

A Review: Framework for Analyzing Traffic Accident in Jaipur- Rajasthan

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ABSTRACT

Traffic accident has hidden global epidemic has provided a significant health and economic burden for many nations in the developing world. Every day killed an estimated average of 3242 people due to traffic accidents in the world. In India the most 1, 39,091 people lost their lives at 4, 40.042 traffic accidents the study, which was carried out in Jaipur in 2013. This is the southernmost district of the Indian peninsula. It covers an area of 1,672 square kilometers. An average of 300 people was killed in the district every year. The incident was analyzed in 2009-2013 District. The special events were obtained from District Crime Records Bureau (DCRB) where they collected information from 41 police stations in the district. The problem in this quarter due to the very sharp on the road due to the complex intensive traffic flow model, the presence of mixed traffic with pedestrians. An average of 3 persons was within 1.2 km, which killed the original geometric design area every year. The ultimate goal of this study is to develop some improvements to alleviate the circumstances that led to traffic accidents in Jaipur.

Keywords: Transport, Traffic, Accident, Road, DCRB, People, Health, Economics.

1. Introduction

The study in Jaipur done, which is the southernmost district of the peninsula of India, the seventh largest country in the world. In Jaipur, the Indian Ocean, the Arabian Sea and the Bay of Bengal hugging each other. The total population of the circle 16, 69, 763. The population density was 999 per square kilometer the district literacy rate was 91.75%. The economy of this area is dominated by agriculture. The 68 percent of the territory of the district has been used for agricultural purposes. The annual rainfall varies between 90 and 160 cm and the average rainfall is 140 cm. The district has a road network of paved roads 3495.8 km. Average 300 people were killed in the district each year in an estimated 1,300 traffic accidents each year. The circulation pattern of the district traffic is the kind of line. The problem in this quarter due to the very sharp on the road due to the complex intensive traffic flow model, the presence of mixed traffic with pedestrians.

Resource of Data

The data on the details of the events from 2009 to 2013 were obtained by special request for the purposes of the project of the District Crime Records Bureau (DCRB) Jaipur, which is under the control of the police chief, district Jaipur. The DCRB receives the data of the accident of 41 police stations in the district.

Types Accidents

Table.1 presents the accident scenario in Jaipur 2009-2013 is to reduce the total number of accidents from 1291 to 1223 mainly due to the reduction of the child, no serious injuries and accidents. Reduced non -injury accidents by 18 % in 2010 to 14 % in 2013. On the other hand , the loss of life that results as a consequence of the death of one year to 20 % of fatal accidents in 2009 to 24 % in 2013. This increase in fatal accidents was the same story also of the last two decades.

Table1. Types of accidents in Jaipur district

YEAR	FATAL	GRIEVIUS	MINOR	NON-INJURY	TOTAL
2009	259	229	768	75	1331
2010	273	220	696	52	1241
2011	282	182	709	41	1214
2012	292	176	769	59	1296

Accident Severity Index

The injury severity index measures the severity of injuries and the availability of medical facilities in this area. The injury severity index is defined as the number of people killed in 100 accidents. Figure 1 shows the severity index of Jaipur, the relatively very high. In 2009, the accident severity index 20.6, where the accident severity rate in 2013 was increased to 24.5. This shows that those killed in 100 accidents people increased every year. The 24.5 accident severity index is the relatively much higher rate. In addition, can also be a cause of the poor collection of data and its reporting process high crash severity index. Since no injuries and minor injuries, are where not included in the police files.

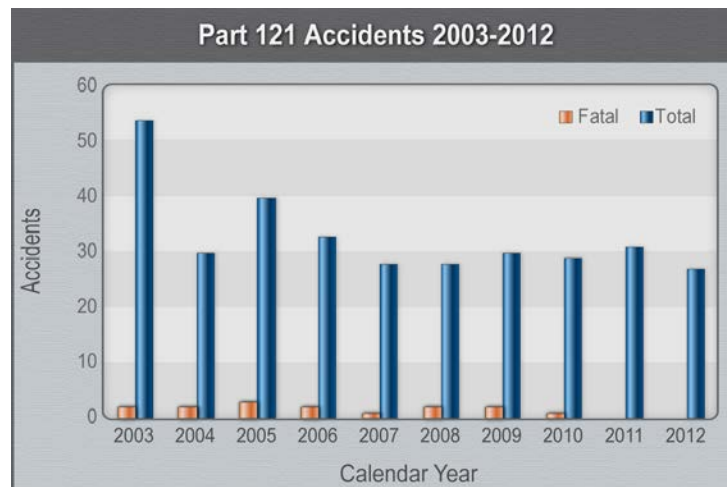


Figure1. Index Graph of Accident Severity (Persons Killed Per 100 Accidents).

