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:** 2 February 2013

**Reviewer:** Marco Peres

Reviewer's report:

General comments

This is an interesting manuscript which addresses the time loss due to oral health issues in the Canadian population, using a nationwide survey. This area of research is important; the manuscript has merit and the methods are, in general, sound. However, I identified some shortcomings, especially the lack of some concepts and definitions used, the way of reporting results, and comparing the study findings with others, that should be addressed.

Specific comments

Abstract

There are no ‘numbers’ in spite of mentioning ‘quantity of time loss’. Please, quantify the magnitude of time loss due to oral health issues in the abstract.

Introduction

The authors clearly justified the study and objectives but I suggest adding some statistics of dental health in Canadians. Reporting that dental diseases affected over 95% of Canadian adults in 2009 is too vague.

Please, commence this section conceptualizing direct and indirect cost supported by recognised and very well known references.

Be consistent with heath economics terminology. For instance, when reporting the days of restricted activity per 100 persons (last paragraph, page 2), it is mandatory to indicate the temporal unit, i.e. month, year or period. Later (first paragraph, page 3), the authors reported an estimated AUD$808 million lost due to oral pain and discomfort without mentioning during what period of time.

It would be preferable if the authors provided information on similar studies in different countries and described the search method.

The objectives of the study should include identifying factors associated with time loss.

Methods

• Please provide information about sources of fluoride in the studied population.

• The authors omitted how the sample size was calculated and selected. What were the statistical parameters that guided the sample calculation? The sample size calculation and selection should be explained in depth (or referenced). Moreover, the authors should explain how they dealt with sample calculation to
test the association of the outcomes with exploratory variables. This requires another sample calculation.

• The clinical examination, as well as all collected explanatory variables, must be described and their cut-off points justified or referenced.

• Please provide additional information about the fieldwork team, data setting and data quality control.

• How did the authors perform statistical modelling? It is mentioned that linear and logistic regression models were performed but it is necessary to justify why and if the outcome variables distribution adhered to the assumptions of these techniques.

• As is unusual in dental public health literature the use of econometric methodology approach, I suggest a more detailed explanation about the calculation of the potential productivity loss (last paragraph, page 5)

Results
Start the results section by providing the participation rate and the main reason for drop out.

Tables 2 and 3 are too long; they need to be shortened. P-values should be displayed for each variable instead of each category.

Tables 4 and 5 should show crude and unadjusted models; the SE column in Table 5 is not necessary.

In Table 4, I identified some 95% CI with the upper limit presented before the lower limit when the contrary is the correct way of presentation.

Please, refrain from repeating values from the tables; instead highlight the most important results. Omit p values and 95% CI in that section.

Discussion
Apparently there is a paradox in the time lost owing to dental issues. The majority of those reporting time loss are from middle-to high-income groups. This issue must be discussed in depth.

Please, take care with comparisons. In the past paragraph of page 10, the authors compared their findings with findings from another study on musculoskeletal strain and bone disorders published in 1998, at least 10 years earlier. In addition, it is important to report if the same methodology was used in both (dental and non-dental) studies.

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