

# Narrative Review on the Glaucoma Awareness in India among General Population in the Past Decade (2014–2025)

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## ABSTRACT

Glaucoma is a major cause of irreversible blindness worldwide, and India is expected to bear a substantial share of the disease burden. Despite advances in diagnostic and therapeutic approaches, delayed diagnosis remains common, largely due to poor public awareness and limited understanding of the disease. This narrative review examines evidence from Indian studies published over the last decade to evaluate glaucoma awareness levels, determinants of awareness, existing knowledge gaps, and public health implications. Available evidence indicates that glaucoma awareness remains low across the country, particularly in rural populations, with awareness ranging from 1.25% to 8.3%, while hospital-based and military populations demonstrate comparatively higher levels. Educational attainment consistently emerges as the strongest predictor of awareness and knowledge. Family history, acquaintance with glaucoma patients, and healthcare exposure contribute positively to awareness, whereas significant misconceptions persist regarding the asymptomatic nature of glaucoma and the irreversibility of vision loss. Mass media remains an underutilized source of information despite its potential for large-scale outreach. The findings highlight the need for comprehensive public health strategies that incorporate community education, opportunistic screening, patient-led awareness initiatives, and integration of glaucoma education into national blindness prevention programs. Improving glaucoma awareness, particularly in rural and underserved populations, is essential for facilitating early detection, timely treatment, and reducing avoidable blindness in India.

**Keywords:** *glaucoma, awareness, India*

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## INTRODUCTION

Glaucoma remains the leading cause of irreversible blindness worldwide, with India projected to host one of the largest affected populations. Despite advances in diagnostic technology and treatment, delayed presentation continues to be a major challenge. Awareness and knowledge about glaucoma are critical determinants of timely diagnosis and adherence to treatment. This review synthesizes evidence from Indian studies published over the past decade to evaluate trends in glaucoma awareness, determinants, and implications for public health.

### Awareness Levels Across India

In a rural Haryana survey of 4,927 participants, only 8.3% were aware of glaucoma and 1.9% had knowledge. Education was the strongest predictor of awareness.[1] Close acquaintance with glaucoma patients was the most common source of information.

A hospital-based study reported 27% awareness, significantly higher than rural surveys, reflecting the influence of urban/semi-urban populations accessing tertiary care. Education and socioeconomic class were key determinants.[2]

In two rural districts, awareness of glaucoma was alarmingly low at 1.25%. Education and district-level outreach (Khammam vs. Warangal) influenced awareness.[3]

Among 496-armed forces personnel, 22% were aware and 12% had knowledge. Frequent health camps and periodic medical examinations contributed to relatively higher awareness compared to rural civilians.[4]

In Odisha, only 4.2% had heard of glaucoma. Education and systemic comorbidities (e.g., diabetes) were significant predictors of knowledge.[5]

### Determinants of Awareness

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Education was consistently the strongest predictor of glaucoma awareness. In rural North India, literate participants were four times more likely to be aware and seven times more likely to be knowledgeable than illiterate participants.[1] In Central India, those educated above high school level had significantly higher awareness.[2] Eastern India data also confirmed education as a significant predictor.[5]

Awareness was higher among participants belonging to upper socioeconomic classes in Central India [2]. However, recent rural North Indian and Eastern Indian studies found no significant correlation between socioeconomic status and awareness, suggesting education outweighs income as a determinant.[1], [5]

Several studies found no significant association between gender or age and awareness.[1], [2] Conversely, Marmamula et al. (2022) reported men and younger participants more likely to be aware of cataract, though glaucoma awareness remained poor.[3]

Close acquaintance with glaucoma patients was repeatedly identified as the most common source of awareness in North India [1] and Central India.[2] Eastern India data also showed family history as a significant predictor of knowledge.[5]

Mass media (TV, newspapers) was an important but underutilized source. In North India, 21% cited mass media as their source;[1] in Central India, 29% did so.[2] In Telangana, 48% of the few aware participants reported media as their source.[3]

