

# STATISTICAL ANALYSIS OF ROAD ACCIDENTS IN KANDY, SRI LANKA

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Road traffic accidents contribute to nearly 1.2 million deaths annually around the globe. Countries like Sri Lanka contribute nearly 75% of those victims. The study was conducted in the Kandy police area in Sri Lanka. Data on all reported road traffic accidents to Kandy police station were collected for the period of 1<sup>st</sup> September, 2002 to 31<sup>st</sup> August, 2005.

Among the vehicles Cars, Vans, Private Buses and Three Wheelers were more involved in accidents. Of these accidents, 1.17% were fatal, 3.07% were seriously injured, 16.59% were slightly injured and 79.17% were property damages. Out of 3798 drivers 98.24% were males. The highest number of drivers involved in an accident was between 20-40 years of age and victims were found between the age group of 30-40 years. The majority of accidents were took place with the drivers who have the temporary driving license and <10 years of experience. In this study the highest numbers of accidents were on Monday and lowest on Sunday. The peak time for accidents were between 7am to 9am and between 2pm to 3pm. Out of 3924 drivers (2.27%) were found to have consumed alcohol. The highest numbers of accidents (62.38%) had occurred colliding between two vehicles. The majority of the accidents were occurred, while the vehicle was moving on a straight road.

There were associations between time of the day, experience of the driver, reason for the accidents and collision type with accidents severity. Ordinal logistic regression model confirms that the time of the day, age of the driver, victim, gender of the victim, consumption of alcohol, cause of the accidents and location were the most significant factors that affected the accidents severity. When considering the driver behavior, time, type of the vehicle, age of the driver, experience of the driver and collision type were the most significant factors that affected the severity of accidents. When considering the victim behavior, time, victim category, gender of the victim and cause of the accidents were affected to accident severity.

Ordinal logistic regression model confirms that the time of the day, type of the vehicle, age of the driver, gender of the victim, consumption of alcohol, cause of the accidents and location were the most significant factors that affected the accidents occurrences.

Binary logistic regression model confirms that the time of the day, age of the driver, type of the victim, age of the victims, gender of the victim, consumption of alcohol, cause of the accidents and location were the most significant factors that affected the accidents with severity (between injured and none injured).