Reviewer's report

Title: Relationships between self-rated oral health, subjective symptoms, oral health behavior and clinical conditions in Japanese university students: A cross-sectional survey at Okayama University

Version: 1 Date: 16 August 2013

Reviewer: Marcos Pascoal Pattussi

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Research on the social determinants of health would benefit from theoretical frameworks reflecting the complexity of real life social processes and their influence, and mechanisms of influence, on health outcomes. That is, theories of the causes of disease that bring together factors defined at different levels and their implications for public health policy.

This is a cross-sectional study aiming to assess the influence of behavioral and clinical on self-rated oral health among University students in Japan.

The subject is relatively well-studied. The criticisms / comments / questions / suggestions below aim to contribute the manuscript improvement.

- Major Compulsory Revisions

1. The determinants of and factors associated with self-rated oral health could be more clearly defined in the background section.

2. Give the direction of associations reported in the background section.

3. Describe in more depth the geographical location contextualizing study population in the country, city and University. Sample is composed of first year students who underwent to the general health examination. All first year students underwent to the general health examination? How many of this age group is out of University? What is the proportion of 18-19-year-old university students in Japan?

4. Authors claim that previous studies have examined only direct effects of independent variables on dependent variables. They justify the adoption of the structural equation modeling because it can be studied to investigate indirect effects and to analyze complex relationship within a conceptual model by allowing the inclusion of latent variables. However, it appears that data collection was not originally designed to answer the proposed research question. A justification of the theoretical model would benefit the manuscript. The proposed theoretical model is limited to the assessment of direct effects of clinical and of behavioral variables on self rated oral health. It lacks accounting for important factors such as socioeconomic, gender, dental health care, psychosocial and contextual variables. This limitation should be pointed out in the discussion section.

- Minor Essential Revisions
1. Page 5 (p5) what does ‘low activity of health behavior’ mean? Place the long sentence about the reasons for evaluating self-rated oral health in the Discussion section.

2. P6 – Keep together objectives and hypotheses. Alternatively, delete the hypothesis sentence.

3. P7 – Is socioeconomic position an important factor for this age group in Japan? Was it collected? Why sex was not included in the model (Figure 1)

4. P15 – rephrase the following sentences because they are not supported by the data: “The high score of DMFT is correlated with anxiety as well as self-rated oral health [13]. Anxiety associated with caries experience might explain the reason why the score of DMFT had higher association with self-rated oral health [4]”. And, “These data suggest that people who cannot recognize and acknowledge their deteriorating periodontal condition accurately are at increasing risk of delaying access to dental care [3].”

5. P17 “our sample might be representative of Japanese young adult population, because the mean score of DMFT in 17 this study (2.3) was close to the data of Japanese aged 15-19 years in the National Survey of Dental Diseases at 2011 (3.2).” This statement is not well taken because: (1) this is not a probabilistic sample, (2) it does not take into account 95% confidence intervals. (3) study population was not contextualized in the methods section.

6. P17 – Why to combine data collection with routine health screening limits the study?

7. Do not duplicate data on figures and tables. Either delete or Table 3 or Figure 1.

- Discretionary Revisions
1. Page 5 (p5) Place the long sentence about the reasons for evaluating self-rated oral health in the Discussion section.

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.