Reviewer’s report

Title: Association between ambient particulate matter concentration and fetal growth restriction stratified by maternal employment

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Reviewer: Samantha Kingsley

Reviewer's report:
Choe et al examined maternal residential air pollution exposure and fetal growth in Seoul and explored effect modification by maternal employment status. Most of the results were similar between employed and non-employed mothers, with a few exceptions. I have some concerns that need to be addressed concerning exposure assessment and interpretations of results.

Exposure Assessment:
- Why did the authors exclude monitor sites near large and busy roadways? Excluding these monitors decreases the average PM measurements and may explain why ORs are not significant and so close to the null.
- How large is a district or gu? Are districts smaller than the city of Seoul?

Results
- The same IQR was used for all analyses - what are the other IQRs? Is the full year IQR the most appropriate?
- Are the ORs between employed and non-employed mothers significantly different (for the same exposure and outcome association)? They all are close to 1.00 and do not appear to be different.

Discussion
- The authors indicate that prior studies of air pollution and fetal growth are not consistent, possibly because of maternal employment. Did these studies adjust for employment in their models?
- How do the present study's findings compare to the prior studies that examined PM and fetal growth cited in the introduction?
- Another limitation is unmeasured confounding by income and neighborhood socioeconomic status. Since exposure is measured at the district level the authors should consider measuring an index for district-level SES to include in all of their models to address this limitation.

Minor Comments
- Why didn't the authors explore the association between PM and preterm births?
- Line 166-167 needs a citation
- The sample sizes in line 187 and percentages in line 189 do not match those in Table 1
- The decrease in birthweight over time (shown in Figure 1) is not mentioned at all. Was it a statistically significant decrease?
- Supplemental Figure 1 is hard to read (blurry)
- Line 227 doesn't make sense "This was not evident in those employed who have been growing portion of mothers."

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.
Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

**Quality of written English**
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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