

Assessment of Vehicular Accidents and Possible Mitigation Measures: A Case of Ahmedabad, Gujarat, India

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Abstract : Rapid urbanization is one of the consequences of rapid population explosion, which has also led to massive increase in number of motorized vehicles essential for carrying out all activities needed for sustaining urban livelihood. With this increased use of motorized vehicles over the time there has also been an increase in number of accidents. Study of road network and geometric features are essential to tackle problems of road accidents in any district or town. The increase in road accidents is one of the burning issues in the present society. Records show that there is one death at every 3.7 minutes because of road accident. It has been found from the research that, accidents occur due to, mistakes of the driver (86%) followed by bad street condition (5%), mistake of pedestrian (4%), as well as technical and maintenance defects (1%). Here, case study of Ahmedabad, Gujarat is taken up where first road safety level is assessed considering various parameters. The study confined to accident characteristics of all types of vehicles. For deeper analysis, road safety index for various stretches in Ahmedabad was found out. Crash rate for same stretches was found out. Based on various parameters priority was decided so that which stretch should be look out first to minimize road accidents on that stretch and which stretch should look out last. The major findings of the study are that accident severity of Ahmedabad has increased, but accident fatality risk has decreased; thus there is need to undertake some traffic engineering measures or make some traffic rules that are strictly followed by traffic. From the above study and literature studied it is found that Ahmedabad is suffering from similar problem of accidents and injuries and deaths caused by them, after properly investigating the issue short-term and long-term solutions to minimize road accidents have been presented in this paper.

Keywords : accident severity index, accident fatality rate, accident fatality risk, accident risk, road safety index

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