Author’s response to reviews

Title: Child assessments of vegetable preferences and cooking self-efficacy show predictive validity with targeted diet quality measures

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Author’s response to reviews:

Response to Reviewers:

We would like to thank the reviewers for their thoughtful review of our manuscript. We appreciate your time and the opportunity to strengthen our manuscript. In response to the reviewer comments, we have revised Tables 1-3, included more details on our diet assessment methodology, and strengthened the discussion section. We hope that reviewers and editors remain interested in our manuscript and consider it appropriate for publication in BMC Nutrition.

Please find our item-by-item responses in the table below:

Editor or Reviewer Comment:

Authors Response:

Editor

- The discussion should include more interpretation of how consistent or inconsistent the present findings are with existing literature. What are the main findings from this research and how do these compare with the literature?

We agree that the discussion needed more substance. Additional comparisons of findings to the literature were added to lines 223-229. Additional points were added in lines 218-221, 238-242, and 247-263 to further strengthen this section.
- The discussion should finish with a paragraph on the implications of the present research. Why are these findings novel and important? Will they inform future research and practice and if so how?

We agree and have added an implications paragraph. See lines 274-281.

Reviewer 1

The table titles need revision - a reader should be able to understand the table without looking at the text. One can't tell what the predictor and outcome variables are in the logistic regression. Presenting beta weights doesn't show how much change in fruit and vegetable intake there could be -- expressing change in intake per unit or SE would be preferable.

The titles for Tables 1-3 were edited to improve clarity. The predictor and outcome variables were identified in Tables 2-3. In Table 2, the regression coefficient does express the 1 unit change in the outcome variable expected per 1 unit change in the predictor variable. In Table 3, the regression results are presented in Odds Ratios, which reflect the changes in odds of the predictor variable.

In the abstract the statement that vegetable preference predicted HEI..... in the predicted direction assumes the reader has the same prediction as the writer. Tell the reader what direction it was. This goes for all results.

We agree and subsequently added the anticipated positive relationship between FFF survey measures and HEI indicators. See lines 56, 193, 197, 198, 206-207, and 221.

Editor or Reviewer Comment:

Authors Response:

Reviewer 1

What does a 2 point change in cooking self-efficacy mean? Do these results mean that there was very little variability in HEI scores except in the vegetable subcomponents?

The possible scores for cooking self-efficacy range from 8 to 40. A two point change in this measure would require a child to have two minor changes in self-efficacy or one major change in self-efficacy. A three point change in cooking self-efficacy is the minimum change required for clinical significance. In the current study, we estimate that for every 3 point increase in cooking self-efficacy we expect a 82.5% increase in the HEI Total Vegetable component score (OR= 1.222, 95% CI: 1.021-1.464). This suggests that students with higher cooking self-efficacy are more likely to consume more total vegetables. The cross-sectional nature of the study does not establish the temporality of this relationship. See lines 238-242.
The reviewer suggested that there is little variation in the HEI scores except the vegetable subcomponents. However, our findings suggest otherwise. As shown in Table 1, the standard deviation for the total vegetable (SD= 1.5) and greens and beans (SD= 1.7) HEI components are less than the standard deviations for the Total HEI Score (SD= 10.7) and empty calories component (SD= 2.0). It may be most appropriate to compare the variation in vegetable-related HEI components to that of the other 5-point maximum HEI components: total fruit (mean=3.22, SD= 1.54), whole fruit (mean= 3.63, SD= 1.63), total protein (mean= 4.12, SD= 1.21), and seafood/plant proteins (mean= 2.69, SD= 2.10). The variation for the total vegetable (SD= 1.5) and greens and beans (SD= 1.7) components are very close to the median SD for the 5-point maximum HEI components, which is 1.6.

Reviewer 2

Line 126 - Specify the average duration of the telephonic interviews Line 128 - 'Only students with ≥ 2 dietary recalls were included in this study' - will it include two weekdays or one weekday & one weekend - Clarify Lines 171-172 - 101 completed at least two dietary recalls - clarify whether these included only weekdays or weekend and weekday both.

The telephonic interviews were about 20 minutes. This information was added to line 128.

The original diet assessment methodology was to obtain 2 weekday and 1 weekend dietary recall on randomly selected days. However, some participants completed less than 3 dietary recalls. We only included the 101 students that completed at least 2 recalls. Of these, 73% had one weekend day of dietary recall. We completed an analysis, and there was no significant difference in any of the targeted HEI variables nor the FFF survey predictor variables between children who had heterogeneity in day type (i.e. included both weekend and weekdays) compared to those who had no heterogeneity in day type. This information was added to lines 129, 177-178, and 259-262.

Editor or Reviewer Comment:

Authors Response:

Reviewer 2

Line 181 - Explain high diet quality

Thank you for pointing out this issue. We elected to remove the statement about high diet quality in the results section. We discuss the participant’s HEI scores relative to those of national average for children of the same age in the discussion section. See lines 188 (which was formerly line 181) and lines 266-269.

Discussion - This section is a bit sketchy.
We agree that the discussion needed more substance. Additional comparisons of findings to the literature were added to lines 223-229. More detail was added to throughout the discussion section; see lines 247-263. Lastly, a paragraph on the study implications was also added to the discussion section. See lines 274-281.

Technical Comments

No Acknowledgement.

The acknowledgement section was updated. See lines 301-303.

Tables not upload as supplementary file.

Tables 1-3 were removed from the main document and were uploaded as a supplementary file.