

# Study of Profile of Motor Vehicle Accidents in Thiruvanniyur Traffic Police Station

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## Abstract

Accidents are an intentional act which is not a voluntary act done by the people. Accidents, tragically, are not often due to ignorance, but are due to carelessness, thoughtlessness and over confidence<sup>[1]</sup>. Human, vehicle and environmental factors play roles before, during and after a trauma event. Accidents, therefore, can be studied in terms of agent, host and environmental factors and epidemiologically classified into time, place and nature of injury.

**Keywords:** Accidents, Ignorance, Carelessness, Environmental factors

## Introduction

We all know how difficult it is to cope up with a sudden loss of life of a near and dear one; moreover, if the person who died was the bread earner, then the lives of the dependents turn topsy-turvy. One of the major reasons for sudden or unexpected deaths in India is road accidents. The irony is that, most of the road accidents could have easily been avoided. A Motor Vehicle 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<sup>[1]</sup>. Thus it can be due to collision between vehicles, between vehicles and pedestrians, between vehicle and animal or between vehicle and geographical or architectural obstacles.

Road traffic accidents are a human tragedy. They involve high human suffering and socioeconomic costs in terms of premature deaths, injuries, loss of productivity and so on. The situation that leads to improper interactions could be the result of the

complex interplay of a number of factors such as pavement characteristics, geometric features, traffic characteristics, road user's behaviour, vehicle design, driver's characteristics and environmental aspects. Thus, the whole system of accident occurrence is a complex phenomenon. The problem of deaths and injuries as a result of road accidents is now acknowledged to be a global phenomenon. The authorities in all countries of the world feel concerned about the growth in the number of people killed and seriously injured on their roads.

The major human factors that contribute to the potency of road accidents causation include drunken drivers, indecisiveness, fatigue, distraction, and confusion. In addition most of the drunken drivers are found to be inexperienced, risk takers, impulsive, aggressive, casual and unaware of the road signals. In India, the motor vehicle population is growing at a faster rate than the economic and population growth. According to WHO, motor vehicle injuries are the sixth leading cause of accidents in our country<sup>[2]</sup>.

## Materials and Method

The study on the profile of Motor vehicle accidents for the year January 2017 - December 2017 at Thiruvanniyur Police Station which comes under South Chennai division, Taramani subdivision, Adyar Traffic Police Station and Thiruvanniyur police Station covers the areas starting from Indira nagar, Kamarajar nagar, Radhakrishnan nagar, Thiruvalluvar salai,

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Marundheeswarar nagar, Vannandhurai, Lakshmiapuram, Kalakshethra colony, Odaikuppam, Mada street, Mangaleri, Rathnam nagar, Puthirankanniamman kovil street, Thiruvanmiyur kuppam, Beach road, Teachers colony, Valmiki nagar, Thiruvalluvar nagar, Srinivasapuram, Journalist colony, PTC colony, Kannapan colony up to Avvai nagar.

My study was analyzed in accordance to the data given by the Thiruvanmiyur Police Station for J6 limit control areas and on the basis of Sex of the victim and accused ; Type of injury either fatal/ non-fatal ; Date of occurrence ; Time of occurrence ; Type of area whether it was nearby a recreational area, nearby hospital , an office , market , bazaar ; Total number of vehicles involved either one or two or three ; Accused vehicle ; Victim involved either a vehicle or pedestrian ; Accused wearing helmet or not ; Nature of injury / death ; Nature of accident due to over speed , rash driving, bad overtaking , sudden breaks , close following , inattentive turn and others<sup>[3]</sup> .

Thus the nature and severity of the problem though vary to a great extent in the different parts of the world but has posed a serious menace for every society in the recent years. Therefore it needs an in-depth study so as to suggest the preventive and curative measures. In this descriptive work, efforts have been made to study and analyse the problem of motor vehicle accidents with special focus on the time, months and place of occurrence and so on. The design structured for this study is descriptive. This purpose of this research design is to provide description of the individuals, nature and causes of the problem under investigation.

## Result and Discussions

### According to the type of injury

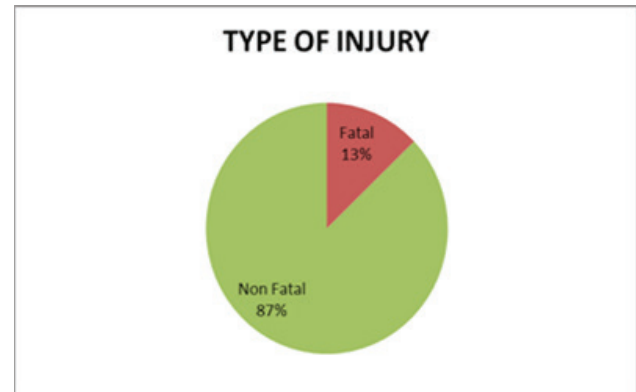
Whenever a road accident occurs on the road, mainly two types of accidents i.e. fatal injury and non-fatal injury are said to happen, depending upon the severity of injury.