#### Knowledge Gaps

Very few participants understood the **asymptomatic course** of glaucoma, with reported figures ranging from 0.7% to 18%.[1], [2], [5] Awareness of **irreversible vision loss** due to glaucoma was low, varying between 4% and 24% across different regions.[1], [5] **Misconceptions** were common, including beliefs that glaucoma is caused by cataract or that vision loss can be reversed.[3], [5] Even among **diagnosed patients**, knowledge about disease type, severity, and progression was poor, with many unable to identify glaucoma as irreversible or asymptomatic.[6]

#### Implications for Public Health

Persistent low awareness of glaucoma in India, despite more than a decade of studies, highlights systemic gaps in health education.[1], [3], [5] Mass media campaigns remain underutilized, even though evidence from the UK demonstrates their effectiveness in improving glaucoma awareness.[1], [2] Opportunistic screening during routine health visits has been proposed as a feasible strategy, particularly in tertiary care and military populations.[2], [4] Patient-centered dissemination, such as using glaucoma patients as community educators, could leverage word-of-mouth networks, a source repeatedly identified in Indian studies.[1], [2], [5] Finally, integration of awareness campaigns within national programs, such as the National Programme for Control of Blindness and

Visual Impairment (NPCBVI), has been recommended to strengthen outreach and sustainability.[3], [5]

#### FUTURE DIRECTIONS

Nationwide standardized surveys are needed to track awareness trends and evaluate the effectiveness of interventions.[5] Tailored interventions for rural populations, where awareness has consistently been lowest, remain critical to reducing disparities in glaucoma education.[1], [3], [5] Strengthening primary eye care services with education modules could integrate glaucoma awareness into routine care and enhance early detection.[2], [4] Finally, research on behavioural outcomes—specifically linking awareness to screening uptake and treatment adherence—remains a major gap in Indian literature and requires urgent attention.[5], [6]

#### CONCLUSION

Over the past ten years, awareness about glaucoma in India has stayed low and uneven, with rural areas showing the weakest levels. Education is the most important factor linked to awareness, yet many misconceptions still exist. While some progress has been seen in hospitals and among military groups, the overall situation makes it clear that stronger, coordinated efforts are needed to raise awareness and prevent blindness from glaucoma.

#### REFERENCES

1. Rewri P, Kakkar M. Awareness, knowledge, and practice: A survey of glaucoma in north Indian rural residents. *Indian J Ophthalmol.* 2014;62(4):482–486. doi:10.4103/0301-4738.132105
2. Maharana PK, Rai VG, Pattebahadur R, Singhi S, Chauhan AK. Awareness and knowledge of glaucoma in central India: A hospital-based study. *Asia Pac J Ophthalmol.* 2017;6(3):243–249. doi:10.22608/APO.2015166
3. Marmamula S, Boopalan D, Khanna RC, Hassija N, Keeffe J. Awareness of cataract and glaucoma in two rural districts of Telangana, India. *Indian J Ophthalmol.* 2022;70(3):982–987. doi:10.4103/ijo.IJO\_977\_21
4. Singh AK, Pantola P, Khan MA, Tomar A, Dhabale V. Glaucoma awareness among Indian military personnel: A tri-service study. *J R Army Med Corps.* 2018;164(2):112–115. doi:10.1136/jramc-2017-000894
5. Taywade M, Nayak B, Pal D, et al. Knowledge, attitude, and practices related to glaucoma in a rural population of Eastern India: A cross-sectional study. *J Curr Glaucoma Pract.* 2025;19(3):119–124. doi:10.5005/jp-journals-10078-1476
6. Sood D, Sood S, Sood I, Kumar D, Sood R, Sood NN. Glaucoma awareness amongst glaucoma patients seeking a second opinion. *Int Ophthalmol.* 2017;37(6):1219–1229. doi:10.1007/s10792-017-0604-5