Reviewer's report

Title: Relation between body mass index and depression: A structural equation modeling approach

Version: 1 Date: 8 November 2006

Reviewer: Fiona Shrive

Reviewer's report:

General
The paper looks at the relationship between BMI and depression in the CCHS. The authors apply SEM to assess the relationship between the two variables. Overall, the paper concludes that BMI and depression are linked and the relationship is gender dependent.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
1. Overall the paper is poorly organised and contains much irrelevant information. For example, page 4 discusses advantage of the data collection method used in the CCHS. This is outside the scope of the current paper's method section. The authors should include only their own methods and simply reference the methodology applied in the CCHS. The current paper need only briefly describe the data source used. Another example is on page 5 where the authors include a lengthy discussion of BMI. Again, a description of the variable used and how it was included in the analysis would suffice.
2. The methodology used is poorly described. The SEM technique is not clearly explained. The authors need to more clearly outline their own methods. Additionally, the variable definitions are unclear. The authors need to clarify how their variables are defined in the CCHS and how they use them in their study.
3. Why were only Ontario respondents included in the analysis? The authors discard over 20,000 respondents to the CCHS from the rest of Canada without any justification for the exclusion. The authors should clarify why only Ontario residents were included.
4. The results and discussion sections should be more clearly delineated. Many points in the results in section would be more appropriate for the discussion section. The results section should include only results form the data analysis. Any implications or interpretation should be in the discussion section.
5. On page 11, the authors allude to "causal" pathways. One major component of causality is temporal association meaning that the causal factor must precede the outcome. In this case, we have cross-sectional data thus the timing of the depression in relation to obesity is unknown. All mention of causality and statements of obesity leading to depression or visa versa should be removed. Only an association between the two variables can be examined.
6. References should be included for the MET values and the EAT index score.
7. Lastly, the authors discuss the limitations of their statistical package. Why use this package if it is unable to complete the analysis set out? This choice needs to be better explained and clarified.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Discretionary Revisions (which the author can choose to ignore)

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: No
Declaration of competing interests:

I declare that I have no competing interests.