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Identification of Road Safety Risk Factors in Africa

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Objective

Road safety in Africa is poor. The number of road fatalities (26.6 fatalities/10⁵ population) is almost three times that of Europe's. In addition, Africa has the highest proportion of pedestrian and cyclist mortalities with 44% of deaths. However, the most disturbing concern in Africa, is that road trauma is expected to worsen further, with fatalities per capita projected to double from 2015 to 2030. African countries, seem to suffer from a substantial lack of detailed knowledge on road casualties in terms of their number as well as associated factors leading to road accidents

The paper aims to analyse road safety data collected within the SaferAfrica project and identify key risk factors affecting road safety in African countries. A data organisation and analysis system was developed for the data gathered in order to produce indicators and define critical areas and challenges per topic and region of Africa.

Data collection

Data were mainly collected either from international databases (e.g. WHO, 2018; IRF World Road Statistics, 2017; etc.) or via questionnaires distributed to national experts within the context of the SaferAfrica project, the input of which was found very useful.

Priority Areas for Road Safety Actions

The analysis of the data on the basis of the established literature findings related to road safety risk factors highlighted the following topics to be further explored for the identification of key risk factors in the African region:

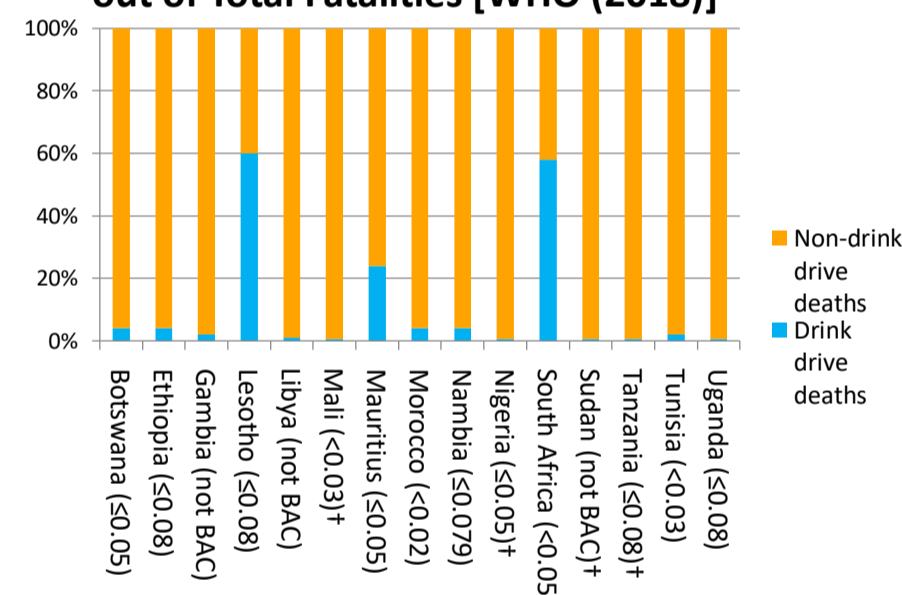
- Road user behaviour
- Infrastructure
- Vehicle
- Post-crash care
- Road safety management

Each topic was examined for the whole African continent in order to define the effects of specific factors on road safety performance.

Road User Behaviour

The key risk factors identified in this topic concerned speed, alcohol, helmet use, seatbelt use and child restraint use, which were explored by using available data on Safety Performance Indicators (SPIs), as well as legislative and traffic law enforcement information. Data on the percentage of road fatalities attributed to drink-driving, was available for a small number of countries. Regarding speeding, more than half of the 44 countries with available data met the WHO best practice guidance for the speed limit at least as far as urban roads are concerned.

Percentage of Alcohol Involved Deaths out of Total Fatalities [WHO (2018)]



Infrastructure

Although some research has been carried out on the field of infrastructure risk factors and road safety, the major issue identified is low data availability. Moreover, a number of technical reports propose guidelines on the basis of international studies without having evaluated the suggested risk factors and countermeasures before in an African context. At present such an effort is increasingly taking place in academia, as some high-quality scientific papers have been identified.

Vehicle

The key risk factors from the vehicle assessment point of view revealed that the improvement of vehicles' fitness has an enormous potential to reduce the impact of vehicles in crashes. The utilized indicator (fatalities /1,000vehicles) revealed that even the best performing country in Africa (Mauritius, 0.34 fatalities/1,000 veh) is more than **6 times** below the relevant value of a European country (e.g. Switzerland).

Post-crash care

Post-crash care activities should take place at local, national and regional levels. Within the legal constructs of national and local governments, countries are encouraged to implement activities that increase responsiveness to post-crash emergencies and improve the transport system ability to provide appropriate emergency response and longer-term rehabilitation for crash victims.

Road safety management

From the data gathered and the analysis that followed, it was shown that the African countries have good performance concerning the establishment and the strengthening of a lead agency and some management and evaluation tools exist already. However, some weaknesses were identified, such as partial or lacking dedicated funding for the implementation of road safety strategies and a poor system for data registration and monitoring road safety performance.

Conclusions

Through this process, critical road safety areas were defined and even highlighted per region in order to take into account geographic characteristics and potential road safety performance heterogeneities. This analysis aimed to allow the identification of priority areas for road safety actions and interventions per region, with emphasis being given on those with high road safety improvement potential. On that purpose for those risk factors that sufficient data were available, further analyses were performed for the African regions, as defined within the SaferAfrica project.

More information

The present research was carried out within the research project "SAFERAFRICA - Innovating Dialogue and Problems Appraisal for a Safer Africa", which has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 724029.

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