Reviewer’s report

Title: A review on the epidemiology of myopia in school children worldwide

Version: 0 Date: 16 Jun 2019

Reviewer: Serge Resnikoff

Reviewer's report:

1. General comments
This manuscript is a literature review of the papers addressing epidemiology of myopia in school children published between 1st Jan 2013 and 30th Nov 2018.

This study is not a meta-analysis, nor a systematic review.

Authors did not attempt to assess the strength of evidence for the different risk factors they report. In that respect, this manuscript is mainly a compendium, presenting main findings of the studies published during the period under considerations.

The review process should be described in more details - currently, it is not clear how the papers were actually reviewed, which criteria were used, how many papers were entered in the review process and how many were eventually retained.

There is no "discussion" section where the strength and the limitations would be presented and discussed.

2. Specific comments and recommendations

P2 L2-3: There is no quantitative evidence provided about this trend in this paper. Abstract should reflect the actual content of the manuscript.

P2 L 10: I would make clear in this section that this is a literature review, to avoid confusion with systematic reviews or meta-analysis.

P2 L26: Age range should be spelled out.

P1 L35: Please define "school children" in terms of age

P3 L40: "PubMed and Medline were the main resources": please clarify which other databases were used.

P3 L51: Please clarify how study methodology and robustness of data were actually assessed. Which criteria were used?

P3 L56: Any textbook or only those published during the 2013-2018 period?

P3 L60: A section is missing here: how many papers have been entered in the review process? How many have been dropped? What were the main reasons from rejection? Transparency on the review
process is critical.

P4 L2-8: Definition of myopia as "greater than or equal to -0.5 D". It has been recommended that, "in quantitative contexts, myopia always should be treated as a negative value and mathematical comparison symbols should be used in their strict mathematical sense." In that respect, this section should read ... a SER less than or equal to -0.5... less than 0.5 D... less than or equal to -0.75 D etc. See following article: Flitcroft DI, He M, Jonas JB, et al. IMI - Defining and classifying myopia: a proposed set of standards for clinical and epidemiologic studies. Invest Ophthalmol Vis Sci. 2019;60:M20-M30. https://doi.org/ 10.1167/iovs.18-25957 (see page 23). This reference might be more relevant that the current one (ref [9])

P5 L00: I assume this is in non-cycloplegic surveys. Please clarify.

P5 L7-11: This is beyond the scope of this paper (school children).

P5 L42: Recommend using past tense throughout the results section.

P5 L53: Science is not about beliefs, especially in literature reviews. Consider another verb reflecting whether it is a hypothesis or a finding supported by evidence.

P5 L58: Recommend providing age (or age bracket) rather than grade at school as it may vary from country to country.

P6 00: "Asian children at highest risk": is it highest risk or highest prevalence?

P6 00: "concluded" might not be the appropriate term as this paper is not a meta-analysis.

P6 L17: what is "normal visual acuity"?

P6 L26: Proportion of school children with High Myopia is an important indicator and should be further developed.

P7 L1: Same comment as above. Is this the conclusion of authors (based on what, as there is no meta-analysis?) or the conclusion of the authors of the reported papers?

P8 00: "In young adults"- is this still about school children?

P10 L00: Repetition of "had a higher risk"

P11 L33-34: Interventional studies might be also needed to better understand "what works" in different settings and age groups.

Table 1: what does "selected studies" mean here? All the studies that were retained for the review? Or a selected subset (e.g. cross-sectional studies reporting prevalence?). In any case, the list of the papers retained needs to be provided. Could be a supplementary material available on line. It would be also helpful to know which studies were cycloplegic and which were not (additional column)

Table 1: suggest using Global Burden of Diseases regions in order to have a better granularity than "continent". At least differentiate South Asia (India) and East Asia (China, Korea, Japan).
Table 1 "cohort": shouldn't this be "age range"?

Table 2. I would recommend indicating the country rather than the continent, which is quite vague given the geographical variations in geographical and cultural environment.

Fig 1. Given the variations across places, age-groups and over time, I would strongly recommend using country names (instead of continents). I would also recommend adding age range and year of the study. This would make the figure much easier to read and interpret. It would be a great summary of the paper and likely to be widely quoted.

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

No

**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.

Not relevant to this manuscript

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

Acceptable

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