

Eye Donation: Perception and promoting factors among medical students.

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ABSTRACT

Introduction: There are 2 million corneal blind in India with a big gap between corneal demand and supply. The Govt. of Haryana by launching Nehru Drishti Yojna has taken a big step to eliminate corneal blindness from Haryana. Medical students are from a different educational background with a scientific base and thus have a pivotal role play in becoming as role models and mass educators.

Objective: To assess the perception of medical students regarding eye donation.

Methods: A cross sectional study was conducted among medical students of MMIMSR, Mullana, Ambala. A pretested, semi-structured questionnaire was used for collecting the necessary information after getting informed consent. The data was statistically analyzed using SPSS version 11.5 software.

Results: 96% of the students knew about corneal donation though only 67% were willing for eye donation. Nobility was the major inspiring force for eye donation. 13% reported, objection by family and 3.2% reported religious factors as restrictions for eye donation. There were many misconceptions regarding eye donation. 27% thought that eye donation would result in delay in funeral arrangements.

Conclusion: There is an imperative need to emphasize undergraduate teaching to evade myths concerning eye donation and promote eye donation.

Keywords: Eye donation, perceptions, myths.

Introduction:

Corneal blindness constitutes 1% of total blindness.¹ Corneal blind people can regain vision by Keratoplasty. There are 2 million corneal blind in India. According to Consolidated report for the Eye Donation Centres under Nehru Drishti Yojna in Haryana for the year 2010 presently there are 8000-10000 corneal blind people in the State of Haryana. In 2009 a total of 1318 eyes were donated out of which only 730 corneas were used for Keratoplasty. Thus, there is a big gap between demand and supply. To overcome this problem Nehru Drishti Yojna has been launched in Haryana on 26th January, 2010. Under this scheme 20 new eye donation centers were opened¹.

Even after more than 50 years, patients waiting for corneal transplants constitute a considerable backlog which is growing. The need, therefore, is to educate the masses about eye donation in an effort to increase the procurement of corneas².

Well-informed medical students could be expected to influence eye donation rates². Education of physicians early in their courses may lead to better procurement rates for donor organs³. This study was designed to assess the perception of medical students towards eye donation and their willingness to pledge eyes.

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Material and Methods:

This cross-sectional study was undertaken among medical students of Maharishi Markandeshwar Institute of medical sciences and research, Mullana, Ambala. Students from all the five years of the college participated in the study. The students were informed about the purpose of the study, assured complete confidentiality and invited to participate. Those not willing and those not available even after three visits were excluded from the study. Out of a total of 600 students 467 participated giving a response rate of 76.2%.

A pretested, semi-structured questionnaire was used for collecting the necessary information after getting informed consent. The questionnaire contained questions on demographic details, their awareness on eye donation, reasons for donating and not donating eyes by people, their intention to donate eyes and sources of information. Those who were willing to donate eyes were informed about the nearest eye bank. The data collected was compiled and statistically analyzed using SPSS version 11.5 software package.

Results:

The present study was conducted among 467 medical students of MMIMSR Mullana. 301(64.5%) of the

respondents were in the age group of 15-20 years, while 166(35.5%) were in the age group of 20-25 years. Males and females were almost equally represented with 236(50.5%) and 231(49.5%) participants. Regarding educational qualification of father majority were graduate (83.7%) while least 3(.6%) were postgraduate and above. Most of the parents were in business (31%), government officers (31.3%) and private sector (31.9%).

Table 1. Knowledge about eye donation among students.

Sex	Heard about eye donation	Not heard about eye donation	Total
Male	225 (95.34%)	11 (4.66%)	236(100%)
Female	226 (97.8%)	5 (2.2%)	231(100%)
Total	451 (96.6%)	16 (3.4%)	467(100%)

As table no 1 shows in our study 96.6% of the students had heard about eye donation. Females were more aware than males (97.8% and 95.34% respectively). Most (54.6%) had heard about eye donation from television. This was followed by newspaper (39%) and doctor (34%). Only 28 % of the students had received knowledge of eye donation from the academic curriculum. Radio was a source of information for 13.5% of the respondents while pamphlets and other IEC material provided information to 9%.

Table 2. Willingness for eye donation

Sex	Yes	No	NA	Total
Male	141 (59.7%)	80 (33.9%)	15 (6.4%)	236
Female	174 (75.3%)	47 (20.3%)	10 (4.3%)	231
Total	315 (67.5%)	127 (27.2%)	25 (5.4%)	467

$$X^2 = 12.98 \text{ d.f } 2 \text{ p} = .002$$

As can be seen from the above table 67.5% of the students were willing to donate their eyes. Females were more willing to donate and this difference was significant.

Table- 3 Promoting factors for eye donation.

