Author's response to reviews

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

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Author's response to reviews: see over
Thank you for your continued interest and helpful feedback on the 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.

**Editor’s Comments:**

Are sufficient details provided to allow replication of the work or comparison with related analyses: if not, what is missing?

1) Line 181-184, this study aims to explore the effect modification of sex, age, and method used in suicide on BMI and suicide behavior, but there is no information on how to do so in the Statistical Analysis and Heterogeneity part (the authors only mentioned sex (Line 273-275)). Please add.

   Thank you for pointing this out. We have added details and rationale for examining age and the method used in suicide as potential effect modifiers on the relationship between BMI and suicidal behaviour beginning on line 278 and ending on line 316 (pages 12-13). While sex will be statistically examined as an effect modifier by stratifying the results for males and females, age and the method of suicide will be qualitatively explored as potential effect modifiers in the body of our review.

   Is the planned statistical analysis appropriate?
   Yes, but some modifications are needed.

2) Statistical Analysis and Heterogeneity, Line 261-263, Could you please give more detail on “absence of significant heterogeneity”? (e.g., p-value>0.10, or I-squared less than 60%, or both)

   We have now explicitly stated, “If substantial heterogeneity (defined as an \(I^2 >40\%\)) exists between studies, a random-effects model will be employed when pooling the data in a meta-analysis” (line 261-263, page 12).

3) Statistical Analysis and Heterogeneity, Line 263-265, “Separate subgroup analysis will be performed for the association between BMI and suicide completion and attempted suicide, and if possible, suicidal ideation.” What factor(s) will the authors do the subgroup analysis?

   We have revised our description of the analysis which now states that we will be conducting three separate meta-analyses to investigate the association between BMI and completed suicide, BMI and attempted suicide, and BMI and suicidal ideation (line 265-269, page 12). This was decided because suicidal behaviours differ with
respect to prevalence, etiology, risk factors, and population, and thus should be treated as different outcomes.

We appreciate your feedback and look forward to hearing from you.

Best Regards,
Stefan Perera and Dr. Zainab Samaan