Reviewer's report

Title: Geographic variability of road traffic accidents in Spain during the period 2002-2004: an ecological study

Version: 1 Date: 11 April 2007

Reviewer: Abdulbari Bener

Reviewer's report:

General
I have read the manuscript and regret to inform you that the paper is not suitable for publication in BMC Public Health in its present form. I have not found any noticeable merit in the manuscript for consideration and it needs substantial revision to meet the standard of BMC.

• The aim of the present study was to describe the inter-province variability of Road Traffic Accidents (RTA) mortality on Spanish roads, adjusted for vehicle-kilometers traveled, and to assess the possible role played concerning explicative variables. The topic of the research is a common subject and many studies have been conducted on RTA and risk factors. Hence, the new articles must be in line with those reports with some interesting and new findings.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
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• The aim of the present study was to describe the inter-province variability of Road Traffic Accidents (RTA) mortality on Spanish roads, adjusted for vehicle-kilometers traveled, and to assess the possible role played concerning explicative variables. The topic of the research is a common subject and many studies have been conducted on RTA and risk factors. Hence, the new articles must be in line with those reports with some interesting and new findings.

• The manuscript is well written, but new information described.

• ABSTRACT
Objective: The first two lines mentioned under Objective are not needed, other should be deleted such as the following explicative variables type of road, heavy vehicle traffic, alcohol consumption, rainfall and other precipitation, drivers income and educational and cultural levels.

• Methods: The methodology seems OK

• Results: The results have been presented in a very short and concise manner.

• Introduction: It is too long. Some parameters are cited in introduction, but discussed in the current study such as gender, speed etc.

• Materials and Methods: An ecological study design was employed. The authors calculated the mean annual rate of RTA deaths for the period 2002-2004, adjusted for vehicle-kilometres travelled, in the 50 provinces of Spain. They have related the death rate from RTA with the independent variables described above, using simple and multiple linear regression analysis with backward step-wise elimination. Unfortunately, p value has not been stated in Tables.

• Statistical tests: Type of tests used are appropriate, but not interpreted very clearly. Tables 2 and 3 are not presented well and p-value is missing.

• Results: Results are not presented very well. After presenting the data in a meaningful way in tables, the results section should state the analysis of the data. Readers are pointed to the tables rather than exploration of data. The important findings of each table should be stated under results.

• Discussion: The discussion should point out the relationship among variables and the situation. It should follow the same order of the result section. After discussing the important study findings of each table, they should see the situation with previous similar studies. The author has discussed the topic in various angles without concentrating on the objective.

• Conclusion: The authors concluding investment in improving the highway network and encouraging an increase in demand for public transport, road safety campaigns and driver training schemes. I believe that this study is more relevant to local journal, rather than international audience.

• Decision: By all means, I do not find any originality in this study. It does not contribute anything to the
literature too. There is no new study finding in this manuscript. In the light of the afore-mentioned points, I reject this paper for BMC Public Health.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

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Discretionary Revisions (which the author can choose to ignore)

What next?: Reject because scientifically unsound

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

'I declare that I have no competing interests'