Author’s response to reviews

Title: Association between time perspective and organic food consumption in a large sample of adults

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Author’s response to reviews:

Dear Editor,

Please find enclosed the revision of our manuscript entitled, “Association between time perspective and organic food consumption in a large sample of adult” (Manuscript Number: NUTJ-D-17-00183), originally submitted on June 19th 2017.

We have examined and taken into account all comments and include point-by-point responses to all comments and issues raised. Changes in the final manuscript have been colored in red. We thank the reviewers for their comments.

The material used in this study is original and has not been either published or submitted for publication elsewhere. We confirm that the paper has been read and approved by all authors. There is no conflict of interest. No honoraria, grant awards or other forms of payment had been received by anyone in order to produce the manuscript.
We thank you for your continued consideration of this manuscript and will be happy to provide any additional information that might be needed.

Sincerely yours,

Marc Bénard

ASSOCIATE EDITOR

The topic is interesting and important and the manuscript is generally well written. However, there are several concerns raised by both reviewers and myself, which should be thoroughly addressed to improve the quality of the manuscript.

1. One major limitation in this study is a lack of validity on estimation of organic food consumption (but not mentioned at all); the reference 23 mentions that “although the food frequency questionnaire used showed acceptable reproducibility and relative validity, the question relating to the frequency of organic food consumption was not validated”. Do general French individuals accurately recognize their consumption frequency of organic foods? What kind of bias for estimating organic food consumption is expected (in terms of directions and degrees)? A thorough discussion in this regard is essential.

   >> A discussion regarding this issue has been added in the strengths and limitations subsection.

   In the text:

   “Questions concerning frequency of organic food consumption were not validated and could have led to misestimate the percentages of organic food consumer or proportions of organic food consumption in the diet. However, the estimation of organic food consumers was not substantially modified in a sensitivity analysis assessing the robustness of the scale (Baudry J et al., 2015). In addition, considering that the completion of the Org-FFQ was optional and the long set of items of the questionnaire, participants with more sustainable food concerns could be more likely to complete it compared to other participants of the cohort. Finally, a high proportion of women and of individuals with a high level of education was included in our analysis, whom have been shown to have greater sustainable consumption (Panzone L et al., 2016; Gilg A et al., 2005).

2. Another important issue is no information available on the reasons or rationales for the selection of each of the potential confounding factors. Particularly, why did you consider energy intake, the diet quality score (mPNNS-GS), and total food intake to be potential confounding factors? How do these confound the association you examined? A careful selection (and description) of potential confounding factors considered is essential.

   >> A description on the rationales for the selection of each of the potential confounding factors has been added. Energy intake, the diet quality score, and total food intake were hypothesized to be associated with consideration of future consequences. Furthermore, organic food consumption
was thought to be influenced by these variables. An increase in energy intake would lead to an increase in organic food consumption, a better diet quality would lead to a higher likelihood to consume organic food, and a higher total food intake for a food group increase the likelihood to consume organic food for that food group. Thus, these variables were considered as potential confounding factors of the relationship between consideration of future consequences and organic food consumption.

In the text:

“Since socio-economic positions are associated with CFC (Adams J and White, 2009) and dietary intakes, all adjusted models included the following confounders: age, gender, education level, occupational status, monthly income per household unit, and place of residence. In addition, it has been suggested that time perspective can predict or be predicted by health behaviors (Adams J and Nettle D, 2009). Moreover, BMI, energy intake, mPNNS-GS (diet quality), and total food intake of the food group all predict the level of organic food consumption and were thus taken into account.”

3. I think that Tables 2 and 3 can be combined.

>> We decided to keep tables 2 and 3 separate since we believe it provides a better readability of the main results this way.

4. Line 113-114: From this sentence, readers can only understand that the authors used the ratio of reported energy intake to estimated basal metabolic rate to identify under- and over-reporters of energy intake, but no information has been provided on the definition of over- and under-reporting, cutoff points, and the rationale (or CV values) for the calculation. Such information should be provided. See the following paper: Black AE. Critical evaluation of energy intake using the Goldberg cut-off for energy intake:basal metabolic rate. A practical guide to its calculation, use and limitations. Int J Obes Relat Metab Disord 2000;24(9):1119-30.

>> A definition of over- and under-reporting, cutoff points, and the rational for the calculation have now been provided.

