

A study on Nh-11 to find out the causes and High accident Zone between Jaipur to Sikar

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ABSTRACT: The population is increase in Rajasthan day-by day and this population increment gives the result of increase the demand of vehicle, if we are going to past study then we are finding that the beginning of this century the vehicle population is less % to present. From the past studies they are increased to twice within 5 year duration but the length of the road existing is not able to handle this traffic without any fatal .Hence, mixed traffic conditions are arising and congestion will takes place. After certain limit they may cause road crashes by which loss of human live is happening. By this the loss in world economy is over US \$80Billion per year. In India the accident is occurring for every minute or we can say that every second. In India the accident problem is a combination of various factors viz., prevailing lack of traffic management measure, improper placement of traffic control devices, roadside hazards and ribbon development along the road network. Road accident scenario in the country is a very grim, more so on National Highway. In fact the present study corridor, portion of NH-11and accounts, more rates of the accidents. This paper presents an analysis of accidents on small portion NH-11 Jaipur to Sikar. The data for analysis is collected for the period of 2014 to March 2016.

KEYWORDS: Road Accident, Cause of road accident, Fatalities, Types of road accident

1. INTRODUCTION

From the beginning of this century the number of motorized vehicle has been increasing continuously. The spectacular increase in number of motor vehicles on the road has not kept pace with corresponding increase in total length of road network. The supply lane for traffic i.e. the road length not has been able to meet the demand created by the growth of vehicle population. Further the mixed traffic situation prevailing on our road network has further aggravated the traffic situation. Thus the vehicles population increases in year by year. Coupled with mixed traffic situation has created a major social problem- the loss lives through road accident. Increase in traffic brings out extremely severe problem of road accident. The impact of road traffic accident in term of injuries, impairments and fatalities are global social and public health problems. It is now well established that many developing countries face a serious problem of road accidents. Accident fatalities rate in developing countries like India is high in the comparison with that in the developing countries. The population of India has double during the last 30 year while vehicle population has double in the last 5 year. Since the growth of the road infrastructure could not cope up with growth in travel demand. Traffic accidents in deaths constitute 40% of the total accident deaths in India, which is not sufficiently recognized by lay by public.

The road accident are happening manly of fatal type on National Highway. The vehicles that mostly causing accident on National Highway are trucks due to more numbers of goods traffic on National Highway. The 5% length on National Highway carry 50% of good traffic, while 9% of State Highway carry 30% of good traffic. However, estimate based on government statistics indicate that about one third of all road crash fatalities takes place on National Highways and another one-third on State Highways.

The human misery and the serious economic loss caused by road accident demand the attention of the traffic engineering and call for evolving appropriate solutions to tackle this problem. The causes of road accidents were found to be faulty road user behavior, deteriorating traffic law enforcement, unscientific accident recording and investigation, encroachment problem, lack of traffic control devices, road safety furniture, and proper traffic management planning

STUDY AREA

Study has been carried out on urban & rural sections of the National Highway no.-11 from Jaipur to Sikar. Jaipur is the Pink city And the no tourist comes in visit jaipur to bikaner with large number of in and out flow of vehicles. So with the present study it is possible to reduce the frequency of vehicle accidents passing through Jaipur city

3. DATA COLLECTION AND ANALYSIS

The following data collected from the study area

3.1 Traffic and No. of Accidents

The traffic data collected since Year 2009 to 2011 and converted into Average Daily Traffic. Year wise Average Daily Traffic (A.D.T.) and No. of Accidents, along with study corridor, are given in Table1.

