

AWARENESS OF EYE DONATION AMONG COLLEGE STUDENTS OF HUBLI CITY, KARNATAKA

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This article is available online at www.ssjournals.com

ABSTRACT

Background: According to WHO estimates India has 10 million blind population. Corneal problems cause a significant proportion of blindness in India. Although effective strategies to prevent corneal blindness are likely to be more cost-effective, visual rehabilitation by corneal transplantation remains the major treatment for restoring sight in those who already have corneal blindness. The requirement of donor corneas per year is at least 20 times the current procurement.

Objectives: To study the knowledge and attitude of college students towards eye donation.

Methods: A cross-sectional study was conducted using a pre-structured, pre-tested questionnaire to solicit information from students of 8 colleges in Hubli and Dharwad.

Results: Totally 403 students from 8 colleges were part of the survey. 96% students aware about eye donation and knew that eyes can be donated after death. Majority (61%) know that eyes should be donated within 6 hours. 69% believe that there is no age limit for eye donation. 68% are of opinion that eye donation will not cause disfigurement of face, among them females were more aware than males. 33.4% know that only cornea is used in eye transplantation. 78.1% are willing to donate eyes.

Conclusion: These data shows that although majority were willing to donate eyes there is still more potential for obtaining cornea. By the survey we got to know that weak eye sight, religious belief, afraid of invasive process and social stigma are the important reasons for not donating eyes. We also need to educate students to overcome social stigma regarding eye donation

Keywords: Eye Donation, Awareness, College Students, Corneal Blindness

1. Introduction:

Corneal diseases constitute a significant cause of visual impairment and blindness in the developing world¹. A total of 80% of the world's blind live in developing countries. Retinal diseases are the most important causes of blindness (40-54%) in established economy nations while cataract (44-60%) and corneal diseases (8-25%) are the most common causes of blindness in countries with less developed economies. Keratitis during childhood, trauma, and keratitis during adulthood resulting in a vascularized corneal scar and adherent leucoma are the most frequent causes of corneal blindness in developing countries. Corneal diseases are responsible for 20% of childhood blindness. Nearly 80% of all corneal blindness is avoidable². In India, the total number of overall treatable corneal blindness is about 3.1 million; children constituting 35% of the burden. Total Vision Quality Corneas needed are almost 3.6 million³.

There are many cross sectional eye donation awareness studies done on nursing students,

health professionals, polytechnic college, urban population and rural population. Whereas this study was focused to assess the awareness among the college student community representatives of different educational background, and also college students in particular who will be the future of any country, their knowledge about eye donation plays an important role in eye donation campaigns and college is one of the best places for effective implementation of health programmes and health education where they can be easily motivated. Hence this study was conducted with the objective of studying the knowledge and attitude of eye donation among college students of Hubli.

2. Materials and Methods:

A community based cross-sectional study was conducted in the urban colleges of Hubli for a period of three months from May 2011 to July 2011.

2.1 Sample size: Since the prevalence of eye donation awareness among the college

students is not known in India, an estimated prevalence of 50% with 95% confidence interval and allowable error of 5%, a sample size of 384. A sample of 403 was finally included in the study for analysis. Fifty students aged greater than 15yrs from each of the 8 Colleges in Hubli were Included in the study. To maintain the uniformity and a representative sample, students from Engineering College, Commerce College, Medical College, Physiotherapy College, I T I Students and Karnataka University were included in the study.

A prior permission of principals of respective colleges was obtained and data was collected with the help of a Pre- structured questionnaire. The questionnaire was prepared with the help of a well known ophthalmology specialist from S.G.M eye bank, M.M. Joshi hospital (Padmanayanalaya) Hubli.

2.2 Statistical methods: The data was compiled and analysis was done by EPI Info Statistical Software. Proportions were tabulated and Chi Square was used as test of significance at $p < 0.05$.

3. Results:

Out of 403 students 55% were males and 45% were females. Age group ranged between 16 to 25 yrs of which majority 230 (57.1%) were in the age group of 16 to 20 yrs. 92% of students belonged to Hindu religion, 6% were Muslim and Other religion 2%.

In the study it was observed that 96% students were aware about eye donation & 94.8% know that eyes can be donated after death. Majority (61%) knows that eyes should be donated within 6 hours. 41% of students think that a person having communicable disease can donate eyes. 69% believe that there is no age limit for eye donation. 68% are of opinion that eye donation will not cause disfigurement of face, among them females were more aware than males. Majority (63%) says that one can contact for eye donation when alive & only 27% are aware that one can contact after death of donor. Majority (74.19%) are of opinion that eyes can be removed in hospital only and 17.6% said eyes can be removed in any convenient place. 41.6% says that names of donor & recipients will not be revealed to anyone. Only 33.4% knows that cornea is used in eye transplantation. 49.75% think that pledging is necessary for eye donation. In Majority (61.3%) media was their source of information about the eye donation (Table 1:

Showing the Knowledge of Students regarding eye donation).

Among the 403 students 315(78%) of them were willing to donate their eyes after death and 88 (22%) were not willing to donate their eyes. The reason for donating eyes in majority 192 (61%) was to help the blind and in 123(39%) the reason being to make the eyes immortal. Among the students who were not willing to donate eyes the main reason being lack of interest among 53(60%) of students and weak eye sight, religious belief, afraid of invasive process and social stigma are the important reasons for not donating eyes among 25(40%) of students.

There was no statistical significance between males and females in knowledge and attitude of eye donation after applying the chi-square test.

