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GENDER BASED ASSESSMENT OF ROAD TRAFFIC ACCIDENTS IN MYSORE CITY

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Abstract

Road Traffic Accidents (RTA) are growing at an alarming rate throughout the world. The present paper has tried to map and analyze the road traffic accidents of male and female occupants within Mysore City in the year 2013. The secondary data were collected relating to accidents registered with Krishnaraja, Devaraja and Narasimaraja Traffic Police stations in Mysore city. During one-year study period of Mysore city 2013, 902 cases of road traffic accidents occurred. There are 768 Male occupants and 205 Female occupants. Road traffic accidents have been plotted within Mysore city using Arc GIS 10.3 software. In addition, a determination was also made to know the percentage of cause of male and female occupants road traffic accidents.

Keywords: occupants; road traffic accidents; GIS

Introduction

The many Nations around the world, injuries are the leading source of death. Motor vehicle occupant fatalities are defined as any driver or passenger of a motor vehicle killed from injuries that occurred when their vehicle collided with another motor vehicle, rolled over, or crashed into a stationary object (Fung L. and Conderino S., 2017). In Mysore city the motor vehicle occupants characterize almost 80% of fatally injured road users. High-risk groups of motor vehicle occupants contain young drivers, older drivers, impaired drivers, and unrestrained occupants. The number of fatalities was lower in females than in males; females accounted for about one-third (32%) of all fatalities while males accounted for 68% (Parenteau C.S. et al. 2013). Motor vehicle crash fatalities were higher for males than females in all age groups, while the male population is

equal to or less than the female population in all age groups (Chang D.2008). In developing countries, the morbidity and mortality burden is increasing due to road traffic injuries. According to the recent survey RTA amount at least 1-2% of GDP loss to the countries worldwide (Kumar D.R. 2013)

Men have long held the lead in motor-vehicle crashes (MVCs). Though, recent research from a assortment of countries (e.g., Australia, New Zealand, Finland, and the United Kingdom) specifies that women are closing the gap. For instance, studies in Europe have found that, even though females have a better safety positioning than males, young female drivers have more problems in vehicle handling and in learning to traffic situations (Romano E.2008). Equated with males, female drivers were less likely to be involved in crashes associated with the highest hierarchical levels of driving

behavior (HLDB) level, but more likely to be involved in the lowest level (Transportation Research Board.2009). Among all traffic accidents, road traffic accidents entitlement the largest toll of human life and tend to be the most thoughtful problematic world over. Worldwide, the number of people killed in road traffic accidents (RTA) each year is estimated at almost 1.2 million, while the number of injured could be as high as 50 million (Kual A. et al. 2005). Road traffic injuries are the eighth foremost cause of death for all age groups. More than half of all road traffic deaths are among vulnerable road users: pedestrians, cyclists, and motorcyclists. Road traffic injuries are now the foremost cause of death for children and young adults (WHO.2018).

In this study, we further explore the road traffic accident location of male and female drivers and occupants for the fatal crashes over time of 2013 in Mysore city. More specifically, this study has three aims. First, identification of road traffic accidents. Second examined male and female occupants in road traffic accidents. Third, percentage the gender of occupants in Mysore City.

Study area

Mysore is most tourism magnetism palace city and second largest city in the state of Karnataka. Mysore is located 135 km from Bangalore, the state capital. It is the headquarters of the Mysore district and the Mysore division and lies about 146 km (91 mi) south-west of Bangalore, the capital of the state. The city is spread across an area of 128.42 sq.km (50 sq mi) and is situated at the base of the Chamundi Hills.

Mysore is located at $76^{\circ}39'E$ and $76^{\circ}42'E$ longitude and $12^{\circ}18'N$ and $12^{\circ}30'N$ latitude and has an average altitude of 770 meters (2,526 ft). It is located in the southern region of the state of Karnataka. Mysore city has 65 wards and the total Population of Male 4,46,474 and Female 4,35,231 (census .2011). The existing two-lane road linking Mysore to the state capital Bangalore has been upgraded to a four-lane highway. This has reduced the travel time significantly. National Highway 212, and State Highways 17, 33, 88 passes through Mysore connecting it to nearby cities.

