Author's response to reviews

Title: Correlates of perceived health related quality of life in obese and non obese older adults: an observational study

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Author's response to reviews: see over
To

Editor of BMC Public Health

Fermo, 12/12/2013

Dear Editor,

please find enclosed the revised text of manuscript “Correlates of perceived health related quality of life in obese and non-obese older adults: an observational study”. We are grateful to the reviewers for their comments, which we feel have improved our manuscript. Our replies to their comments and suggestions are detailed below.

Reviewer's report

Title: Correlates of perceived health related quality of life in obese and non-obese older adults: an observational study
Version: 1 Date: 11 August 2013
Reviewer: Yvonne van Mourik

Reviewer's report:
The authors stated that the aim of their paper was to analyse the correlates of health related quality of life (HRQL) in obese and non-obese Italians older adults.
In their paper, they do not answer this question. They show us the results of difference in baseline characteristics between normal, overweight and obese older persons (table 1). The correlates were analysed in all Italian older adults, which showed that BMI correlates independently significant with HRQL (table 2). The second part is already known, as the authors stated in their introduction that many studies report the association between obesity and worsening health related quality of life in both sexes? What’s new or interesting for the readers is not clearly described in the discussion.

Major compulsory revisions
§ Q: Study population: In the methods is explained that 205 patients admitted into the division between January 2010 and December 2012 were recruited, were this all patients admitted? In the results you didn’t mention how many patients were excluded or didn’t want to participate. How many patients were eligible (so aged above 60 years)?
A: We have now specified under the Section ‘Sample and recruitment’ the full process of screening and enrolment of our study.
Q: Were the excluded patient more likely to be obese? Could this influence your results, in which way?
A: Concerning the subjects who either refused to participate or inaccurately completed the questionnaires, they were not supposed to be more likely obese on an a-priori basis. Conversely, regarding the subjects who did not meet the inclusion criteria, these patients, being poorly controlled diabetics or affected by pharmacologically uncontrolled endocrinological diseases (e.g. Cushing’s syndrome, acromegaly, hypothyroidism), were very likely to be either less or more obese than the included ones, depending on the respective disease. However, the hormonal imbalance of these subjects is also able to influence their psychological status, in view of the psychic effects of the hyper- or hypo-secreted hormones (e.g. cortisol, levothyroxine, growth hormone). Therefore their exclusion was absolutely mandatory.

Q: Methods: statistical analysis: why did you divide the persons in three BMI classes, where your aim was to analyse between obese (#30kg/m2) and non-obese (<30kg/m2) persons?
A: We used the following BMI classification in this study, such as normal weight, overweight and obesity, to analyse the different conditions and psychological status of each group. Now, the title has been changed accordingly, to reflect this classification.

Q: In the methods should be clear that you also looked at the mental component of the SF-36 in your statistical analysis, although you mentioned that there was no significant difference in your results.
A: Methods revised accordingly.

Q: Results: the correlation analysis was performed to evaluate the variables associated with PSC and you stated that BMI was significant; your analysis was performed in all older persons and not differentiated in variables associated with PSC in obese persons and in non-obese persons. You stated that BMI is negatively associated with PSC, which was already known from literature (as you stated in your introduction). Could the variables associated with PSC differ between non-obese and obese persons? Is this not interesting for future funding?
A: A new correlation analysis was performed separately for each BMI group (data not shown in the article). The results were very similar to those including the whole sample, for this reason it was decided to maintain this approach.

Q: Conclusion stated that many aspect were significant determinants for quality of life, is this for all older persons or only the obese older persons? The authors say that funding should be invested in benefits of losing weight, why? Is there evidence that eventually patient have a better HRQOL? And at short time, what is the influence of losing weight/diet on HRQOL?
A: A conclusion to response to this statement has been added.

Minor essential revisions

Q: Abstract: Background: “205 subject at the age ….. Ancona (Italy) should be placed at the methods section.
A: Done.

Q: Abstract: Results: ‘significant variables were included in a linear regression model as independent variables’ should be stated in the methods section, which variables were significant is a result.
A: Done.
Q: Put all inclusion and exclusion criteria of your study population under one heading, namely sample and recruitment.
A: Done.

Q: Discussion: ‘as our results show, the BMI of obese subjects was significantly higher than those in the other two groups’. This is obvious, as BMI is included in the definition of obesity.
A: The phrase has been deleted.

Q: Discussion: ‘consistent with another Italian study, the negative impact on quality of life was observed in domain reflecting physical status, not mental health’. I wonder what the rationale behind this is, why would obesity only affect the physical quality of life.
A: Some references to support this result have been added.

Q: Discussion: ‘In particular, physical functioning, bodily pain, … are the components of SF-36 which differed significantly’. Isn’t this obvious, as these, except vitality, were the subscales of PCS?
A: The phrase has been displaced.

Q: Conclusion: too long, part of sentences written in the conclusion, should written in the discussion.
A: Done.

