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: 4 September 2007

Reviewer: Matti Hillbom

Reviewer's report:

General

In a prospective cohort of 57,407 Finns aged 14 to 18 years and followed for an average of 11.4 years the authors observed 312 injury deaths. Recurring drunkenness and daily smoking were significant risk factors for injury death, irrespective of whether the index injury was intentional or unintentional. Poor health and socioeconomic background did not predict injury deaths. They conclude that injury prevention interventions may benefit from promoting healthy lifestyle in adolescence.

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

1. Death Register data of the non-respondents should be given more accurately. There were 14,971 (20.7 %) non-responding cohort members. How many intentional and unintentional injury deaths occurred among them? Was the distribution by injury type similar to that of respondents? The last paragraph in Statistical methods should be provided by additional data and removed to the Results section. It is important to know whether bias due to non-respondents could influence the observations. This should be discussed.

2. In the Methods you should tell us whether you used mailed questionnaires or did you contact the cohort members by phone etc. You should also describe more accurately what is meant by occasional drinking (how often and did occasional drinkers drink to intoxication?), recurrent drinking (how often?) and recurring drunkenness (daily, several times a week, every week-end etc.?). How the questions were formulated to obtain the data?

3. You should calculate the statistics in tables after having omitted those 14 with unknown cause of death and correct the tables.

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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)
1. Page 6: Why are not all injury-based deaths autopsied in Finland?
2. Page 8 (Table 2). Should be (Table 3)
3. Page 9: Do not use males and females (this is not an animal experiment). Use instead men and women.
4. Page 9: What are the four health variables?
5. Page 11, first paragraph, last sentence. Could be better to add to this sentence …“irrespective of injury type…”
6. Page 12, third row: “…, are behaviors that persist into adulthood” Add reference 17 at the end of this sentence.
7. Page 12, second paragraph: what phenomenon?
8. Table 3. Unintentional injury deaths should include only 136 subjects because 14 of unknown cause do not belong to either intentional or unintentional groups.

Discretionary Revisions (which the author can choose to ignore)

1. The causality of drunkenness to injury risk is well established. Concerning injury deaths in this material, the authors should show how many of those in each injury category were intoxicated by alcohol (or drugs) at death. Such data will easily be drawn from autopsy reports.
2. Surprisingly, the authors found daily smoking to predict injury death. It is well-known that there is a close correlation between smoking and drinking. Did you test for interactions? How do you explain daily smoking as a predictor for injury death among relatively young people?
3. Did you observe that those who participated in organized sports were non-smokers or abstinent more often compared to others?

What next?: Accept after minor essential revisions

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

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests.