Reviewer’s report

Title: Association of body mass index with amnestic and non-amnestic mild cognitive impairment risk in elderly

Version: 1 Date: 26 Jun 2017

Reviewer: Kjeld Andersen

Reviewer's report:

Thank you for your response, which have clarified many of my questions and concerns.

However, I have a few questions and remarks left:

1. I am still not sure about the direction of time in the study. The authors state that there was no difference between baseline level of BMI in the three groups (aMCI, naMCI, and controls), page 10 / line 206 and table 3. However, when you inspect table 3, you notice that, although the mean and SD is similar in the three groups, the distribution of underweight, normal weight, overweight, and obese is different between na/aMCI and controls (also clearly state in the text, page 10 / line 210 - 217). When you then read that MMSE and MOCA for na/aMCI and controls are comparable to each other, table 2, and that underweight/overweight/obesity at baseline is associated with increased risk of na/aMCI at follow-up, I would like to see the mean MMSE and mean MOCA for each group at baseline. Just to assure the reader that these groups have had a decline in cognitive function qualifying a na/aMCI diagnosis. I realise that it is clearly stated that all participants were cognitively intact at baseline, page 6 /line 130-131, but I think this will substantiate the conclusions of the study.

2. I still think it is very elaborate multivariate statistical models with many variables and very few participants in some of the cells. This makes me a bit curious to the remark in the letter from the authors stating results may cancel each other out if groups are collapsed and give a negative conclusion (answer 5).

3. MOCA is in my view also a multidimensional instrument for assessing the cognitive function measuring speed, visuospatial skills, naming, memory, attention, abstraction, etc. - so I am still not convinced why both MMSE and MOCA has been chosen for the study. It is, however, a minor point.

4. Another minor point: in table 2, it is not state what ± indicates (I guess SD), and in the foot note the #-sign denotes comparison with naMCI, however, I cannot find any #-sign in the table.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

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

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

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