Reviewer's report

Title: Adolescents’ health and health behavior as predictors of injury death - A prospective cohort follow-up of 652,530 person-years

Version: 1 Date: 28 August 2007

Reviewer: William Pickett

Reviewer's report:

General

This is an interesting paper. I have mixed feelings about this manuscript and would ask the authors to consider these points as constructive suggestions.

On one hand (positive), the analysis, its construction, and its presentation are excellent. The results are reported in a very professional manner.

On the other hand (negative), the theoretical underpinnings of this manuscript are very weak, and you have ignored a large body of existing literature in the development of your arguments and their discussion. For example, to suggest that studies of risk factors for injury are scarce and limited to socioeconomic studies is just not true. There is a huge body of literature on social and lifestyle determinants of injury. You have just chosen to ignore it (or are unaware of it). Second, the analysis is not based upon an underlying theory, and this would have helped.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1. I would suggest that the literature review is incomplete and misleading. Your contention that most epidemiological studies on risk factors for injury deaths surround socioeconomic risk factors is not true. There is a great body of literature on health behaviors and injury risks out there ... you just haven't cited much of it. This review needs to be re-written with greater attention to the existing body of evidence. Further evidence of your lack of consultation with the existing literature is in the discussion, where you do not provide citations for most of the points that you are raising.

2. Your analysis is quite well done, but it would be strengthened by basing it upon an underlying theoretical framework; either social or biological in nature.

3. Your analysis does not consider the fact that many of the risk factors under study will change over time, and that these measures of exposure for different times are not available for analysis (or are they?).

4. The finding that drinking and smoking are associated with risks for injury is not
too novel. These behaviours are known to cluster and are markers of an underlying lifestyle that leads to major injury risks. Several people have looked at substance use and its effects on risks for injury. Some have modelled these behaviours together (i.e. in scales) instead of as individual risk factors. Discussion of your results should be made in light of the existing literature.

5. The conclusion that you are not going to base any intervention program on the findings is conservative; surely there is some randomized trial or other evidence that could be cited surrounding (e.g.) drinking countermeasures to prevent injury occurrence.

6. It would be helpful to examine the consistency of the risk relationships observed for specific types of injury (beyond intentional and unintentional). Your approach is analogous to putting all cancers together and looking for "risk factors for cancer". You may find stronger relationships when you examine individual types of injury death as outcomes, although power may be limited for some analyses. It may also be helpful to explore differences in the relationships examined by sex.

Overall, I would encourage you in that I think that your analysis is robust and compelling, it is nicely presented, and the results have some merit. However, the manuscript would benefit from a more sophisticated theoretical base, more in-depth consideration of existing literature, and some further sub-analyses.

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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)

None

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Discretionary Revisions (which the author can choose to ignore)

None

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article whose findings are important to those with closely related research interests

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.