

Reviewer's report

Title: Perceived Body Image in Men and Women with Type 2 Diabetes Mellitus: Correlation of Body Mass Index with the Figure Rating Scale

Version: 3 **Date:** 22 September 2009

Reviewer: Tiffany Cox

Reviewer's report:

General:

I would like to thank the authors for addressing many of the concerns with the initial submission of this manuscript. There are additional remaining concerns that would strengthen the manuscript.

Given the general theme of this paper, I think it is important to point out that a high correlation between BMI and body image figure does not necessarily mean that participants' perceptions are close to their actual BMI as suggested throughout the paper and discussed in the conclusion. All participants could consistently underestimate or overestimate BMI and still achieve a high correlation, which simply assesses the strength and linearity of an association. Therefore, if all (or most) participants inaccurately perceive body image, but do it in the same direction, the correlation would still be high. I have experienced this phenomenon in some of my own work. Thus, I just would like to provide caution when interpreting the correlation.

Major Compulsory Revisions

1. Re-review: Response adequately addresses concern.
2. Re-review: Response adequately addresses concern.
3. Re-review: Response adequately addresses concern.
4. Re-review: Response adequately addresses concern.
5. The response does help to clarify the approach. There is still concern about error and bias utilizing this approach. However, the approach is now clear.
6. The response does clarify that participants were not clustered which lessens my concern about the analysis approach not employing GEE modeling. If the true goal of the study was to look at correlations between BMI and body image stratified by T2DM status, then this approach accomplishes that. However, it does not take potential confounders into consideration at all, which is why a more sophisticated modeling approach was suggested. This may be something that the statistician would like to revisit and reevaluate as was done with the type of correlation reported (Spearman versus Pearson). Confidence in the results may be increased with additional statistical review.
7. Re-review: Response adequately addresses concern.

8. Re-review: Response adequately addresses concern.
9. Re-review: Response adequately addresses concern.
10. Re-review: Response adequately addresses concern.
11. Re-review: Response adequately addresses concern.
12. Re-review: Response adequately addresses concern.
13. Re-review: Response adequately addresses concern.
14. Re-review: Response adequately addresses concern.
15. Re-review: Response adequately addresses concern.

Minor Essential Revisions

16. There are still several places in the manuscript in which body "image" is used to refer to the figure. For example, "study measures" paragraph 1 and "results" paragraph 2.

17. Re-review: Response adequately addresses concern.

18. Re-review: Response adequately addresses concern.

19. To clarify, I was not referring to references for BMI and disease since that is not the argument of this sentence. A reference should be added to support that "BMI and FRS are useful to assess the relationship of body weight to adverse clinical outcomes."

20. Re-review: Response adequately addresses concern.

21. Re-review: Response adequately addresses concern.

22. Re-review: Response adequately addresses concern.

23. Re-review: Response adequately addresses concern.

24. Re-review: Response adequately addresses concern.

25. Re-review: Response adequately addresses concern.

26. Re-review: Response adequately addresses concern.

New:

Introduction paragraph 1: "assessed" should be changed to "estimated." Saying assessed implies that body fat was measured.

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests.