

Awareness of Eye Donation in the Rural Population of North Karnataka

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Abstract

Purpose: To determine the "awareness of eye donation" and "willingness to donate eyes" in the rural population of North Karnataka.

Methods: A total of 300 subjects representative of the rural population of north Karnataka participated. Subjects in age group of 18yrs to 70yrs were interviewed by a standard questionnaire regarding awareness of eye donation and willingness to donate eyes. Oral consent was taken before interviewing the subjects.

Results: Out of 300 subjects, 19% were aware of eye donation, 81% were having no knowledge about eye donation. Out of those aware, 2% were females. Majority of those with knowledge about eye donation belonged to age group of 18 to 30 years (8%). Out of those with awareness 16% were literate and 3% were illiterate. The major source of awareness was media (11%) out of 300 subjects, 8% wanted to pledge their eyes, 12% were not interested, 64% needed more information about the procedure and 16% wanted to consult with relatives. 1% participants were aware that eye donation had to be done within 6 hours. Illiteracy and female sex were major predictors of ignorance. 16% were of opinion that there will be disfigurement after donating eyes.

Conclusion: Eventhough multiple strategies are currently followed to increase awareness of eye donations, more creative strategies have to be applied, especially to target rural, illiterate population.

Keywords: Eye Donation; Awareness; Rural Population; North Karnataka.

Introduction

Corneal blindness either due to corneal pathology like ulcers or trauma is a major cause of blindness and vision impairment in children and young adults, having a long life ahead of them [1].

The fact that restoring vision through corneal transplantation is possible for a sizeable proportion of the corneal blind in India has led to a sustained drive to raise awareness of eye donations and corneal transplant in general population, but the current annual procurement of corneas for donation in India remains at approximately one-tenth of the annual requirement (data from Eye Bank Association, India).

Navodaya Eye bank, Raichur is involved in promotional activities to increase awareness, besides harvesting donor eyes. A survey conducted to determine the level of awareness of eye donations in rural population of north Karnataka is reported here.

Materials and Methods

The study was conducted from Nov 2016 to March 2017. Subjects for this study were randomly selected from people attending Ophthalmology OPD, belonging to rural background.

300 no of subjects were interviewed using a standard questionnaire in their own local language

Subjects in age group of 18 to 70 yrs were interviewed. Oral consent was taken before the start of survey. Demographic details including age, gender, literacy were collected from the subjects.

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Received on 14.01.2018, Accepted on 09.02.2018

Literacy was defined as a minimum ability to read or write one's name. The time taken was approximately 8 to 10 minutes on an average.

Questions regarding awareness of eye donation, source of information, further willingness to pledge their eyes, myths about procedure of eye donation, awareness of eye banks in general were asked in the local language and data was compared based on age group, literacy status and gender.

Results

Table 1 shows the demographic characteristics of respondents to our study.

Out of 300 subjects, 66% were male 34% were female. 26% were literate 74% were illiterate. Results of questionnaire are as follows-

1. *Awareness of eye donation:* Only 19% of total subjects were aware of eye donation, 10% subject responded as just heard and 9% responded as yes. 81% of them had no knowledge (Table 2). Awareness in females was 2%, Out of those aware 16% were literate, and only 3% were illiterate (Table 2).
2. *Source of information about eye donation:* Out of various sources of information about eye

donation, Media was a major source (11%). Other sources of information were through family doctor/hospital, village camps, posters in descending order.

3. *Willingness for eye donation:* After the subjects were informed about what eye donation is, 8% of subjects wanted to donate their eyes. Majority of subjects willing to donate eyes belonged to age group of 18 to 30yrs (6%) (Table 2). Out of total subjects who were ready to pledge their eyes, 5% (62.5%) were literate (Table 2).
4. *Knowledge of timing for eye donation:* Only 1% responded eye donation had to be done within 6 hours of death. 6% responded that it has to be done in 24hrs, Others were not aware of the timing.
5. *Reason for not pledging eyes:* Majority of subject not willing to pledge their eyes needed more information about the procedure to pledge their eyes (64%). 12% of them responded as they wanted to consult with their relatives (Chart 1).
6. *Opinion about delay in funeral:* 13% of subjects were of opinion that eye donation will cause delay in funeral, 85% had a doubt if eye donation can cause delay in funeral.
7. *Opinion about facial disfigurement:* 16% were of opinion that there will be disfigurement after eye donation, 76% -(majority) were not sure.

