

Abstract

Cataracts are a significant cause of decreased visual acuity in developing countries with the only treatment being surgery. In many remote parts of the developing world, people remain blind from cataracts, due to a lack of access to quality eye care at an affordable cost. My work aimed to scientifically determine common themes among the barriers to cataract care in south India. A series of basic demographic questions were asked and a brief questionnaire was given that examined various potential patient barriers regarding cataract surgery. These answers were recorded and the patient responses were later analyzed. Potential subjects were those who sought care at Uma Eye Clinic/Unite for Sight outreaches. Patients who were diagnosed as having a cataract(s) by Uma Eye Clinic's eye doctors were eligible for this study.

Introduction and Background

- Blindness due to cataract is an enormous problem in India not only in terms of human morbidity but also in terms of economic loss and social burden..
- Studies have shown that there are over 12 million blind people in India, and 80.1% of these are blind due to cataracts.¹
- Cataracts are a reversible cause of blindness; however in many regions of rural India care is difficult to obtain.



Figure 1: Tamil Nadu lies in the southernmost part of the Indian Peninsula.

Purpose: The purpose of this study is to obtain a deeper understanding of the barriers a population faces in order to obtain medical care for cataracts. By understanding these barriers the results of this study may help improve future outreaches for cataract service by various public health organizations.

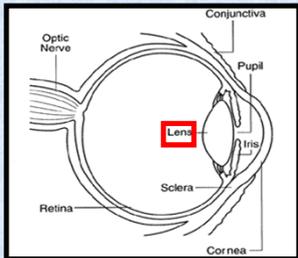


Figure 2: A cataract is a clouding of the lens of the eye.

Materials and Methods

- The protocol was reviewed and approved by the Health Sciences Institutional Review Board of the University at Buffalo.
- Location of the Study:** outreach camps set up by Uma Eye Clinic in South India within the state of Tamil Nadu. These camps were sponsored by Unite for Sight.
- Subjects:** After initial evaluation by eye care professionals, those patients with cataracts who would benefit from surgery were then eligible to participate in this study, 150 patients were enrolled.
- Protocol:** With patient consent, subjects were asked a series of basic demographic questions and asked to provide answers to a "barriers to care questionnaire" administered verbally (either by live interpreter or auto recording) in the Tamil language.
- Data Analysis:** Data were entered into an organized, searchable database using Microsoft Excel.

Materials and Methods

Patient Barriers Questionnaire (Administered Verbally)

- How long ago did your vision get bad and begin to interfere with your daily activities?
 - Less than a year ago
 - 1-2 years ago
 - 3-4 years ago
 - more than 5 years
- Before you came today, did you know that something could be done to restore your sight?
 - Yes
 - No
- Did you try anything to restore your sight?
 - Yes
 - No
- Do you know anyone who has had cataracts?
 - Yes
 - No
- Do you know anyone who has had cataract surgery?
 - Yes
 - No
- Will you have cataract surgery?
 - Yes
 - No

If no, why?

 - Fear
 - Time
 - Transportation
 - Cost
 - Other
- Will you need to ask permission to receive cataract surgery?
 - Yes
 - No
- If you could talk to someone who had cataract surgery, would you be more comfortable with receiving it?
 - Yes
 - No
- Do you have family obligations that prevent you from taking time off for your surgery?
 - Yes
 - No
- Will your family want you to have cataract surgery to restore your sight?
 - Yes
 - No
- Are you able to obtain transportation to receive cataract surgery?
 - Yes
 - No
- Can you afford cataract surgery?
 - Yes
 - No
- After cataract surgery, patients need to use eye medication. Are you able to afford eye medication?
 - Yes
 - No
- Are you planning to have cataract surgery that is sponsored by Unite for Sight so that it is free of charge to you?
 - Yes
 - No
- If surgery were not free of charge to you, would you be willing to pay for cataract surgery?
 - Yes
 - No

Results and Conclusion

Data were tabulated for answers to each question. During administration of the questionnaire, it was noted that subjects had difficulty answering several questions, likely secondary to cultural barriers. Therefore, questions 12, 13, 14, and 15 were not included in the analysis:

Demographics of study population

	Male	Female
Study Population	45	105
Literacy (Able to read)	28/45 (62%)	23/105 (24%)
Employment outside of the home	21 (47%)	20 (19%)
Education (at least one year)	37/45 (82%)	40/105 (38%)

Results and Conclusion

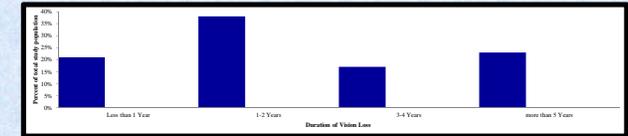


Figure 4(Above): Duration of vision loss compared to percent of total population

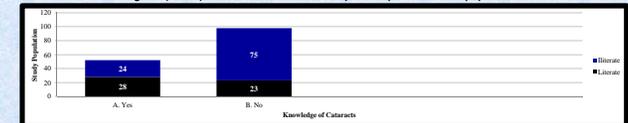


Figure 5(Above): In response to question 4 regarding knowledge of cataracts 98 people answered "No", 80 of them were women. 60 out of the 80 women who answered "No" are illiterate.

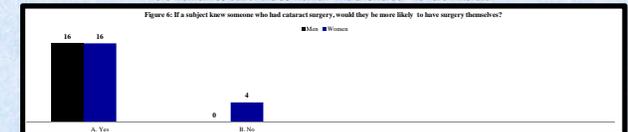


Figure 6: My results showed that subjects were more likely to have cataract surgery if they knew someone who has had cataract surgery in the past.

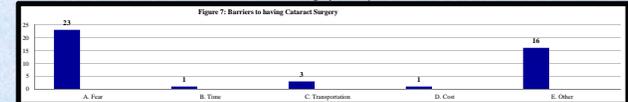


Figure 7: Fear proved to be the number one barrier to cataract surgery. Of those who answered "Other", reasons include family obligations and religious beliefs.

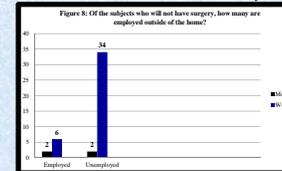


Figure 8: Of those 44 subjects who would not have cataract surgery, 82% were not employed outside of the home, the majority of those subjects being women.

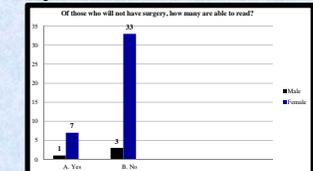


Figure 9: Of those 44 subjects who would not have cataract surgery 82% were unable to read, with 92% of those being women

- The anticipated benefits of this study are to society and to the knowledge development of public health in developing countries
 - A better perspective as to the various barriers to patient care for cataract surgery in a developing nation.
 - Assist various organizations like Unite for Sight to more efficiently treat a wider range of patients by utilizing the data obtained to develop an improved approach to cataract treatment.
- Data showed that the majority of the subjects who were not willing to have cataract surgery were illiterate, so written education regarding cataracts may not be a reliable approach.
- Subjects who knew someone that had undergone cataract surgery in the past, were more likely to agree to have cataract surgery.
- In the future, I would like to solely utilize a human translator, as many patients found it difficult to understand the questions with the audio playback.

References

(1) "WHO – Priority Eye Diseases." World Health Organization. World Health Organization. 7 Jul 2009
<http://www.who.int/blindness/causes/priority/en/index1.html>