Reviewer’s report

Title: Association of major dietary patterns and different metabolic phenotypes: A population-based study of northwestern Iran

Version: 1 Date: 08 Oct 2019

Reviewer: Zhongshang Yuan

Reviewer's report:

The authors have added some details and enriched the contents of this study to make it more readable, and most of my comments have been addressed. However, there are still several problems that need to be addressed.

Page 2 - In the conclusion, the description of animal dietary pattern should not be supposed here. From my perspective, the authors could organize it as following:

Conclusion: The present study indicates that animal dietary pattern was associated with MHO and MUHO phenotypes. It is suggested that some measures should be taken to strengthen nutrition education for the population and advocate a balanced diet to improve this condition.

Page 7 - I wonder if the whole variance explained by the dietary patterns was quite small. Is it possible to introduce other dietary patterns analyzed from principal component analysis? Besides, dietary patterns may be not the same in different gender. Why did not the authors implement principle component analysis by gender to identify dietary patterns?

In Table 1, the p-value (P=0.02) referred to overall difference of prevalence among four phenotypes in different gender rather than that between MHO and MUHO phenotypes, and the authors should conduct chi-square test in each phenotype by gender.

Table 1 - The abbreviations mentioned should be noted below. And the highlighted p-value should not be bold. Furthermore, the underlined notation should be deleted.
Table 3 - It seems that the first tertile of each dietary pattern was considered as reference rather than MHL group. In addition, what is the association between dietary patterns and MHL phenotype?

There are still some spelling or grammar mistakes.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

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If not, please explain in your comments to the authors.

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