

The prevalence of refractive errors and its determinants in the elderly population of Mashhad, Iran

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Abstract

Purpose: To determine the prevalence rates of refractive errors in elderly people in Mashhad, Iran. **Methods:** In a cross-sectional study with a cluster sampling method, the sample population was selected proportionate to the total population of Mashhad. The selected citizens were then invited for eye examinations at the clinic. After an interview, refractive data were collected using objective and subjective refractions. Refractive error data were converted into spherical equivalent (SE), and myopia was defined as an SE worse than -0.50 diopters (D) and hyperopia worse than +0.50 D. **Results:** Of the 1040 selected samples, 93.0% participated in the study. Data were analyzed for 1367 adults without previous cataract surgery who had right eye refraction data; 30.4% were women, and 69.6% were men. The mean age was 73.7 ± 11 years. The prevalence of myopia was 27.2% (95% confidence interval (CI) 24.8-29.6); 29.6% in men and 22.0% in women (P < .001). The rate of myopia showed an increase with age (P < .001). The prevalence of hyperopia was 51.6% (95% CI, 48.9% to 54.3%); 57.6% in women and 48.3% in men (P < .001). The rate of hyperopia showed a significant decrease with age. The prevalence of astigmatism in the studied sample was 37.0% (95% CI, 34.9% to 39.1%). **Conclusions:** Refractive errors are a major issue among the elderly and their prevalence rates vary greatly depending on age and gender. The present study was able to examine this public health issue among the elderly in Mashhad.

Reaxys Database Information

Author keywords

Cross-sectional study; Elderly population; Refractive errors

Indexed Keywords

EMTREE medical terms: adult; aged; article; astigmatism; eye examination; eye refraction; female; human; hypermetropia; Iran; major clinical study; male; myopia; prevalence; priority journal; refraction error; age distribution; cross-sectional study; middle aged; risk factor; sex ratio

MeSH: Age Distribution; Aged; Aged, 80 and over; Astigmatism; Cross-Sectional Studies; Female; Humans; Hyperopia; Iran; Male; Middle Aged; Myopia; Prevalence; Risk Factors; Sex Distribution

Medline is the source for the MeSH terms of this document.

ISSN: 09287086 **CODEN:** OPEPFS **Source Type:** Journal **Original language:** English

DOI: 10.1080/09287080902873049 **PubMed ID:** 19437316 **Document Type:** Article