

## Eye donation: Awareness, attitudes and beliefs among nursing staff of a tertiary care teaching hospital in Chitradurga, India

Rajasekar Mohan Metri<sup>1</sup>, Amrutha A M<sup>2,\*</sup>, Vijayalakshmi M<sup>2</sup>, Ashwini K G<sup>3</sup>, Ganashree C P<sup>3</sup>

<sup>1,5</sup>Associate Professor, <sup>2,3</sup>Assistant Professor, <sup>4</sup>Senior Resident, <sup>1,4</sup>Dept. of Ophthalmology, <sup>2,3</sup>Dept. of Community Medicine, <sup>5</sup>Dept. of Physiology, Basaveshwara Medical College & Hospital, Chitradurga, Karnataka, India

**\*Corresponding Author: Amrutha A M**

Email: amrutha.angadi89@gmail.com

### Abstract

**Introduction:** Corneal transplantation is a sight restoring procedure that enhances the recipient's quality of life. The number of corneal transplants which were done is very low when compared to requirements in India. This is largely due to the inadequate number of corneas collected. Nursing staff can influence eye donation rates.

**Materials and Methods:** A cross-sectional study was conducted among 59 nurses of Basaveshwara Medical College and Hospital, Chitradurga in July 2018. Primary information was collected by interview technique by using a pre-tested semi-structured questionnaire. The data was analysed and presented in simple proportions.

**Results:** Among total 59 nurses, 36 (61%) were aged 21 to 30 years and 18 (30.5%) were aged between 31 to 40 years. Study participants had good knowledge regarding eye donation. 89.8% nurses were willing to donate their eyes. On the whole nursing staff had good attitude towards eye donation.

**Conclusions:** The nursing staff have good knowledge and attitude towards eye donation. Still further research on attitude of nurses and other professionals on good amount of sample and also better health education programs regarding the organ/eye donation process.

**Keywords:** Awareness, Blindness, Corneal donation, Nursing staff.

### Introduction

Corneal defects are main cause of blindness in the developing countries like India. Other causes of blindness include xerophthalmia due to vitamin A deficiency, trachoma, corneal ulceration, ophthalmia neonatorum, onchocerciasis, ocular trauma and leprosy.<sup>1-3</sup>

Around the world there are 3.7 crore people are blind and among them 1 million are willing for corneal transplantation.<sup>4</sup> In India 1.8 crore people are blind<sup>5</sup> and among these 1.9 lakh are blind from bilateral corneal diseases.<sup>6</sup> The current corneal collection rate in India is 22,000 per year as per eye bank association of India. We need 2.7 lakh donors to perform 1 lakh corneal transplants in a year in India. Still there is approximately a 20-fold increase from the donor eyes available as of now.<sup>7</sup>

In developed countries there are other factors which affect collection of corneas, and these factors may affect the public attitude towards eye donation<sup>8</sup> but this has not been received attention from the developing countries especially India. So there is a need to educate the public about eye donation in an effort to increase cornea collection. It is an act of charity, purely for the benefit of society, which is totally voluntary.<sup>9</sup> Public health prevention programs like health education are the most cost effective means of decreasing the global burden of corneal blindness by increasing the awareness about eye donation. Nursing staff are the main health care providers in the hospital. With this background, they were selected for this study with the objective of assessing their awareness and perception on eye donation.

### Materials and Methods

This observational cross sectional study was conducted at Basaveshwara Hospital, Chitradurga in July 2018. Sample size was obtained by universal sampling technique. Primary source of information by direct interview method of 60 nursing staff. All patients who are present and those who give consent were included in this study.

### Statistical Analysis

The data were entered in excel sheet and analyzed using SPSS. Data was expressed in proportion.

### Results

A total of 59 participants from Basaveshwara Medical College and Hospital filled out the questionnaire, out of which 36 (61%) were aged 21 to 30 years and 18 (30.5%) were aged between 31 to 40 years. Majority of the participants 38 (64.4%) had more than 3 years of work experience. Majority of the nursing staff had not undergone any sort of training on eye donation. (Table 1)

**Table 1: Profile of study subjects**

Variable	Frequency (%)	
Age	21-30	36 (61)
	31-40	18 (30.5)
	41-50	5 (8.5)
Work experience	<1yrs	6 (10.2)
	1-2yrs	8 (13.5)
	2-3yrs	7 (11.9)
	>3yrs	38 (64.4)
Eye donation training	Yes	6 (10.2)
	No	53 (89.8)

### Assessment of Knowledge

The knowledge items listed in Table 2 described the frequency and percentages of each item answered. Questions were asked to determine the depth of knowledge

of nurses regarding issues essential for eye donation. (Table 2).