Methodology

The city of Mysore, second largest city of the state of Karnataka, is facing fast urbanization meanwhile the last few years. Toposheet surveyed 2005-06 and satellite images from Google Earth databases were used to digitize road networks in Mysore city. The secondary data of 2013 were also collected relating to accidents registered with Krishnaraja, Devaraja and Narasimaraja Traffic Police stations in Mysore city. The occurrences of accidents of male occupants and female occupant's location were plotted using ArcGIS 10.3 software.

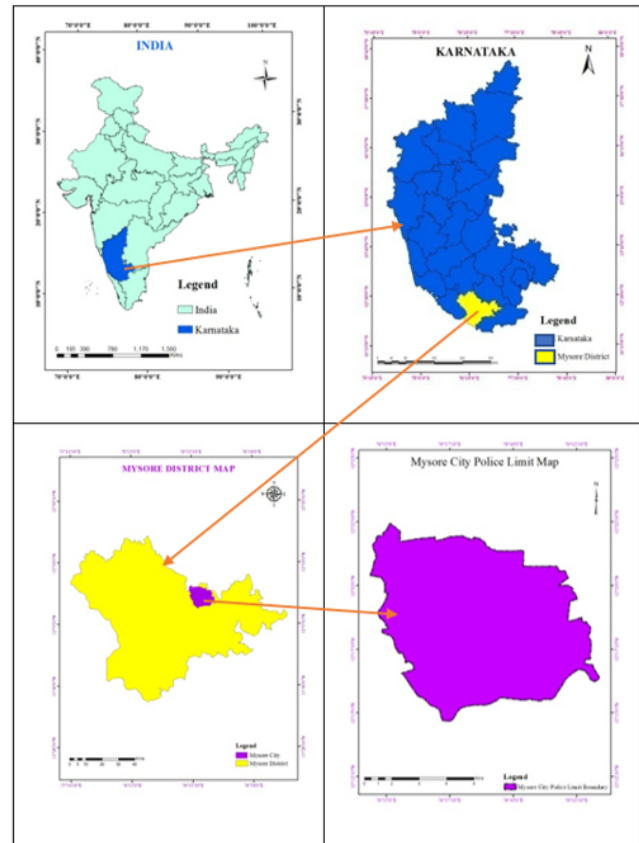


Fig. 1. Study area map

Discussion and Result

The accidents in Mysore city are due to several reasons. In order to study the involvement of male and female occupants in the accidents in Mysore City, the gender wise accident location map was generated. Though a total number of 902 accidents were registered, 973 occupants were involved in these accidents, of which 768 were male (78.93 percent) and 205 were female (21.07 percent).

Table 1. Accidents based on gender of occupants in Mysore City (2013)

Sl. No	Occupants	Number of Occupants	Percentage
1	Male	768	78.93
2	Female	205	21.07
Total		973	100

Source: Traffic Police Stations

The Figure 2 and Figure 3 shows the locations of the road traffic accidents where male and female occupants are involved respectively. 768 male occupants were involved in the accidents in Mysore City in the year 2013 accounting for 79 percent of the total occupants.

