We thank Zhao and Xu for their valuable comments and recommendations on our study(1).

Firstly, we would like to note that both our study and Zhao’s study find that paternal body mass index (BMI) was associated with birth weight(1,2). We agree that a subgroup analysis by offspring sex is necessary to explore the sex-specific rule. We did subgroup analyses according to the infant’s sex in our first revised manuscript. However, we found that the results were similar in subgroup analyses according to the infant’s sex (online Supplementary Tables 1 and 2), and the associations between paternal preconception BMI levels and small-for-gestational age/large-for-gestational age in female/male infants were similar to the results in online Supplementary Table S4 in our previous study(1), respectively. Based on these results, we found no sex-dependent effect of paternal preconception BMI on large-for-gestational age/small-for-gestational age. According to comments of reviewers and space limitations, we deleted subgroup analyses results by the infant’s sex in our revised manuscript.

Secondly, information on the paternal history of chronic metabolic diseases was collected through face-to-face interviews by trained health staff in the National Free Pre-pregnancy Checkups Project (NFPCP)(3). We also agree that paternal history of chronic metabolic diseases (e.g. diabetes or hypertension) might have an impact on birth outcomes. The couples’ potential confounding variables which were significant in univariate analyses were subsequently adjusted in multivariate-adjusted multinomial logistic regression models. Paternal history of chronic metabolic diseases (e.g. diabetes or hypertension) was not significant in univariate analyses, and we have tried to put these variables into the model for adjustment, but the results showed that there is no difference between adjusting these variables or not. Therefore, paternal history of chronic metabolic diseases was not included in the final models.

In conclusion, no sex-dependent effect of paternal preconception BMI on large-for-gestational age/small-for-gestational age was observed in our study. Both our study and Zhao’s study suggest that more efforts should be put on couples’ preconception health.

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The corresponding author has full access to data in the study and takes responsibility for data integrity and the accuracy of data analysis. T. G. analysed the data and drafted the main manuscript text. J. J. and Y. D. searched the literature and interpreted the results. Q. W., H. S. and D. Y. led the data collection and laboratory testing. Y. Z., D. Y., Y. W., H. Z., Z. P., J. Z., Y. H. and Y. Z. collected the data. Y. Y. and X. M. revised the manuscript.

There are no conflicts of interest.

Abbreviations: BMI, body mass index; NFPCP, National Free Pre-pregnancy Checkups Project.
Supplementary material

For supplementary material/s referred to in this article, please visit https://doi.org/10.1017/S0007114522001179

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