Author’s response to reviews

Title: Anxiety and depression in children and adolescents with obesity: a nationwide study in Sweden

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“Anxiety and depression in children and adolescents with obesity: a nationwide study in Sweden”

Dear Alessandro Recchioni, Senior Editor,

Thank you very much for the opportunity to revise our manuscript as suggested by you and the reviewers. We hope that with these changes made, the article is accepted for publication. A revised version of the manuscript is now submitted.

For specific comments to editorial points and referees:

1. We have addressed all comments in this response letter and made appropriate changes in the revised manuscript.

2. A marked-up copy of the changes (using the "track changes" command) made from previous article file is provided.
Reviewer #1 Robert Berkowitz: The authors have made improvements in the current draft and have responded to this reviewer's concerns with thoughtful responses. As they have written in the discussion, there are three limitations of concern.

One is selection bias - comparing treatment seeking youth (who may be more distressed) to those in the general population; and another is surveillance bias - that youth who are treated for obesity may receive more professional contact and, thus, receive more diagnoses of anxiety and depression.

The third limitation is that height and weight data are not available in the general population control group; this group contains some percentage of youth with obesity - the 1.3% estimate appears too low (a comment about whether this estimate is too low would strengthen the draft).

Despite these limitations, the authors have important data regarding the potential association between obesity and anxiety/depression in youth; these data add to the existing literature regarding this association while controlling for other factors.

RESPONSE: We appreciate the constructive comments from the reviewer. We have taken all suggestions into account, which improved our manuscript. One issue raised by the reviewers was the relatively low proportion of individuals with obesity (1.3%) identified in the control group. This proportion refers to individuals from the comparison group who were also found in the National Patient Register with a diagnosis of obesity. However, the prevalence of obesity in the Swedish population is higher than that. To avoid any confusion, we have deleted this section in the Discussion and replaced it with the following text: “The prevalence of obesity in individuals aged 7 to 17 years in Sweden is estimated to somewhere between 4 and 8%. Thus, we cannot rule out that there are individuals with obesity in the comparison group. Nevertheless, if there are individuals with obesity in the comparison group, this would only lead to a bias towards null i.e. the association between obesity, anxiety and depression would be weakened.” Please see the section “Strengths and weaknesses of the study” in the Discussion, lines 279-283, page 11.
Reviewer #2 Aviva Must: no further comments. The authors have done a good job of responding to the critiques.

RESPONSE: We thank the reviewer for her input.

Editorial requests: The “Authors’ Contributions” section of the Declarations should include the text “All authors read and approved the final manuscript”

RESPONSE: We thank the Editor for pointing this out. This has now been added to the section of Declarations, line 338, page 13.