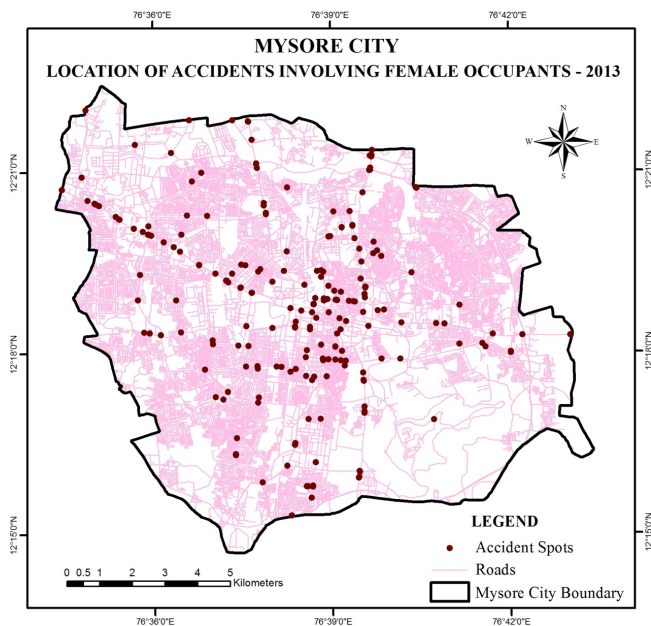


Fig. 4. Location of road traffic accidents by female occupants in Mysore city (2013)

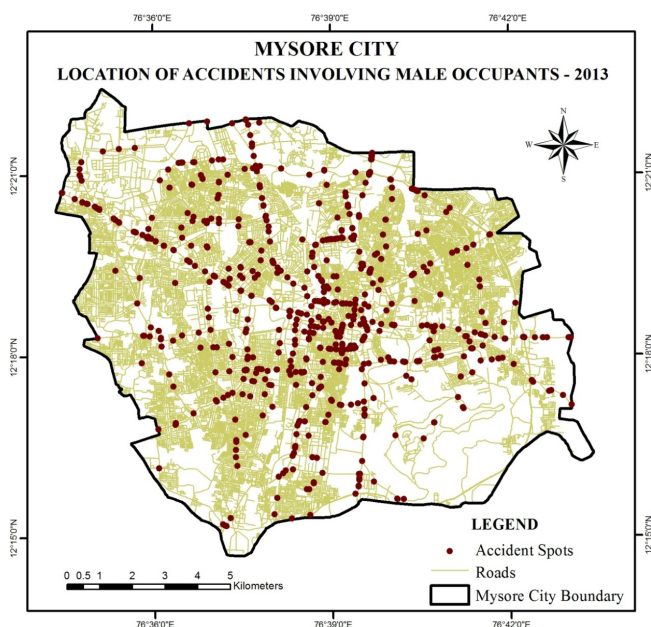


Fig. 2. Location of road traffic accidents by male occupants in Mysore city (2013)

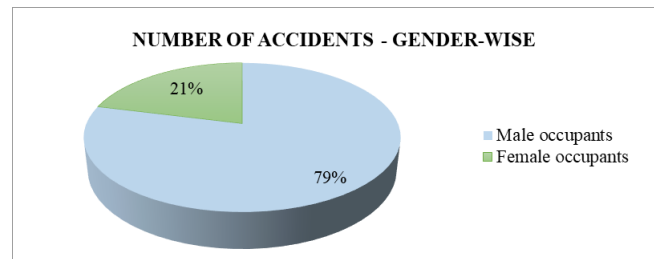


Fig. 3. Chart showing the percentage of road traffic accidents based on gender.

The foremost cause for the accidents involving male, were found to be over-speeding, rash driving, drunken driving, negligence and signal jumping. 205 female occupants were involved in the accidents accounting for 21 percent of total occupants. Foremost cause for the accidents involving female occupants is the scariness, careless driving, negligence, talking in cell phone and wrong judgments of the other vehicles.

Males being the main source of income in majority of family are exposed more regularly to outdoor work than females. This clarifies the involvement of maximum number of males in road traffic accidents. This reflects the ignorance of traffic rules and traffic signal, talking over the mobile phones, lack of assessment of speed of the vehicle by the pedestrians and poor lighting of streets.

Conclusion

In overall, males face higher fatality and accident risk than their female counterparts. There are several factors responsible for accidents but drivers' fault is the most important factor. Strict implementation of laws concerning driving of vehicles, wearing of helmets, wearing seat belts is required. As such, intracranial loss was the most mutual cause of death due to RTAs in our study. Road Traffic Accidents causes tremendous anxiety to the person and the family, as well as loss of life. There is a need to stress on the importance of usage of helmets, seat belts and obedience to traffic rules to reduce the occurrence of road traffic accidents.

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