Author's response to reviews

Title: Dietary patterns and colorectal cancer: results from a Canadian population-based study

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Version: 2 Date: 14 November 2014

Author's response to reviews: see over
November 12, 2014

BioMed Center Nutrition Journal

Re: Manuscript #1728424484140245

Dear Editors,

We appreciate the Editorial Board’s willingness to consider a resubmitted version of our manuscript entitled “Dietary patterns and colorectal cancer: results from a Canadian population-based study”.

We sincerely thank the reviewers for their many insightful, constructive, and specific comments on improving our work. We have carefully taken their comments into consideration in preparing our revision. Our responses are consistent with those recommendations and the reviewers’ comments. We feel that we have adequately addressed the comments from all reviewers. In addition to the changes made in the body of this paper, we have also reformatted the manuscript and supplemented all necessary information as required by the journal.

Thank you very much for your editorial advice and efforts.

Sincerely,

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Dr. Guowei Huang:

Major Compulsory Revisions:

Reviewer 1-1: The authors described the response rates were 54% and 43%, respectively (608 cases and 687 controls). How did the author determine the sample size of this case-control design?

Authors 1-1: Data used in this study is secondary data from a large population-based case-control study. Therefore, sample size calculation was conducted for the initial project other than this current study. Based on information from our previous work, this sentence has been rewritten in the revised manuscript.

“Based on PHQ returning, the analytical sample sizes for the present study were 703 cases and 717 controls. However, only those participants who completed both PHQ and FFQ were entered into final analysis. Hence, the total sample size is 1204 (518 cases and 686 controls) [17].”

Reviewer 1-2: It is also important to determine if quintiles cut-offs were based on the factor scores of the controls?

Authors 1-2: We agree. In order to conduct further analysis, factor scores assigned to both controls and cases were categorized into quintiles and entered into logistic models, using the first quintile (Q1) as reference group.

Minor Essential Revisions:

Reviewer 1-3: Please add a space between 2 words and check them in the full manuscript.

Authors 1-3: We thank and well took the reviewer’s comment. Spaces have been added.

Reviewer 1-4: The criteria used for the selection of cases and controls should be more clearly described.

Authors 1-4: We appreciate the reviewer’s comments and, as a result, sentences have been added to the revised manuscript.

“Incident CRC diagnosis was identified through International Classification of Diseases 9th revision codes (ICD-9 codes): 153.0-153.9, 154.1-154.3 and 154.8; or ICD-10 codes: 18.0-18.7, 19.9, 20.9.”

“Both cases and controls were residents of NL at time of diagnosis or interview.”
Reviewer 1-5: Page 10, line 184: delete the “a” in a US population

Authors 1-5: Corrected.

Reviewer 1-6: Table 1: Please add the unit of body mass index.

Authors 1-6: The unit has been provided as suggested.

“$\text{kg/m}^2$”

Reviewer 1-7: Table 2: The distribution of some food intake were abnormal distribution, please check the distribution of the data.

Authors 1-7: This information is not related to our study objectives and, as a result, it has been deleted from the table 2.

Reviewer 1-8: Please unify the et al’s or et al in the full manuscript.

Authors 1-8: Change has been made as suggested.
Dr. Nadia Bastide:

**Major Compulsory Revisions:**

**Reviewer 2-1:** Table 3 and 4: the number of cases and control per group is missing. Interpretation of data is incomplete without this information.

Authors 2-1: We appreciate the reviewer’s suggestion and corresponding changes have been made.

**Minor Essential Revisions:**

**Reviewer 2-2:** Page setting: Some spaces are lacking; Tables (title should be on the same page)

Authors 2-2: Corrections have been added as suggested.

**Reviewer 2-3:** Data collection, l.80 p.5: What is the “interview” mentioned?

Authors 2-3: “Interview” in this study indicates this survey on person history questionnaire and food frequency questionnaire. Additional description has been provided in the revised manuscript.

“Herein, interview indicates this survey on PHQ and FFQ.”

**Reviewer 2-4:** Statistical analysis l.101 p.6: On what population was made the exploratory common - factor analysis? It is not clear.

Authors 2-4: This comment has been well taken and clarification has been added to the revised manuscript.

“Exploratory common factor analysis was used to identify major dietary patterns for both cases and controls recruited from the NL population, based on the 39 predefined food groups.”

**Reviewer 2-5:** Have authors tested calcium intake in complementary adjustment?

Authors 2-5: No, we didn’t. The potential confounding factors were selected based on criteria mentioned in the manuscript. We believe that the main effects of calcium should have been reflected in the dietary patterns. Introducing calcium as a confounding factor into the model may lead to over-adjustment. We hope this is agreeable to the reviewer.

**Reviewer 2-6:** What were the characteristics of non-respondent comparing to cases
and control who completed the two surveys (PHQ and FFQ)?

Authors 2-6: We thank and agree with the reviewer’s comment. One of our early studies (PMID 19296741) compared between respondents and non-respondents and the results suggest that respondents tended to have a higher socioeconomic status, which underscores the importance in controlling SES through multiple variable regression.


Authors 2-7: We agree with the reviewer’s comment and, as a result, this reference has been added.

Discretionary Revisions:

Reviewer 2-8: 5th paragraph: There are others hypothesis with may explain the association between red and processed meat consumption and colorectal cancer risk (heme and nitrites mainly). This paragraph could be completed.

Authors 2-8: Thank the reviewer for the suggestion; this has been addressed in the revised discussion.

“Another possible mechanism is that heme, sodium nitrate, nitrite and N-nitroso compounds, which were found in lots of red meat and processed meat, have been associated with higher CRC risk [30-33].”

Reviewer 2-9: Last paragraph: references 35-38 should be presented in paragraphs 2 and 3 of the discussion, with other existing results.

Authors 2-9: Change has been made as suggested.