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### Prevalence of refractive error among adults in Gondar Town, Northwest Ethiopia

#### Abstract:

**Purpose:** This study aimed to assess the prevalence of refractive errors and associated factors among adults in Gondar Town, Northwest Ethiopia.

**Methods:** A community-based cross-sectional study was conducted among 881 adults from April 28 to May 28, 2023, in Gondar Town. Optometrists used a questionnaire and ocular examination to collect data. Presenting and pinhole visual acuities were used to diagnose the refractive errors. Data were entered into EPI-INFO version 7 and analysed using STATA 14. Binary logistic regression was used to determine the factors associated with refractive error. An adjusted odds ratio with 95% confidence level was used to assess the strength of the association. Variables with a p-value <0.05, were considered statistically significant determinants of refractive errors.

**Result:** In total, 881 adults participated in this study, with a response rate of 94.83%. The median age of the participants was 35 years (interquartile range: 21 years). Among the study participants, 18.84% (95% CI, 16.39% – 21.57%) had refractive errors. Age greater than 48 years (AOR=3.12, 95% CI:1.61 – 6.07) and 36 – 48 years (AOR=4.13, 95% CI:2.29 – 7.46), non-ocular comorbidities (AOR=3.21, 95% CI:2.04 – 5.06), history of intraocular surgery (AOR=2.05, 95% CI:1.11 – 3.79), and cataract (AOR=2.00, 95% CI:1.06 – 3.77) were significantly associated with refractive error.

**Conclusion:** There was a high prevalence of refractive error among adults in Gondar town. Older age, non-ocular comorbidities, a history of intraocular surgery, and cataracts were significantly associated with refractive error.

#### Biography

**Betelhem Yibekal** has completed her BSc and MSc degrees in Optometry at the University of Gondar in 2013 and 2017 respectively. She has also completed her MPH in epidemiology at the University of Gondar in 2023. She was a lecturer at University of Gondar department of optometry for about 10 years. She practices optometry in both clinical settings and community service activities. She has done more than 10 research articles and published in peer-reviewed journals. Now she is doing her PhD at Australian National University.