Table1 Average Daily Traffic and No. of Accidents

Area	Jaipur region		Reengus region		Sikar region	
	A.D.T.	No. of Accidents	A.D.T.	No. of Accidents	A.D.T.	No. of Accidents
Year						
2014	24306	55	7115	53	7100	60
2015	26805	65	8332	31	6513	65
2016 (March)	35631	20	9546	31	7115	68



Fig No:1 Graph Plot Between No of accident in different region in year wise

3.2 Area wise Accident

The Accident data collected from Jaipur to Sikar Since 2014, 2015, 2016 (march) and given as follows:

Table 2 Area wise Accident

Year/ Location	2014	2015	2016
Bhadala college	30	35	50
Teda mod	40	50	55
Jetpura	40	45	30
Bikaner Bypass	80	100	40

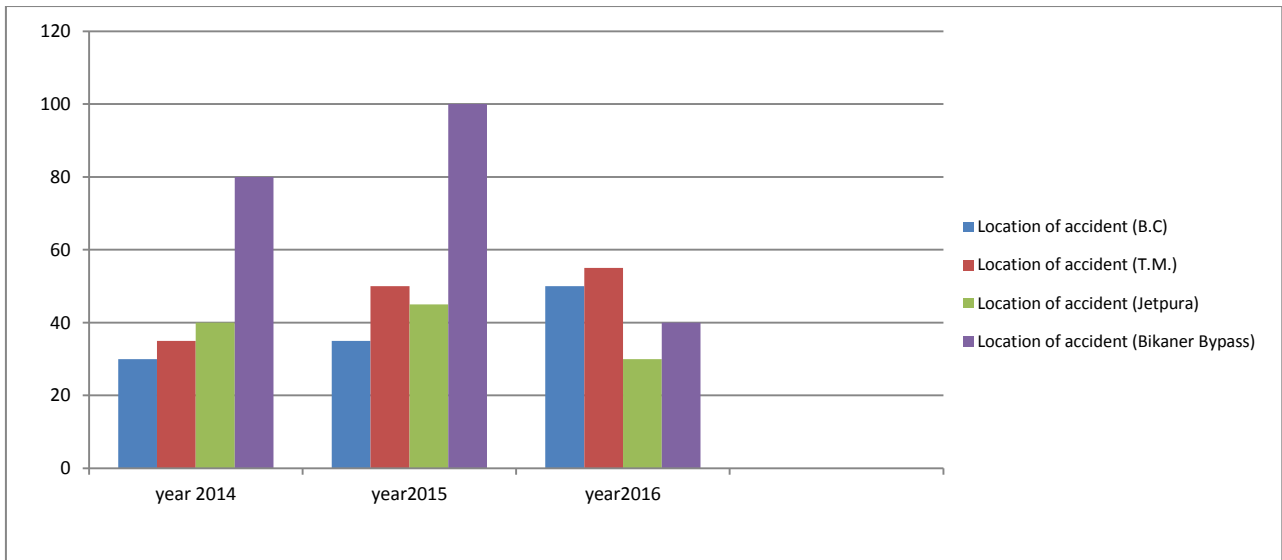


Fig No:2 Graph Plot Between No of accident in different Location in year wise

3.3 Distributions of Accidents

The year wise Causalities, with in study area, are given in Table 3.

Table 3 Year Wise Distribution of Accident

Year	Causalities		
	Fatal	Serious	Minor
2014	70	12	200
2015	81	30	310
2016	60	40	170
Total	236	100	877

