**Reviewer's report**

**Title:** Hyperopia: a systematic review of prevalence and associated factors among school-aged children

**Version:** 2  
**Date:** 9 February 2014  
**Reviewer:** Jenny M Ip

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**Major Compulsory Revisions**

1. Abstract section. The abstract should have a clearly stated aim within the “background section”

2. Background section, line 3. Please provide a reference to the statement “….presence or absence of associated accommodative and binocular dysfunctions”.

3. Discussion. In the section relating to ethnic differences:
   “The particularly low hyperopia prevalence could be partly explained by ethnicity, as in Durban, South Africa [27], where the majority of the population are black followed by Asian people. Regarding ocular components, both African and Asians have an axial length larger than white individuals. Since the study was majorly based in the black ethnicity, it is important to consider that the hyperopic error might be underestimated due to a smaller cycloplegic action in eyes with dark irises.[27, 60]”

   Further clarification is needed. Given that hyperopia is associated with shorter axial length and myopia with longer axial length, we should also expect higher rates of myopia in South Africa. However, this is clearly not the case (2.9-4.0% Naidoo et al). It seems unlikely that in the report by Naidoo et al (and other RESC studies) incomplete cycloplegia could under-estimate hyperopia as a strict protocol for pharmacological dilation was used, and pupil diameter was assessed.

4. Tables 1 & 2 seem to have a lot of duplication of data – the authors could consider condensing the two tables into one.

**Minor Essential Revisions**

5. Results. In the sentence: “...prevalence of hyperopia at age of 7 years ranges from 2.8%[27] to 28.9%[28]. Even excluding outliers, the prevalence ranges from 4.0% [29] to 10.7% [30].”, please elaborate or clarify what is meant by “excluding outliers”.
6. Discussion. The sentence “On the other hand, females have greater acceptance and participation in studies, trials and interviews with scientific purpose that could lead to positive selection bias” should be referenced, or else another explanation provided, as in these paediatric studies, consent is not accepted from the child participants, but from the parents.

Minor Comments not for publication

7. Please ensure consistency in number of decimal places for statistics within the manuscript. Eg. In Abstract, line 8 and line 9, change 4% to 4.0%, and 7% to 7.0%

8. Abstract, line 11. Please change “white people” to “white children”.

9. Background, line 4. Please insert “with” after “child may present”.

10. Background, line 6. Please insert “with” after “children may present”.

11. Methods section, line 14 -15. please remove the”e” after “dysfunction” and the “e” after “dyslexia”.

12. Methods section, line 18. Please correct “researches” to “research”, and remove extra spacing.

13. Results. Please insert “refraction” after “spherical equivalent” throughout the manuscript.

14. Results. In the sentence: “girls appear to have, on average, a smaller AL when compared to boys.[6, 38, 39, 48]”, please change “smaller” to “shorter”.

15. Results. In reporting confidence intervals, the convention is usually (95% CI 8.5 – 13.2), rather than 95% CI (8.5 – 13.2)

16. Results. In the gender associations, please specify age of the sample from Poland

17. Results. In the ethnicity associations, please consider being consistent with either referring to children as “white” or “Caucasian”

18. Results, ethnicity association, line 3. Please insert “et al” after “Kleinstein”, and insert the appropriate reference.

19. Results, ethnicity associations. In the sentence “In another English study with children at the age of 7 years, the non-white ones were less likely to be hyperopic when compared to white children OR= 0.16 95%CI: (0.03 – 0.82); p=0.028 (Table 3).[24]”, please replace “ones” with “children”.

20. Results, ethnicity associations. The sentence “…The results showed that 6-year-old white children presented the highest prevalence of hyperopia
15.7% 95%CI: (13.2 - 18.2) than children of the same age coming from Eastern Asia
6.8% 95%CI: (4.0 - 9.5) and South Asia 2.5% 95%CI: (0.0 - 7.5).[49]” needs to be amended for grammar.

21. Results, ethnicity associations. In the sentence “Moreover, it was also found a higher prevalence of hyperopia in children from the Middle East when compared to children from Southern Asia, yet no significant difference was found between white children and the ones from the Middle East.[39]”, please replace “ones” with “those” or “children”

22. Results, parental education, socioeconomic status. The last paragraph refers to adult findings, and would not be relevant in this review.

23. Results, outdoor activities. After “Rose”, please insert “et al”. Similarly, please amend “this author” to “these authors”, and insert “et al” to after “Mutti”.

24. Conclusion line 8. Please change “loss” to “loss to follow up”.

25. Table 1. Please correct “staded” to “stated” in column “Response rate”; consider inserting description of population setting as “rural” or “urban”

Discretionary Revisions

26. For this review to be clinically relevant and useful for public health implications, the authors should consider a discussion on current recommendations on hyperopic correction (eg, from AAO preferred practice guidelines), and levels of visual impairment (eg. A discussion on visual acuity in relation to levels of hyperopia).

27. Despite concluding statements about evaluating the social impact of hyperopia, there was no mention of this in the discussion or results – perhaps a more balanced approach would be to include some of this in the preceding discussion.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests