Author’s response to reviews

Title: The association between nutrient intake, nutritional status and physical function of community-dwelling ethnically diverse older adults

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Author’s response to reviews:

Dear Editor and Reviewers,

Thank you for the opportunity to revise our manuscript and for the detailed feedback. Please find below responses to each of the comments, and the corresponding changes highlighted in yellow in the manuscript. The role of the funder and figure legend that was omitted has now been added.

Reviewer reports:
Reviewer 1: Please include all comments for the authors in this box rather than uploading your report as an attachment. Please only upload as attachments annotated versions of manuscripts, graphs, supporting materials or other aspects of your report which cannot be included in a text format.

Please overwrite this text when adding your comments to the authors.

The manuscript is well written, and the objectives and the conclusions are clear and appealing. It certainly deserves publication; however, before accepting for publication, there are few issues which should be replied:
1. The title should not include the phrase longitudinal, merely following it up after a period of 8 months doesn't make the study longitudinal.
2. Please write the full form of BME- Black minority ethnicity/ethnic.
3. The references showing website or web references should have date when you saw that website.
4. Please discuss in discussion section that how this method of assessing the nutritional status is at par with the anthropometric and other acceptable methods of assessment.

There is no technical flaw in the study and after addressing these minor points, it deserves publication.

Response
Thank you for your positive feedback and helpful suggestions.

1. The title has been revised, taking out the phrase ‘a longitudinal study’ as suggested by the reviewer.
2. The full form of BME- has been written. Lines 55-56 now read “….it is projected that by 2051, there will be 3.8 million Black Minority Ethnic (BME) people aged 65+ years and 2.8 million BME people aged 70+ years’’
3. The dates that all website references were accessed have now been added accordingly.
4. The discussion section has been improved by adding a few sentences to indicate how MNA-SF used in this study is at par with anthropometric and other acceptable methods of nutritional assessment. Lines 410-421 now read “In comparing the prevalence of malnutrition of the present study with existing literature, it is important to note the use of different tools in assessing nutritional status. The MNA-SF used in the present study has been shown to have a specificity of 100%, sensitivity of 97.9%, and diagnostic accuracy of 98.7% in undernutrition prediction as compared to the MNA-long version [32]. Further validation of the MNA-SF against the MNA-SF in a recent systematic review and meta-analysis found that the MNA-SF (cut-off point ≤11) had a sensitivity of 0.95 (0.75-0.99) and specificity of 0.95 (0.85-0.99) in detecting community-dwelling older adults at risk of malnutrition [58]. Additionally, a study of 155 older adults with a mean age of 78 years exploring the relationship between the MNA-SF and other comprehensive nutritional assessment measures, found that the MNA-SF had a stronger correlation with anthropometric and biological markers (p<0.01) [59]. Considering the accuracy, the non-invasiveness and cost effectiveness of the MNA-SF, it is often regarded as the preferred tool to be used in the identification of malnutrition in the community.

Reviewer 2: The authors of this manuscript report a potential association between nutritional intake, nutritional status and physical performance measures among ethnic-minorities in UK. The methodological description of the study is very detailed and detailed. The nutritional assessment was very well performed. However, the sample showed limitations in some minority groups, which limit extrapolation of results and the follow-up could be influenced by seasonality as stated by the authors.

Major/Minor comments:
Introduction
-What BME means at first paragraph? You need to write it at least once.
-line 89: better scores OF activities
Methods (data analysis)
-I assume there was no missing data at follow-up for all participants included according to your data analysis. Am I right?
Results:
-Tables were not at right positions in the manuscript. I have found Tables outside their recommended positions in results. And finally I found Tables 4 and 5 at the end of the manuscript. The format was a bit confusing and should be corrected carefully for further editorial handling.
-Table 1 needs a footnote explaining TE, p-value by which test. Tables need to be independent from the whole text. Moreover, if you compare 3 groups you need to run pos hoc ANOVA test OR Kruskall-Wallis (non-parametric test).
-Table 4 should be Table 1 as it gives us the clinical characteristics of the sample.
-We could delete constant values from Table 2 and 3 as well as the intercept of Table 6.
-The association between physical performance and nutrition can be mediated by frailty in older adults and this information should be added in Discussion.