**Table 2: Assessment of knowledge regarding eye donation among nursing staff**

Questions	Responses given by the subjects	Frequency (%)
Do you know if any eye bank exists in BMCH/Chitradurga?	Certainly yes	29 (49.2)
	May be	8 (13.6)
	Certainly no	7 (11.9)
	I don't know	15 (25.4)
If yes, how long has it been working	2yrs	5 (8.5)
	>10yrs	5 (8.5)
	5-6yrs	26 (44.1)
	I don't know	23 (39)
Which patients should be considered for eye donation	All hospital patients who have died	49 (83.1)
	Only intubated patients in ICU	5 (8.5)
	I don't know	5 (8.5)
How can I refer a deceased patient for eye donation	Give a call to the Ophthalmologist on call	27 (45.8)
	Contact eye bank office bearers	20 (33.9)
	Contact MS/HRM/NS	10 (16.9)
	I don't know	2 (3.4)
For how long after death can eyes be retrieved for transplantation	6 Hours	28 (47.5)
	72 Hours	2 (3.4)
	24 Hours	27 (45.7)
	I don't know	2 (3.4)
What is the age limit for eye donation	75 yrs	38 (64.4)
	85 yrs	6 (10.2)
	90 yrs	7 (11.9)
	I don't know	8 (13.5)

### Assessment of Attitude

The attitudes held by nurses in this study are summarized in Table 3. Attitudes were rated using a scale

ranging from strongly agree to strongly disagree. Majority of our study subjects had good attitude towards eye donation. (As highlighted in Table 3)

**Table 3: Assessment of attitude regarding eye donation among nursing staff**

	Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree
Do you feel that after transplantation, there be improvement in quality of life of the recipient	13 (22.1)	28 (47.5)	13 (22.1)	2 (3.4)	3 (5.1)
Do you feel that offering for eye donation can add distress to the family already in grief	11 (18.6)	12 (20.3)	23 (39)	8 (13.6)	5 (8.5)
Do u feel that offering for eye donation should be usual part of end of life care	13 (22.1)	22 (37.3)	14 (23.7)	5 (8.5)	5 (8.5)
Do u feel that removing eyes causes any disfigurement of the body	7 (11.9)	10 (16.9)	11 (18.6)	24 (40.7)	7 (11.9)
Do you feel eye donors set a good examples to others to follow	24 (40.7)	27 (45.8)	6 (10.2)	1 (1.7)	1 (1.7)
Do you feel uncomfortable thinking/talking about eye donation	10 (16.9)	20 (33.9)	13 (22.1)	11 (18.6)	5 (8.5)

### Willingness to Donate

According to their own response, 53 (89.8%) individuals of the sample population demonstrated willingness to donate their eyes. But however 49 (83.1%)

had not pledged their eyes yet. Majority of our study subjects were aware that pledging is not necessary for donating eyes (57.6%).

**Table 4: Willingness to donate eye among nursing staff**

Questions	Responses given by the subjects	Frequency (%)
Would you be happy to donate your eyes after death	Yes	53 (89.8)
	No	6 (10.2)
If yes, have you pledged your eyes already	Yes	10 (16.9)
	No	49 (83.1)
Do you think pledging is compulsory for eye donation	Yes	13 (22)
	No	34 (57.6)
	I don't know	12 (22.4)

## Discussion

There is lack of training received by nurses with regards to eye donation and these results are not surprising. There are other studies which have shown that nurses and other healthcare professionals have a limited knowledge about eye donation.<sup>10,11</sup> Educating nurses regarding the donor suitability criteria and stressing on their role in approaching families for donation have led to increased donation rates.<sup>12</sup>

Some of the respondents believed that eye donation could negatively affect the appearance of the donor and that donation discussions could add distress to bereaved families. Increased knowledge that promotes donation might facilitate nurses to have better understanding and skills to offer choice to their patients and families.<sup>13,14</sup>

In a study conducted among staff of hospital, 97% had good knowledge about organ transplantation including eyes.<sup>15,16</sup> A large number of nursing staff (47.5%) knew the best time for eye donation was within 6 hours of death. In another study on medicos and non-medicos 79.6% of medicos knew that eyes can be donated after death and 63.3% knew that it should be done within 6 hours.<sup>17</sup> Our study showed that 53 (89.8%) were willing to donate their eyes. In a study among medical students, 87.8% of the respondents were willing to be eye donors.<sup>17</sup>

Our study revealed that nurses had good awareness regarding eye donation and most of them were willing to pledge their eyes. Nurses can contribute by participating in creating awareness and motivating the people for eye donation.

## Conclusion

Nearly all patients who die in hospitals are potential eye donors, but the number of referrals remains low. Nurses play a pivotal role identifying and discussing the potential for donation. There is a need for health education programmes that focus on eye donation and communication skills needed to offer the choice to patients and families. Nurses can act as volunteers in eye donation camps by creating awareness among general population.

**Conflict of Interest:** None.

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