

## Awareness of Eye Donation among Nursing Students

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### Abstract

**Background:** Corneal blindness is one of the important types of blindness that can be prevented by proper health care, education and conventionally cured by corneal transplantation for which awareness regarding eye donation is essential. **Objectives:** To assess the awareness about eye donation among nursing students. **Methods:** It was a cross-sectional observational study. **Settings:** BLDE nursing college, Bijapur, Karnataka, India. A total of 380 students of nursing students of BLDE nursing college, Bijapur, were involved in this study. A semi-structured questionnaire was used to collect the data from the students. **Results:** Majority (72%) of students were aware that eyes could be donated and 28% were not aware about eye donation. 28% knew the ideal time for eye donation. 93% were willing to donate eyes and 12% had already pledged their eyes. Perceived reasons for not pledging eyes by the students were: lack of awareness (32%), the unacceptable idea of separating the eyes from the body (54%), objection by family members (68%) and religious beliefs (25%). **Conclusion:** This study revealed that nursing students were well aware of eye donation and most of them inclined to sign-up for eye donation. The information about awareness and willingness for eye donation could help in developing strategies to increase procurement of corneas for dealing with corneal blindness. The reasons for not donating eyes need to be considered while creating awareness about eye donation in the community. The nursing students can be actively involved as volunteers in eye donation campaigns. They can also contribute by participating in creating awareness and motivating the people for eye donation.

**Keywords:** Awareness; Eye Donation; Nursing Students; Corneal Blindness; Corneal Transplantation.

### Introduction

Corneal diseases are a significant cause of visual impairment and blindness in the developing world [1].

Globally, bilateral corneal blindness is estimated to be 4.9 million persons or 12% of 39 million blind, utilizing WHO 2010 global blindness data and WHO 2002 sub-region causes (updated by 2010 data) to define regional prevalence [2].

Nearly 80% of all corneal blindness is avoidable [3]. In India, the total number of overall treatable corneal blindness is about 3.1 million, children constituting 35% of the burden [4].

There are approximately 18.7 million people blind in India [5]. Among them 1,90,000 are blind due to bilateral corneal disease [6]. Every year, another 20,000 join to the list [7].

According to the Eye Bank Association of India, the current cornea procurement rate in India is 22,000 per year. It is estimated that a significant proportion of donor corneas are unsuitable for corneal transplantation [8]. Based upon our current ratio of available safe donor eyes, we would need 277,000 donor eyes to perform 100,000 corneal transplants in a year in India [9]. A shortage of transplantable corneas is common and has been the subject of much attention. To increase procurement of cornea, raising the level of public education on eye donation is an important first step. Soliciting for actual eye donation at the time of death is a necessary and accepted practice [9]. Though the factors affecting procurement of corneas and the public attitude towards eye donation have recently received attention in the developed world, not much has been published from the developing world [9].

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This study was focused to assess the awareness among the nursing students who will be part of health services in our country. Their knowledge about eye donation can play an important role in eye donation campaigns and for effective implementation of health programs. Hence this study was conducted with objective of studying the knowledge and attitude of eye donation among nursing students.

### Materials and Methods

It was a Cross-sectional observational study done during Aug-Oct 2014 at BLDE nursing college, Bijapur, Karnataka. Total 380 nursing students participated in the study.

After obtaining institutional ethical clearance, permission from principal of nursing college and informed consent, a semi-structured questionnaire was administered for collecting the necessary information. The questionnaire contained questions on awareness regarding eye donation, knowledge regarding eye donation, reasons for donating and not donating eyes and willingness to donate eyes. A programme on awareness on eye donation was done after the study.

### Results

Out of 380 students, 137 (36%) were males and 243 (64%) were females. (Table 1) Age varied from 16 to 24 years old.