2. Accidents different vehicles

The death rate of motorcyclists in all road deaths is very high in Jaipur. Figure 2 shows in recent years, motorcyclists constitute more than 40% of all deaths in traffic accidents. More than 100 killed each year in traffic accidents motorcycle users. Deaths of motor cycle carrying more than 35% of accidental death Road Jaipur and higher risks. Besides passenger bus driver, the occupants of cars and trucks occupant or time highest percentage of accidents accounts. Consequently, the mortality rate in bus accidents by 18.6% and the mortality in the car is 11.6% and the number of deaths of trucks and the time is 10.5%, or each by the average of all the determined sum of incidents year 2009-2013.

The number of accidents of various types of vehicles occurring 2009-2013 was in Figure 2. The accident caused by the motor cycle is shown very high compared to other vehicles. Engine cycle plays an important role in traffic accidents. With respect to other vehicles bus also other major sources of accidents. The next incident is the source of cars. These days, there are now more the number of cars of the year is recorded to year. This is the main source of motor vehicle accidents. With respect to time and trucks, time has faced large number of accidents. wear tempo heavy loads, so that it has more chances of accidents. After the time of the truck is also a producer of incident source. Comparing accidents caused by time of accident caused by truck low. Small vehicles like car even in the face with these types of problems such as accidents. But the accident rate is less than the larger vehicles. The tourist vehicle as a taxi is also this kind of problems. Compared to all other vehicles such as motor cycle, bus, car, truck, time, car accident, caused by a taxi it is less.

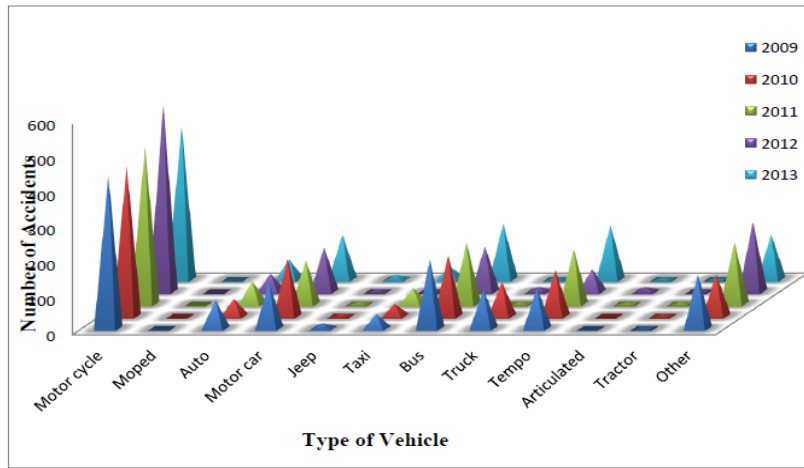


Figure 2: No of Accidents by Various Vehicles

3. Accident classified by time Periods

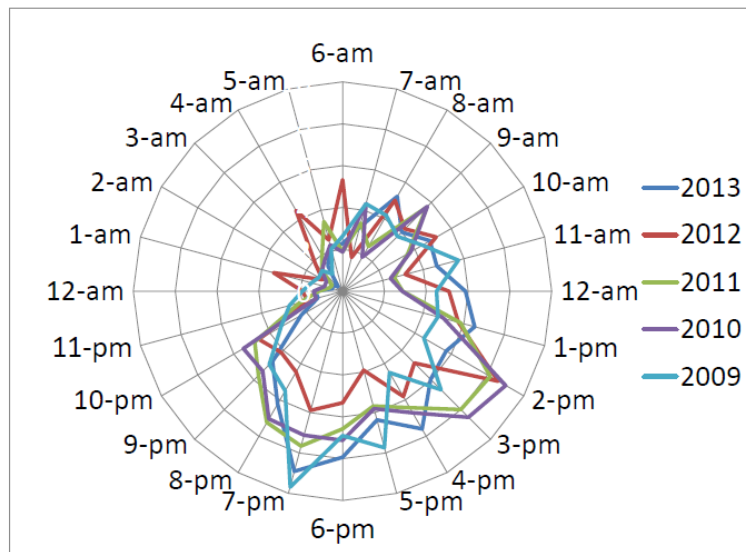


Figure 3: Accident Cycle with Time periods

Figure 3 shows the percentage of incident of time. The accident rate is much lower than before the morning at 00: 00 AM-06: 00 AM .After the accident rose slightly at the time of 7: 00 AM -1: 00 PM. The increase in an accident is due to

