Reviewer's report

Title: Behavioral factors to include in guidelines for lifelong oral healthiness: an observational study in Japanese adults

Version: Date: 13 July 2006

Reviewer: Anne Nordrehaug Astrom

Reviewer's report:

General.
This is a cross sectional study aimed at identifying factors related to retention of teeth/toothloss in Japanese adults using a life course approach. Information is generated from a large population survey and assessed in terms of self reports and clinical data. I have some concerns with respect to concepts used, statistics and validity of the measures of this study. My concerns are outlined below.

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

1. Introduction: This part of the manuscript would benefit from being restructured. Some concepts are used very loosely without further definition (e.g. "preference of poor general health"??), the concept of lifestyle, whilst applied in addition to health related behaviours, needs a definition as well. Page 5, second paragraph starting with--- "Previous studies found that numerous factors contribute to toothloss". References are lacking here. Although some references pertaining to studies indentifying socio-behavioural predictors of toothloss are provided, the above sited statement needs referring more broadly to studies that have identified different types of influencing factors.

2) Methods: It is unclear to me whether this was a census survey or a sample survey. If the study is based on a sample survey, a more comprehensive description is needed regarding: a) sampling method, i.e how were the participants recruited from the population living in Tobishima village?. The number of participants were 777. What was the actual sample size - how was it calculated? What was the response rate? External validity??(representativeness??).

Information is provided as to where the completed questionnaires were collected but not on how the questionnaires were administered (mailed to the respondents, as group questionnaires ??). Some more details are needed here.

According to the objectives this study set out to determine the relationship between health related behaviours/lifestyle and "tooth loss". The results from logistic regression analyses presented in table 4 denotes the outcome variable in terms of "number of retained teeth" and "tooth loss". (moreover in the discussion - tooth loss is emphasized as outcome variable of the study). It is somewhat unclear how the outcome variable (s) was defined(i.e. how was the outcome (s) coded as 0.1 variables) for all ages and separately in the different age groups?? Moreover, from the information in the table and the description of results it is less clear what is used as reference categories for the the independent variables?

4. The discussion is limited - it could benefit fom including comments on the limitations of this study and the threats to the validity of its measures.

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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)

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Discretionary Revisions (which the author can choose to ignore)
What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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

Quality of written English: Not suitable for publication unless extensively edited

Statistical review: No

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