Prevalence of Visual Impairment and Blindness and Survey of Barriers to Eye Care in a South Indian Population

Z Su1, BQ Wang2A, YM Buys2B

1Department of Biology and Department of Physics, Yale University, New Haven, CT; 2Department of Biology, 3Department of Ophthalmology and Vision Sciences, 4University of Toronto, Toronto, ON, Canada

Background

• About 314 million people worldwide live with visual impairment, of whom 45 million are blind and 87% live in developing countries.1

• 1/3 of the world’s blindness caused by cataract occurs in India.2

• Each year about 3.8 million in India are blinded by cataract.3

• The present lack of updated population-based data on visual status and barriers to eye care may hinder designing effective treatment and prevention programs and assessing progress in reducing visual impairment.*

Purpose

To determine the prevalence of blindness and visual impairment, and identify barriers to eye care in Chennai, India.

Methods

• A cross-sectional study of vision status of 2558 subjects aged 5 years and older was conducted in May and June 2009.

• Single-stage cluster random sampling: routine eye camps in 19 randomly selected rural villages and urban slum areas.

• All camp participants underwent a vision acuity screening with a Snellen E chart and a near vision chart and a basic eye exam.

• 424 subjects aged 15 years and older responded to a quantitative survey prior to eye examinations.

• Two-stage cluster random sampling: a simple random sample of participants proportional to camp size at all 19 camps.

• The survey included demographic background, awareness of visual status, acceptance of and prior access to eye care services.

• An interpreter translated by reading verbatim a standard interview script written in Tamil.

• Statistical analyses were performed using MINITAB 15.

Results

The prevalence of blindness was 0.72%, 2.63%, and 7.92% by the WHO, Indian, and US definitions respectively; the prevalence of visual impairment was 12.38% (Table 1). Blindness and visual impairment occurred more frequently in females (Table 2) and older ages (Figure 2 and Table 3). Cataract (12.12% [95% CI 10.88-13.45%]) was the leading cause of blindness and visual impairment (Table 4). Only 15.1% [95% CI 11.8-18.7%] of all surveyed could afford private eye care and 52.6% [95% CI 47.7-57.4%] had never received previous eye care services (Figure 1). The acceptance rates for glasses was associated with age, education and access to eye care and for surgery was associated with visual burden (Table 5 and 6).

Discussions and Conclusion

Cataract remains the leading cause of blindness and visual impairment in this region. Resources should be allocated to address the high prevalence of cataract. Perceptual barriers to eye care are consistent among most demographic groups, notably including education, employment, and financial status. Concerns for quality of local eye care services, financial barriers, and a general lack of eye care knowledge present major challenges for local eye care providers.

References


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