

Prevalence and Causes of Visual Impairment in Low–Middle Income School Children in São Paulo, Brazil

PURPOSE. Assess prevalence and causes of vision impairment among low–middle income school children in São Paulo. **METHODS.** Cluster sampling was used to obtain a random sample of children ages 11 to 14 years from public schools (grades 5–8) in three districts from June to November 2005. The examination included visual acuity testing, ocular motility, and examination of the external eye, anterior segment, and media. Cycloplegic refraction and fundus examination were performed in children with uncorrected visual acuity 20/40 or worse in either eye. A principal cause of visual impairment was determined for eyes with uncorrected visual acuity of 20/40 or worse.

RESULTS. A total of 2825 children were enumerated and 2441 (86.4%) were examined. The prevalence of uncorrected, presenting, and best-corrected visual acuity 20/40 or worse in the better eye was 4.82%, 2.67%, and 0.41%, respectively. Spectacles were used by 144 (5.9%) children. Refractive error was a cause in 76.8% of children with visual impairment in one or both eyes; amblyopia, 11.4%; retinal disorders, 5.9%; other causes, 2.7%; and unexplained causes, 7.7%. Myopic visual impairment (spherical equivalent -0.50 D in one or both eyes) was not associated with age or grade level, but female sex was marginally significant ($P = 0.070$). Hyperopic visual impairment ($+2.00$ D or more) was not associated with age, grade level, or sex.

CONCLUSIONS. The prevalence of reduced vision in low–middle income urban São Paulo school children was low, most of it because of uncorrected refractive error. Cost-effective strategies are needed to address this easily treated cause of vision impairment.

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