Reviewer's report

Title: Associations between diet and mental health using the 12-item General Health Questionnaire: cross-sectional and prospective analyses from the Japan Multi-Institutional Collaborative Cohort Study

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Reviewer: Dorina Cadar

Reviewer's report:

Manuscript title: Associations between diet and mental health using the 12-item General Health Questionnaire: cross-sectional and longitudinal analyses from the Japan Multi-Institutional Collaborative Cohort Study. This study presents a cross-sectional and a longitudinal analysis between dietary intake of food groups/nutrients and mental health assessed with GHQ 12 in two areas of the Japan Multi-Institutional Collaborative Cohort Study. This is a well written manuscript with a clear rationale and description of analyses conducted. I have a number of minor comments and recommendations for improvement: 1. Clarify in your aim that you will conduct a cross sectional and a longitudinal investigation between dietary intake of food groups/nutrients and mental health. 2. Clarify earlier in the manuscript (both in your aim and abstract) that you will investigate food groups (describe/list the food groups investigated) and nutrients in relation to mental health. 3. In the method section other variables (line 144) please remove the employment status from the group of lifestyle behaviours captured in brackets. move it next to educational attainment. 4. In the statistical part of the method section please move the sentence about SPSS (line 160) at the end of that section. 5. There is some confusion resulting from the description of GHQ exclusion in line 110. " We followed 6,697 participant whose GHQ score was lower than 4 at baseline..." That suggests that the longitudinal analyses are conducted in a healthy sample free of individual with depressive symptoms (scoring positively on this scale of GHQ, with a score >= 4). this is the standard way of ascertainment the prospective association between an exposure and a subsequent outcome. However, in line 177, it is described an adjustment for baseline GHQ and it is no longer clear if those with higher score of GHQ were in fact excluded or not. I suggest that authors conduct analyses in a sample free of individuals with depressive symptoms at baseline, and one analyses in a sample from which they do not exclude those cases. the latter should be presented as sensitivity analyses. 6. The authors should emphasise more the finding related to the food groups, especially the significant association with vegetables intake and marginally significant with dairy products. the abstract and conclusion focuses mainly on the nutrients and ignore the findings on food groups. 7. To ease the readability of these findings, the authors should reorganise the table of results (Tables 5 and 6) so each quintile is presented by rows rather than columns. 8. Please justify why only two geographical area from Japan were included in these analyses and what are the implication of this selection for the generalisability of these findings. 9. Please use more often the terminology of depressive symptoms in your discussion, replacing the GHQ higher score description, which is repetitive and technical for a clear emphasis of these findings. 10. Please refer to STROBE checklist in the method section. 11. The author described that the restriction of data availability is a request of the ethics committee. if not, they
should simply state that data are not openly available in a separate sentence, independent of the ethical approval statement.

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