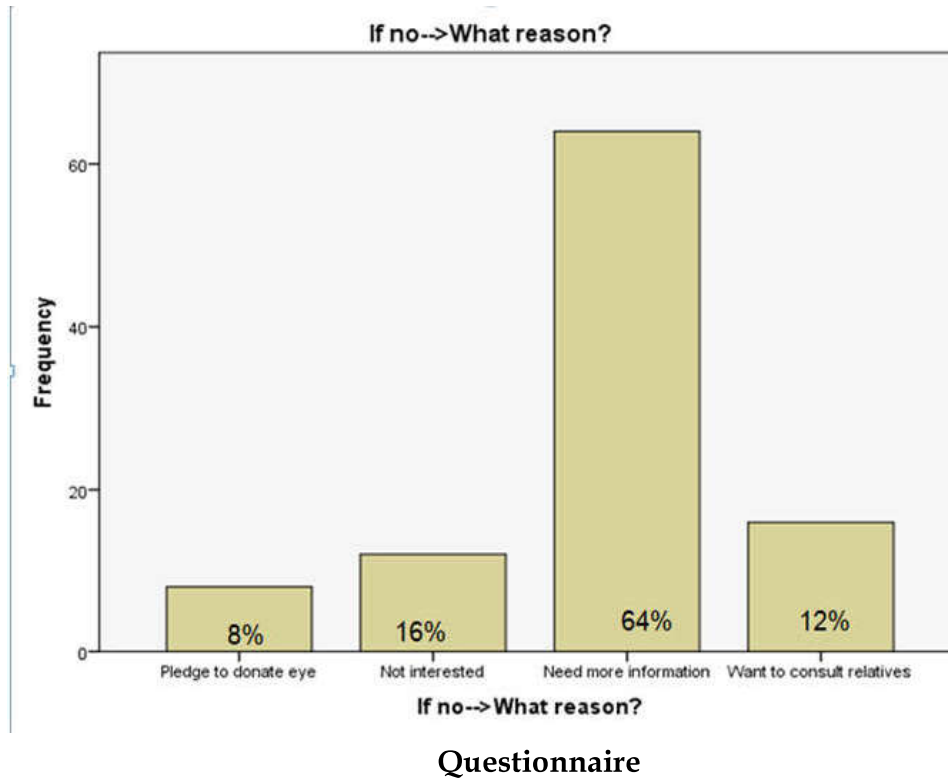
Table 1: Demographic details

Age		Percentage	
18-30 yrs	60		
31-50yrs	117		
51-70yrs	123		
Sex		Percentage	
Male	198		66%
Female	102		34%
Literacy		Percentage	
Illiterate	222		74%
Literate	78		26%
Primary Schooling	33		
Secondary Schooling	36		
Graduate			

Table 2:

		Do You Know About Eye Donation?				Do You Want to Pledge Your Eyes?		
		Yes	No	Just Heard	Total	Yes	No	Total
Gender	Male	24(8%)	147	27(9%)	198	21(7%)	177	198
	Female	3(1%)	96	3(1%)	102	3(1%)	99	102
Age	18-30yr	18(6%)	21	21(7%)	60	18(6%)	42	60
	31-50Yr	6	105	6	117	6	111	117
	>50yr	3	117	3	123	0	123	123
Literacy	Literate	21(7)%	30	27(9)%	78	15(5)%	63	78
	Illiterate	6	213	3	222	9	213	222

Chart 1: Bar chart Reason for not pledging eyes



Personal Details

- name :
- age :
- address (Rural/Urban) :
- Occupation :
- Literacy : Literate/
- education :

Questions about Eye donation

1. Do you know about eye donation?
2. How did you come to know about eye donation?
3. What part of eye is donated in eye donation?
4. What is donated eye used for?
5. Who are eligible for eye donation?
6. Are there any religions taboos for eye donation?
7. Do you think there will be disfigurement of person after eye donation?
8. Do you feel there will be delay in funeral arrangement due to eye donation?
9. Are you willing to pledge you eyes for donation?
10. It no- what is the reason?
11. Has any relative of your pledged his/her eye?
12. Do you know about eye bank?
13. Do you know timing and function of eye bank?
14. If any relative of your s has pledged eyes? Haw early you should inform an eye bank?
15. Is there any fee for eye donation?
16. Do you know why eye donation is important?

8. *Awareness about eye bank:* Only 1.5% of subjects were aware about eye bank and its functioning.
9. *Religious Taboos:* Majority of subjects (95%) were of opinion that there are no religious taboos linked to eye donation.

Discussion

Corneal ulcers have been recognised as a major cause of blindness in developing countries [2]. major portion of the huge burden of blindness in India is avoidable [3,4]. The epidemiology of corneal blindness is dependent on endemic diseases prevalent in each geographical area [5].

Recent study from Karnataka, southern India reported the prevalence of corneal blindness as 0.13%. This constituted 9% of all blindness reported in this study [6]. The annual incidence of corneal ulcers in Madurai, Tamil Nadu is estimated at 113 per 100,000 people, which is 10 times the incidence reported from the United States [8].

Although the Madurai study cannot be considered representative of the entire country, a rough estimate of the magnitude of corneal ulcers in India may be obtained by projecting the results to the population of India. This will amount to approximately 840,000 persons developing a corneal ulcer every year in India; this is 30 times the number of corneal ulcers seen in the United States [9].

Corneal transplantation offers the potential for sight restoration to those who are blind from corneal diseases. This, however, is dependent on people willing to pledge their eyes, and relatives willing to honour their pledge.

Data from our study suggests additional efforts are needed to improve awareness of eye donation in the community. It is a matter of concern that only 19% of the persons interviewed had knowledge of eye donation. Illiteracy and female sex were possible predictors of ignorance of eye donation (Table 2).

A similar result was found in a preliminary survey conducted by the Aravind Eye Care System in an adult population of the state of Tamil Nadu in southern India [7], Females were less willing to pledge eyes.

In a similar study by Krishnaiah et al [8] age-gender adjusted prevalence of awareness of eye donation in rural population of andhra pradesh, was 30.7% but only 0.1% had pledged eyes. 32.9% were willing to pledge eyes. Among the subjects willing, to pledge their eyes for donation 91.2% were literates.

In our study, among the subjects who wanted to pledge their eyes, 62.5% were literates.

Therefore a novel method for awareness should be directed towards rural illiterate population for increasing the number of eye donations.

Priyadarshin et al [7] in their study also suggests that alternate strategies have to be developed for awareness of the illiterate and rural population.

Rural influential people like local leaders and religious priest can play a major role in increasing awareness in rural population. According to gogate et al [9] religious leaders have a tremendous potential to enhance eye donation.

General practitioner of medicine, medical and para medical student can also play an important role in clarifying doubts of subjects who need more knowledge about eye donation for pledging their eyes [12].

In a study conducted by Vallinayagam et al [10], on eye donation awareness in medical and engineering students, The majority of the population, 71.87% was not familiar with the enucleation time limit. Therefore educating medical and paramedical personnels about eye donation is of utmost importance.

Conclusion

Multiple strategies are currently followed for awareness about eye donation, But more creative and approachable strategies have to be applied. Especially to target rural, illiterate population which comprises of major bulk of people in our country

Steps should be Taken to -

1. Involve local leaders and religious priests.
2. Thorough education about procedure of eye donation and eye banking to medical practitioners and students.
3. Subjects who are willing to pledge their eyes but need more information should be targetted utmost.
4. Relatives of the deceased person should be motivated.

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