

# AN OVERVIEW ON RETROSPECTIVE STUDIES OF ROAD SAFETY IN INDIA

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## **Abstract**

Road accidents are tragedy to life. This may bring human suffering in terms of injuries and may even death. Government is taking road safety initiatives and implementing various road safety improvement programs but the overall situation is still not satisfactory. The victims are mostly in age group of 25-65 years. The loss of bread winner of family can be catastrophic. Government alone cannot solve all road safety issues but active involvement of all stake- holders is necessary to promote policy reforms and implementation of road safety measures. The present review provides the scale and dimensions of road accident in India. This will create awareness on road accidents, guidelines and help in decision making on road safety.

**Keywords:** Road traffic accidents; Injury; Data systems; India.

## **1. Introduction**

Road accidents are the major concern for developing and underdeveloped countries where around 1.2 million people die and 50 million injure in road traffic crashes worldwide every year [1]. World report on road accident prevention urges an urgent need for the governments and multiple agencies related to health, transport and police to increase and sustain action to prevent road accidents [1]. The present review give the detailed account of studies carried out by workers in this field so as to aware the masses and adopt preventive measures to curb the unwanted road accidents.

## **2. Road Accidents – A Frequent Cause of Death**

Deshpande P. (2014) in his study on Road safety and accident prevention in India found that in 2010, there were nearly 5 lakh road accidents in India. This caused a death of around 1.3 lakh country's population. These statistics bring to our notice that every minute a road accident happens and to this effect one road injury death every 4 minutes. Unfortunately, more than half the victims are in the economically active age group of 25-65 years. Road traffic injuries can be stopped by adopting a multipronged approach to road safety. Government need to take broad range of measures, such as, traffic management, design and quality of road infrastructure, application of intelligent transport system, safer vehicles, law enforcement, effective and quick accident response and care etc. with support from stakeholders [2].

## **3. Road Safety – A Comprehensive Data Availability**

Maxwell Barffour et al. (2012) in their study on availability and coverage of road safety data at national and state level by reviewing through two authenticated sources viz., the National Crime Records Bureau (NCRB) and the Ministry of Road Transport and Highways (MORTH). They compared the data with standard manual of the World Health Organization (WHO) and developed

a checklist of indicators required for comprehensive road safety assessment. They found that NCRB and MORTH databases had 81 and 91 percent data for most of the need areas specified by the WHO under outcomes and exposure indicators respectively. At the state level, data on outcome and exposure indicators were available relatively less to about 54 percent of need areas from either of the 2 sources. No data was available on safety performance indicators in the NCRB database while in the MORTH database; data availability on safety performance indicators was 60 percent at both national and state levels. Data availability on costs and process indicators was found to be below 20 percent at the national and state levels. An utmost need is required to improve the road safety data in India so as to develop monitoring of traffic injuries and deaths. This will enable analytical interpretation of national and state road safety data, and allow the policy makers to effectively formulate the policies [3].

#### **4. Road Safety – A multifaceted Analytical Approach**

Kanuganti Shalini et al. (2016) in a case study carried out in Jhunjhunu district of Rajasthan, India on the priority of safety requirements set a hierarchy of road safety measures based on multi criteria approach. Such criteria need to be analyzed by policy makers and decision takers on road safety. Hierarchy to be set based on criticality of issues related to safety of roads in rural areas [4]. Khanal Mandar et al. (2014) studied road safety in developing countries suggested that in country like India before intervention the government need to analyze the increasing graph of number of vehicles, infrastructural aspects, its institutional aspects, Socio-economic aspects, Socio-cultural/behavioral aspects of population and educational aspects of masses [5].

#### **5. Road Safety – A Political Concern**

Dandona Rakhi (2006) in her study on parliamentary questions asked on the road safety issues by members of the Indian Parliament between year 2002-2004 found that the gaps need to be addressed to make road safety visible as a public health problem to policymakers in India. She reviewed 1529 questions asked to the Ministry of Road Transport and Highways. Only 140 (9.1%) were related to road safety, whereas 1076 (70.5%), 181 (11.8%), 51 (3.3%) and 81 (5.3%) were related to other aspects of the national highways, state roads, vehicles and other issues, respectively. Data on road accidents mostly of number of crashes and fatalities but not categorized on the basis of age, sex and type of road users affected by road traffic injuries. The main cause of road crashes in India is human error as informed in the parliament; however, the robustness of this information is questionable. They blamed training of drivers for road accidents with little attention to other factors that cause road crashes. The discussion on legislations only focused on drivers, ignoring other road users. The data presented do not highlight the true nature of the problem so appropriate policy and intervention response by policy-makers is not possible. It is high time for policy to know the real cause of road accidents to frame the rules and laws accordingly [6].

#### **6. Road Safety – Preventive Measures and Awareness**

Kulkarni Vaman MD et al. (2012) conducted a study on undergraduate medical students of Mangalore, Karnataka, India and came to the conclusion

that road traffic accidents can be curbed with practicing proper preventive measures. This can be possible by increasing awareness of masses. It was found that awareness of masses was low. The awareness can be enhanced by way of sign boards, posters and mass media to reduce the morbidity and mortality in relation to road accidents [7].

## **7. Conclusion**

Standard of living of society has increased over the years which enabled each individual to afford two wheelers and cars to increase their movement on roads. The infrastructural and technological advancements in developing country like India are not *as par* with the explosion of vehicles in last few decades. Policymakers and Executive staffs' coordination with public cooperation to practice safety measures is essential to substantiate decrease in the rate of road accidents. Epidemic of road traffic crashes can be cured by collective effort of government and society at large.

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## **9. References**

1. Mohan, D., Tsimhoni, O., Sivak, M., & Flannagan, M. J. (2009). *Road safety in India: challenges and opportunities*. University of Michigan, Ann Arbor, Transportation Research Institute.
2. Deshpande, P. (2014). Road safety and accident prevention in India: a review. *International journal of advanced engineering technology*, 5(2), 64-68.
3. Barfffour, M., Gupta, S., Gururaj, G., & Hyder, A. A. (2012). Evidence-based road safety practice in India: assessment of the adequacy of publicly available data in meeting requirements for comprehensive road safety data systems. *Traffic injury prevention*, 13(sup1), 17-23.
4. Kanuganti, S., Agarwala, R., Dutta, B., Bhanegaonkar, P. N., Singh, A. P., & Sarkar, A. K. (2017). Road safety analysis using multi criteria approach: A case study in India. *Transportation research procedia*, 25, 4649-4661.

5. Khanal, M., & Sarkar, P. (2014). Road safety in developing countries. *J Civil Environ Eng S*, 2, 2.
6. Dandona, R. (2006). Making road safety a public health concern for policy-makers in India. *National medical journal of India*, 19(3), 126.
7. Kulkarni, V., Kanchan, T., Palanivel, C., Papanna, M. K., Kumar, N., & UnniKrishnan, B. (2013). Awareness and practice of road safety measures among undergraduate medical students in a South Indian state. *Journal of forensic and legal medicine*, 20(4), 226-229.