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SPATIAL CHARACTERISTICS AND PUBLIC HEALTH CONSEQUENCES OF ROAD TRAFFIC INJURIES IN ROMANIA

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Abstract

Romania has recorded a dramatic number of road traffic accidents in the last five years. The latest European documents and statistics indicate that the country has the highest number of traffic fatalities across the Member States of the European Union. The aim of the paper is twofold. First, the authors aim to analyze the spatial characteristics of traffic accidents for the period 2010-2014: spatial distribution of accidents at county level, number of vehicles involved, socio-spatial distribution of accidents, and correlation between the urbanization level and accidents. Second, the intent is to calculate various indicators expressing the severity of traffic accidents. The paper concludes with some remarks related to the consequences of road accident injuries on public health.

GIS (Geographic Information System) techniques are employed in the paper, using official data sets provided by the General Inspectorate of Romanian Police and the National Institute of Statistics.

The main results of the paper are: a) a set of maps and charts indicating the distribution characteristics and the crash concentration areas, located along the major road connections and in the main urban areas; b) a chart of the social vulnerability, indicating that the most frequently involved social groups are males aged 18-26, while the other age groups and females are less involved in accidents; c) a set of maps and charts regarding the impact of accidents on health, indicating that about half of the accidents have minor impact on health, the other half being represented by severe injuries and fatalities.

One of the main conclusions of the study is that during the last five years the traffic accident statistics in Romania has not significantly improved. Therefore, traffic accidents represent the main risk and their reduction is one of the targets for the transport and road safety policies.

Key words: GIS, public health, road safety, traffic accidents

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