PROMOTING FACTORS**	Male	Female	Total
Noble cause*	106 (44.9%)	127 (55%)	233 (50%)
Pleasure to help the blind*	92 (39%)	115 (49.8%)	207 (44%)
Monetary benefits	0	1 (.4%)	1 (.4%)
Inspired by an article/magazine	21 (8.9%)	20 (8.7%)	41 (9%)
Influenced by knowledge in academics	36 (15.3%)	40 (17.3%)	76 (16.3%)
Friend received cornea	14 (5.9%)	12 (5.2%)	26 (5.6%)
Friend donated cornea*	3 (1.3%)	10 (4.3%)	13 (2.8%)

**Multiple response * significant $p < .05$

Table 3 shows the promoting causes for eye donation. Maximum (50%) thought that eye donation was a noble cause, while 44% thought it was a pleasure to help the blind. Only 16.3% were influenced by academics. 9% were inspired by magazine/articles.

Table 4 Reasons for non willingness for eye donation

Reason**	Male	Female	Total
Objection from family*	41 (17.4%)	21 (9.1%)	62 (13.3%)
Body ill treated by organ transplant.	12 (5.1%)	5 (2.2%)	17 (3.6%)
Health related problem	17 (7.2%)	12 (5.2%)	29 (6.2%)
Dislike basic idea of eye donation*	15 (6.4%)	6 (2.6%)	21 (4.5%)
Age factor*	15 (6.4%)	6 (2.6%)	21 (4.5%)
Religious restriction	7 (3.0%)	8 (3.5%)	15 (3.2%)
Not sure about correct use of cornea after extraction*	26 (11.0%)	12 (5.2%)	38 (8.1%)

**Multiple responses * significant $p < .05$

The above table shows that objection from family was the most common reason for not donating eyes.

Table 5 Knowledge about Ideal time for eye donation

Time after death	Male	Female	Total
Within 2 hours	85 (36%)	58 (25.1%)	143 (30.6%)
Within 1 day	10 (4.2%)	19 (8.2%)	29 (6.2%)
Within 6 hours	135 (57.2%)	150 (64.9%)	285 (61%)
Any time after death	6 (2.5%)	4 (1.7%)	10 (2.1%)

$\chi^2=9.98$ df 4 p=.042

Table 5 shows the knowledge of the students about the correct time of eye donation. 61% of the students knew correctly that eyes could be donated within 6 hours.

Table 6 Knowledge about use of donated eyes

Donated eyes are Used	Male	Females	Total
Transplant full eyeball	21 (8.9%)	12 (5.2%)	33 (7.1%)
Corneal transplant	206 (87.3%)	217 (93.9%)	423 (90.6%)
Lens transplant	9 (3.8%)	2 (.9%)	11 (2.4%)
Total	236	231	467

90.6% of the students were correctly aware that the donated eyes were used for corneal grafting. 7.1 and 2.4 % responded that eyes were used for transplanting full eye ball and lens respectively.

Regarding the practice of eye donation 22% of the students had already donated eyes. 12% did not answer the question. Remaining 66 % had not donated eyes.

Discussion:

In our study 96.6% of the students had heard about eye donation. In a study done by priyadarshni et al in southern India only 50.69% of the respondents had heard about eye donation³. This difference can be attributed to the fact that this study was done among general population whereas our study was done among medical students who are likely to be better informed. Females were more informed than males. A study done among attendants of patients in Malaysia also found that females were significantly associated with better awareness⁴.

Mass media was the most significant source of information for the students. Out of these television

was a source for 54.6% and newspaper 29%. Similarly Singh et al in their study among medical students in Delhi have also reported that television was the main source of information(77.8%)⁵.

In our study 67.5% were willing to donate eyes. Similar Results were obtained in a study done by Dhaliwal et al where 80% students were willing to donate their eyes⁶. These results are encouraging because students who are themselves motivated will be in better position to encourage others to donate eyes. In another study willingness for eye donation was seen in 66 (41.5%), whereas 93 (58.5%) families refused eye donation in families of postmortem cases⁷.

Maximum (50%) of the students wanted to donate their eyes because it was a noble cause, while 44% of the students thought that it was a pleasure to help the blind. In a study done in Singapore among those who were willing to donate their corneas, 92.9% did so because they thought that donating a part of themselves after death made them feel they were doing good⁸.

Most (90.6%) of the students in our study knew that donated eyes are used for corneal transplant. However in a community based study done in Andhra Pradesh only 2.9% of the subjects were aware about this. Medical students are more educated and belong to better socio-economic status, therefore this finding is justified⁹. However in a study done in Malaysia only 121 (30.25%) medical students knew that donated eyes were used for corneal grafting¹⁰.

Our study found that 61% of the students were aware about the correct time of eye donation within 6 hours. However in a nursing college only 38.2% of the students knew about the correct time¹¹. This suggests that comparatively medical students are more aware than nursing students.

To conclude the present study highlights the fact that though medical students were aware about eye donation there were many lacunae and misconceptions in their knowledge. There is a need to enhance their knowledge so that they can act as counselors for eye donation.

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