

INTRAS

Inequalities in Traffic Safety

DURATION
1/10/2013 - 31/12/2017

BUDGET
601.742 €

PROJECT DESCRIPTION

In health research extensive evidence is found on socioeconomic and cultural differences on health outcomes. One of these health concerns are traffic injuries which impact is expected to increase worldwide. As in other health domains inequalities are found in accident involvement. Again underprivileged groups are the most vulnerable. Injury research however still lacks explanatory models on how contextual and individual factors contribute to injury causation.

The main objective for this study is therefore to reveal some of these mechanisms that explain the differences that occur in road accident involvement in Belgium. Since no studies have been conducted on the differences in road accident involvement in Belgium by different socioeconomically and culturally defined groups, this will also be part of this research proposal.

Apart from the valorisation 3 work packages are defined. The first work package involves the conceptualization and the exploration of the extent of the problem in Belgium. The second work package goes deeper into the underlying mechanisms that give cause to the inequalities found in work package 1. Analyses in these first 2 work packages require data that are available at different levels of disaggregation. In work package 3 methodological issues are addressed to combine these data in such a manner that a maximum of information can be obtained from them.

As first step in the research an elaborate conceptual framework will be constructed from the main theories described in international literature. This model will also provide a grip for the remaining tasks throughout the different work packages, since from this model a number of explanatory linkages will be looked into.

Inequalities in traffic safety come from differences between individual and household characteristics, but they are also influenced by social and physical context. Two approaches are followed to study the extent of the problem of inequalities in traffic safety for Belgium. A first approach defines inequality on the level of the neighborhood or municipality, while for the second approach stated accident involvement is studied on the individual level.

In the second work package some of the (possible) mechanisms that were identified in the first work package will be further investigated in a Belgian context. 3 cases will be discussed. The first case studies whether (and to which extent) mobility patterns differ among people with different socio-economic background, and to which extent this is influenced by the neighborhood characteristics.

A second task within this work package will mainly focus on inequalities that can be found in unsafe behavior and unfavorable attitudes. The main focus of this task lies on the study of the impact of socio-economic and socio-cultural factors on the determinants of unsafe road user behavior. Since there are no data available in Belgium that allow to link difference in attitudes to road users' ethnic background, the task will be conducted on the basis of an ad hoc developed survey questionnaire that will be based on two theory of planned behavior questionnaires for speeding that have already been validated in Dutch. Different groups of varying ethnical origin will be considered.

The third task is an illustration of the benefits of the data-integration efforts in work package 3. By combining data from different sources a richer dataset will be obtained, giving the opportunity to include more relevant parameters into the analysis. This will allow us to estimate the relative importance of each of the studied effects (individual, social context, physical context, exposure).



INTRAS

The third work package involves the creation of a data warehouse in which data from various sources, at different levels of aggregation are collected. Until now virtually no integration efforts have been made to fully exploit the richness of the variety of available data resources. The main task within this work package is therefore the development of a methodology for data-integration that is resource-friendly and explicitly takes into account model uncertainty.

The first task in the development of an integrated traffic safety data analysis framework for Belgium is the identification of the available data sources. After all the relevant data sources have been identified, a data warehouse has to be created to facilitate the development of the integrated analysis framework. Next the actual methodological framework has to be constructed.

The field of traffic safety is interdisciplinary by nature since it derives from the complex interaction between all sorts of environmental and human factors. This interdisciplinarity is reflected in the project team with researchers from different backgrounds such as health & social psychology, sociology, transportation sciences, and statistics. The outcome of this project might allow practitioners as well as policy makers to develop a more evidence-based view on the extent to which socio-economic and cultural differences affect road safety. The finished product of research will consist of a scientific report covering the findings obtained in the three work packages described above.

CONTACT INFORMATION

Coordinator

Stijn Daniels
Universiteit Hasselt (UHasselt)
Transportation Institute (IMOB)
stijn.daniels@uhasselt.be

Partners

Peter Silverans
Belgian Institute for Road Safety (BIVV-IBSR)
peter.silverans@bivv.be

Mario Cools
Université de Liège
LEMA
mario.cools@ulg.ac.be