Bibliometric analysis in motorcycle accident research: a global overview

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Abstract

770 million motorcycles are estimated on the roads. Motorcyclists represent more than 380,000 annual deaths worldwide. 28% of the global fatalities in the roads in 2016. With the increase of the accident rate, studies have been developed within the scientific literature. Bibliometric analysis is applied in the field of motorcycle safety in order to identify relevant publications on risk factors of road crashes and their implications. The information in this research was extracted from Web of Science and Scopus databases between 1947 and May 31, 2018. The study identified the key bibliometric indicators such as publications, authors, journals, countries, institutions, citation and co-citation analysis, subject categories, and co-occurrence of terms. EndNote, Microsoft Excel, Statgraphics Centurion and VOS-viewer software were used for the analysis. In total, 1813 articles were considered. The publications from 2000 to 2017 exhibits an average growth of 9%. The journal "Accident Analysis and Prevention" was the key issue in the publication and citation. The top institutions were the University of California, Universiti Putra Malaysia, and Monash University. The average citation of the top 10 articles was 134. A network visualization map showed that 'vehicle', 'model', 'system', 'road', 'safety', and 'behavior' were the most commons key terms. Bibliometric analysis demonstrates a high collaboration between authors and institutions. Two growing trends were identified. First, studies on the protection of the motorcyclist and the safe design considering the performance. Second, studies in analysis, characterization, and prevention of accidents. These studies are more related to the generation of strategies for the protection of road safety for motorcyclists.

Keywords

Bibliometric analysis: Motorcycle; Accident, Crash; Injury