

## ABSTRACT

**Background:** Rising trends of morbidity and mortality due to road traffic accidents, has made it a significant public health problem. Motorcycle accidents have led towards 43% out of road injury deaths in South East Asia. These are preventable and recognizing multiple factors behind the scenarios would help to take necessary preventable actions on time.

**Objective:** Study is focused at describing the epidemiology of road users meeting with a motorcycle accident admitted to the Accident Service Unit, Colombo South Teaching hospital.

**Methods:** A descriptive cross-sectional study was conducted among the vulnerable road users (motorcycle riders, pillion riders, pedestrians, cyclists) following a motorcycle accident and presented to the Accident Service Unit, Colombo South Teaching hospital. Consecutive sampling method was used considering who fulfills the eligibility criteria and study was conducted for forty-six days. 384 study participants were interviewed using an interviewer-based questionnaire. Data analysis was performed using frequency distributions and chi-square tests to investigate the associations between injury severity (depicted by injured body regions count category) and accident characteristics.

**Results:** Most of the victims were in the age range of 20 to 29 years (43.2%, n=166). Majority of the road users were motorcycle riders (70.8%, n=272). There were 81% (n=311) males and 49.4% had the habit of occasional drinking. Most of the participants were monthly income earners (60.9%, n=234). Majority of the accidents took place on Mondays (18.5%, n=71). We observed major increase in the accidents between 12.00pm to 5.00pm (39.6%, n=152). Commonest accident type was motorcycle slip and fall (25.3%, n=97) taken place on straight roads (66.7%, n=256). Although major part of the riders was wearing a helmet (68.8%, n=264) they were wearing dark color clothes (42.7%, n=164) without a protective jacket (54.4%, n=209).

Most of the study participants faced minor injuries with New Injury Severity Score (NISS) <9 (94.5%, n=363) (commonest type of injury was abrasions; n=231). There was a statistically significant association between injured body regions count category and

type of the road user and ( $p=0.027$ ) and did not observe a statistically significant association with day of accident, accident type, weather condition or road condition.

**Conclusions and Recommendations:** Advancement of this study with a logistic regression model, arrange it in a ward set up or representing the Colombo district would be possibilities to figure out above associations which couldn't be manifested via present study.

Moreover, implementation of new road rules, raising public awareness regarding road accidents and promoting public transport could be suggested as recommendations following this study to improve road safety and motorcycle accident prevention.

Key words: Epidemiology, Motorcycle accidents, Road users, Sri Lanka