ACCIDENT ANALYSIS ON NATIONAL HIGHWAY 202

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ABSTRACT

Pedestrians are the most victims of road accident because of lack of awareness; when they move on road they are not at all conscious about accident and the cause of accident and the right of vehicle driver to use the road. Vehicle driver mostly exceed the capability of driving and vehicle. Three wheelers (with four stroke engine), lighter vehicle, compete with the heavy vehicles which are overloaded and have high momentum. When critical situation arises, accident occur between these vehicles. Traffic police and highway police have limitation in number. Moreover, highway is passed through the cultivable land and is made by cutting the land beside the road. Generally, domestic animals come on to the road and create problem for the persons who are driving. Even when unfortunately, accident occurs, vehicle fall into the canal beside road which is created for cutting soil and thus increase severity. Accidents on the roads and its severity can be minimized if users understand the reasons for the causes of accident.

Each of these basic elements comprises several sub elements like pavement characteristics, geometric features, traffic characteristics, road user's behavior, vehicle design, driver's characteristics and environmental aspects.

Key words: Accident, Highway, Road, Safety, Vehicles.

1. INTRODUCTION

The WHO's Global Status Report on Road Safety states that over 90% of the world's fatalities on the roads occur in low and middle-income countries, although these countries only have about 48% of the world's registered vehicles. The WHO anticipates, unless immediate action is taken, that over the next 15 years, the number of people dying annually in road traffic crashes may rise to 2.4 million. The increase will probably entirely occur in low and middle-income countries and road traffic injuries will become there one of the three major causes of death. Globally, road traffic injuries are already today among the three major causes of death for the age group 5 to 44 years (WHO, 2009).

2. METHODOLOGY

For the planning of road development and management schemes Traffic Data Collection and projections there of traffic volumes are basic requirements. Traffic flow pattern appears to be random in distribution, as it reflects people's motivation in terms of different composition of vehicles on diverse types of roads under varying environmental conditions. It follows then that data being collected is a methodological statistic, because traffic flow pattern follows a random distribution. Despite such complexities, it does follow fairly and clearly defined patterns that are possible to classify and analyze.

The major areas for which this data is required are:

- project initiation and Planning prioritization

- design of Project

- National Transport Statistics

- Road Safety Measurements

Some of the key areas in which traffic flow data is needed for development and management of the road network include:

a) Determination of a program me of road widening needs and general improvement or strengthening of existing road through a program me of reconstruction and construction of a new roads;

b) To check the efficiency of the road network by comparing current traffic volume with the level of service or the calculated capacity;

c) To establish the relationship between traffic volume, number of accidents and causes thereof, as well as determination of the probable occurrences;

d) To plan prioritization of roads improvement schemes;

e) To assess economic benefits arising from roads improvements;

f) Investigation of various capacity and design problems for both roads and bridges and parking facilities;

g) Design and improvement of new/existing junctions;

h) Assistance in planning new developments such as roads in a new town, subdivisions, land use, which generally includes shopping centers, hotels, commercial and industrial complexes, service stations and other traffic generators activities;

i) Determination of warrants or the need for implementation of traffic improvement and traffic control measures, such as synchronized/coordinated traffic signals, stop signs, one-way roads, no entry, etc.

 ***In addition to the above the following are typical specific needs:***

a) Assessment of pavement performance through traffic surveys and Period monitoring of selected sections;

b) Ascertaining appropriate/optimal timings for maintenance interventions and rehabilitation needs of various roads countrywide;

c) Establish economic and social implications of design and feasibility studies of all development projects countrywide;