In the text:

“Participants with unlikely estimates of energy intake were identified as under- and over-reporting participants using Schofield’s equations. Basal metabolic rate (BMR) was calculated according to age, gender, weight and height. Energy requirement was calculated based on BMR and physical activity level (set by default at 1.55). The ratio between energy intake and energy requirement was calculated and individuals with ratios below or above cutoffs previously identified (0.35 and 1.93) were excluded (Black AE, 2000).”

5. Line 154-156: I do not understand this sentence. Please clarify, adding an appropriate reference.
The sentence has been modified with the addition of a reference. Multiple imputation by fully conditional specification (also called multiple imputation by chained equations) use a multivariate analysis to impute data and allow discrete and continuous variables (with no assumptions about the distributions of either missingness or the observed variables).

In the text:

“Missing data on confounding variables were handled with multiple imputation by chained equations (20 imputed datasets) (Van Buuren S, 2007)”

6. Line 20: Please carefully avoid the use of term such as “increase” in this context because of the cross-sectional nature of this study.

The manuscript is basically fine. I just have a few minor corrections:

Line 241: "Future time perspective": awkward diction.

243: "Consideration of future consequences" is not a "personality trait" but a behavior.

"Personality trait” has been changed into “psychological construct”.

Change "altruist" to "altruistic".

There are two tables at the end that were not successfully downloaded and so I could not see them.

We apologize for this problem. We hope that the reviewer will be able to see them in this new version.
This innovative, well written and fresh paper aims to analyze the association between consideration of future consequences and organic food consumption in a large sample of the adult general population in France. Participants come from the NutriSante Cohort. Despite personal and environmental determinants of organic food choice have approach by previous investigations, this is the first one studying this specific psychological trait. The statistical analysis is well described, and the approached used by the authors is correct. The paper is well written, no major language editing is needed. Because it is easy to read and follow, the findings should be easily communicated to a non-academic audience, let's say, the food industry, health policymakers, and the overall population. I have to admit that I really enjoyed reading and reviewing this manuscript. I just have a few minor suggestions which are mostly intended to add to the paper.

>>> We thank the reviewer for this positive comment.

Introduction

I'd like to see some statistics on organic food consumption in France and hopefully others EU countries.

>>> Descriptive statistics on organic food consumption in France have been added.

In the text:

“In France, sales of organic products represented 5.5 billion euros in 2014 corresponding to a 10% increase from the previous year as it was the case in most European countries (The World of Organic Agriculture, Statistics & Emerging Trends 2017).”

Methods

Sample subsection >>> I'd state that a flowchart of participants in the overall cohort and this specific study is available as supplementary material.

>>> This statement has been added in the sample subsection.

In the text:

“A flowchart of the participants included in this study is available as supplementary material.”

Lines 115-122 >>> I'd relocate this paragraph to the subsection 'Socio-demographic, economic, anthropometric and lifestyle characteristics', which describes potential confounders included in the analysis.

>>> The concerned paragraph has been relocated to the suggested subsection.
Results

Description of the population >> I'd replace population with sample

>> The modification has been made.

Description of the population >> Line 173 >> This is a marginal difference probably due to a large sample size, so, I'd explain this.

>> An explanation of this marginal difference has been added.

In the text:

“In average, included participants had a lower CFC score (40.5 ± 7.1 vs. 40.9 ± 6.9, p<.0001). This marginal difference was likely to be significant due to the large sample size.”

Discussion

I'd very much like to see a paragraph of implications of these findings. What I liked the most in this study is the fact that the results are useful not just to understand why we choose organic over non-organic but to understand the overall process of food choice, and how this process is biased by specific psychological traits as much as by other external influences. Thus, I think the findings may have important implications for health promotion and prevention of nutrition-associated NCDs.

>> The implications of these findings are discussed in the conclusion paragraph where more details have been added.

In the text:

“This study showed that consideration of future consequences could be considered as a construct associated with consumption of organic food. For the majority of the assessed food groups, participants with the highest future orientation were more often consumers of organic foods, and when consuming these foods consumed a higher quantity of them. More generally, time perspective could be a personality trait predicting environmental and health concerns, and could be a key psychological factor influencing dietary behaviors and in particular organic food intake. These findings could explain the cognitive process underlying organic food choices and show the importance to take individual’s psychological factors into account regarding overall food choices. Promoting the importance of future outcomes and long-term benefits could represent an approach of public health programs aiming at encouraging intake of organic food or more generally health promotion and chronic disease prevention.”