to any person by doing an act in a rash and negligent manner that endangers the life and safety of any other person, shall be imprisoned for six months or with fine of five hundred rupees or both.
- c) Section 338 of IPC: Causing grievous hurt to any person by doing an act in a rash and negligent manner that endangers

the life and safety of any other person, shall be punished with imprisonment which may extend to two years or with fine of one thousand rupees or both.

d) Section 304(A) of IPC: Causing death by negligence- whoever causes death of any person by doing any act in a rash and negligence manner not amounting to culpable homicide, will be punished with imprisonment of a term which will extend to two years or with fine or both.

Methodology

This study is undertaken with the permission of the Commissioner of Police, Mangalore City Police Commissionerate. After taking an appointment from the respective sub-divisions, the comparative crime statistics of 2015, 2016 and 2017 with regard to road traffic accidents has been collected. Further, analyzing the recorded data gathered from the four divisions, it was found that only convicted case files had all the details needed for the study in the respective police stations. For the purpose, the researcher had taken following objectives:

- a) To find out the main causes for road accidents in Mangaluru city, Karnataka, India.
- b) To know at what time of day, day of the week and month of the year road accidents occurred.
- c) To find out which vehicles are most involved in road accidents.
- d) To suggest measures to reduce road accidents in the city of Mangaluru, Karnataka, India.

The universe of the study is Mangaluru City Police Commissionerate which consists of four Traffic Police Station namely Traffic East Police Station, Kadri, Traffic West Police Station, Pandeshwar, Traffic North Police Station, Surathkal and

Traffic South Police Station, Nagori. The Traffic South Police Station, Nagori was established in 2017 and there were no statistics available. Hence, this police station is excluded for the present study [2-5].

A total of 439 cases were obtained from three Police Stations. Further, collected data has been coded in a code book. Based on the objectives, altogether 10 variables have been found useful for the analysis. Later SPSS software has been adopted for the comparison and co-relation of data. The statistical data has been presented in form of graphs.

Analysis and interpretation

The total road accident statistics were compared between the three traffic police station in Mangalore City Police Commissionerate, it reveals that majority of the road accidents were reported in Traffic North Police Station, Surathkal(217), followed by Traffic West Police Station, Pandeshwar(113)and least cases were reported in Traffic East Police Station, Kadri(109).

Graph no. 1: Day and time of the occurrence of road accidents

Most of the road accidents occur during weekends as there is less traffic and people tend to over speed and drive in a rash and negligent way. They also tend to go out of the city and there could be many road accidents in the highways as. There would be parties during weekends which would lead to drinking and driving. During weekdays minor traffic accidents takes place as there will be heavy traffic. Also, many road accidents take place at night as there is no traffic and the road will be empty so people will tend to over speed. During peak hours of traffic i.e. when it is time for schools or offices or when they leave, there will be heavy traffic which could lead to minor accidents. Hence, day and time of the occurrence of road accidents has been considered as an important variable for the analysis [6,7] (Figure 1).