d) Establish the use of the road network by vehicles of different categories, traffic distribution, etc.
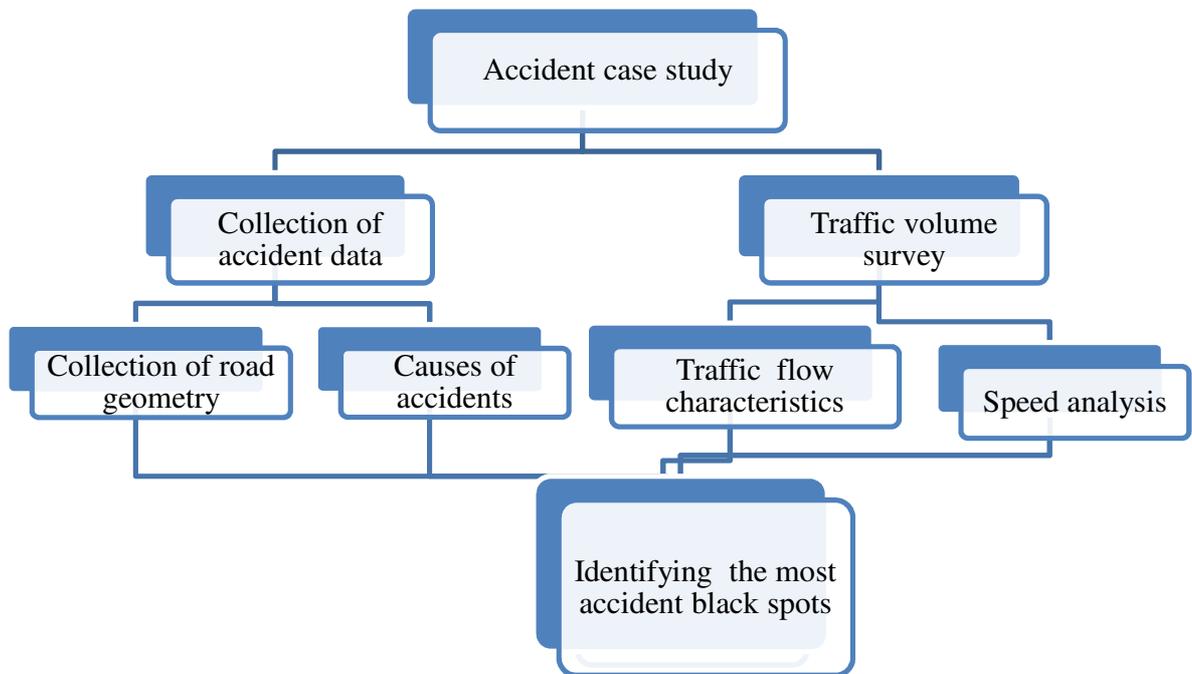
3. STUDY AREA

National highways in Warangal district and RangaReddy district are taken as my paper study area.

| Road type	Road name	Length
NH 202	Kazipet to ghatkesar	113km
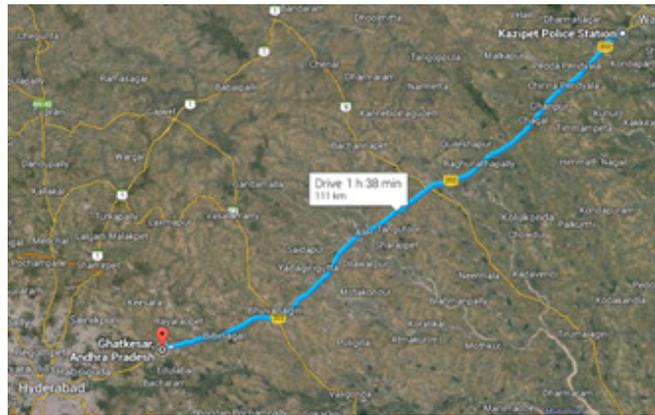
Route map from Kazipet police station to ghatkesar police station

The accident information was collected from the print media for the last five years from 2008-2012 as one of the core database for this study and analyzed subsequently. In this regard, accident data was collected from a popular and reliable divisional newspapers. for the following reasons:

- Newspaper is the mirror of society, locality and the whole geographic area.

- Spot death accident and collision accident patients never go to the hospital.

4. RESULTS AND DATA ANALYSIS

a) Age range of driver: it is evident that many the drivers of about 53% are in the age of less than or equal to 30 years, that means majority of the drivers are young with up-rising stamina and inspiration and obviously they drive the traffics vigorously without thinking the up-coming accident risks vivid in mind. As a result, most of the time early age drivers fall in accident.
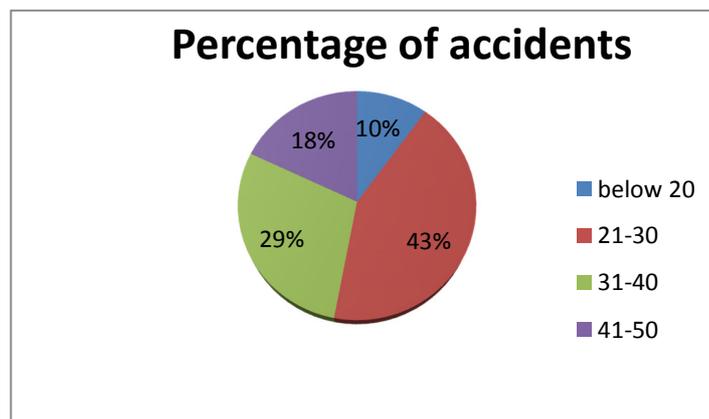
b) Analysis of Data collected:

The data is analyzed in two stretches because of newly paved road from Rampur to Hyderabad.

- Stretch 1 starts from Kazipet police station to Bhongiri police station.

