

Reply to Letter – Comparison of the Pediatric Vision Screening Program in 18 Countries across Five Continents

We thank Bušić *et al.* for their interest in our article. Thank you very much for the kind words. Appreciate that you highlighted two main points pertaining to vision screening that are also of our concern – near visual acuity (VA) and optotype issues.

Undeniable that the combined distance VA and near VA has been reported to be more accurate for detecting equivalent spherical refractive error as well as for the detection of amblyopia than either of the two tests alone.^{1,2} However, its efficiency for hypermetropia detection remains debatable. There is a study published by Leone *et al.*³ entitled “Use of visual acuity to screen for significant refractive errors in adolescents: is it reliable?” They investigated the efficiency to detect significant refractive error using uncorrected VA. They concluded that the prevalence of uncorrected VA might provide a reasonably accurate estimate of the prevalence of myopia, but there was no reliable VA cutoff for clinically significant hyperopia or astigmatism. In addition to that, the +1.50 D test, usually as a component of the modified clinical procedure of vision screening, has been widely used for refractive screening for hyperopia.⁴ On an average, 1 D more hyperopia is associated with a reduction in distance VA of 0.02 logMAR. Based on the Optometric Clinical Practice Guideline by the American Optometric Association on Hyperopia, hyperopia may be categorized based on the etiology (simple hyperopia [biological variation], pathological hyperopia [anatomical abnormality], and functional hyperopia [paralysis of accommodation]) or the degree of refractive error (low hyperopia: +2.00 D or less, moderate hyperopia: +2.25 to +5.00 D, and high hyperopia: +5.00 D or more). Latent hyperopia is that which can be overcome by accommodation. Absolute hyperopia cannot be compensated with accommodation. The total magnitude of hyperopia is the sum of absolute and latent hyperopia. The effect of hyperopia on VA depends on the magnitude of the hyperopia and the ability to overcome the hyperopia. Although VA may be reduced at times, especially at near, the measure of VA in patients with latent hyperopia is usually normal. In patients with absolute hyperopia, the reduction in VA at both distance and near is proportionate to the degree of absolute hyperopia. Screening by VA testing is likely to identify only hyperopia associated with high astigmatism and/or amblyopia. Persons with simple hyperopia are usually able to obtain good VA through active accommodation. For your information, the above point was not the main emphasis in our Table 4. We aimed to highlight the variation issue in the application of

distance VA testing in Table 4. Different types of VA charts and different testing distance were implemented in most of the countries. Both challenges were elaborated accordingly in the article.

Regarding the issue on optotype, may we draw your attention to the discussion section under the second heading on “Limitation in implementation...” and the last few sentences. The optotype issue was addressed, and kindly refer to “The optotype selections, heights and spacing and designs deviated from standard guidelines.⁶⁸ ...”. Further explanation on the recommended optotype selection could be obtained from the reference no. 68 as indicated in the article.

Nevertheless, we believe that this communication will benefit our readers to understand the current challenges of pediatric vision screening program. At the same time, the constructive feedback gives us valuable tips too. Hopefully, we will continue to pursue our interest in enhancing pediatric vision screening worldwide.

Conflicts of interest

There are no conflicts of interest.

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