Reviewer's report

Title: Effectiveness of mass media campaigns for reducing alcohol-impaired driving and alcohol-related crashes: A systematic review

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Reviewer: Gabriele Messina

Reviewer's report:

Although the object of article has already been treated previously in other studies, it is certainly useful to have an updated systematic review on this important subject.

The authors define very well the topic and the objective of the study.

All the studies included in the systematic review, have been subjected to a strong selection using the scheme provided by the authors. The studies were checked for risk bias and stratified according to guidelines provided by EPOC.

MAJOR REVISIONS

- When the authors report the extracted data, from the studies or from their analysis, they often did not include confidence intervals. Ex. P. 6, line 82: “... median decrease in alcohol related crashes of 13%”.

- In addition, while in this paragraph they are considering mean and regression models based on calculated means from the various studies, in the rest of the study, they refer to medians. This cause some confusion. What did they use/compare?

- The discussion should be expanded, considering the complexity of the topic and the findings they have (results).

- The studies which were included have several outcome measures which were not always the same among the studies (in fact, some studies consider only “all crashes and Injury crashes”, other studies “fatal crashes and alcohol related crashes” etc.). This aspect introduces a variability in the estimate of the “overall effect”. Authors should introduce this aspect in the limits.

Can the writing, organization, tables and figures be improved?

- Figure 3 (is it a figure?) should be better presented.
  • It lacks of confidence intervals.
  • It lacks of the weight that each study has on the “overall estimate”.
  • It lacks of the average of all studies (diamond)
  • The study of Tay et all (21), Zampetti et all (34) and Worden et all (35), appear to have a value of 0.0%, and the first among them is represented with a symbol not specified.
MINOR REVISIONS

-It is not clear the use of references when the author writes, "The follow-up period of data varied from four months (28) to six years (31) ". Are the references 28 and 31 respectively, the shorter and the longer? Do these studies refer to the latency of the effectiveness of the campaigns of mass media?
Are the methods appropriate and well described, and are sufficient details provided to allow others to evaluate and/or replicate the work?

-Most of the methods used in the study are quite clear and understandable, but in the "Calculation of summary effect measures" authors might better explain the methodology which was adopted.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

I declare that I have no competing interests