- Stretch 2 starts from Bhongiri police station to Bibinagar police station

C) Collection of Data

The following data represents the data collected for the past five years starting from 2009 – 2013 with only number of cases registered and fatal cases and non-fatal cases.

Year	Number of cases	Number of fatal cases	Number of non-fatal cases	Number of cases
2009	356	153	203	356
2010	358	147	211	358
2011	345	136	207	345
2012	332	116	216	332
2013	525	164	361	525

Total number of accident
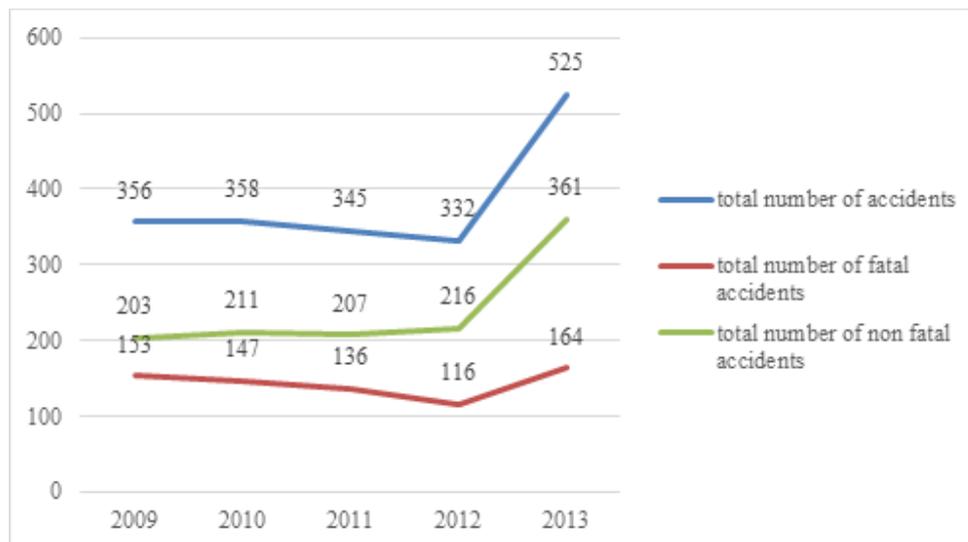
Data on accidents

D) Analysis of data on Stretch 1

The stretch 1 consists of following places

- Kazipet
- Madikonda
- Station Ghanpur
- Raghunathpalli
- Aler
- Bhongiri

The following data shows the data at the respective place from 2009 to 2013

Place	Number of persons injured	Number of persons died
Kazipet	237	111
Madikonda	238	108
station Ghanpur	320	97
Raghunathpalli	168	72
Aler	195	89
Bhongiri	338	136

Data on number of persons involved in accident on stretch 1

E) Analysis of data on Stretch 2

The stretch 2 consists of following places

- Bibinagar

- Ghatkesar

The following data represents the data collected from 2009 – 2013

Year	Number of persons injured	Number of persons died
2010	119	68
2011	98	62
2012	147	52
2013	193	72

Data on number of persons involved in accident on stretch 2

5. CONCLUSION

From this report we conclude the following circumstances

- It is clearly observed that the rate of accidents has been increased gradually on National Highway 202, in the year of 2009 the number of cases registered were only 203 but in the span of five years i.e., 2013 the number of cases registered were 361 almost an increase of 10.2% of the total accidents.

- From this report we state that the number of accidents that lead to death have also increased. In 2009 there were only 187 persons but in 2013 203 persons were died due to accidents.

- Similarly, in the case of persons who were injured due to accidents has also increased from 365 (2009) to 570 (2013).

- In the year 2011 the highway was re-constructed using advanced materials and high range of technology which includes correct placement of sign boards, line decency was implemented and so on, but the number of accidents were increased to much extent in the year 2011 the number of cases registered were only 202 but in 2012 there were 216 cases and in 2013 there were 361 cases were registered which has made an increase in the number of accidents to take place.

- We have also observed that the pavement width was decreased where there the frequency of accidents was more, the following figure was taken at the accident-prone area near Madikonda which shows that the median width is increased to almost to the width of single lane road i.e., 3.75m.

- On our talk with the police authority about the reasons about accidents taking place, the following are the main reasons given by them

  - Drunk and drive

  - Over speed

  - Over taking vehicles in wrong direction

  - Neglecting sign boards

  - Following a vehicle very closely to overtake i.e., tailgating

- There was some place were no sign boards are placed such as school zone at station Ghanpur which has made that place as an accident-prone area.

- From this project we have observed that there are many places where the width of pavement is reduced suddenly which has laid a way for accidents. For example, at Rampur outskirts the width of road has been reduces suddenly without any sign boards indicating reduction of width of road.

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