

Commentary: Uncorrected refractive errors in Indian adults: An unrecognized problem

The use of a systematic review to estimate the refractive error and presbyopia burden in adult Indians is a welcome approach, to provide meaningful estimates from a fairly large number of published articles in the country.^[1]

Many different approaches have been used to estimate the refractive error, such as rapid assessment of avoidable blindness, rapid assessment of visual impairment, and rapid assessment of refractive errors, and these can pose challenges in comparing data. Some rapid assessments can attribute visual impairment to refractive error, whereas the actual primary cause could be other underlying disease pathology. However, a systematic analysis does negate some of the biases in individual studies but do not rule them out entirely.

The high estimates for uncorrected refractive error (54.5 million) and presbyopia (177 million) are a cause for serious concern because their potential impact on quality of life and economic productivity could be significant. The impact of uncorrected refractive errors has been reported in multiple occupations. Verma *et al.* assessed multiple parameters including visual acuity, color vision, phoria, night vision, depth

perception, contrast sensitivity, glare recovery, peripheral vision, and vertical field of vision among 387 drivers and reported that among those drivers with a reported accident history 85% had at least one compromised visual function compared with 48% in the nonaccident group.^[2]

Interventions have shown to be beneficial from an economic standpoint. In the PROSPER trial^[3] done among 751 tea pickers in Assam, where half of them were randomized to receive presbyopic glasses, the daily weight of tea picked in the intervention group increased from by 9.84 kg per day compared to 4.59 kg per day in the control group, a 21.7% relative productivity increase. The number with uncorrected refractive error could increase dramatically as the Indian population ages and addressing this becomes important.

Although access to care for refractive services in most cities is easy, there are financial barriers for assessing those in the lowest socioeconomic groups. In rural areas access is much poorer. This should be addressed by policymakers because correcting refractive errors is a relatively simple way of improving productivity and quality of life.

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