Discretionary revisions

Q: Which ethics committee?
A: The Ethics Committee of Polytechnic University of Marche approved the project.

Q: Your definition of primary/secondary/tertiary education?
A: The definition of educational level has been added.

Q: Definition of obese is usually written as BMI #30 kg/m2
A: The classification of BMI used in this study has been added.

Q: Discussion: ‘unsurprisingly, the prevalence of cardiovascular diseases was significantly higher in obese subjects’, this is generally known, but this should be supported with a reference.
A: Done.

Q: Abbreviations not used properly through the article (first time mentioned).
A: Revised.

Level of interest: An article of limited interest
Quality of written English: Acceptable
Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests: I declare that I have no competing interests.

Reviewer’s report
Title: Correlates of perceived health related quality of life in obese and non-obese older adults: an observational study
Version: 1 Date: 16 August 2013
Reviewer: Shariff-Ghazali Sazlina
Reviewer’s report:

Minor Essential Revisions:

§ Q: Abstract, first paragraph: statement “205 subjects at the age # 60 yrs. Recruited into the Division of Endocrinology of the Polytechnic University of the Marche, Ancona (Italy)” should be under the methods section
A: Done.

§ Q: Abstract, first paragraph: to include in the background section the rationale for this study
A: Done.

Background:

§ Q: To describe the magnitude of obesity among older persons as public health problem by providing some statistics on the prevalence of obesity among older persons worldwide and in Italy.
A: Done.

§ Q: The authors should focus and describe the impact of obesity among older persons.
A: Done.

§ Q: The authors should also provide background literature on the impact of obesity on health related quality of life of older persons (if any) and what previous studies have found on the correlates of health related quality of life among obese people since there is none on the older persons.
A: Done.

§ Q: Background, fourth paragraph, “Minor issues not for publication”: to remove either the word ‘elderly’ or ‘older adults, do not use both in the sentence. Please ensure this throughout the manuscript.
A: Done.

Methods, first paragraph – Sample and recruitment

§ Q: Authors should describe the study design, sampling methods, inclusion and exclusion criteria under this subheading.
A: We have now detailed under the sample and recruitment section the study design as well as the full process of screening and enrolment of our study.

§ Q: What was the response rate for participation in this study?
A: We have now specified in the “sample and recruitment” section the number of subjects who refused to participate to our protocol.

§ Q: What was the estimated sample size for this study?
A: Sample size estimation was now added in the paragraph “Sample and recruitment”.

Methods, second paragraph – Instruments
Anthropometric measures and clinical data

§ Q: What were the ‘extensive clinical and case history evaluation’ performed? Suggest that authors describe these clearly in the methods section.
A: In our study, we performed an extensive anamnestic evaluation in order to evaluate comorbidities and prescribed medications (data are presented in Table 1). The considered
clinical data were BMI, waist and hip circumference. We specified this point in the “anthropometric measures and clinical data” section.

§ Q: Suggest that authors provide the classification of BMI used in this study.
A: Done.

§ Q: The sentence “Subjects who met any of the …diabetes mellitus” should be placed under the subheading Sample and recruitment.
A: Done.

Methods, fourth paragraph – Quality of life

§ Q: The authors should describe how the SF-36 subscale scores for the 8 domains, and PCS and MCS scores were computed.
A: Description included with reference.

Methods, eighth paragraph – Statistical analysis

§ Q: Minor issues not for publication”: # Authors must ensure the abbreviations use throughout this manuscript is uniform (‘PSC’ should be ‘PCS’?), similarly for Tables 1 and 2
A: Checked and revised throughout the text and tables.

§ Q: Why was the correlation analysis performed only for PCS scores and not for the MCS scores?
A: We performed correlation analysis in both summary measures (PCS-36 and MCS-36). However, only PCS-36 was significantly associated with BMI, so we concentrated our further analysis and results in this respect. Now, Methods and Results sections include also these details. Moreover, Table 2 shows the correlation analysis including r coefficients and p-values of both PCS-36 and MCS-36.

§ Q: It is unclear on the bivariate analyses performed to determine the association between SF-36 scores and the independent variables to determine the potential variables to be included in the regression model. What analyses were used for categorical variables?
A: Pearson’s correlation analysis was performed to analyse correlations between PCS-36 and MCS-36 and continuous independent variables. t-test or one-way ANOVA were used to compare PCS-36 mean values among categorical variables.

§ Q: Was ‘a linear regression model’ performed for the analysis conducted as a multiple regression model? If not, strongly suggest that the authors performed a multiple regression model to address issues of the type 1 errors from the analysis.
A: We confirm that a multiple linear regression model was used, as also showed in Table 3.

§ Q: The authors should elaborate on the regression analysis performed for this study, including the method of regression used, the cut-off used for significant variables to be included in regression model, and if the assumptions were checked and fulfilled.
A: Details on regression analysis performed are now included in the Statistical Analysis paragraph.

