

An Overview of Motorcycle Crashes in Sri Lanka with a Comparison between Public Opinion and Police Crash Data

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Abstract

Road safety is being a major topic discussed all time, focused studies are not much carried out to identify factors affecting the road traffic crashes. Among the huge number of road traffic crashes, motorcycles are one of the most vulnerable vehicles on roads. In this research, motorcycle crashes happened at the urban areas was analysed. A descriptive data analysis about motorcycle crashes is a very important to develop the public opinion about motorcycle crashes. There are so many road rules and regulations in Sri Lanka. A study about those road rules and regulations related to motorcycle crashers, motorcycle riders were carried out here. The road rules and regulations and a brief description about driving license examination were carried out here. A questionnaire survey was conducted to find out the public opinion about road user's disciplines and motorcycle crashers. To find out the motorcycle congestion of the urban roads, a traffic count was carried out. Also, the police crash database was obtained from the Traffic Police Headquarters Colombo. Some other motorcycle crash data were obtained from the Ceylinco Insurance PLC to find out the most unsafe motorcycle type available on the road. Results of the questionnaire, police crash database, and crash data obtained from Insurance Company were analysed. A descriptive analysis was carried out with the comparison between questionnaire survey results, police crash data analysis and Insurance crash data analysis. When the fatal crashes are considered, motorcyclists are ranked number one. Most vulnerable vehicle category presented on the road, most driver/rider fatal vehicle category, most vulnerable vehicle type that caused more accident to pedestrian can be identified as the motorcycle. The major outcome of this research was identify a list of factors that involves with increasing of motorcycle crashers. Some major factors identified for motorcyclist's safety are:

“Helmet is the most important safety equipment for motorcyclists; wiser and strap use is more important to reduce the severity of fatal crash”,

“Multiple road junction, 4-leg junction and T junction are the more unsafe locations for motorcyclists according to the responses, but stretch of road, no junction within 10m is more unsafe because most of past motorcycles crashes happened at that location”,

According to the responses slippery surface, flooded with water surface, wet surface are unsafe road surfaces for motorcyclists, but dry road surface has more crashes, because of the hidden factor of “exposure”. According to the responses, rain and fog/mist weather types are the most unsafe for motorcyclists but clear weather type is more unsafe than other weather types, because most of motorcycle crashes happened at clear weather type.

According to the responses, night, no street lighting is the most unsafe lighting condition for motorcyclists, but daylight is the most unsafe lighting condition for motorcyclists, because most of motorcycle crashes happened at daylight lighting condition.

According to the responses, brake system of motorcycle is the most considerable factor related to motorcycle safety. No traffic control system is more unsafe than others for motorcyclists. Because most of motorcycle crashes happened at no traffic control. Aggressive/negligent driving and speeding is more unsafe human pre-crash factor contributing to an accident

Keywords: Road safety, Motorcycle crashes, Public opinion, Questionnaire

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