

Understanding motorcyclist-related accidents in Colombia

Abstract

In 2016, Colombia's position regarding motorcyclist fatalities per 100,000 inhabitants was tenth worldwide and second in South America. In the seven years from 2012-2018, the proportion of deceased and injured motorcyclists among all road users was 50%. To analyse the significant aspects of the accident rate of motorcyclists in Colombia from 2016 to 2018 and estimate cost social value of motorcycle-related deaths. The global numbers of fatalities and injuries were compared to the Colombian context. Descriptive and inferential statistics were conducted to explore the association of fatal trauma and motorcycle accidents. P values and odds ratios were calculated. Bogotá, Cali, and Medellín were the cities with the most accidents. The month, day, time, age of the victims, and climatic conditions had a statistically significant association with the fatal trauma. Most victims were between the ages of 20-29 years. Motorcycles were involved in more than 60% of accidents. The social cost of a life lost in a motorcycle accident was estimated at \$2,418 million Colombian pesos (725,400 USD) per year. The establishment of countermeasures for the road safety of vulnerable users should focus on associated causal factors in order to develop strategies to effectively reduce the number of accidents.

Keywords: Motorcycles, road traffic crashes, accident, fatality, injured, non-fatal