

Eye Examinations and Sociodemographic Factors: A Retrospective Population-Based Analysis

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Introduction: Regular eye examinations are a key component to improving eye health. However, access to eye care largely remains a work in progress and several factors remain major barriers to eye care services around the globe. This study aims to investigate the associations between sociodemographic factors and whether adults received an eye examination within the past 12 months in the United States.

Methods: Data were pooled from the 2022 National Health Interview Survey (NHIS). Participants aged 18 years or older for whom data were available on whether they had an eye examination from an eye specialist were included in our analysis. Univariable and multivariable logistic regression models were used to examine associations between sociodemographic variables and odds of undergoing an eye examination in the past year. An odds ratio (OR) and 95% confidence interval (CI) was reported for each analysis.

Results: Across 27,246 adults, 14,812 (53.57%) had an eye examination in the past year and 12,434 (44.97%) did not. In multivariable analysis, the following sociodemographic factors were associated with an increased odds of having undergone an eye examination in the past year: self-identifying as female (OR=1.49, 95%CI=[1.39, 1.61], $p<0.01$), Hispanic (OR=1.25, 95%CI=[1.11, 1.41], $p<0.01$) or Asian (OR=1.30, 95%CI=[1.13, 1.51], $p<0.01$). The following factors were associated with a reduced odds of having undergone an eye examination: being single (OR=0.91, 95%CI=[0.83, 0.99], $p=0.02$) or in a cohabiting relationship (OR=0.72, 95%CI=[0.63, 0.81], $p<0.01$) compared to being married, residing in the West compared to the Northeast (OR=0.87, 95%CI=[0.77, 0.99], $p=0.04$), and lacking citizenship status (OR=0.69, 95%CI=[0.59, 0.81], $p<0.01$), insurance (OR=0.55, 95%CI=[0.47, 0.63], $p<0.01$) or a usual place of care (OR=0.54, 95%CI=[0.48, 0.61], $p<0.01$). Broadly, a lower income ($p<0.01$ to $p=0.04$) and education level ($p<0.01$ to $p=0.05$) were associated with a lower odd of undergoing an eye examination.

Conclusion: Several sociodemographic factors were associated with whether adults recently underwent an eye examination. Public health efforts dedicated to addressing inequities in vision screening are imperative.