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## Original Research Article

# Knowledge and awareness of glaucoma among nursing personnel in a rural tertiary care hospital

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## ABSTRACT

**Purpose:** To assess the knowledge and awareness of glaucoma among nursing personnel in a rural tertiary care hospital.

**Materials and Methods:** Questionnaire based study conducted on 106 nursing personnel. A self designed questionnaire combined of 20 closed ended dichotomous and open ended questions were administered. Subjects 'having heard of glaucoma' even before being recruited for the study were defined as aware and subjects who were having some understanding of the eye disease were defined as knowledgeable.

**Results:** A total of 106 subjects participated in the study. The proportion of awareness was 96.22% (102). 'Good knowledge' was demonstrated in 26.41% (28) of the participants. 44.3% (47) participants were classified under 'fair knowledge' and the remaining 29.24% (31) were deemed with 'poor knowledge'.

**Conclusion:** Even though the level of awareness of glaucoma among the nursing personnel is good, their knowledge base is still inadequate.

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## 1. Introduction

Glaucoma is a chronic, progressive optic neuropathy caused by a group of ocular conditions, which leads to damage of the optic nerve with loss of visual function, most commonly due to raised intraocular pressure.<sup>1,2</sup> The leading cause for irreversible blindness worldwide is Glaucoma, the silent thief of sight.<sup>3</sup> Glaucoma is estimated to affect over 11 million Indians.<sup>4</sup> By 2020, India had been projected to be the second largest home of glaucoma.<sup>5,6</sup> The inadequate awareness surrounding glaucoma is one reason why it is late diagnosed, increasing the risk of blindness.

It is possible to detect glaucoma at an early stage through camp screening and by encouraging the general public to seek regular ophthalmic care. In order for these programs to be successful, a large number of people must participate,

which is impossible without some awareness of the disease and its blinding consequences. As such, attempts at reducing the burden of disease will not be effective if they do not address improving the level of awareness of the general population and hospital personnel beyond merely doctors. Importance of early diagnosis of Glaucoma cannot be underestimated, for its effective treatment and prevention of blindness.

## 2. Aim

This study was conducted to evaluate the awareness and knowledge of Glaucoma among nursing personnel at a rural tertiary care hospital.

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### 3. Materials and Methods

Study was approved from the Institutional Ethical Committee and written informed consent was obtained from the subjects to ensure confidentiality. A self-designed questionnaire combined of 20 closed ended dichotomous and open ended questions were administered.

Subjects "having heard of glaucoma" even before being recruited for the study were defined as aware and subjects who were having some understanding of the eye disease were defined as knowledgeable. Knowledge was graded as good, fair, and poor based on the subjects' collective responses to questions on glaucoma.

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1. Have you heard of Glaucoma?
  2. If yes, what is the source of your information?
  3. Is Glaucoma the disease of the lens, optic nerve, cornea?
  4. Do you know the normal pressure of the eye? If yes, what is the range?
  5. Is glaucoma the same as cataract?
  6. Can it affect all age groups?
  7. Does smoking aid in glaucoma?
  8. Does Glaucoma occur in childhood?
  9. Is diabetes a risk factor for Glaucoma?
  10. Can glaucoma occur in both eyes?
  11. Does it run in families?
  12. Does gender affect glaucoma?
  13. Can exercise cut the risk of glaucoma?
  14. Is the damage which has occurred irreversible?
  15. Is constant change of spectacles a concerning symptom of glaucoma?
  16. Does glaucoma make your eyes sensitive to light?
  17. Is it a treatable condition?
  18. Does glaucoma have an asymptomatic course?
  19. Is there surgical treatment for glaucoma?
  20. Can we use laser to treat glaucoma?
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### 4. Results

Each question was allotted one mark. 'Knowledge' was classified as Good ( $\geq 16/20$ ), Fair ( $\geq 11/20$ ) and Poor ( $\leq 10$ ) based on total marks. 'Awareness' was based on participants having 'heard' of glaucoma.

A total of 106 subjects participated in the study. The proportion of awareness was 96.22% (102). 'Good knowledge' was demonstrated in 26.41% (28) of the participants. 44.3% (47) participants were classified under 'fair knowledge' and the remaining 29.24% (31) were deemed with 'poor knowledge'.

### 5. Discussion

The low awareness of glaucoma illustrates the need for public education about this disease. It is vital to reduce the morbidity associated with most chronic diseases by

providing health education and counseling at an early stage, especially when the disease is asymptomatic. We cannot understate the importance of including non-ophthalmic health care workers in the fight against glaucoma-related blindness. Often, non-ophthalmic health care workers are the first point of contact for patients. Hence, for these health care personnel to effectively assess or educate patients regarding glaucoma requires a good understanding of the disease process.

We found that in our study there was good awareness in 102 (96.22%) of the subjects. Similarly, in a study by Padmajothi M.S et al, 95% were aware of Glaucoma, the awareness of causes and treatment of Glaucoma were high only among the clinicians (88%) & very poor (28%) among nursing & administrative staff.<sup>7</sup> A study from Melbourne, Australia, reported awareness of glaucoma in 76% of the general population,<sup>8</sup> while a population-based study from Nepal reported a very low level of glaucoma awareness.<sup>9</sup>

The most striking result from our study is that nearly 96% of the subjects were aware of the disease. But the drawback being, awareness of the disease was not sufficient for nursing personnel to be able to effectively suspect a glaucoma diagnosis.

In our study, 'Good knowledge' was demonstrated in 26.41% (28) of the participants. 44.3% (47) participants were classified under 'fair knowledge' and the remaining 29.24% (31) were deemed with 'poor knowledge'.

Likewise, OO Komolafe et al concluded in their study that among a total of 240 participants, 148 (68.6%) participants had heard of glaucoma which comprised all participants from the clinical directorate and 28 participants from the administrative directorate.<sup>10</sup> In our study, while the study subjects had high levels of awareness, only a quarter of them had good knowledge of glaucoma. This low level of knowledge, specifically among the health care personnel, highlights the importance of education for enhancing overall knowledge of glaucoma to be able to aid in rapid diagnosis of the disease

K F Monsudi et al conducted a study where 114 (42.5%) of respondents were nurses, and 204 (76.1%) of the hospital workers had heard about glaucoma.<sup>11</sup>

### 6. Conclusion

Even though the level of awareness of glaucoma among the nursing personnel is good, their knowledge base is still inadequate. Due to the limited reach of the health care system in India, it is important that each health provider is educated on Glaucoma so as to reach a larger segment of the population that has no access to comprehensive eye care. Continual professional development programmes should be implemented in order to improve the knowledge of nursing personnel.

## 7. Conflicts of Interest

The authors declare that there are no conflicts of interest regarding the publication of this paper.

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