

AWARENESS AND KNOWLEDGE OF GLAUCOMA AMONG THE PATIENTS OF A RURAL BASED TERTIARY CARE HOSPITALSujit Bahekar¹, Pradnya Bhalerao², Smita A. Pawar³

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Abstract

Purpose: Glaucoma is the second leading cause of blindness after cataract and the leading cause of irreversible blindness in the world. Diagnosis is often made at the late stage of the condition when much damage to the eye has already occurred. Therefore, there is urgent need to address this condition to prevent blindness among general population. **Methods:** hospital based cross-sectional study was conducted in the outpatient department of Ophthalmology in a tertiary care centre of central India. Institutional Ethical Committee approval was taken. 673 patients attending Ophthalmology OPD were included in the study as per the sample size. Written consent was obtained. Socio demographic information was recorded and Awareness and Knowledge questions related to Glaucoma were asked. Statistical analysis was done using SPSS software. **Results:** people in age group of 40-60 years were more aware compared to other groups with Chi square test ($X^2=10.33$). The results were statistically significant with p value (0.0057). Awareness levels among male and female were not statistically significant with $X^2=1.25$ and p value (0.26). The major sources of awareness in this study were magazines, television (TV), and other media followed by information from doctors. Awareness level about symptoms, treatment was very low compared to other similar studies. **Conclusion:** Effective awareness measures and use of mass media for spreading the awareness irrespective of their sex, literacy and economic background, only can prevent the blinding consequences of the disease by people seeking early medical attention.

INTRODUCTION

Glaucoma is the second leading cause of blindness after cataract and the leading cause of irreversible blindness in the world. Diagnosis is often made at the late stage of the condition when much damage to the eye has already occurred.^[1] Glaucoma progresses slowly with few, if any, noticeable symptoms in the early stage. Raising the public level of awareness through public education for periodic eye check-up is one of the effective measures for its early detection and management. The magnitude of disability associated with the disease warrants to have an awareness programme in place as the disease can be controlled if diagnosed in its early stages. 12 million people are affected accounting for 12.8% of the countries' blindness.^[2] Population based studies report a

prevalence between 2 to 13 %. As blindness from glaucoma is irreversible, early detection is the key to improve the prevention of blindness from glaucoma. The success of control programs requires the participation of the general population in large numbers, which is not possible without some degree of awareness about the disease and its blinding consequences.^[3] Detection of glaucoma at an early stage is possible through camp screening and by encouraging the general population to seek regular ophthalmic care.^[5] The success of such programs requires the participation of the general population in large numbers, which is not possible without some degree of awareness about the disease and its blinding consequences. Therefore, attempts to reduce the burden of disease will be unfruitful if addressed without improving the awareness levels of the general population.^[6]

The objective of the current study is to evaluate the awareness of glaucoma and various factors influencing it among patients attending the ophthalmic outpatient department at a tertiary care setting in central India via a hospital-based survey.

MATERIALS AND METHODS

Hospital-based cross-sectional study was conducted in the outpatient department of Ophthalmology in a Tertiary Care Centre after Institutional Ethical Committee approval. 673 patients attending Ophthalmology OPD were included in the study as In Our study population out of 673 participant, 34 participants were “aware” of glaucoma. The overall awareness was found to be 5.05%

The mean age of awareness was found to be 40-60yrs. Out of 34 aware participant 20 (58.82%) were from age between 40-60yrs, 8 (23.52%) were from age group 18-40yrs and 6 (17.64%) from age above 60yrs (Figure- 1). 8 (3.64%) out of total 220 participants in the age group of 18-40 years, 20 (7.78%) out of 257 in age group of 40-60 years and 6 (3.06%) out of 196 total in age group above 60 years were found to have awareness. More people in age group of 40-60 years were aware with $X^2=10.33$ and p value(0.0057) compared to other groups.

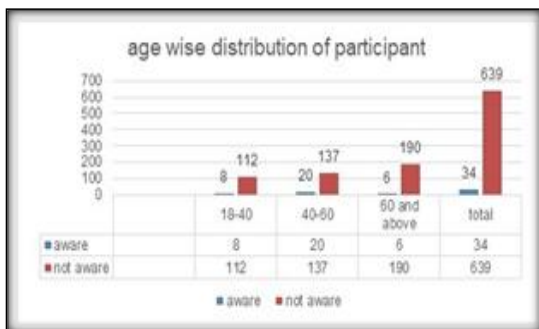


Figure 1: Age distribution of Glaucoma Aware participants

Aware male were 21 (5.98%) out of 351 total as against 13 (4.04%) out of total 322 female. However, this was not statistically significant with $X^2=1.25$ and p value (0.26).

