Author’s response to reviews

Title: Association Between Body Mass Index and Suicidal Behaviors: A Systematic Review Protocol

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Editors-in-Chief

Thank you for your continued interest and helpful feedback on the revised manuscript we submitted to Systematic Reviews entitled “Association Between Body Mass Index and Suicidal Behaviors: A Systematic Review Protocol.”

We have carefully reviewed and responded to the comments and questions. Please see our responses (in bold) below.

Reviewer’s Comments

1) Line 262, page 12, you plan to apply a random-effects model if I-squared >40%, so there are 2 options available (fixed, random-effects model). Therefore, words in line 236 (page 10) “…summary estimate using a random effects model as a certain degree of heterogeneity in…” need a modification for this issue. (Except, you plan to use a conservative method (a random-effects model) to any meta-analysis if so, please modify, if so a modification of line 262 is needed).

Thank you for pointing out this inconsistency. We would like to be conservative by using a random-effects model regardless of the amount of heterogeneity that is present across studies. We will still refer to an I² of >40% to define a significant amount of heterogeneity; however, a random-effects model will be used in each of our meta-analyses of studies investigating the relationship between BMI and suicidal behaviour. Lines 262-266 on page 12 have been modified to clarify our use of a random-effects model. A reference regarding random-effects compared to fixed-effects models has been added on line 499.

2) Line 265-266, “Three separate meta-analyses will be conducted to investigate the association between BMI and completed suicide, BMI and attempted suicide, and BMI and suicidal ideation.” Line 267-268, “The aforementioned suicidal behaviors differ with respects to etiology, population, and prevalence, and therefore they will be treated as separate outcomes [60].” (Refer to Line 265-266): As you are going to explore the relationship between BMI (exposure) and suicidal behaviors, normally we perform a meta-analysis for each outcome and I agreed. But I am just confused about information in line 267-268. Would it be ok to remove line 265-266? If not, please kindly explain to me.

We have removed the lines “The aforementioned suicidal behaviors differ with respects to etiology, population, and prevalence, and therefore they will be treated as separate outcomes [60]” on page 12. We agree that we will perform a meta-analysis for each outcome when exploring the relationship between BMI and suicidal behaviors, thank you.

3) Line 276-295, those are about the qualitative synthesis? If so, please move line 272-275, “Review Manager 5.3 (The Cochrane Collaboration, London, UK) will be used for all statistical and pooled analyses. The results of the pooled analysis will be summarized
by calculating odds ratios [ORs] or hazard ratios [HRs] and 95% confidence intervals.”

Yes, lines 276-295 are about the qualitative synthesis. Therefore, we have moved lines 272-275 (page 12) after the original line 295 (page 13) to lines 293-295 on page 13 as you have recommended.

4) Line 269, Presenting and reporting of results. It would be benefit to your protocol to consider a guideline for reporting meta-analysis in observational studies, e.g. MOOSE (Meta-analysis of observational studies in epidemiology: a proposal for reporting. Meta-analysis Of Observational Studies in Epidemiology (MOOSE) group

Thank you for this suggestion. We have now noted that in addition to the PRISMA guidelines for the systematic review portion of our study, the MOOSE guidelines will be consulted when presenting the results of a potential meta-analysis (explained on lines 303-307, with a reference regarding the MOOSE guidelines added on line 504).

Best Regards,
Stefan Perera and Zainab Samaan