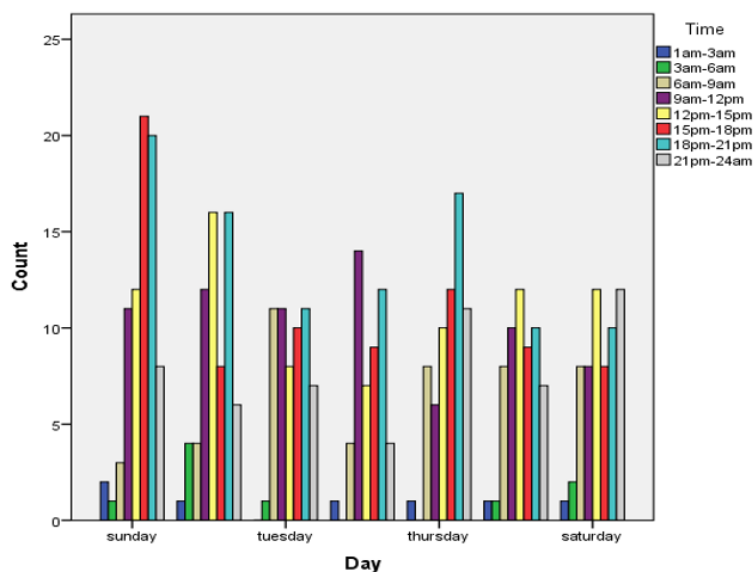


Figure 1

The graph compares the occurrence of road accidents with regard to day of week and time of three Traffic Police Stations of Mangaluru city reveals that 21 percent of the road accidents have occurred on Sunday between 15pm to 18pm. It also shows that on the same day 20 percent accidents have been reported between 18pm-21pm. On Monday it has been noted that 16 percent of the accidents have taken place between the time span of 12pm to 15pm and 18pm to 21pm. Majority (11%) of the accidents that took place on Tuesday ranged between 6am to 12pm and 18pm to 21pm. Similarly, on Thursday majority (17%) of the road accidents were reported between 18pm to 21 pm. During Friday and Saturday many of the road accidents have occurred between the time span of 12pm to 15pm (12%) and 18pm to 21pm (10%).

The least number of road accidents have occurred during the time span of 1am to 3am and 3am to 6am [8].

Graph no. 2: Age of the accused and causes of road accident

Youngsters are most involved in road accidents while middle age individuals and older people are least involved as they drive carefully and follow the traffic rules and laws. Also, majority of the road accidents take place due to the rash and negligent driving of individuals and not due to road conditions or environmental conditions but mainly because proper precaution isn't taken by the individuals to keep themselves safe as well as others around them. Hence, age of accused and causes of road accidents has been considered as an important variable for the analysis [9] (Figure 2).

