Reviewer's report

Title: Risk of obesity in Middle East immigrants compared with Swedes in two deprived neighbourhoods

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Reviewer: M. Janice Gilliland

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This is an interesting manuscript on a topic of considerably importance. Insufficient research has been done comparing three different measures of obesity in diverse populations. The paper, however, suffers from some serious flaws that need to be remedied before it is suitable for publication.

Major Compulsory Revisions

1. The major flaw with the manuscript is the inadequate description of the study as outlined in the Methods sections. The authors mention the care need index (CNI), but do not explain it or explain what the scores means. Furthermore, the study is evidently part of a larger study comparing two neighborhoods, one of which will be rebuilt compared with one that will not be rebuilt, but there is no information on study design or descriptions of the neighborhoods. Sample was described as “Random samples of 18-65 (n=1400) were obtained from the local government.” (p 8), but no details are provided as to how the sample selection was made. The authors list exclusion criteria but do not give a breakdown on what percentage of potential participants fall into each exclusion category. A total of 1400 residents were obtained for the sample, but the final study was limited to 306 individuals for a response rate of <22%. Such a poor response rate is a serious limitation. Some analysis was done to look at response bias, but only on the 678 subjects that meet inclusion criteria. Two exclusion criteria were no listed telephone number or an incorrect number, meaning that residents of lower socioeconomic status were likely excluded. Even so, some differences were found between participants and non-participants although the authors did not report statistical significance of the differences.

2. There are other problems with the manuscript, particularly in the Discussion section. This entire discussion section needs to be reworked for clarity and to better address the hypotheses.

Minor Essential Revisions

1. One problem with the manuscript is that it appears to have been written by a non-native speaker of English. One suggestion to improve the manuscript is that the authors work with an editor to address problems with punctuation, grammar and syntax problems.

2. Perhaps as a result of English language problems, there are problems with clarity in the writing throughout the paper.
3. Furthermore, the authors often make statements of comparison without including a comparison group, for example (page 4) “Higher rates of BMI-obesity have been established in Swedish adolescents from low socioeconomic families.” Higher compared to what families? In some cases statements of purported fact are made without supporting references being cited.

3. Other less serious problems were found, most of which could be easily addressed, such as editing Table 1, which shows three educational categories while the manuscript (p 11) says education was classified as two categories, or correcting formatting problems in Table 4.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests