

# A Study of Awareness of Glaucoma among Ophthalmology out patients in a 2-Tier City, Tumkur

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## ABSTRACT

**Aim:** A pilot study for evaluation of awareness and knowledge of potentially blinding ocular disease Glaucoma among people attending OPD of a medical college hospital in Tumkur district.

**Materials and Methods:** A hospital-based study of 300 patients attending Ophthalmology as outpatients to Siddhartha Medical College, Tumkur, participants were given a questionnaire to probe into their knowhow levels on order to evaluate their awareness of Glaucoma. Questionnaire was properly explained to the subjects in their understandable language before assessing their awareness. Subjects less than 20 years or more than 75 years and the ones suffering from the disease were not included. Subjects "who had heard of a disease called Glaucoma" prior to their recruitment into the study were labelled as 'aware'. The participants who has some understanding of Glaucoma were categorized as "knowledgeable"

**Results:** Out of 300 subjects recruited for the study, only 5 subjects were aware of a disease called Glaucoma. Determinants of awareness about glaucoma were educational status & known (history of glaucoma) in the family.

**Conclusion:** Awareness and knowledge of glaucoma in patients attending a medical college hospital was abysmally low.

**Key words:** Awareness, Knowledge, Glaucoma, Medical college hospital, Hospital based study, 2-tier city

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significantly increasing the risk of glaucoma blindness.<sup>[10]</sup>

Multiple socio economic factors like, Education level, family history, the access to entertainment, and exposure to public health education information by government or non-governmental organizations (NGO), influence the levels of awareness.

## INTRODUCTION

Blindness is a serious concern all over the world, especially in a country like India. It has permanent effects on socio-economical status of a person. At the national level, consumes a major share of the government's spending toward health.<sup>(1)</sup> This is more so in a developing country like India. Being the second leading cause of visual loss in the world, the prevalence of glaucoma worldwide is 67 million and 6.6 million people are blinded due to glaucoma. Approximately 11 million Indians are affected by Glaucoma.<sup>(2)</sup> Blindness due to glaucoma is irreversible but preventable. In India, glaucoma is the third most common cause of blindness with a prevalence of 5.8% among the blind, next to cataract and uncorrected refractive errors.<sup>(3)</sup> Nearly half of the blind people are unaware of their condition.<sup>(4)</sup>

As demonstrated by various studies 50 - 90% of the glaucoma cases remain undiagnosed<sup>[5]</sup> and a majority of case are diagnosed at an advanced stage of the disease.<sup>[6,7]</sup> the probable reason for the late presentation of Glaucoma is the lack of awareness about this disease,<sup>[8,9]</sup> this factor

## MATERIALS AND METHODS

It was a medical college hospital based study. A simple, structured questionnaire was designed to capture information about demographics including age, educational status, household income, access to entertainment, occupation. The set of queries were designed to be small & simple, easily understandable, and contained questions, both open-ended and closed. It was conducted on 300 random patients who visited the OPD of Department of Ophthalmology of Sree Siddhartha Medical College, Tumkur.

The questionnaire was envisaged in English and then translated into the kannada, the main local language. This translated version was given to patients so that they could identify and associate to locally used terms and also for repeatability & consistency.

In order to reflect the population most at risk, the respondents were chosen mostly from among those between 30 and 70 years old, after obtaining oral consent. Questions were asked to assess knowledge required information and understanding

of the subject gained through some source or learning, unlike the questions assessing awareness, which merely required information, without the need of understanding.

Diagnosed cases of glaucoma were excluded from participating, as we believed they might have acquired information about glaucoma after diagnosis, which would affect the true assessment of the general population. When interested, the accompanying, family members or relatives were allowed to participate.

The opening questions in the questionnaire were brief & simple, in patient's understandable language— "Do you know about increased pressure in the eye"? This question was then explained in a number of ways like "Have you heard about Glaucoma" or "Do you know anything about Glaucoma or increased eye pressure"?

Only if the response to this question was yes, i.e., the participants had heard about Glaucoma, they were allowed to take up the rest of the questions evaluating awareness and knowledge about glaucoma. However, this alone was not considered as awareness, because merely being aware of the term did not ensure awareness about the disease. However, not having heard the term itself meant lack of awareness.

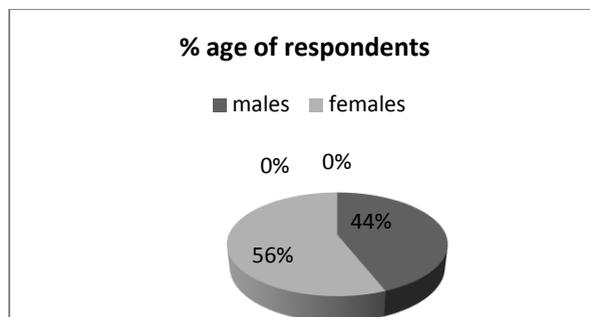
## RESULTS

The sample size of 300 subjects was comprised of 132 males and 168 females. The age range of the study sample was from 20 to 75 years. There were more females, than males, the difference being statistically significant. 285 of the 300 participants had never heard of glaucoma and 15 of the 300 respondents were found to have some knowledge about glaucoma out of with 5 where 'aware' and rest 10 respondents had just 'heard' of glaucoma.

