

Isra M. Hussein¹, Shahnaza Hamidullah², Myrna Lichter³,

¹Temerty Faculty of Medicine, University of Toronto, Toronto, Ontario, Canada

²Schulich School of Medicine and Dentistry, Western University, London, Ontario, Canada

³Department of Ophthalmology, St Michael's Hospital Health Centre, University of Toronto, Toronto, Ontario, Canada

Background

Late presentation of glaucoma can lead to irreversible vision loss, making early diagnosis a primary goal in the management of the disease^{1,2}. Therefore, identifying factors that contribute to late presentation of glaucoma can aid in the development of public health measures to help ease the burden of disease. Evidence suggests that socioeconomic status (SES) is an important predictor of late presentation of glaucoma, potentially contributing to more severe disease and poor prognosis^{3,4,5}.

Objectives

The primary objective of this study is to systematically assess the impact of socioeconomic status on the presenting severity of glaucoma.

Methods

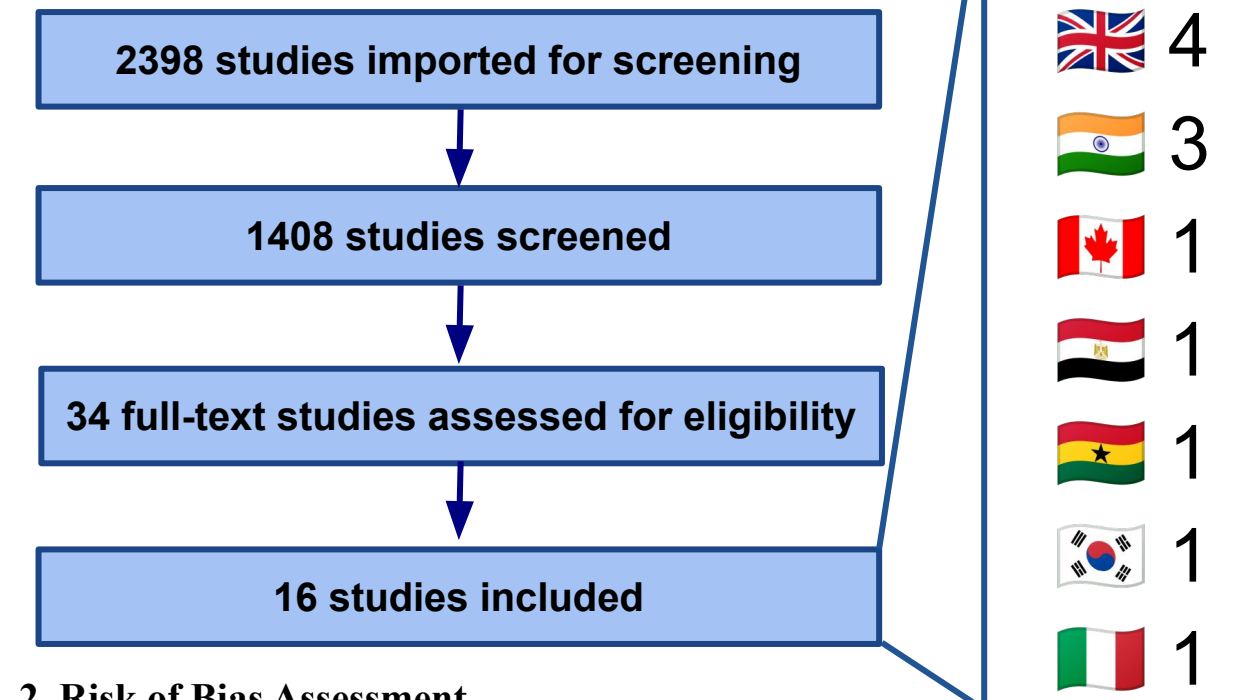
1. We searched PubMed, MEDLINE, and Embase for glaucoma studies published before November 10, 2021. Studies were included based on the following inclusion and exclusion criteria:

Inclusion Criteria	Exclusion Criteria
Adult patients ≥ 18 years of age	Pediatric patients ≤ 18 years of age,
Studies reporting on socioeconomic status and the presenting severity of glaucoma	Studies reporting on other ophthalmic conditions
Studies available in English language	Studies not reporting on socioeconomic status, new onset glaucoma, and/or severity of glaucoma
Randomized controlled trials, prospective and retrospective cohort studies, and case-control studies	Studies not available in English
	Editorials, opinion pieces, letters, textbook chapters, and new articles.

2. Risk of bias was assessed using the National Heart, Lung, and Blood Institute's (NHLBI) quality assessment tools according to the study design.

Results








1. Summary of Included Studies:





2. Risk of Bias Assessment

Study	Quality Rating
Abdull et al., 2015	Good
Adekoya et al., 2014	Fair
Ayub et al., 2021	Good
Buys et al., 2013	Good
Day et al., 2010	Good
Duke et al., 2013	Good
Henson et al., 2009	Good
Ng et al., 2009	Good
Eissa et al., 2016	Good
Giorgis et al., 2012	Fair
Odayappan et al. 2021	Good
Riva et al. 2018	Good
Sung et al. 2017	Good
Kyari et al., 2016	Fair
Fraser et al., 2001	Good
Gogate et al., 2011	Fair
Ntim-Amponsah et al. 2005	Fair

3. Summary of Findings:

SES Measure	Association with late presentation of glaucoma
Area-Based Indices*	 (Ng et al., 2010; Sukumar et al., 2009; Day 2010)
Income	 (Buys et al., 2013; Sung et al., 2017;; Daay 2010)  (Ayub et al., 2021)
Education	 (Abdull et al., 2015; Eissa et al., 2016; Fraser et al., 2001; Gogate et al., 2011; Fraser et al., ; et al., 2016; Odayappan et al., 2021)  (Duke et al., 2013)
Occupation	 (Abdull et al., 2015; Gogate et al. 2011; Ntim-Amponsah et al., 2005; Odayappan et al., 2021; Riva et al., 2018)  (Duke et al., 2013)

 Positive association  No association *Area-based indices included SIMD, ACORN.

Conclusions

Most studies showed that low SES correlates with more advanced glaucoma at first diagnosis, highlighting the need for strategies for earlier detection in individuals with low SES. Additional longitudinal prospective studies are needed to validate current findings and better characterize the effects of SES on the disease course of glaucoma.

References

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