Author's response to reviews

Title: Group-based developmental BMI trajectories, polycystic ovary syndrome, and gestational diabetes: a community-based longitudinal study

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Author's response to reviews:

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To the Associate Editor,

Thank you for the opportunity to submit the revised manuscript BMED-D-17-00868 entitled "Group-based developmental BMI trajectories, polycystic ovary syndrome and gestational diabetes: a community-based longitudinal study" to BMC Medicine. We thank the reviewers and Associate Editor for their comments and have responded to specific points raised using highlighting throughout the manuscript. We look forward to your response.

Sincerely,

Dr. Anju E Joham & Dr. Nadira Sultana Kakoly,
(on behalf of all authors)

School of Public Health and Preventive Medicine, Monash University
Associate Editor’s comments

Did you make sure that women did not report T2DM in the same or especially previous questionnaire when reporting GDM as the meaning of GDM might be misinterpreted by the women answering the questionnaires? We cannot identify modifications within the manuscript.

We have checked to see if any women reporting live-births have reported “yes” to GDM at Survey 6, but had pre-existing T2DM in Surveys 1-5. We found this to be 37 women. We have re-run the analysis excluding these women, and this did not change the overall results. Therefore, the results presented in the manuscript have not been altered. However, if the editors and/or reviewers feel that it is important to update the results excluding these women, we can then update that within the manuscript.

We have not excluded women who reported T2DM in Survey 6 only. It is possible that these women had GDM and then developed post-partum T2DM in the 3 year period between Surveys 5 and 6. As we do not know the specific timing of these two events, this is a limitation, which we acknowledge on page no. 12, lines 299 - 301.

We had acknowledged the limitation of the use of self-reported GDM referring to the validity and reliability of the measure used on page no. 12, lines 296 - 299.

As for imputation, can you report how many self-reported BMI values did you have in average per patient?
We have used 5 out of 6 BMI (83%) values on average. We have added this to the manuscript on page no. 5, line no. 110 and again on page no. 9, lines 223 – 224.