Out of total 39 motor vehicle accidents that occurred under the limit of Thiruvanmiyur Traffic Police Station [fig1], 34 where non-fatal (87%) and 5 where fatal (13%). It is observed that maximum injuries where non-fatal which can be serious, severe or minor injuries.

In the similar studies made during the year 2008, nearly 1.3 million people died every year in Indian roads

and 20 to 50 million people suffered from non-fatal injuries <sup>[4]</sup>. When we compare this data with the study made, there is huge reduction in the rate of fatal injuries during 2017 in a particular area.

Figure 1: Type of Injury



### According to the type of vehicles involved in accident

The severity of accident depends upon the type of vehicle involved in the accident. There are more chances of fatal accident taking place in case of van, car, motor cycle, auto rickshaw, MTC bus, jeep and other vehicles.

Out of total 39 cases that was registered, 16 accidents was due to car (41%), 11 by Motor Cycle (28%), 4 due to van (10%), 2 was due to auto and MTC bus each(5%) and 1 due to jeep (3%) [fig2].

Previous studies showed that cars contributes to about 46% of the total accidents occurred followed by truck, bus, tempo up to 38% and the least 6% by auto<sup>[4]</sup>. Hence there is a reduction in rate of car accidents in this study of a small area.

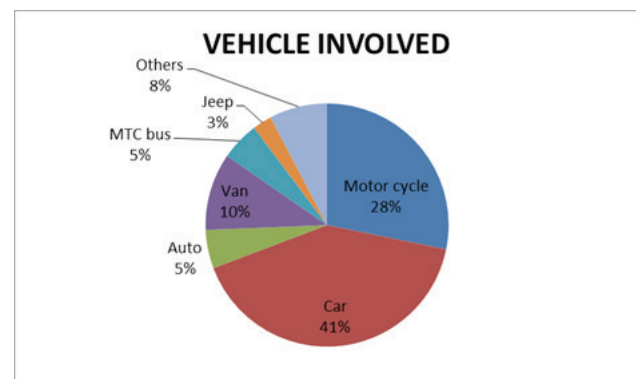


Figure 2: Vehicles Involved

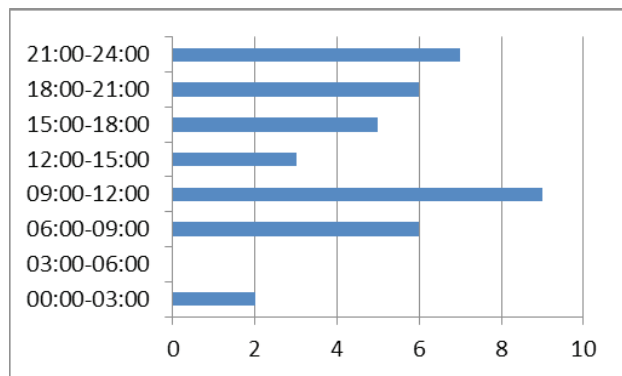
**According to time of accident**

Mainly, we divide road accidents according to 24hrs time period in the interval of three hours i.e., 00:00 - 03:00, 03:00 - 06:00 and 06:00 - 09:00 and so on.

From the total of 39 cases about 9 accidents took place during 09:00 - 12:00 (23.07%) then followed by 7 during 21:00 - 24:00 (17.9%). It is also clear that there was no accident occurred during 03:00 - 06:00 (0%) and the least 2 accidents during 00:00 - 03:00 (5.1%). It is also evident that during 06:00 - 09:00 and 18:00 - 21:00 there were equal percentage of accidents (15%) occurred [Table1].

According to the similar studies we can observe that in 2012, 16.7% of the cases of road accidents were reported to have occurred between 1500 and 1800 hours followed by 16.6% between 1800 and 2100 hours [4]. But in this study the maximum number of accidents occurred during 0900 and 1200 hours which is working hour's daytime.

**Table 1: Time of Accident**



**According to the month of occurrence**

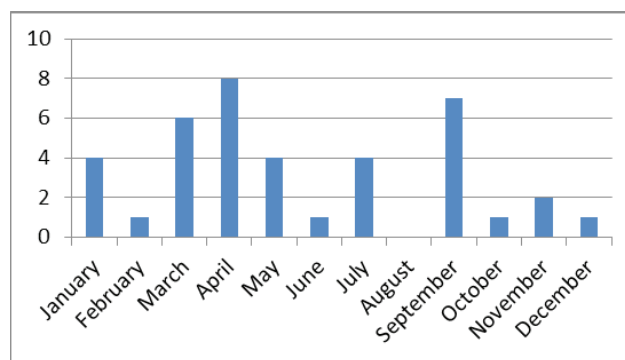
The number of accidents differs in each month due to change in climatic conditions and other physiological conditions.

From the study of 39 accidents [Table2], maximum of 8 accidents occurred during the month of April (20.5%), 7 during the month of September (18%) and the least about 1 occurred in the month of February (2.5%), June (2.5%), October (2.5%) and December

(2.5%). There was no evidence of accident during the month of August.

