

A Retrospective study on road traffic Accidents from ABVIMS & Dr RML hospital New Delhi

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ABSTRACT: Road Traffic Accidents (RTA) are the one of the major causes of death in the world where India ranks 1st in number of RTA across the 199 countries reported in the World Road Statistics in 2018, followed by China and USA. Road crashes are the second leading cause of death globally among young people and affect the most economically active members of the population. More than 90% of RTA occurs in the low income middle countries.

The major reason for these are Road Features, Road Junctions, Types of Traffic Control. Ongoing Construction Works, Speed Breakers, Weather Conditions, Poor Lighting, Lack of Adequate Road Signs, Sidewalks, Neighborhood Environment. Human Factors like Violation of Traffic Rules, Invalid Driving license, non-use of safety Devices like Helmets and Seat Belts, Triple riding, Distracted Driving, Negligent Parking, Not Crossing Roads at Pedestrian Crossings, Road Rage, Overloading/ Overcrowding of Passengers Vehicles and improper use of Headlights.

Our study aims to find Gender, Age, Place, Time, and Seasonal Variation in Road Traffic Accidents (RTA). Further, to know difference in mode of accident(whether pedestrian/vehicles) does the accident. We studied retrospective one year data from January 2022 to January 2023 of all the RTA cases which were done at DR.RML Hospital (Mortuary) and following results were found. Major fatalities were of Males of age group (21-30) years. of which, seasonal variation slightly more in summer (April-June) and most accidents occurred in daytime on streets and highways. Maximum victims were Pedestrians. Intake of alcohol was not taken into account as Viscera Analysis reports were not available along with the Post Mortem reports.

The limitation of this study is, the lack of history taken from relatives as it is a retrospective study and hence, further studies are needed to overcome the limitations.

Key Words: Road traffic Accidents, Variation, India.

INTRODUCTION

Road Traffic Accidents (RTA) are one of the major causes of death in the world where India ranks 1st in number in RTA across the 199 countries reported in the World Road Statistics in 2018, followed by China and USA.(3) Road crashes are second leading cause of death globally among young people and affect the most economically members of the population. More than 90% of RTA occurs in the low income middle countries.(2)

India has a fatality rate in road traffic accidents i.e. 20 times that of developed countries. According to Registrar of general of India, the data of all injury related fatalities only reflect 20-30% of actual injury related data, India has 1% of world vehicles but 6% of total RTA occur at India, The major reason for these are : Road Features, Road Junctions, Types of Traffic Control. Ongoing Construction Works, Speed Breakers, Weather Conditions,

Poor Lighting, Lack of Adequate Road Signs, Sidewalks, Neighborhood Environment. Human Factors like Violation of Traffic Rules, Invalid Driving license, non-use of safety Devices like Helmets Seat Belts, Triple riding, Distracted Driving, Negligent Parking.(2)Also as per studies road traffic accidents were due to consumption of alcohol,,rash driving or consumption of liquor,,Majority were pedestrians and animals sharing roadways with fast and slow moving vehicles. Increased driving speed of vehicles ,disregard of traffic rules,are one of the cause of death.

Road traffic accidents can be called as perennial disaster as the life claimed are more than any disaster .RTA crash causes economic loss(3). The loss arises from cost of treatment as well loss of economically productive days of persons and further sufferings by family members. The UN general assembly has set up an ambitious target of halving the global no. of death and injuries for road traffic crash by 2030. It is not at all expected that road accidents will be removed from the country. The way to control road traffic accidents is in our own hands as it is not a natural disaster. Ensuring proper remedy must be considered by the policy makers before many more lives are taken away by the threat of road traffic accidents.(2). Mximum no of deaths were between 10.00 am -11.00am due to school, officials and shopkeepers going to their work.

We have seen that most of countries have a multidisciplinary approach to traffic planning and road design. It is done by psychologists, engineers, doctors, sociologist, vehicle expert .While in other developed countries including China the situation is improving – but in India it is not if trend continues no. of RTA would increase by 100% between 2013 and 2027 .Without increased effort and new initiative the RTA death in India is likely to cross the mark 250,000 It is also expected from Indian population that we should drive and cross roads carefully and should not hurry while on roads, Drunkenness is one of the reason of accidents, so should be avoided.

REVIEW OF LITERATURE

Sanjay et.al analyzed that road accidental death and injuries in India vary according to age, gender, month and time. Age between 30-59 years is the most vulnerable population group though males face high level of fatalities and injuries than female counter parts. Moreover, RTA is higher in extreme weather and high in union territories than all groups.

