Reviewer's report

Title: Maternal obesity and fetal deaths: results from the Brazilian cross-sectional demographic health survey, 2006

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Reviewer: Tomasina Stacey

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Thank you for giving me the opportunity to review this paper, it investigates a pertinent subject and is generally well written. However I feel that there are some aspects that need addressing before it is suitable for publication. Please find comments below:

1. Is the question posed by the authors well defined? Yes
2. Are the methods appropriate and well described? See comment below
3. Are the data sound? Yes, but see comment below
4. Does the manuscript adhere to the relevant standards for reporting and data deposition? Yes
5. Are the discussion and conclusions well balanced and adequately supported by the data? Unsure (see below)
6. Are limitations of the work clearly stated? Could be fuller analysis of the limitations
7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished? Yes
8. Do the title and abstract accurately convey what has been found? Yes
9. Is the writing acceptable? Yes

Major consideration

1. The method is well described, however it is difficult to interpret the significance of the results as it is not possible to determine the temporal relationship between BMI and perinatal outcome. This is touched on in the limitations, but I feel that it is a more profound flaw in the methodology and that the conclusion 'obesity is associated with an increased risk of spontaneous abortion…' is not truly justified based on these data - more discussion is required here.

2. An association between obesity and fetal death has been well established in the literature (although it is acknowledged that this has predominantly been in high income countries), and therefore for this paper to be of more interest to the reader a point of difference from previous papers needs to be identified. For instance, why were there different findings in relation to the two measures of
obesity described (waist circumference and BMI) and the association with early and late fetal deaths.

Minor issues
1. Minor issues re definition: marital status included single, married, widowed and divorced- how were cohabitating couples who were not married classified?
2. The meaning of the second half of the first paragraph under Prevalence of abortion and stillbirths is unclear.
3. Second paragraph of biological plausibility and limitations- the public health implications are mentioned, however an analysis of the literature in how (or how difficult) this can be achieved would add depth to the paper.

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

Quality of written English: Acceptable

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'