When we compare with previous study done in Tamilnadu during the year 2012, the month wise distribution of road accidents has also shown more accidents during the month of May (8.8%) followed by the month of April (8.74%) and January (8.72%) while the least number of accidents were reported in the month of September[4]. Hence my study shows maximum occurrence of accidents during the month of April (20.5%) and the minimum during February, June, October and December (2.5%) each.

**Table 2: Month of Occurrence**



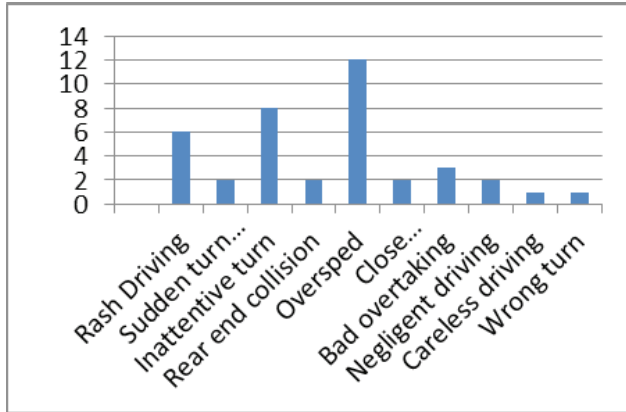
**According to the nature of accident**

The nature of road accidents that occur on the road can be due to vehicle overtaking , head on/rear end collision , rash driving , sudden turn without collision , inattentive turn , wrong turn , close following and sudden break , over speed , negligent and careless driving .

From the study, out of 39 road traffic accidents, 12 were due to over speed (30%), 8 due to inattentive turn (20.5%) and rash driving (15%) whereas careless driving (2.5%) and wrong turn (2.5%) [Table3].

Similar studies made showed that the major reason was rash driving(30%), over speeding (28%) and rear end collision (5%) being the least reason for occurrence of accidents[5]. When we compare this with the present study made maximum number of accidents was due to over speeding and there is decrease in the number of accidents due to rash driving.

**Table 3: Nature of Accident**

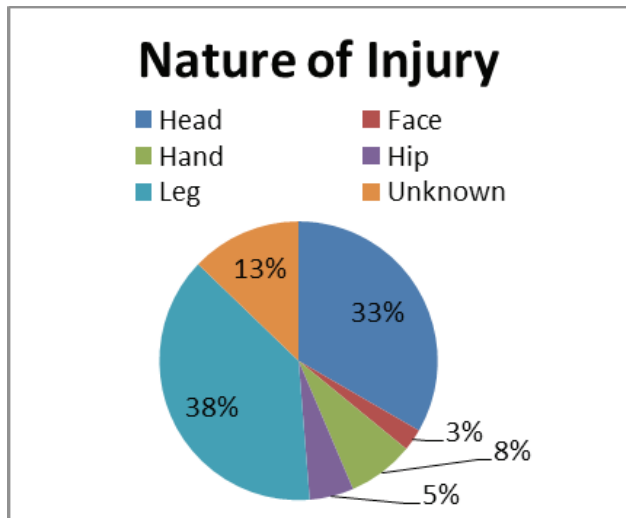


According to the nature of Injury / Death

There are certain sites where injury is more common like the legs, hand, face etc.

According to the road traffic accident data, out of 39 cases [fig3], 13 injuries was on the head (33%), 15 were on legs (38%), 2 was on the hip (5%) and 1 injury on face (3%).

A similar study showed the commonest site of injury was the head (23%) and the least common site was the hip (8%) [6]. But in this study the more common site is the leg and head injury is relatively lower when compared.



**Figure 3: Nature of Injury**

**Conclusion**

When we were young, we were taught “precaution is better than cure”, and so many other things like “one should help a person in need”, etc. but as we grow old we almost forget these things and seldom follow them and by the time we realize that what was taught to us

is really true and worthwhile, it gets too late. People need to be convinced that following rules and being in discipline is also cool and it is in their interest to follow traffic rules. Some of the rules to be followed in order to prevent motor vehicle accidents:

**Overspeeding-** Excess speeding is always unsafe, and excess speed means running vehicle more than the safe limit. Excess and inappropriate speed can result in crash, injuries to occupants and pedestrians, and damage to others as well.

**Drunk or Driving under Influence of Drugs -** Driving under the effect of alcohol or drugs is one of the causes of RTAs and mortality associated with it. Hence proper measures have to be taken in order to prevent accidents.

**Teenage Driving-** Teens as drivers are known for rash driving impulsively and also to get away reasons. They cause accidents due to inexperience and speed.

**Night Driving-** Night driving is a potential risk for travelers. Lack of street lights results in glare of the incoming vehicles especially on high beam. The speed must be under control. Night driving should be avoided on long routes as far as possible.

**Overtaking and Wrong Driving-** It is common in our country to drive on the wrong lane or driving in wrong opposite direction, not keeping to left, which may result in head-on collision.

**Poor Construction of Roads and Bad Planning-** About 400 people die on our roads daily. The roads we plan and make are substandard, constructed without due attention, and with disregard to mandatory super- vision.

**Conflict of Issue - Nil**

**Fund – Self**

**Ethical Clearance – Obtained**

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