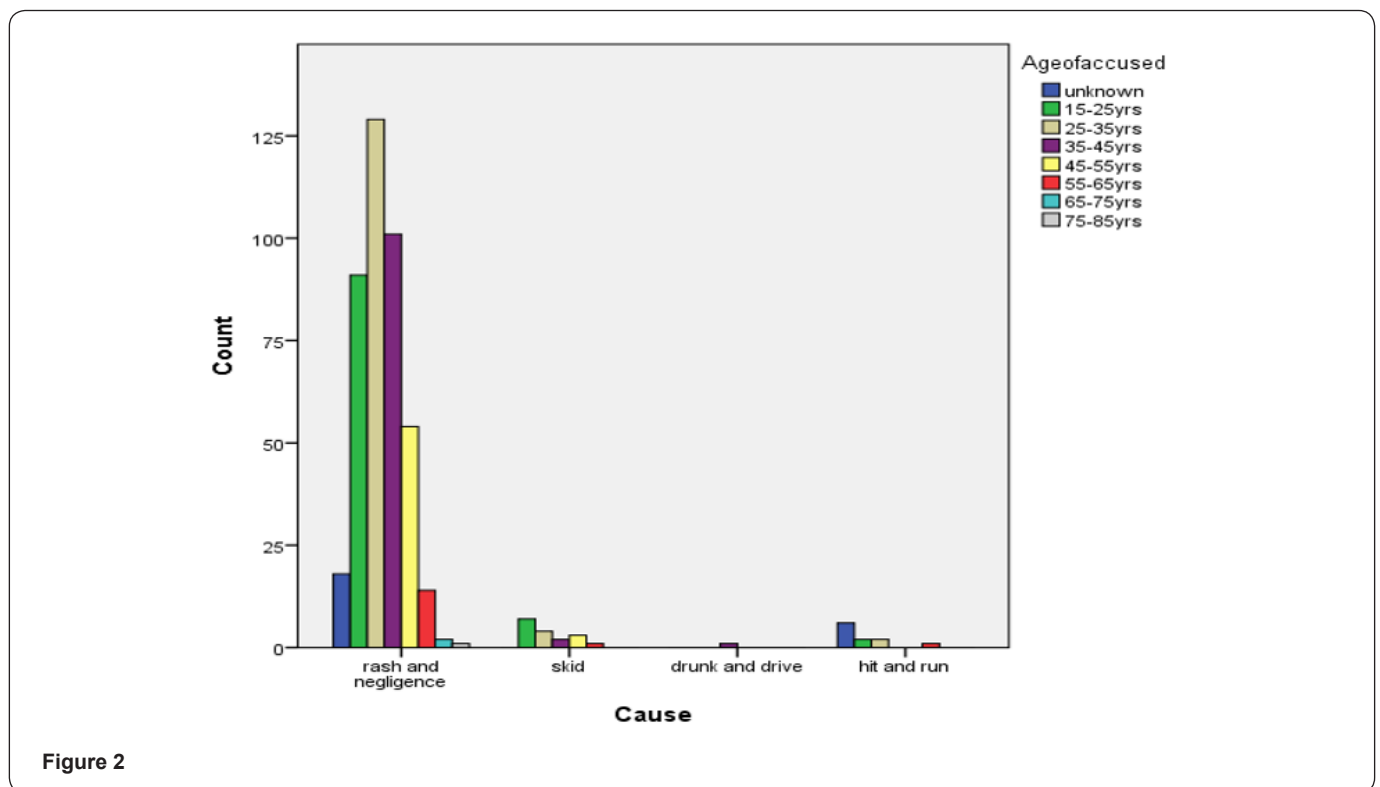


Figure 2

The above bar diagram shows the age of accused and cause of road accidents which is reported from three Traffic Stations of Mangalore City Police Commissionerate. It reveals that, majority of road accidents were caused by person between the age group of 25-35years (125%) and 35-45 years (100%). The main cause of it is rash and negligent driving and skidding of vehicle. The least number of accidents were caused due to drunk and driving. The accused aged between 55 years to 85 years are least involved in road accidents. Persons between the age group 15 to 25 years and 25 to 35 years were involved in hit and run cases [10].

The comparative data with regard to the Place of Occurrence of road accidents which is reported from three Traffic Police Stations of Mangalore city reveals that more than 41 percent of the road accidents were reported in eleven places in and around Mangalore

city. These places include shopping areas, work places and park where heavy traffic movements occur. Nearly 33 percent of the road accidents occurred in the National highway and Industrial areas (Surathkal, Panambur, Mulki and Nanthoor). More than one fourth of the road accidents (25.57%) took place in the Heart of Mangalore City (Pandeshwar, Hampankatta and Market road near State Bank) is due to heavy traffic in those places as it consists of market places, shopping complex, official dealings and work places [11].

The data pertaining to the month of occurrence of road accidents which is reported from three Traffic Police Stations of Mangalore city reveals that the highest number of road accidents (31.86%) had occurred in the winter season (January, February, March and December). 26.23 percent of the road accidents took

place in the months July, August and September i.e. Monsoon season. Whereas, during the summer season 25.71 percent of the road accidents had occurred in the month of April, May and June. The least number of road accidents (16.5%) took place in autumn season i.e. October and November [12].

In case of data collected to the accused vehicle involved in road accidents which is reported from three Traffic Police Stations of Mangalore City Police Commissionerate reveals that more than half of the road accidents (64.69%) are caused by Motorcycles and Cars. More than one fourth of the road accidents (22.58%) were caused by Lorries and Buses. The vehicles least involved in accidents were Auto rickshaw and Tempo (11.96%) in the city of Mangaluru.

The data with regard to the gender of accused involved in road accidents which is reported from three Traffic Police Stations of Mangalore City Police commissionerate reveals that Male (98.2%) are most involved in vehicular accidents whilst females (5.7%) are least involved as they do not drive as often as males

Findings

- a. 21 percent of the road accidents have occurred on Sunday between 15pm to 18pm and on the same day 20 percent accidents have been reported between 18pm-21pm.
- b. On Monday, 16 percent of the accidents have taken place between the time span of 12pm to 15pm and 18pm to 21pm.
- c. Majority (11%) of the accidents that took place on Tuesday ranged between 6am to 12pm and 18pm to 21pm.
- d. On Thursday, 17 percent of the road accidents were reported between 18pm to 21 pm.
- e. During Friday and Saturday many of the road accidents have occurred between the time span of 12pm to 15pm (12%) and 18pm to 21pm (10%).
- f. The safest time to travel was found to be between the time span of 1am to 3am and 3am to 6am.
- g. Most of road accidents were caused by persons between the age group of 25-45years (125%) and 35-45 years (100%).
- h. The accused aged between 55 years to 85 years are least involved in road accidents.
- i. The main cause of it is rash and negligent driving and skidding of vehicle.
- j. The least number of accidents were caused due to drunk and driving.
- k. Persons between the age group 15 to 25 years and 25 to 35 years were involved in hit and run cases.
- l. More than 41% of the road accidents took place in and around eleven places in Mangalore City (Bendoorwell, Bejai, Kadri, Lalbagh, Urwa Store, Bunder, PVS, Mannabettu, Kottara, Bajpe, Kavoor).