According to Department of community medicine HIMS, Dehradun, Uttarakhand, by Kakkar et al India. RTA is due to multi-factorial causes like human, vehicular and environmental factors. Most common cause of RTA was driving above speed limit followed by consumption of alcohol by driver, rash driving at turns, its sharing road rages with fast moving vehicles.

According to article on road traffic accident by Sharma et al in 2023 approx 1.19 million people die each year as a of result of road traffic accident. RTA is the leading cause of death in children and young adults aged between 5-29 years. 92% of world fatalities on the road occur in low and middle income countries, and more than half of road traffic deaths are among vulnerable road users including pedestrians, cyclist and motor cycleist(3).Also dangerous and careless driving.overtaking,drunken driving,use of mobile phone accounts for road accidents.

As stated, most vulnerable age group was 25-34 years, and male predominance. Most common cause of RTA was driving rash (47.1%) followed by consumption of alcohol by drivers and rash driving at turns, On the basis of result obtained, major cause of RTA were predominately pedestrians and animal crossing the road with fast and slow moving vehicles Increased speed of vehicles widespread of disrespect of traffic rules, unusual behavior of men are cause of road traffic accident,

Acc to article on road traffic accident by McIvening, road traffic injuries kills 1 to 2 million people each year and injure or disable as many as 50 million which represents 60 % increase in last 5 years, Road crashes are¹ the

second leading cause of death' globally among young people and affect most economically active members of population.

Kakkar et al concluded that road traffic accidents were more in day time,.Pedestrians, were involved more and occurred on highways, Accidents rate were higher in males than females

AIM AND OBJECTIVES

1. To know the variation on the basis of Gender, Age, Seasonal Variation, Diurnal variation for road traffic accidents.
2. To find out whether the drivers/passengers or the pedestrians are more prone to road traffic accidents.

MATERIAL & METHODS

We have collected data from Postmortems which has been conducted from Jan 22 - Jan23.Total 959 cases were done, 200 cases were of road traffic accidents .Various factors in terms of age, gender, seasonal variation, time of occurrence, mode of accident were analyzed. Appropriate statistical test were done to find the results.

