Author’s response to reviews

Title: Factors associated with dental caries among institutionalized residents with schizophrenia in Taiwan: a cross-sectional study

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Version: 6 Date: 28 June 2010

Author’s response to reviews:

Dear Prof. Titmus,

Many thanks for your mail with the reviewers’ comments. We’d like to thank the Editors and reviewers for their useful suggestions, and have substantially revised this manuscript according to reviewers’ comments. The important issues raised by the reviewers have been clarified and elaborated. This revision of manuscript had been edited by the International Science Editing (www.biomedes.co.uk). All the changes are highlighted with red colored markers. We hope the corrections of this revised manuscript will be meeting the requirements of BMC Public Health. Please find the attached files for the revised manuscript.

MS: 8899253593491398
Factors associated with dental caries among institutionalized residents with schizophrenia in Taiwan: a cross-sectional study
Kuan-Yu Chu, Nan-Ping Yang, Pesus Chou, Hsien-Jane Chiu, Lin-Yang Chi

Reviewer: Georgios Tsakos

Major Compulsory Revisions
1.RE: what are the key points of the existing literature, and which are the gaps.

After an extensive searching for the relevant literatures, we actually found that few of the existing literatures had been focused on the oral health among institutionalized patients with schizophrenia, and even fewer of them had been adjusted for potential confounders. We have made this clear by rewriting the section of Background. (p. 3, paragraph 1-2)

… Schizophrenia is the most complex psychiatric disorder that affects mankind; treatment of institutionalized residents, especially those with schizophrenia, takes up a significant part of the health care resource, compared to other psychiatric inpatient groups in Taiwan [10]. However, to date, there has been relatively little research conducted on factors associated with dental caries among this
population. In addition to age and LOS, there were many other possible factors associated with dental caries in patients with schizophrenia. ...

4. RE: why chose to categories the outcome variables according to the general population.

The reason why we’ve categorized the outcome variables was based on the thinking that the institutionalized residents with schizophrenia should have at least similar level of oral health status to the general population. Therefore, we categorized the outcome variables according to the means of results from an oral health survey of general population. (p. 5, paragraph 2)

… They were based on the hypothesis that institutionalized residents with schizophrenia should have a comparable level of oral health status to the general population. We chose the cut-off points of the dental caries indexes as the corresponding means from an oral health survey for general Taiwanese [17].

6. RE: the variable on economic status is questionable.

In Taiwan, the criterion of low-income was that the average of family income fell below the lowest living expenses. The low-income status, which represented a specific welfare conditions, was validated by local authorities. Patients with low-income status would admit the specific wards and had a special discount of admission fees in this hospital. (p. 6, paragraph 3)

… Economic status was categorized as low income or non-low income, depending on the low-income certificate issued by local authorities.

11. RE: The sentences that were not relevant should be removed.

We have deleted the two incorrect statements and revised the relevant paragraph in the Discussion. (p. 11, paragraph 3; p. 12, paragraph 2)

… In fact, age is a strong confounder of the DMFT score, overcoming the effects of other explanatory variables. This is reasonable because co-linearity was significant between educational level, grade of disability, LOS, and age (all p-values<0.001 for the Pearson correlation test) in this study. …

… Schizophrenia seems to be more common in poor families, but their economic status lessens the chance of receiving adequate dental care, which could partly explain the results [15, 20].

New points:

16. RE: The objective of the study should be more precise.

We have revised the objective of the study and made it more explicit. (p. 4, paragraph 2)

… aiming to identify the relationships between the personal characteristics (including individual and treatment factors) and dental caries indexes among institutionalized residents with schizophrenia in Taiwan.
17. RE: more clear description of characteristics
We have revised the “Variables” section of Methods, including outcome variables and explanatory variables, which represent characteristics of the subjects. (p. 6, paragraph 2)
... The explanatory variables, which represent personal characteristics, were individual factors (such as sex, age, educational level, marital status, grade of disability, and economic status), and treatment factors (such as use of anti-psychotics and LOS). ...

18. RE: The explanatory variables refer to the personal characteristics needs to match the objectives.
We have modified explanatory variables to match the objectives, which refer to both individual and treatment factors. (p. 4, paragraph 2 and p. 6, paragraph 2)

19. RE: The Conclusions need to be revised.
We have revised the Conclusions to be more coherent to the Objective and Results obtained. (p. 13, paragraph 3)
... One of the individual factors examined, i.e. older age, had an independent effect on the risk of high DMFT score after adjusting for other potential explanatory factors. Furthermore, a prolonged stay in institution was the only treatment factor that was found to be related to CI and NRT. These results could provide an improved insight for psychologists and dentists who provide dental preventive services for this element of the population with special needs. ...

Discretionary Revisions
20. RE: whether non-respondents were different from the selected sample.
The statement about non-respondents being different from the selected sample in basic characteristics had been added to the Discussion of the revised draft. (p. 11, paragraph 2)
... It was difficult to compare participants with non-participants in terms of the personal characteristics influencing the dental caries index. The majority of those who did not participate in the survey were living in a rehabilitation hospice for psychotics with low physical functions or severe negative symptoms of schizophrenia. This symptom was potentially devastating to oral health because it impaired the patient's desire and ability to adhere to preventive oral hygiene [19]. As a result, this survey probably underestimated the level of dental caries. ...

Reviewer: Hannu Hausen
RE: The manuscript is far too lengthy; the claims are incoherent, and ungrounded.
Many thanks for pointing out the inadequacies in the earlier manuscript. We have condensed the manuscript and revised some inappropriate claims, so as to make it succinct and coherent.
We are delighted that you could consider publishing our manuscript in BMC Public Health, and look forward to your further correspondence. Thank you again for your patience and kind assistance.

Sincerely Yours,

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