

## Visual impairment in the 40- to 74-year-old population of Shahroud, Iran

### PURPOSE:

To determine the prevalence of visual impairment by age and gender in Shahroud.

### METHODS:

Using random cluster sampling, 6311 Shahroud inhabitants who were between 40 and 74 years old were invited for ophthalmological examinations. Visual acuity worse than 0.0 LogMAR (6/20) and 1.3 LogMAR (400/20) in the better eye was regarded as low vision and blindness, respectively. The cause of blindness was determined by an ophthalmologist and in a person with more than one cause, the most correctable cause was regarded as the main cause.

### RESULTS:

This study was conducted on 619 participants (response rate: 98.2%). On the basis of presenting visual acuity, the prevalence of low vision and blindness was found to be 1.8% (95% confidence interval (CI): 1.1-2.5) and 0.0% (95% CI: 0.0-0.3), respectively. Based on corrected vision, these values were 0.0% (95% CI: 0.0-0.3) and 0.3% (95% CI: 0.1-0.6), respectively. Visual impairment increased with age in women ( $P < 0.001$ ). Uncorrected refractive errors (63.9%), cataract (20.2%), and amblyopia (0.9%) were the most common causes of visual impairment based on presenting vision. Based on corrected vision, however, cataract (42.0%), amblyopia (12.0%), and retinitis pigmentosa (7.0%) were the most common causes of visual impairment.

### CONCLUSION:

Although the prevalence of visual impairment in the city of Shahroud was determined to be lower than two previous studies in the country, correction of refractive errors and cataract could minimize the rate of visual impairment in this population as they were shown to comprise 80% of the causes of visual impairment. The elderly women need to receive more attention.