Response

Thank you for your positive feedback and helpful suggestions.

Introduction

Response

1. The meaning of BME in the first paragraph has been written in full. Lines 55-56 now read “….it is projected that by 2051, there will be 3.8 million Black Minority Ethnic (BME) people aged 65+ years and 2.8 million BME people aged 70+ years”

2. The ‘of’ that was omitted in this sentence has been added. Line 88-89 now reads “….closely associated with better scores of activities of daily living, lower depression scores and increased quality of life”

Methods

Response

Yes, that is correct. There were no missing data for all of the participants who were included in the analysis at follow-up.

Results

Response

The authors believe the reviewer meant to say table 1 and 2 are placed at the end of the manuscript. We apologised if the reviewer found the positioning of the tables a bit confusing. The authors followed the guidelines of the Journal on table formatting, which states that “Tables less than one A4 or Letter page in length can be placed in the appropriate location within the manuscript. Tables larger than one A4 or Letter page in length can be placed at the end of the document text file. Please cite and indicate where the table should appear at the relevant location in the text file so that the table can be added in the correct place during production”. As such, tables 1 and 2 were placed at the end of the manuscript as these tables were larger than one A4 page. The remaining tables (3-6) were less than one A4 page, so they were placed in the text appropriately.

Table 1 needs a footnote explaining TE, p-value by which test. Tables need to be independent from the whole text. Moreover, if you compare 3 groups you need to run pos hoc ANOVA test OR Kruskall-Wallis (non-parametric test).
Response
Again, we believe the reviewer is referring to table 3 instead of 1. A footnote has been added to indicate TE and the p-values. Lines 250-251 now read “TE = Total energy; *P-value calculated using one-way ANOVA. The results of the post hoc ANOVA is also included in lines 226-246.

-Table 4 should be Table 1 as it gives us the clinical characteristics of the sample.
Response
The authors feel that Table 1, which contains socio-demographic characteristics and other health-related information at baseline and 8-months’ follow-up will serve the purpose of the study well and better informs readers of the general overview of the sample instead of table 4.

-We could delete constant values from Table 2 and 3 as well as the intercept of Table 6.
Response
Deleted as suggested by the reviewer.

- The association between physical performance and nutrition can be mediated by frailty in older adults and this information should be added in Discussion.
Response
The authors have expanded the discussion, indicating the relationship between frailty and malnutrition in older adults. Given that frailty encompasses measures of physical function, the extent of frailty among this sample could have influenced the physical function scores, and thus influenced the relationship between physical performance and nutrition. Lines 428-442 now read “Additionally, frailty as a related concept to physical function could have influenced the observed relationship between nutritional status and physical function in the present study. A recent systematic review and meta-analysis found a strong positive association and considerable overlap, of 47%, between frailty and malnutrition of hospitalised older adults [62]. As earlier explained, physical frailty affecting mobility could have adverse consequences on how older adults shop for food and prepare healthy meals, which could further exacerbate their nutritional status, and in a cyclical manner, worsen their frailty status. Physical function measured using SPPB also serves as an indicator of risk of frailty, and proposed cut-offs of SPPB scores are often used to assess frailty status. In the present study, using the summary cut-offs of SPPB scores proposed by the European Medicines Agency, 22% of the sample were considered frail, 14% pre-fail and the majority (64%) considered non-frail at baseline [63]. In addition, almost half (43.3%) of the frail and pre-frail older adults, as indicated by SPPB score, were found to be malnourished or at risk of malnutrition. Among the non-frail older adults, 78.4% were found to have normal nutritional status. These findings substantiate the correlation and overlap between frailty and malnutrition, as reported in previous studies [62, 64].

We again thank the Editor and the Reviewers for their time in reviewing this manuscript. Addressing the above comments has considerably improved the quality and clarity of the manuscript.
Yours sincerely,

Dr. Evans A. Asamane on behalf of the authors

References


