Author's response to reviews

Title: Interest in dietary pattern, individual-level social capital, and psychological distress: A cross-sectional study in a rural Japanese community

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Author's response to reviews: see over
Dear Dr. Wesley Dean,

Title: Interest in dietary pattern, individual social capital, and psychological distress: A cross-sectional study in a rural Japanese community.

Thank you very much for your valuable comments.

We read your comments very carefully and revised our manuscript faithfully according to your comments. We are returning herewith a newly revised manuscript.

(Major Compulsory Revisions)

(1) According to your comment, we added an explanation in the section of background why we were linking elements of social capital (reciprocity and sense of community belonging) with depression and interest in dietary pattern. We also constructed a figure indicating the likely causal linkage (mechanism and directions) between these distinct constructs. In this figure, plausible causal linkages including their possible mechanism and directions were shown. The multilevel characteristics of model was also shown according to your comment.

We have added sentences as follows (please refer to page 5 line 14).

“Figure 1 showed a conceptual model to explain the relationship between psychological distress, interest in dietary pattern and social capital. Interest in dietary pattern is likely to affect psychological distress, and vice versa. Both emotional attachment towards one’s community and feeling of reciprocity are likely to improve one’s feeling of distress. Furthermore, social capital could give normative pressure to interest in dietary pattern by neighbor’s social support. The multilevel characteristics of model is also shown: individual level (psychological distress and interest in dietary pattern) and community level (social capital). “
Figure 1. A conceptual model is shown to explain the relationship between psychological distress, interest in dietary pattern and social capital. The multilevel characteristics of model is also shown: individual level (psychological distress and interest in dietary pattern) and community level (social capital). Plausible explanations for hypothesized causal linkages (white arrows) were indicated in italics.

(Minor Essential Revision)

1) Page 5, we have changed “We also had a hypothesis that...” to “We hypothesized that...”
2) Page 6, we have changed “We conducted a survey in municipality...” to “We conducted a survey in a municipality...”
3) Page 8, we have changed “based on the Putnum’s...” to “based on Putnum’s...”
4) Page 10, we have changed “suggesting that the lower the social
capital, the...” to “suggesting that the lower the level of perceived reciprocity, the...”

5) According to your comment, we replaced “items of social capital” to “social capital items” or “two social capital items”.

6) On page 12, regarding description that “It seemed that the association between interest in dietary pattern and psychological distress was more greatly attenuated by the inclusion of the social capital variables, as compared with the association between social capital and psychological distress by the inclusion of interest in dietary pattern”, you pointed out it is difficult to follow this sentence.

We are very sorry for this, because this description was inappropriate in the revised manuscript. In the first version of manuscript (manuscript submitted on September 2012), this description was valid to explain the results of multiple logistic regression analysis. However, in the second version of manuscript (resubmitted on November 2012), results of multiple regression analysis (odds ratio of variables) have changed due to the inclusion of new variable of frequencies of intakes of vegetables and fruits in the regression models. Consequently, change in odds ratio of sense of community belonging with or without interest in dietary pattern became greater than the results of first manuscript (please see a following reference data). Thus, the description was not appropriate to explain the new results of regression analysis.

We deleted this sentence in the newly revised manuscript. We apologized for this mistake of revision process, and thank you very much for your precise comment.

(Reference data)

Comparison of results of multiple regression analysis between first manuscript and revised manuscript. In the revised manuscript, variable of frequencies of intake of fruits and vegetables was newly included in the model. In the revised manuscript, odd ratio of community belonging in case of exclusion of interest in dietary pattern greatly decreased as compared to first manuscript (underlined data). As a consequence, the description was inappropriate in the revised manuscript.
(1) Association between interest in dietary pattern and psychological distress

<table>
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<th>Odd ratio (B)</th>
<th>(A-B)</th>
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<tr>
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(2) Association between social capital and psychological distress

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<tr>
<td>&lt;Reciprocity&gt;</td>
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<td>&lt;Sense of community belonging&gt;</td>
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<tr>
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<td>0.67</td>
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</table>

7) Page 14, we have changed “we consider the public health meanings of an association between interest in dietary pattern and psychological distress as follows: The improvement of dietary patterns would also be a favorable strategy for promoting the mental health of community residents where mental health issues such as suicide prevention are regarded as important parts of the health promotion agenda in the community” to “We consider the public health significance of an association between interest in dietary pattern and psychological distress to be as follows: The improvement of dietary pattern would be a favorable strategy for promoting the mental health of community residents where mental health issues such as suicide prevention are regarded as important parts of health promotion agenda”

8) Page 15, we have changed “sense of belonging to community” to “sense of community belonging”.

9) Page 15, we have changed "They concluded that individual..." to "They concluded that a low level of individual...".

10) Page 15, we have changed "There seem to be three possible explanations"
of why social capital was associated with interest in dietary pattern: facilitated access to information on healthy eating, normative pressure to adopt healthy eating behavior from neighbors’ social support, and reciprocal nonmarket exchanges of food that are characteristics of rural communities. First, people living in a community with a higher level of social capital such as reciprocity could attain higher levels of health literacy by facilitated flows of health information on dietary habits through community health activities.” to "There seem to be three possible explanations for the association of social capital with interest in dietary pattern: facilitated access to information on healthy eating, normative pressure to adopt healthy eating behaviors from neighbors’ social support, and reciprocal non-market exchanges of food that are characteristics of rural communities. First, people living in communities with greater levels of reciprocity could attain higher levels of health literacy by facilitated flows of health information on dietary habits through Community health activities.”

11) Page 15-16. As you pointed out, we agree that the inclusion of the claim about social capital and technology literacy is not appropriate for discussion. The reason why we cited this literature in the previous manuscript was that we could not find appropriate literature on social capital and health literacy. In the newly revised manuscript, we deleted this sentence.

12) Page 16. Regarding explanation of linking between interest in dietary pattern and social capital, your suggestion is very helpful. We have constructed a conceptual model and showed it in a figure including plausible explanation you suggested in the section of background. I think that our manuscript becomes better because of your helpful suggestion.

13) Lastly, the title of paper was slightly changes: individual-level social capital was replaced to social capital, because we come to believe that there was no need to stress “individual-level”. As your comment on multilevel characteristics of model, we rather discussed more on community-level aspect of social capital in this paper. Thank you for your comment.
I cordially thank you again for your comments for improving our manuscript.

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