Reviewer's report

**Title:** Time loss due to oral health issues in the Canadian population: analysis of a nationwide cross-sectional survey

**Version:** 1  **Date:** 29 January 2013

**Reviewer:** Anna-Lena Ostberg

**Reviewer's report:**

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

**GENERAL COMMENT**

The study reports from a nationwide omnibus survey in Canada, comprising an array of health issues. The focus for this study, time lost due to oral health conditions - both on the individual and on the societal level - is sparsely investigated. Thus, the aim of the study is interesting.

**SPECIFIC COMMENTS**

**TITLE and ABSTRACT**

The term “oral health issues” is vague, please be more specific. Both clinical and self-reported data were collected. However, the clinical data are not commented on.

The aim of the study defined in the abstract and that in the main text differ to some extent. The one in the abstract is clearer.

Please consider the construction of the second sentence under “Methods” in the abstract (proportion of who/what?). No musculoskeletal conditions were investigated in this study and should not be reported in the results here.

The conclusion in the abstract and that in the main text do not correspond. Moreover, it should be better focused.

**BACKGROUND**

The background is adequate as a whole. However, the same currency must be given when comparing costs for time loss in different countries.

**METHODS**

Exclusion criteria shall be justified. The sample is said to statistically represent 97% of the total Canadian population. It would be interesting to know the total count of the population.

The questionnaire contained 722 items. This is extremely much. Please see below under DISCUSSION. The answer options of the used items should also be
Statistics: The usage of inverted odds ratios is debatable and not justified. Please see comment under RESULTS. Whether here or under RESULTS, the variables omitted due to multicollinearity should be given.

The data were collected between March 2007 and March 2009. Why was average household wages per occupation classification from February 2012 used to estimate individual losses?

Ethical approval and data deposition shall be accounted for.

RESULTS
My main concern is the pedagogical approach in using inverted odds ratios for OR:s <1. An example: in §2 of the results the second sentence begins as follows: “Table 2 demonstrates that as income decreased so did the odds of reporting time loss”. However, the table shows increasing inverted OR:s. What is the reference group in the different calculations? If the authors wanted all OR:S to be >1, reverse coding of specific items could have been carried out before the analyses - although this could also entail difficulties in the interpretation.

The tables are very extensive.
Table 1: no option for those =high school. “Frequency of seeing dental professional”: it surprises me that there is no option between “One or more times per year” and “Emergency or never”.
Table 2: See above regarding inverted OR:s. Why is dmft and DMFT given – nothing is commented on or used in the analyses. And what does N=27,629,868 stand for (the same for the primary and the permanent dentitions)?
Table 4: were all the variables mentioned in the table included in the same regression model?
Table 6 reports on productivity loss in different occupational groups. The clinical relevance of this is unclear, please motivate.

DISCUSSION
Results are repeated to some extent in the discussion section, which enables reductions (too long as is, > 5 pages). On some points, new results are given for the first time in the discussion section (§2: “the majority of 1 to 2 member households were comprised of higher educated, higher income earners” and §5: about the total estimated monetary loss).

Some parts of the discussion are not supported by references (§§ 3 and 4). Specifically “the very few examples from the dental literature” shall be cited (§4, line 2).

In §6, comparisons are made with an Australian national survey, which produced opposite findings to the current study (line 9). Please discuss better.

The method’s discussion is balanced. However, the validity of a questionnaire
containing 722 items must be discussed!
The conclusion in the abstract and that in the main text do not correspond. Also, see above my comments to the abstract.

- Discretionary Revisions (which are recommendations for improvement but which the author can choose to ignore):
  Key words should preferably be MeSH terms.

**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.