Peer Review Report

Review Report on Associations between air pollution exposure and daily pediatric outpatient visits for dry eye disease: A time-series study in Shenzhen, China

EVALUATION

Q 1   Please summarize the main findings of the study.

The study investigated the association between dry eye diseases and ambient air pollutants amongst Children in Shenzhen, China. The study used time series analysis with
The study observed a positive association between NO2, O3, PM2,5 and PM10 with DED.

Q 2   Please highlight the limitations and strengths.

The research topic is not novel except for the study area. the study applied state-of-art analysis with large hospital admissions for DED, 19'170 cases, Authours attempted to using advanced method approaching. However, the data analysis did not present detail to justify the findings. The manuscript is also poor writing with numerous typos throughout

Q 3   Please provide your detailed review report to the authors. The editors prefer to receive your review structured in major and minor comments. Please consider in your review the methods (statistical methods valid and correctly applied (e.g. sample size, choice of test), is the study replicable based on the method description?), results, data interpretation and references. If there are any objective errors, or if the conclusions are not supported, you should detail your concerns.

Author should provide why chose degree of freedom and potential confounding variables. In manuscript now, authors have developed models based on existing models, rather based on the database. Therefore, it might distort findings. Moreover, authors also did not provide any sensitivity analysis to justify the conclusion.

Second, the study investigated the effects of APP on DED amongst children. Hence the title and research question should mention on it.

Authors mentioned to used fixed site monitoring stations, are there automatic machine or sensor?

Information about quality of data about hospital admission should provide clearly? Patient is in-patient or out-patients? Authors extract individual record or aggregated records?

Line 118-120 and 126-129 both mentioned on ethical issue, they should write in the same paragraph.

Why authors need to use K-S to test normal distribution of each variable

Since the author concluded that the relationship in SO2, CO and O3 are not linear. Hence the main findings in table 2 for SO2, CO and O3 should re-analysis carefully.

Contents from line 150 to 158 should move to methodology part.

Words such as "verus", correction analysis in line 144 are not corrected.

Line 181 is not clear what it is mean

Abstracts:

Use single-lag, rather than non-cumulative lag.

Line 11-12: it is not clear lag and outcome of RR.

PLEASE COMMENT

Q 4   Is the title appropriate, concise, attractive?

it is appropriate since without study population.

Q 5 **Are the keywords appropriate?**

yes

Q 6 **Is the English language of sufficient quality?**

The manuscript is also poor writing with numerous typos throughout. Contents in each paragraph do not clear and consistent

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Q 7 **Is the quality of the figures and tables satisfactory?**

No.

Q 8 **Does the reference list cover the relevant literature adequately and in an unbiased manner?)**

yes

QUALITY ASSESSMENT

Q 9 Originality — ▮▮▮▮▮ (5/5)

Q 10 Rigor — ▮▮▮▮▯ (4/5)

Q 11 Significance to the field — ▮▮▯▯▯ (2/5)

Q 12 Interest to a general audience — ▮▮▯▯▯ (2/5)

Q 13 Quality of the writing — ▮▮▯▯▯ (2/5)

Q 14 Overall scientific quality of the study — ▮▮▯▯▯ (2/5)

REVISION LEVEL

Q 15 **Please make a recommendation based on your comments:**

Major revisions.