The highway accidents scene in India, as in many developing countries, is characterized by mixed traffic comprising heavy and multi-axle vehicles, light commercial vehicles, cars and motorized two wheelers with different shapes and speeds.

Accident risk is found to vary with population, area, road length and number of vehicles available in any state. The police authorities are not using the format given by Indian Road Congress as this format is cumbersome and lengthy. Thus there is a need to come up with training of traffic police to bring uniformity in accident records throughout the country. Hence, it needs to be realized that traffic enforcement needs to be scientific so that road users utilize the facility within the frame work of law, engineering and normal courteous behaviour and respect for other co-users. This science needs to be based on continuous research and analysis of road related accidents and conflict potentials.

Design improvement measures consist of redesigning of intersections and widening and strengthening of roads. The traffic systems management measures like, traffic restrictions, provision of alternate routes etc. are to be implemented in the city. Initially, a restriction was imposed (during morning and evening hours) on the movement of trucks in a section of National Highway passing through the city. However, construction of a bypass road for through traffic in National Highway is required at an early stage.
Based on data collection and analysis over five years for NH 47 stretch, the number of accidents on an average increased by 9.6 percent every year and traffic flow by 6.3 percent. The 85th percentile speed of vehicles is 90 Kmph and there is gradual increase in speed every year in NH 47 stretch in particular and in all NHs in general due to the reason of reduction in weight of vehicles, improved engine efficiency and provision of median.

The multiple linear regression model developed by this study would definitely useful for highway/transportation engineers to predict the accidents and for further planning to control the accidents in future. In the developed model two variables namely, percentage of heavy vehicles, vehicle speed have more impact with number of accidents and the three variables namely quantum of traffic, number of intersections & access roads and number of horizontal curves have lesser impact with number of accidents. The sensitivity analysis carried out will be useful to choose the suitable planning strategy in order to control the accidents.

The major accident spots in Salem City and the Black spots in NH 47 (Salem-Coimbatore stretch) have been identified and suitable specific remedial measures were suggested to reduce accidents. In addition to this the concerned authorities should,

- Ensure that the roads are properly designed, well-constructed and maintained
- Ensure that vehicles are safe and well maintained
- Show consideration for other road users and pedestrians
- Monitor the driver compliance with the law
- Encourage the driver training at levels above the legal minimum standards
The four “E”s of road safety program namely Engineering (proper road, vehicle and traffic Engineering measures), Education (Road Safety Education among the school children, drivers and general public), Enforcement (Legislation and Enforcement) and Environment & Emergency care of road accident victims will help in significant reduction in the accident rate and its severity.