masses of people to another reason to transport from one place to go to college, work, school, etc. from 2: 00 PM -7: 00 PM the accident is much higher which is due to the high amount of people back home, from where they went in the morning to work, school, etc. So clearly shows more number of incidents in the afternoon and evening occurred. And minus the number of incidents took place in the morning. This may be because in the morning the riders can feel very enthusiastic and active.

Figure 4 shows in May 2009, more number of accidents treated. March and April has the same number of accidents. In August and January, it has a lower number of accidents. June, July, an accident February almost equal to the end of September, October, November has much less amount of incidents and increased again in the last month of December, has. This clearly shows that the month of May and March has large number of accidents. In 2010, May and March months number of accidents over. And next March to May and the months of January, June, August, October and November has less accident rates than in May and March. Finally, as the months of February, April, July, September and December, much less the number of accidents year rates. In 2011, May and December have more number of accidents over. And in the months of January, March, June, July, August and November has approximately the same number of accidents. And at the end of the year, a month like February, April, September and October has faced much less the number of accidents rates of the year. In 2012 and 2013 the highest incidents do not occur in the months of May and June in December. Accidents are a little less in the months like July, August, September and October. This year, minus the number of incidents in January, February, March, April and November.

Generally accidents are higher in May. A percentage of about 10.68 % accidents , acquired where in November of only 5.18% incidents were acquired . He can was due to the number of students in schools and universities that use the road because of the holiday high. Some medical studies show that in May because of the intense heat in summer.

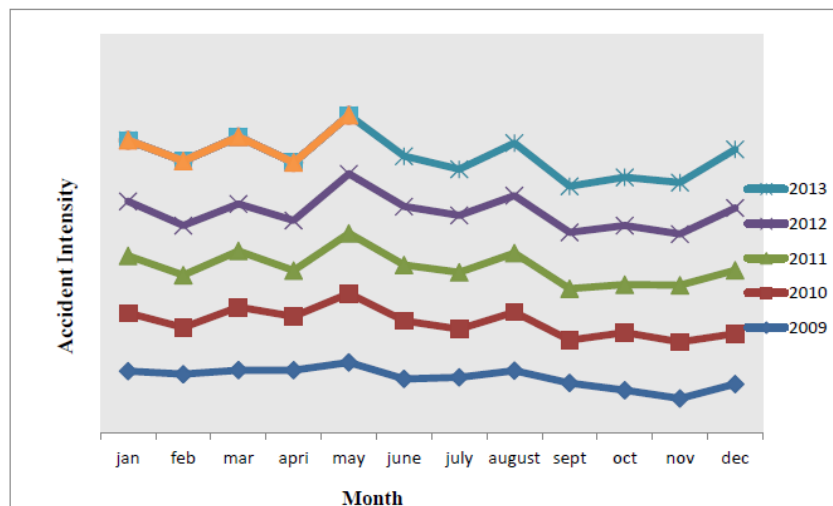


Figure 4: Monthly traffic accident reporting graph.

4. Distribution of Nature of Accident

Figure 5 shows the accident by the type of incidents. In Jaipur plus the number of accidents occur due to a collision of the head. The main reason for the collision head overtaking of vehicles in turnings. Other factors such as tipping, slipping, turn right after the collision, hit and run are relatively low. The head impact Can the quality of roads will be reduced by

the driver setting. The solutions for the following drivers to be increased, and to give appropriate signals while avoiding overtaking, overloading of vehicles, such as time or truck. The solutions for the road is to maintain sufficient road width and shoulder width on the side of the road , a good distance from the road to the driver and the rupture distance must be maintained even visible.



Figure 5: Distribution of Nature of Accident

5. Conclusion

Traffic accidents cannot be completely prevented, but with proper environmental, technical and social interventions that can be minimized to a higher level. This study provides a clear picture of the problems of road in Jaipur. Although this study provides the view to develop improvement measures to alleviate the circumstances that led to traffic accidents in Jaipur.

6. References

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