



Reply to Letter to the Editor re: “Refractive and Vision Status in Down Syndrome: A Comparative Study”

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We are grateful for your kind attention to our manuscript.¹ This paper presented the prevalence of amblyopia and refractive errors in patients with Down syndrome (DS), however, we did not investigate their types and causes. In other words, this paper provides a description of visual dysfunction in this population, but no causal inference can be drawn regarding the relationship between DS and cerebral visual impairment (CVI). On the other hand, the study conducted by Wilton et al.² did not have a causality design. They only carried out a cross-sectional study using a questionnaire rather than neurologic assessment to find that 38.0% of the DS patients were suspected CVI cases. Even with predictive models, only 62.0% of the suspected CVI was correctly detected. For these reasons, the results of our study and those of Wilton et al.² are not contradictory.¹

The second comment was related to the control group. As reported in the other paper of this project, the DS population comprised known cases (according to genetic testing results in the medical records) regardless of refractive error status.³ Therefore, the control group must have included non-DS subjects regardless of their refractive error status. If the criteria used to select the

control group included normal subjects without refractive errors, matching would have been biased. Considering the objective of the study, matching was only done for age and sex. Your comment would apply to the assessment of the association between DS and the type of visual impairment (cerebral or ocular). The reason for the unequal number of participants in the two groups is that we performed group-matching, not individual matching, and the number of subjects may not necessarily be equal in the two groups in group-matching.

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