m. 33% of the road accidents occurred in the National Highway and Industrial areas (Surathkal, Panambur, Mulki and Nanthoor).

n. In the Heart of Mangaluru city, more than one fourth of the road accidents (25.57%) occurred in places like Pandeshwar, Hampankatta and Market road near State Bank.

o. The highest number road accidents (31.86%) had occurred in the season of winter (January, February, March and December). 26.23% of the road accidents took place in the months July, August and September i.e. Monsoon season.

p. In the summer season (25.71%) of road accidents had occurred in the month of April, May and June. The least number of road accidents (16.5%) took place in autumn season i.e. October and November.

Suggestions

- i. The fines for the road accidents are too low that a common man can afford. Hence the fines should be way higher so that all those who are using vehicles will be more careful while riding/driving and that will deter them to ride or drive in a rash manner.
- ii. There should be strict regulations and should spread awareness with regard to these regulations for pedestrians while crossing and walking on the roads.
- iii. The traffic signs should be put in major accident prone areas as to warn the other commuters.
- iv. Even drivers should be highly penalized if they break the traffic rules and laws.
- v. The Speed limits of the vehicles should be checked and fines should be levied if found over speeding.
- vi. Cameras should be kept in all important junctions, busy roads and in lanes. The cameras should be checked regularly by the constables in the control room.
- vii. Pedestrians should also be fined if they do not cross on the zebra crossing and if they do not walk in the footpath where provided. Where there is no footpath, it should be provided.
- viii. Motorcycles should be kept off the footpaths and parked only in the permitted places in order to ensure safety of pedestrians.
- ix. More speed breakers should be added near school zones, important junctions and in small lanes.
- x. Driver's education i.e. about traffic rules, laws and dangers of rash driving should be taught in schools, colleges and panchayath.
- xi. Awareness should be given to all through hoardings, SMS, TV commercials. Such messages will avoid careless accidents.

xii. There should be a point system if the drivers violate the traffic rules and it will be recorded in a system and based on that records license can get suspended or revoked.

xiii. Once the license gets revoked or suspended, the drivers should be made to attend "Defensive driving" classes for 10 days, where rules and regulations will be taught, after receiving the certificate then they can re-apply for the license.

xiv. Crossing bridges are to be erected in certain places in National Highways and major junctions like Nanthoor and places where it seems fit.

xv. Dividers and markings on the road need to be painted every couple of months as it fades and it is difficult for the driver to see while driving at night.

xvi. Plants need to be grown on the dividers mostly on the Highways so that the glare from the head lights of other vehicles won't disturb the drivers on the other side of the road and pedestrians cannot cross where they please on the highways.

Conclusion

a) The road accidents were caused mainly due to rash and negligence driving as they do not follow the traffic rules and laws.

b) Most of the victims were pedestrians. Many of the times it isn't the fault of the driver, the pedestrians do not cross in the specified crossing area.

c) The road accidents had occurred during weekends and during peak hours of time as everyone rushes to work or school. Traffic should be controlled during these peak hours as it could avoid many accidents by placing more than one traffic police officers in major junctions.

d) People were negligent in the way they drive and some road accidents could have been avoided easily if traffic rules and laws were followed.

e) During the weekends and at night there are more accidents as they over speed because there will be less/no traffic and will tend drive/ride in the wrong side of the road.

f) Most of the road accidents were very simple in nature and filed for insurance purpose.

g) The files in the police station should be maintained well and the papers should be kept in order for easy retrieval.

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