It was apparent that those subjects who were 'aware' had a family member suffering from blindness, while the other 2 aware respondents had different sources of information like the mass media television or radio. 297/300 had no family history of blindness.

Maximum Awareness of glaucoma was found in 51 – 60 years, while across all the other age-groups there was a statistically significant reduced level of awareness Gender wise, males had a greater level of awareness than the females, statistically significant finding

Gender	No. Respondents	% Age of Awareness
Males	132 (44%)	1.333%
Females	168 (56%)	0.333%



The degree of awareness was high among respondents with better literacy, also statistically significant finding.

3 participants who were aware, revealed that family members or friends were the source of information.

Literacy	No. of respondents	% age of awareness
Illiterate	94 (31.33%)	0%
< 10 <sup>th</sup> grade	111 (37%)	0.33%
Undergraduate	80 (26.66%)	0.33%
>graduate	15 (5%)	1%

12 of the participants said that mass media was the source of information, out of which only 2 were aware of the genetic predisposition and consequences of the disease.

Age Group	Number of Respondents	% Age of Awareness
< 40 Years	59 (19.6%)	0%
41-50 Years	86 (28.6%)	0.33%
51-60 Years	88 (29.33%)	1%
61-75 Years	67 (22.33%)	0.33%

## DISCUSSION

Glaucoma is a non-symptomatic disease. Early diagnosis, prompt and effective treatment, if initiated can halt the progression of this disease. A cost effective way of reducing Ocular morbidity is by creating Awareness of glaucoma.

According to NPCB blindness caused due to glaucoma is 5.80%. This Questionnaire based study evaluates the awareness and knowledge about glaucoma from a cohort of patients attending a medical college hospital of Tumkur district in Karnataka. The purpose of this survey was to assess and analyze the understanding the knowledge of glaucoma among the cohort. It was to assess whether the participants were aware of this blinding chronic disease with a subtle clinical course, and the importance of screening among the general population.

The data must be considered seriously by public health authorities because we found that despite the importance given to glaucoma in both private & public eye care facilities, its effect on

visual disability and blindness, the level of awareness and knowledge about this condition was quite low. Indeed, we found the patients to be uninformed or even misinformed on glaucoma.

In our study, 'awareness' was meant to convey about having some idea of the disease or having specific or exact association with Glaucoma. This survey shows that only 15 participants acknowledged hearing about glaucoma. Among them only 5 respondents were actually 'aware', while the rest had very shallow knowledge. The rest 10 respondents who could not correlate glaucoma with its association could have confused it for other eye conditions due to the similar terminology. Most probably, this is the reason for familiarity with the disease called Glaucoma.

In this study, increased awareness and knowledge was directly proportional to the level of education and among close acquaintances of glaucoma patients, probably due to the morbidity associated. Creating awareness that Glaucoma is largely asymptomatic and therefore the diagnosis is delayed and that the Blindness due to Glaucoma is irreversible, could affect the Attitude & Concern about Glaucoma.

Although this survey was conducted in a cohort of patients attending medical college outpatient department in Tumkur district, it correlates well with the poor awareness in Indian general population evidenced by Population-based studies.<sup>[11-14]</sup> However, a direct comparison with other studies is difficult. Although some studies define awareness as "having heard of Glaucoma", we have used a set of questions to define awareness. The content and composition of the questionnaire have also differed, and in this study we have avoided more medical and technical terms.

## CONCLUSION

This pilot study done in the hospital setting clearly reveals extremely poor awareness. The limitation of this study is that, it samples people attending hospital voluntarily. A community based RCT would be required to give the actual picture of awareness. The sample size must be larger for actual awareness assessment. Our findings show serious deficiencies in the public awareness about glaucoma in patients attending our hospital in Tumkur. Creating community awareness by various programs about glaucoma can give a significant boost for promoting preventive ophthalmic care. This could result in effective screening, early diagnosis, prompt treatment thereby reducing visual morbidity and irreversible blindness, Providing detailed disease related information to patients, like symptoms, prevention, management etc, can also improve awareness.

Strategies need to be devised to increase awareness on a war footing to bring in an attitude

change regarding Glaucoma. This is the only way to increase the effectivity of all glaucoma programs. Furthermore, there is a need to identify interventions that reinforce people's attitude above the perceived level of awareness about glaucoma to make this and to devise strategies that can influence behaviour to the risk of blindness from glaucoma.

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