Out of 34 aware participant 23(67.64%) belonged to upper middle class and 11(32.35%) were from lower middle class. Out of 34 aware participant 5

per the sample size. Written consent was obtained and socio demographic information was recorded Awareness and Knowledge questions related to glaucoma were asked.

Subjects recruited for the study and having heard of word glaucoma were defined as “aware”, and further questions relevant to the eye disease understandings were asked and they were defined as “knowledgeable”. Data was tabulated and analysed using SPSS software.

RESULTS

(14.70%) were having glaucoma, 7(20.58%) were relatives of glaucoma patient and 22(64.70%) were patients of other eye disease. 67.6% were aware of positive family history for Glaucoma (Figure 2).

Majority of aware participant told TV, newspaper as their source of awareness followed by Doctor (Figure 3). Out of 34 aware participant 25(75.8%) knew that glaucoma and cataract are not same and 9(24.2%) were not aware of any difference between them. 20(58.82%) participants knew that glaucoma results from pressure damage to the nerve whereas 3(8.8%) thought it results from mature cataract and 11(32.4%) didn't know about it. 23(67.6%) participants were aware that family members are at higher risk, 10(29.4%) didn't know about it and 1(2.9%) thought that family members are not at high risk. Out of 34 aware participant 24(70.6%) knew that glaucoma is associated with high intraocular pressure. Rests were not aware of it. Aware participant thought Hypertension, Diabetes and Age above 40yrs are the major risk factor for glaucoma. (61.8%) aware participant thought Diminished or loss of vision and (55.9%) thought pain in eye as common symptom of Glaucoma (Figure 4).

50% of the aware participant knew raised intraocular pressure is a sign of glaucoma (Figure 5). 24(70.6%) participants knew that glaucoma is treatable and 10(29.4%) didn't know if treatment is available for this condition. 55.9% knew medical modalities as treatment of glaucoma and 44.1% thought surgery as treatment modality. 16(47 %) aware participants knew lifelong treatment is required for glaucoma 15(44.1%) didn't know about it and 3 (8.8%) thought treatment is required till IOP is controlled. (Table-1).

Table 1: Participant's response about treatment options for Glaucoma

Treatment available	Duration of treatment	Awareness about treatment modality
Yes 24 (70.6%)	Lifelong 16 (47%) Don't know 15 (44.1%) Till IOP is controlled 3(8.8%)	Medical 55.9%, Surgical 44.1%

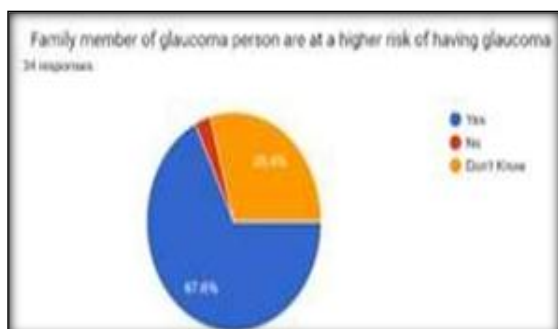


Figure 2: Participant's response about family risk of Having Glaucoma

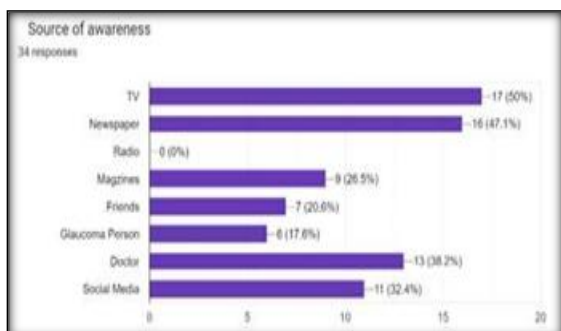


Figure 3: Source of awareness for Glaucoma

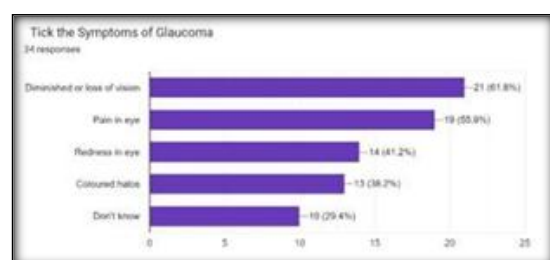


Figure 4: Participant's response about common symptoms of Glaucoma

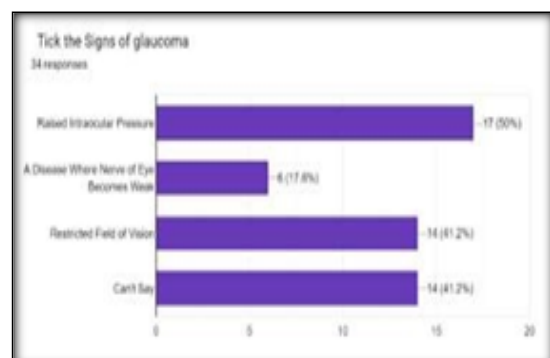


Figure 5: Participant's response about common signs of Glaucoma.