RESULTS

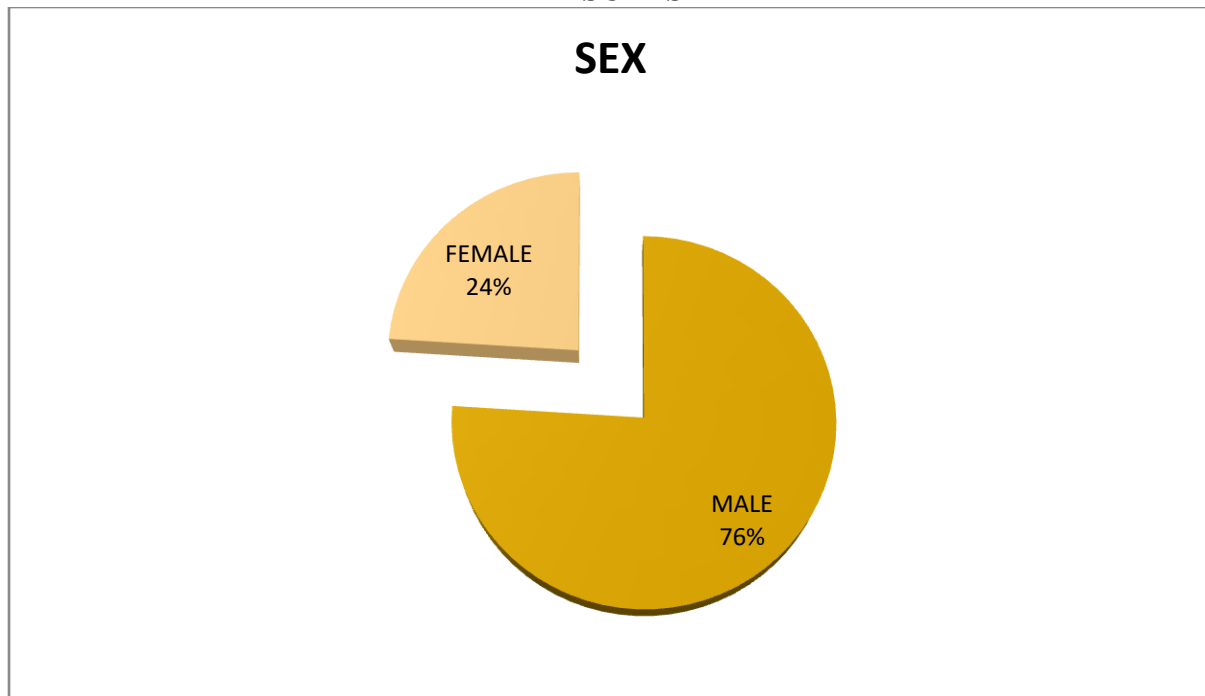


Fig no 1 figure showing gender difference in our study

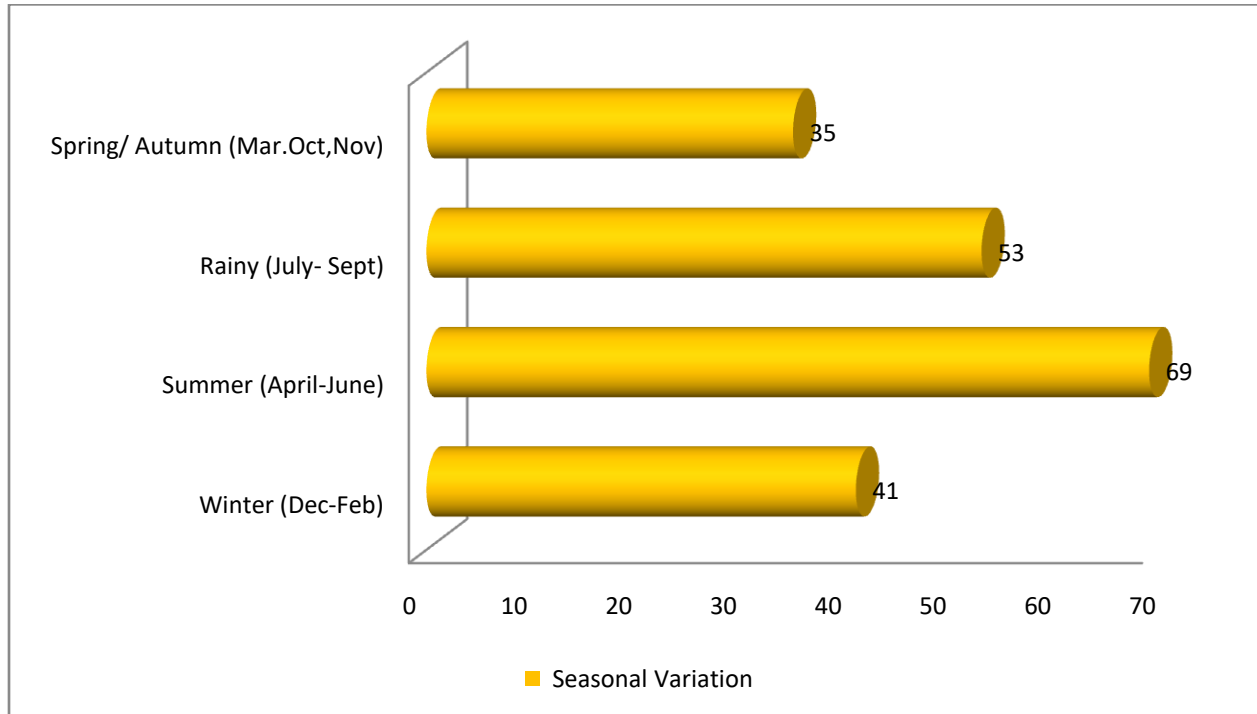


Figure No 2 Showing Seasonal variation in our study

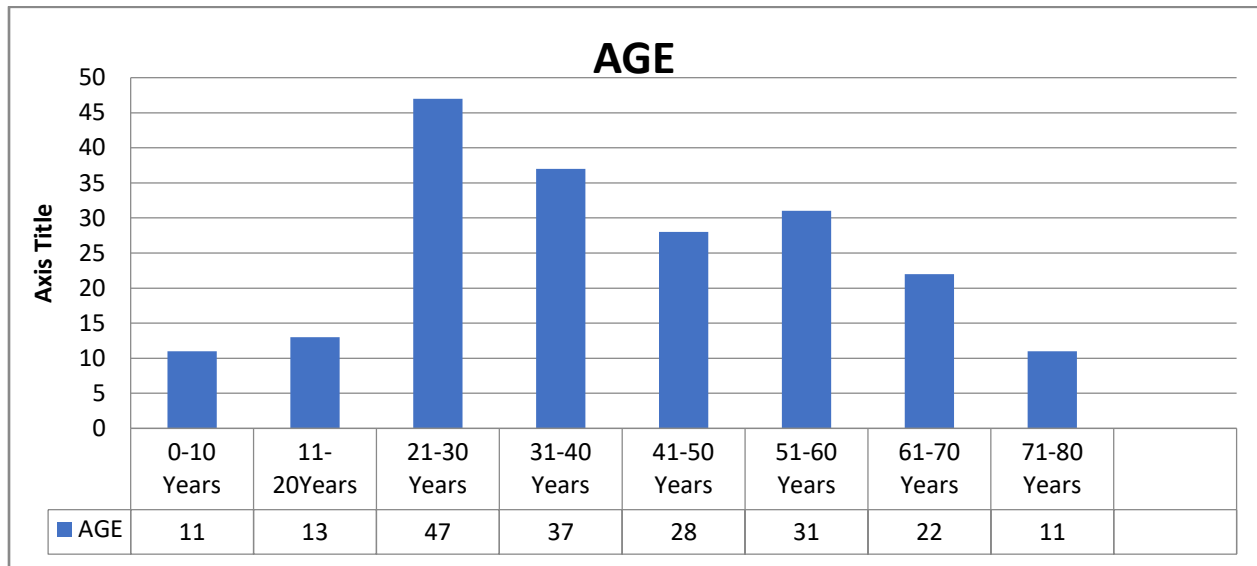


Figure no 3 Showing Age variation of RTA in our study

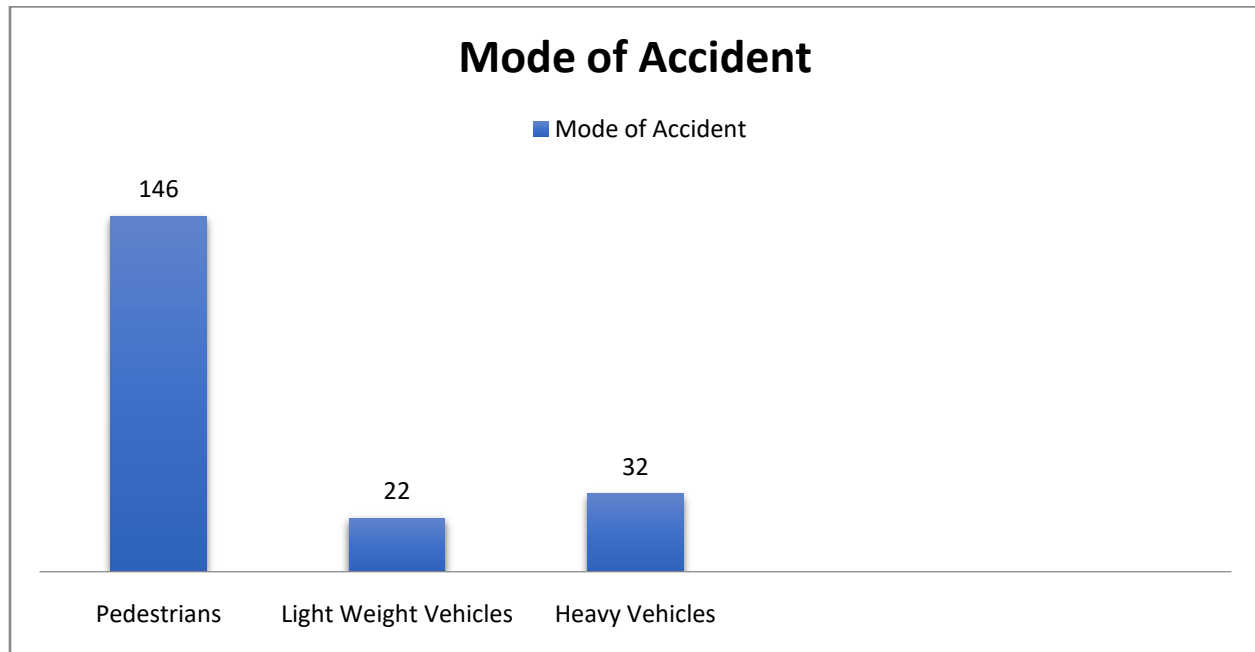


Figure no 5 showing Diurnal Variation in our Study

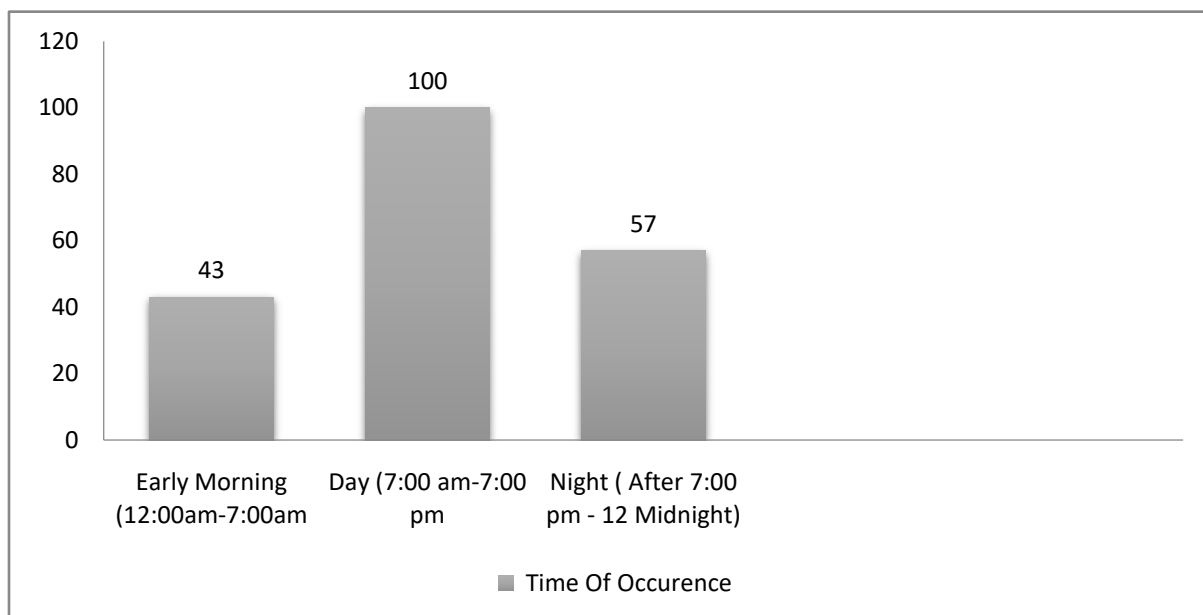


Figure no 6 showing mode of accidents in our study

DISCUSSION

In our study, maximum cases were of males,(Refer Figure no 1) with age group of 21 -30 (Refer Figure no 3) years and majority of accidents occurred in April to June (summer season)(Figure no 2), Maximum Were pedestrians (Fig no 6)and majority of the cases occurred in day time (7.00am to 7.00pm).(Fig no 5)

A traffic accident is defined as an accident involving at least one vehicle on a road open to public traffic in which at least one person is injured or killed.