§ Q: For the regression analysis, the authors should elaborate on why the Physical Component Summary score was used as the outcome measures and not the individual subscale domains representing the physical component of SF-36.
A: We thank the reviewer for this valuable suggestion. We performed the regression analysis also using the four subscales of physical component (Physical functioning, Role-physical,
Bodily pain, General health) separately as dependent variables. The Results section includes now also this analysis.

Methods, fifth to eighth paragraphs

§ Q: The validity and reliability for the elderly population of the questionnaires used in this study: PASE, SF-36, HADS, and Lubben SNS should be included.
A: The references regarding the study of validity and reliability for the elderly population of the questionnaires used in this study have been included in the text.

§ Q: “Issues not for publication”: Authors must declare the permission and purchase of licenses for the use of questionnaires such as PASE and SF-36 due to intellectual property and copyright issues.
A: The permission for the use of the questionnaires was obtained by the authors of the instruments.

§ Q: The process of data collection during this study is unclear. Please elaborate on this under the methods section.
A: Data collection occurred in our clinic on the same day of inclusion in the study, by clinical and case-history evaluation and questionnaires compilation.

Results

§ Q: Did the authors determine the normality of the data prior to the selection of the parametric tests? Suggest that authors use appropriate tests based on the normality of data.
A: Yes, normality of the data was checked as a first step of statistical analysis. Details are now included in the related paragraph.

§ Q: Results, second paragraph: to provide the exact p values and avoid using p<0.05.
A: Done.

§ Q: Results, second and third paragraphs, “Minor issues not for publication”: please change abbreviations PSC and MSC to PCS and MCS, respectively.
A: Done.

§ Q: Results, second paragraph: Are the results in Table 2 of correlation analysis or linear regression?
A: Table 2 (now Table 3) provides the multiple linear regression model. We have corrected the text in the section “Results” accordingly.

Results, second paragraph 2:

§ Q: It is unclear about the tests used to determine the associations between PCS and MCS, respectively with the independent variables in this study.
A: Paragraph revised including the tests used.

§ Q: Did the authors perform Pearson’s correlation analyses for the categorical variables too (which is inappropriate)? Kindly address these and clearly state in the results section.
A: Pearson’s correlation were used only for continuous variables. T-test or one-way ANOVA was used to assess associations between PCS-36 and categorical variables. The “Method” section now clearly state the latter.
Q: Suggest that the authors present the bivariate analysis results in a table and the results of Pearson’s correlation must be clearly presented (provide the r and p values of these results).
A: Done; Table 2 shows the correlation analysis.

Q: Results, second paragraph, “Minor issues not for publication”: statement “Any that were significant were included in a linear regression model as independent variables…” is unclear. Kindly rephrase this sentence.
A: Done.

Q: Discussion, second paragraph: the statement “the BMI of obese subjects was significantly higher than those in the other two groups…” is unclear since the authors have classified the participants according to the BMI. Therefore, participants who are obese are those with higher BMI.
A: The phrase has been deleted.

Q: Discussion, fifth paragraph: The authors should also discuss why age and education were associated with PCS of quality of life.
A: Done.

Q: Conclusion, first paragraph: In view of the possibility of sarcopenic obesity among older persons, the authors need to address the types of physical activity recommended in older persons.
A: Done.

Q: The last sentence in the conclusion paragraph is unclear on how physical activity becomes a psycho-therapeutic tool. Please rephrase this statement.
A: Done.

Table 1:
Q: Please clearly state that continuous independent variables were presented as mean and standard deviations (if non normally distributed data should be presented as median and IQR) and the categorical data as frequency and percentage.
A: Done.

Q: Table 1, “Minor issues not for publication”: What was the rationale of the one-way ANOVA performed to determine the mean difference of BMI across the different BMI categories? Didn’t the authors categorize the participants according their BMI and this provides the significant difference detected?
A: We agree with the reviewer, so the comparison was deleted from the table.

Q: Table 1, “Minor issues not for publication”: “Number of drugs assumed” Is this the number of medications prescribed? Kindly rephrase this.
A: Done.

Q: Table 1, “Minor issues not for publication”: to provide the exact p values for the all the results and do not use ‘p<0.05’ for significant results and ‘n.s.’ for non-significant results.
A: Done.

Q: Table 1, “Minor issues not for publication”: kindly make the table self-explanatory. It is unclear what the superscripts a, b, c denotes. Please clearly define the post hoc test notation of what each of a, b & c represents.
A: Done.
Q: Table 2, “Minor issues not for publication”: To remove the t values and ‘not standardized coefficient’ and present as B and SE, beta, include the 95% confidence interval results and the p values in the regression table.

A: Done.

Level of interest: An article of importance in its field
Quality of written English: Needs some language corrections before being published
Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests: I declare that I have no competing interests.

We hope that the revised manuscript may now be suitable for publication in *BMC Public Health*.

Sincerely,

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