Reviewer’s report

Title: Sports activity and combined use of snus and cigarette smoking among young males in Finland in 1999-2010

Version: 1 Date: 28 November 2011

Reviewer: Francois Marclay

Reviewer’s report:

Minor Essential Revisions:

a) In the abstract and in the first paragraph of the results, you compare smoking or and snus use prevalence in 1999 and 2010. Does it refer to prevalence in Finland, Europe, worldwide? Also a reference for these numbers is missing. Is there a link between the decrease of smoking and the increase of snus use due to former smokers trying to quit or simply changing habits, or is it new snus consumers who did not previously engage in smoking? It would be interesting to consider this epidemiologic shift when interpreting the results related to sport activity. The evolution of the phenomenon in sport may just reflect the evolution in society, but may also be independent from it. A short reflection might be worth to consider in the discussion.

b) In the 4th paragraph of the background, is it the rate among 18-year-old males and above or just 18-year-old? A little bit unclear.

c) In the 5th paragraph of the background, you mention that you expect people with high sports intensity to prefer snus. It would be interesting to provide a few details about your hypothesis. I assume you are referring to the diminished health risks and lack of negative effects on the respiratory system but it might not be obvious to the readers.

d) In the 2nd paragraph of the subjects and methods, how do you define “occasionally”? There is a significant difference between using it one every two weeks and four times a week. This is a significant parameter to consider when interpreting the results.

e) Similarly, as you combined daily and occasional users, the discussion should put a little more emphasis on this point as it may nuance the interpretation of the data. From a methodological point of view, the number of cigarettes or snus pouches used daily or occasionally should have also been included in the questionnaire.

f) In the 1st paragraph of the results, you indicate 16’746 respondents. However, 735 daily users represent 4.46% and not 5%, 6178 represent 36.89% and not 39%, and finally 1771 represent 10.57% and not 11%. As a usual practice, numbers should be rounded down and the second percentage should be verified.
g) In the last sentence of the 1st paragraph, 12% and 7% should be interchanged.

h) In the last sentence of the 2nd paragraph, a “.” at the end is missing.

i) In the 4th paragraph of the results, you mention that the association between tobacco product use and sports activity has not changed over time. However, as smoking has decreased and snus use has increased, this result is a bit confusing and would require more details for a better understanding. I assume you’re referring to the general pattern of snus use in sport but it’s not totally clear.

j) In the 1st paragraph of the discussion, which disciplines are categorized as team sports?

k) Similarly, in the 2nd paragraph, which disciplines are categorized as skiing (cross country, …)?

l) In the 2nd paragraph, you mention that the use among organized teams is somehow promoted. Do you have hypothesis that may explain it? Is it a cultural or ritual thing, is it due to group initiation or “team building” purpose, etc? It would be worth mentioning a few hypotheses to explain this result. Also, regarding the pharmacological effects of nicotine, is there a potential link with performance enhancement and doping? Whether it is on purpose or not.

m) In Table 1, if you sum the n of each category, it never results in 16’746 respondents. Is it due to incomplete completion of the questionnaires? If yes, this should be mentioned in the discussion. If not, there is an issue with the numbers presented in this table. Accordingly, the sum of the ‘self-reported physical fitness’ category is 17’715, which is almost a thousand more than the total number of respondents. Again, numbers should be carefully verified and the OR recalculated accordingly, both in the table and manuscript.

n) In Figure 1, for a better visibility, the scale for the years should be adjusted so that the years and the separation match.

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

**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.