According to WHO on road safety, 1.25 million people kill on world roads and more than 1 million bear injuries. Factors responsible for RTA are environmental, human, socio demographic, medical technology, political, organizational. Some factors like sunset, dusty environment, lack of concentration are some factors.

Safety can be improved by successfully co relating frequency of accident occurrence and severity of causative variable, RTA can be reduced through proper education & promotion level that encourages the use of safety equipments, There are various reasons which are effectively useful for reduction in the no. of crashes and injuries by road accidents i.e. governing traffic rules ,maintaining speed limits, use of helmets, making vehicles more protective, speed alarming notifications to the nearest police patrolling vehicle and formulating and implementing compulsory helmet. However, human error seems to be major cause in road traffic accident. It is also due to stress caused by economic or family problem.

Environmental factors like road conditions, weather conditions, hill slopes also play vital role in road traffic accidents. Majority of accidents occur among vulnerable roads as motorcyclist (23%), pedestrian (22%).

Preventive measures include maintenance of Vehicles with good brakes, pedestrians walking on the pavement instead of walking on road. Without effective efforts and new initiatives, the total no. of road traffic deaths in India is likely to cross the mark of 250,000 by 2025.

Misjudgment, lack of clear understanding of functioning of vehicle can be reason for road traffic accident. Also according of study done in 2022 over speeding, drunken driving, driving on wrong side, jumping red light, use of mobile phone, weather conditions., improper vehicular care are one of the reasons for road traffic accidents.

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