**Table 1:** Sex distribution

Sex	Total	
	Male	Female
	137 (36%)	243 (64%)
	390 (100%)	

**Table 2:** Responses to the questionnaire on eye donation (n=380)

Questions	Response -Yes Number (%)	Response- No Number (%)
Eyes can be donated	283 (72)	107(28)
Eyes can be donated only after death	268 (70.5)	112 (29.5)
Knows Ideal time for eye donation (within 6hrs after death)	107 (28)	273 (72)
Donated eyes is used for corneal grafting	29 (8)	351 (92)
Knows contact place for eye donation	205 (54)	175 (46)
There is shortage of eye donors in India	174 (46)	206 (54)
Knows any person who has donated eyes	67 (18)	313 (82)
Knows any person who has received eyes	0 (0)	380 (100)
Willing to donate eyes	352 (93)	28 (7)
Already pledged to donate	45 (12)	335 (88)

In this study, 72% of students were aware that eyes could be donated and 28% were not aware about eye donation. 28% knew the ideal time for eye donation and 54% knew the contact place for eye donation. 8% knew that donated eyes are used for corneal grafting. 46% knew that there is shortage of donors in India. 93% were willing to donate eyes and 12% had already pledged their eyes (Table 2).

Perceived reasons for not pledging eyes by the students were: lack of awareness (32%), the unacceptable idea of separating the eyes from the body (54%), objection by family members (68%) and religious beliefs (25%) (Table 3).

Source of awareness: doctors (71%), family members (41%), friends (56%) (Table 4).

### Discussion

In this study, 72% of the students were aware that eyes could be donated. In study conducted by Singh P et al among hospital staff, 97% of them had good to good knowledge about transplantation of various human organs [10]. In study conducted by Gupta A et al among students of a nursing college in Bangalore, 96.8% were aware of eye donation [11]. In another study conducted by Nekar S Manjunath et al among college students of Hubli city, Karnataka, 96% of the students were aware of eye donation [12]. In a study conducted by Krishnaiah S et al among general population showed the awareness level on eye donation to be 73.8% [1].

**Table 3:** Distribution of perceived reasons for not donating eyes (n=28)\*

Questions	Number	Percentage (%)
Lack of awareness	9	32
Unacceptable idea of separating the eyes from the body	15	54
Objection by family members	19	68
Religious beliefs	7	25

\*Multiple responses

**Table 4:** Distribution of source of awareness (n=283)\*

Source of awareness	Number	Percentage (%)
Doctors	201	71
Family members	116	41
Friends	159	56
Radio	21	7
Television	91	32
Newspaper	38	13
Magazine	48	17
Poster	79	28
Pamphlets	45	16
Internet	163	57

\*Multiple responses

Only 50.7% had knowledge on eye donation in a study conducted by Priyadarshan B et al among the south Indian population [13].

In this study, 28% knew that the ideal time for donation is within 6 hours of death, 8% knew that the donated eye is used for corneal grafting and, 43.9% knew about the appropriate place for an eye donation.

Dhaliwal U observed that 79.6% of medical students knew that eyes can be donated after death and 63.3% knew that it should be done within 6 hours [14]. 46% of the students agreed that there is a shortage of eye donors and 93% were willing to donate their eyes. 12% of the students had already pledged their eyes. Dandona R et al. showed that 87.8% of the students were willing to donate the eyes [15].

Tandon R et al. observed that 73.8% were aware of eye donations and only 44.9% were willing to pledge their eyes [16].

Lack of awareness, dislike of disfiguring the body, objection by family members and religious beliefs were the reasons for not donating the eyes. Similar reasons were also reported in other studies [16,17].

### Conclusion

This study revealed that nursing students were aware of eye donation and most of them inclined to sign-up for eye donation. But the knowledge regarding the place of eye donation, time limit to collect cornea and whom to contact and when to contact was still not known clearly. Among the students who were not willing to donate eyes the major reason was lack of awareness, dislike of disfiguring the body, objection by family members and religious belief.

This study shows that only a few had pledged eyes, but majority of the students were ready to donate the eyes. The information about awareness and willingness for eye donation could help in developing strategies to increase procurement of corneas for dealing with corneal blindness. We also need to educate students to overcome social stigma regarding eye donation. The reasons for not donating eyes need to be considered while creating awareness about eye donation in the community. The nursing students can be actively involved as volunteers in eye donation campaigns. They can also contribute by participating in creating awareness and motivating the people for eye donation.

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