DISCUSSION

The awareness of glaucoma among study participants in our study was found to be 5.05% (34 out of 673) and out of these 34 aware participants only 24(3.56%) were having some knowledge about the disease. Sathyamangalam et al (2009) reported an awareness level of 13.5% among the

participants in their study with another 8.7% of participants having some knowledge of glaucoma.^[7] Rewri and Kakkar (2014) reported an awareness level of 8.3% among rural population in North India.^[8]

Low level of awareness in our study compared to other study may be due to the fact that study was conducted in population where maximum number of patients are from rural area. Awareness level was more in age group of 40-60 in our study 20(58.82%) out of 34 participants. Female had low level of awareness 13(38.24%) compared to male in our study. Awareness was more in participant with Higher Educational Status 29(85.29%) and upper middle class 23(67.64%).

In a study conducted by Dandona et al (2001) 10.2% of the enrolled participants were aware of glaucoma.^[9] Another study conducted by Krishnaiah et al (2005) reported awareness of glaucoma in only a small percentage of the participants (0.32%).^[10] The major sources of awareness in this study were magazines, television (TV), and other media, followed by information obtained from a relative and acquaintance with a person suffering from disease and an ophthalmologist in 2 (11.1%) subjects. In our study also major source of awareness were mass media like T V, newspaper, magazine and Social media platform but unfortunately its potential has not been tapped fully to spread awareness of this disease in a way it has been used for other life threatening diseases.

Only 24(3.56%) out of 673 participants were having some knowledge of glaucoma.

CONCLUSION

Awareness and knowledge about glaucoma was very low among the rural population of western Maharashtra. We have found that younger participant, women, Subjects with lower level of education and lower socioeconomic statuses were less aware of glaucoma. The study finding stressed the importance to spread awareness in general population with effective use of mass media as overall awareness is very low. Awareness programmes should be directed towards spreading the awareness more in rural areas, economically backward and illiterate population in a manner understood by them. Effective awareness measures only will prevent the blinding consequences of the disease by people seeking early medical attention.

REFERENCES

1. Nkum, G., Lartey, S., Frimpong, C., Micah, F., & Nkum, B. (2015). Awareness and knowledge of glaucoma among adult patients at the eye clinic of a teaching hospital. Ghana medical journal, 49(3), 195-199.
2. Panday M, George R, Vijaya L. Epidemiology of Glaucoma In South India. Kerala J Ophthalmol.9(18).

- <https://pdfs.semanticscholar.org/0333/8c4f1e42287947b8ed4c3f1a8b0b2ce63ce7.pdf>
3. Prabhu, M., Patil, S. H., & Kangokar, P. C. R. (2013). Glaucoma awareness and knowledge in a tertiary care hospital in a tier-2 city in South India. *Journal of the Scientific Society*, 40(1), 3.
 4. Glaucoma is the third leading cause of blindness in India, 12 million people are affected | SP News Agency. <http://spnewsagency.com/glaucoma-is-the-third-leading-cause-ofblindness-in-india-12-million-people-are-affected/>
 5. Garber, N. (1990). Health promotion and disease prevention in ophthalmology. *Journal of ophthalmic nursing & technology*, 9(5), 186-192.
 6. Javitt, J. C. (1995). Preventing blindness in americans: the need for eyehealth education. *Survey of ophthalmology*, 40(1), 41-44.
 7. Sathyamangalam, R. V., Paul, P. G., George, R., Baskaran, M., Hemamalini, A., Madan, R. V., ... & Lingam, V. (2009). Determinants of glaucoma awareness and knowledge in urban Chennai. *Indian journal of ophthalmology*, 57(5), 355-360.
 8. Rewri, P., & Kakkar, M. (2014). Awareness, knowledge, and practice: a survey of glaucoma in north Indian rural residents. *Indian journal of ophthalmology*, 62(4), 482.
 9. Dandona, R., Dandona, L., John, R. K., McCarty, C. A., & Rao, G. N. (2001). Awareness of eye diseases in an urban population in southern India. *Bulletin of the World Health Organization*, 79(2), 96-102.
 10. Krishnaiah, S., Kovai, V., Srinivas, M., Shamanna, B. R., Rao, G. N., & Thomas, R. (2005). Awareness of glaucoma in the rural population of Southern India. *Indian journal of ophthalmology*, 53(3), 205-208.