Author’s response to reviews

Title: Optimism is associated with diet quality, food group consumption and snacking behavior in a general population

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Author’s response to reviews:

Dear Editor,

Please find enclosed our answers to the second revision of our manuscript titled, “Optimism is associated with diet quality, food group consumption and snacking behavior in a general population” (Manuscript Number: NUTJ-D-19-00172), originally submitted on May 30th 2019.

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 highlighted in yellow. We thank the reviewers for their comments that allowed improving our article greatly.

We thank you for your continued consideration of this manuscript and will be glad to provide any additional information that might be needed.
Reviewer 3:

ABSTRACT

1. Line 50: 'reduced cardiovascular diseases'- Do you mean reduced risk of cardiovascular disease?

We have now added “risk of cardiovascular disease” lines 50 and 92.

2. Line 66-67: Can you please provide supporting statistics?

We have added statistics for alcoholic beverages and appetizers:

Line 67-68: “In contrast, optimism was associated with higher consumption of alcoholic beverage (β (95% CI) = 5.71 (2.54-8.88), P = 0.0004) and appetizers (OR (95% CI) = 1.09 (1.04, 1.14)).”

3. Line 69: ‘with a better overall diet quality overall'- Please revise

We have deleted the word that was duplicated.

BACKGROUND

1. For the first sentence can you provide additional supporting references.

We have added three new references, line 77:
2. Determinants of nutrition and eating behavior are numerous, among which psychological factors [2]. Could you please revise this sentence, as it is difficult to comprehend?

We have now modified the sentence.

Line 77-78: “Many factors influence eating behavior, including psychological ones.”

3. Line 81: 'positive psychological traits' could you provide some examples?

We have added two examples:

- Line 82: “positive psychological traits that could have a beneficial impact on dietary behavior and nutritional status such as intuitive eating1 or self esteem2.


METHODS

1. Line 138: I think Capital letters should be for used for 'life orientation test'

We have modified in line 138: “Life Orientation Test”.


2. Why was optimism only measured on time-point?

Unfortunately, at this stage, only one measure of optimism is available in the NutriNet-Santé cohort study (in 2016). We have planned to repeat the LOT questionnaire at an interval of 5 years (planned in 2021). Since the Nutrinet-Santé cohort study is a web-based prospective study on the relationship between nutrition and health and determinants of dietary patterns and nutritional status, care must be taken to disseminate questionnaires sparingly.

3. Did participants record dietary intake on a weekend day as well as weekdays?

Participants are invited to complete 3 dietary records: 2 weekdays and 1 weekend day. We have added this information.

Line 152-154: “The three self-administrated non-consecutive validated 24 h dietary records were randomly distributed between week and weekend days (2 weekdays and 1 weekend day).”

4. Line 182: How has it been the diet quality score been modified?

On line 185, we have explained that the mPNNS-GS is based on the PNNS-GS but without the physical activity component. We have modified “it” by mPNNS-GS in the hope that it will be clearer for the reader.

Line 185: “The mPNNS-GS is based on the PNNS-GS score 3, but accounts for dietary component only, excluding the physical activity component.”

RESULTS

1. Line 268: This should be 'On average' rather than 'In average'

We have done the modification line 273.

2. Lines 268-237: Can you provide some descriptive statistics in brackets?

All descriptive statistics are provided in table 1. Following recommendation of many journals, we prefer not repeating these data in the text.
3. Line 275: Please remove the words 'specifically a' can indicate a percentage in brackets related to the use of the word majority?

We replaced the word "a specifically" with "among which”:

Line 280: “Around three quarters of the participants declared snacking practices, among which a majority snacked more than once a week”.

4. Line 279-280: Can you indicate how an X (specify unit) increase in optimism score results in a X (specify unit) increase in diet quality score. How much is lipid intake increased by on average and how much is carbohydrate and protein intake decreased by?

These information are provided in tables 3. Again, we prefer not repeating these data in the text.

5. Line 286-287: They also had lower intakes of meat and poultry, dairy products, milk-based desserts and sugar and confectionery. - Sorry I am confused you said that participants had higher consumption of dairy in the previous sentence.

There are 2 different food groups:

- Dairy products like milk and yogurts with less than 12% of added sugar. Our results have shown that optimism was negatively associated with consumption of this group

- Dairy and meat substitutes that are for example, soya-based products. Our results have shown that optimism was positively associated with consumption of this group

Line 172-175: For the present study, we defined 22 food groups: fruits and vegetables (…) dairy products (e.g. milk, yogurts with less than 12% of added sugar), cheese, dairy and meat substitutes (e.g. soya-based products, vegetarian steaks)…

6. Table 3: I assuming B mean beta-coefficient. This could be identified more clearly in a footnote below the table.

Following the reviewer’s advice we have added “Beta-coefficient” in table 3.
DISCUSSION

1. Can you hypothesise why an association was not found between energy intake and optimism? Is weight status associated with optimism?

   a. A potential hypothesis is that optimism has an impact on the quality of the diet but not on the overall quantity (calories) consumed. This hypothesis would partly explain why we did not find an association between energy intake and optimism.

Line 316-317: These results suggest that optimism could have an impact on diet quality but not on the overall energy intake.

   b. The potential association between optimism and weight status is of great interest. We have tested this association in an article that we have submitted recently to another journal.

2. Line 324: Are there any hypothesised mechanisms that might explain why healthy eating is associated with optimism?

   We showed that dispositional optimism was associated with healthier diet quality. We therefore assumed that optimism could have an impact on eating choices. Studies have shown that optimists have been shown more likely to adopt healthier behaviors. Another studies have found that optimists have a better profile of emotional responses to adversity which can lead to healthier choices among which healthier diet.

   Line 322-326: “Healthier choices in optimistic individuals may be due to a more proactive approach to health promotion 4. Optimistic individuals have been shown more likely to adopt healthier behaviors including less smoking and more exercise 5. Optimists also show a better profile of emotional responses to adversity (less distress, more positive emotions) due to more effective coping reactions, which can lead to healthier choices.”

3. Line 340: Please revise to start of the sentence to "To our knowledge, there is no data."

   We have modified the sentence, line 346.
4. Line 349: 'to have a good representation of the participants' usual diet' - How do you know this?

We have added a reference that explain this sentence.


Line 355-356:

“The main strength of this study was the use of at least three 24-h dietary records that allowed us to have a good representation of the participants’ usual diet. As previously shown, usual intake of a population can be estimated based on at least two recalls 6”.

5. Was the diet quality of this cohort comparable to the national population? Can you compare your results with national data?

Dietary intakes of the NutriNet-Santé cohort were compared with those of a nationally representative survey (Etude Nationale Nutrition Santé, ENNS).


Line 372-374: “However, a low magnitude of differences in food intakes (apart from fruits and vegetables) was observed between the NutriNet-Santé study and a representative sample of the French population.”