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Prevalence and causes of visual impairment in a Brazilian population: The Botucatu Eye Study

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Published: 19 August 2009

Received: 6 December 2008

BMC Ophthalmology 2009, **9**:8 doi:10.1186/1471-2415-9-8

Accepted: 19 August 2009

This article is available from: <http://www.biomedcentral.com/1471-2415/9/8>

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Abstract

Background: This paper reports population-based data on the prevalence and causes of visual impairment among children and adults in Botucatu, Brazil.

Methods: A population-based cross-sectional study was conducted involving a random start point and then systematic sampling of an urban Brazilian population in the city of Botucatu. There were approximately 3 300 individuals aged 1 to 91 years who were eligible to participate in the study. Of this sample, 2485 (75.3%) underwent ophthalmic examination. The ophthalmic examination included uncorrected (presenting) and best corrected distance visual acuity using standardized protocols. The primary cause of decreased visual acuity was identified for all patients with visual impairment.

Results: Presenting low vision and presenting blindness were found in 5.2% (95% CI: 4.3–6.1) and 2.2% (95% CI: 1.6–2.8) of the population, respectively. Unilateral presenting low vision and unilateral presenting blindness were found in 8.3% (95% CI: 7.2–9.5) and 3.7% (95% CI: 2.9–4.4) of the population respectively. Best corrected low vision was found in 1.3% of the population (95% CI: 0.9–1.7) and best corrected blindness was discovered in 0.4% of people (95% CI: 0.2–0.7). The main cause of presenting low vision was refractive error (72.3%) and cataract was the most prevalent cause of blindness (50%).

Conclusion: The main causes of low vision and blindness in this Brazilian city were uncorrected refractive errors, cataract, and retinal diseases. Programs to further reduce the burden of visual impairment need to be targeted toward the correction of refractive error and surgery for cataracts.