4. Discussion:

In this study, 96% of the students were aware of eye donation. In a study by Priyadarshan B et al, among the south Indian population, 50.7% of participants were aware of eye donation⁴. In another study by Singh P et al and Golchet G et al among hospital staff, 97% of them had good to excellent knowledge about transplantation of various human organs^{5,6}. In another study by Dandona R et al, age-gender-adjusted prevalence of awareness of eye donation was 73.8%⁷. Similarly in a study by Suresh K et al, on rural and hospital based population 98% of the subjects among 425 were aware about the eye donation⁸.

In a study done by Tandon R, et al., on factors affecting eye donation from post-mortem cases in a tertiary care hospital. Information by mass media was the main reason in 61.3% of students for the high level of awareness in our study participants. Mass media in the form of television, newspapers, magazines, and posters were important sources of information on eye donation. Other studies also found publicity campaigns and the media to be the major sources of information on this issue⁹.

In the present study majority 62.2% of students thought that whole eye is transplanted to restore the vision and the ideal time was less than 6 hrs in 61% of students. In study done by Gupta A et al, on nursing students large number of students 74.4% of 188 knew that the donated eye is used for corneal grafting and 32.8% knew that the ideal time for donation is within 6 hours of death¹⁰. Similarly in a study by Dhaliwal U on medical

and nonmedical students also observed that 63.3% of medical students knew that it should be done within 6 hours¹¹. In a study by Suresh K et al, only 31.5% said that whole eye is removed in eye donation, and 86.3% said eyes should be removed within 6 hrs⁸.

In the present study majority 74.1% were not aware of eye bank facility in their vicinity but they knew that, the hospital which had eye bank was the best place for collecting the eyes. In the study by Gupta A et al, on nursing students only 62 (32.9%) students knew about the appropriate place for an eye donation¹⁰.

In the present study majority 315(78%) were willing to donate eyes after death. Similarly In the study by Gupta A, majority 85.1% were either willing or had already pledged to donate their eyes¹⁰. In the study by Suresh K et al, majority 80.5% of the subjects were willing to donate eyes after death⁸. In a study Singh, M.M *et al*, among medical students, 87.8% of the respondents were willing to be eye donors¹². Another study Dandona R et al, in the urban population observed that 73.8% were aware of eye donations and only 44.9% were willing to pledge their eyes⁷. In the study by Tandon R et al, only 41.5% were willing to donate eye among relatives of post-mortem cases who were aware of eye donation⁹.

In the study the main reason to donate eyes in majority 61% of students was to help blind people, and reasons for not donating was lack of interest among 53 (60%) of students and weak eye sight, religious belief, afraid of invasive process among 25 (40%) of students. In the study by Gupta A et al, the main reasons for eye donation were nobility in the work by 137 (85.6%) and pleasure to help the blind by 77.5%¹⁰. Other reasons for not donating eyes included objection by family members, dislike of disfiguring the body, delaying of religious rites, and religious restrictions. Similar reasons were also reported in other studies⁹.

Conclusion:

The present study revealed that college students were well aware of eye donation and most of them were interested to donate their eyes. 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 interest and other reasons being weak eye sight, religious belief, and afraid of invasive process. The reasons for not

donating eyes need to be considered while creating awareness about eye donation in the community. The college students could 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. Since the study was done on college students representing different education background, the results can be generalized to college students in urban population.

Recommendation: The study recommends for curriculum changes to educate the students about eye donation. To conduct Regular health awareness camp in schools and colleges regarding eye donation. To bring in Legal reforms, strategies that have worked well in other parts of the world may be useful here too. For example in USA the presumed consent law was introduced in 1975. This concept has legal sanction, where if the dead person has not registered any objection to donate while alive, consent is presumed and eye can be removed as required. The govt., should introduce the concept of "Presumed Consent" to boost eye donation.

Acknowledgement:

I acknowledge Principal of the colleges for providing permission to conduct the study in their campus. I also acknowledge undergraduate students for their support. I greatly acknowledge the cooperation rendered by students, who by revealing their personal information helped me in completing this work.

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Table 1: Showing the Knowledge of Students regarding Eye Donation.

Sl.No	Questions	Common Response	N (%)
1	Eyes Can Be Donated	Yes	387(96%)
2	When To Donate Eyes?	After Death	382(94.8%)
3	Ideal Time For Collection Of Eyes After Death?	Within 6 Hrs	246(61%)
4	Consent For Eye Donation Is Given By	Elders in the Family	350(86.8%)
5	Can A Person With Communicable Disease Donate	No	293(72.7%)
6	Age Limit For Eye Donation	No	343(85.1%)
7	Who Can't Donate Eyes?	With HIV, HTN, DM, Jaundice	189 (46.9%)
8	Is Eye Donation Against Your Religion?	No	339(84.1%)
9	One Donor Can Give Vision To 2 Blind	Yes	310(76.9%)
10	When To Contact For Eye Donation?	When alive	254(63%)
11	Whom To Contact For Eye Donation?	Hospital	299(74.2%)
12	Which Is The Best Place For Removal Of Eyes?	Hospital	299(74.2%)
13	Do Names of the Donor and Recipient Remain unknown	Yes	168(41.7%)
14	Can Eyes Be Preserved In Eye Bank?	Yes	299(74.2%)
15	Do You Know Presence Of Eye Bank In Surrounding	No	299(74.1%)
16	Do you know any person who donated eyes	No	294(73%)
17	Can Eye Donation Cure All Type of Blindness?	Yes	241(59.8%)
18	Eye donation Means	Whole Eyeball	251(62.2%)
19	Immediate Measure To Be Taken After Death To Preserve Eyes	Close the eyes	147(36.5%)
22	Disfigurement Of Face	No	272(67.5%)
20	Is It Necessary To Pledge Before Death For Eye	No	202(50.12%)
21	Source of Awareness?	Media	247(61.3%)