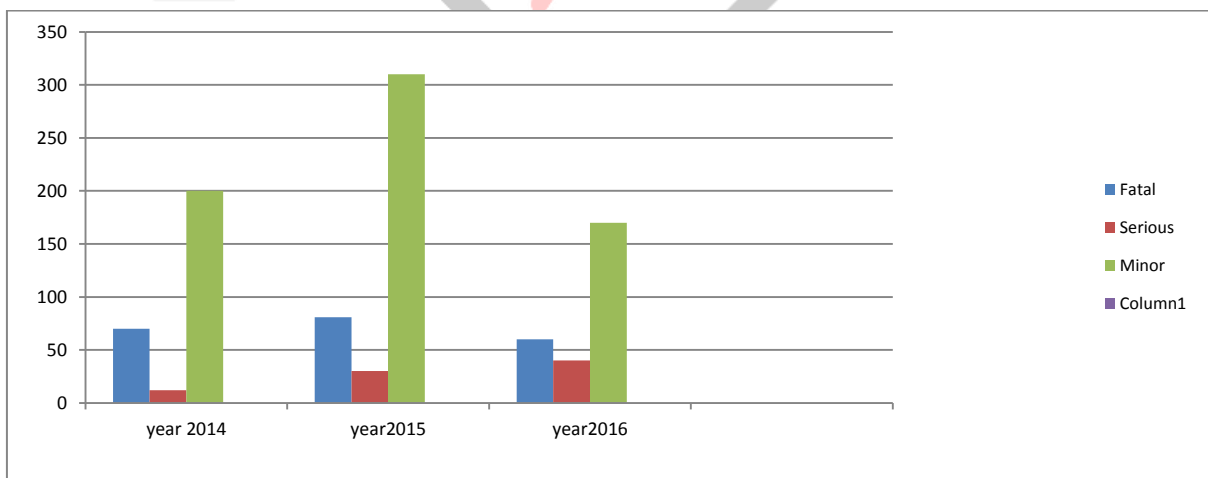


Fig No:3 Graph Plot Between No of accident in year wise

3.4 Severity Index

The year wise severity Index, since 20014 to 2016 (March).

Table 4 Severity Index

S.N.	Year	Severity Index
1	2014	30
2	2015	25.62
3	2016(March)	23

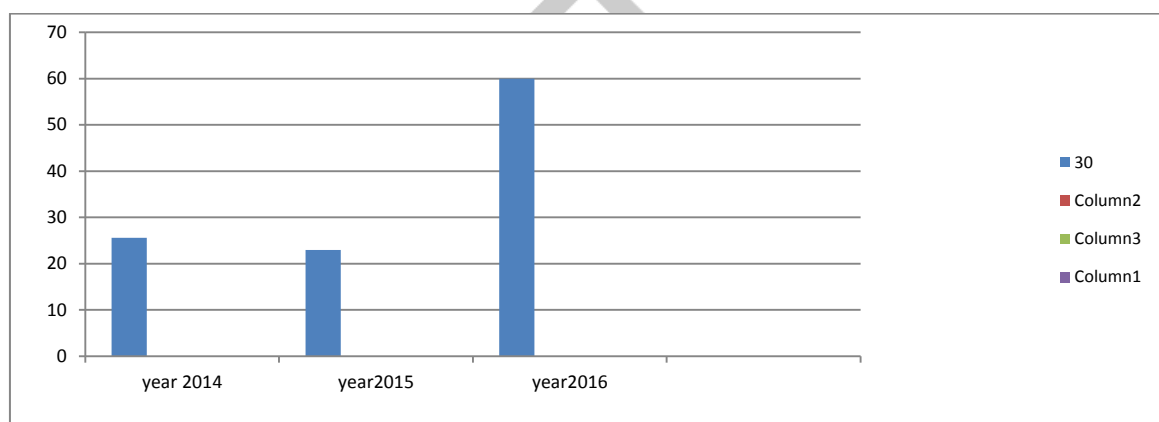


Fig No: 4 Graph Plot between Year And severity Index

CONCLUSIONS:

The trend of accidents occurring in urban portion Near Reegus is more than 35 % to rate of total accidents in each year The main accident rate due to Local vehicle . This may due to high speeds and more vehicular traffic. The maximum number of Fatalities is registered in rural highway portion. This may due to heavy goods traffic coming from villages in early hours towards city. In the present study area the frequency of fatal accidents are 4 in a week and 6 for minor accidents in a week. In this research paper we are find that the a service road is required near the high accident zone. In sikar Bikaner by pass a Fly over is required. Maximum accidents observed are of tractor Eicher accidents in the study corridor followed by buses and reegus vehicles. It is inferred that NH's are mainly meant for trucks. and no if accident between car and trucks on the high accident zone Bikaner by pass mod. One fatal and five casualties are occurring per km per year in the study area.

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