



A study on perceptions about eye health care and promoting factors for eye donation among medical students from a tertiary care teaching hospital

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Abstract

Background: Voluntary eye donation depends on the awareness levels of various stakeholders in the community. Today's medical students are tomorrow's stakeholders of the community. Medical professionals can enhance eye donation rates by educating and motivating the relatives in case of patient's death.

Aim: Hence the present study was undertaken with an objective of assessing the promoting factors for eye donation among medical students.

Material and methods: The present descriptive cross sectional study was carried out among undergraduate students of a medical college in western Uttar Pradesh in the month of February 2014 using pretested self administered questionnaire.

Results: 77% students knew about eye donation. 51% of them were willing to donate their eyes. Only 39% students knew that the ideal time for eye donation is within 6 hours of death. 64% had knowledge about vitamin A's important role in prevention of childhood blindness. TV, newspaper or other media were the most important channels of getting information for majority (60%) of the students. Regarding perceived promoting factors for eye donation by them, noble cause (57%), pleasure to help the blind (51%) and inspired by advertisement on television (42%) were 3 top most promoting factors. **Conclusion:** Inclusion of different preventive and promotive aspects of corneal blindness along with basic eye health care into the course curriculum is the need of the hour.

Key words

Perceptions, Promoting factors, Eye donation, Eye care, Medical students.

Introduction

Corneal diseases are a significant cause of visual impairment and blindness in the developing world. 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. Approximately 18.7 million people are blind in India and 190,000 are blind from bilateral corneal disease [1]. For such people, corneal transplantation helps in restoring their sight. According to the Eye Bank Association of India, the current cornea procurement rate in India is 22,000 per year [2, 3]. However, the current corneal procurement rates are inadequate to meet the transplantation need in India.

The Andhra Pradesh Eye Disease Study (APEDS) conducted between 1996 and 2000 among the rural population of Andhra Pradesh reported the

prevalence of corneal blindness at 0.13%, constituting 9% of all blindness [4]. Based upon our current ratio of available safe donor eyes, 277,000 donor eyes are needed to perform 100,000 corneal transplants in a year in India [5]. Each year about 20000 new cases of corneal blindness is added to the existing list [6]. As the current rate of procurement of donor cornea is only about 22,000 per year, the backlog of corneal transplantation is growing [7]. Thus, there is a big gap between demand and supply.

Voluntary eye donation depends on the awareness levels of various stakeholders in the community. Today's medical students are tomorrow's stakeholders of the community. The medical students are the future health care providers for the community, having strong scientific base and an inherent inclination to serve the mankind. Medical professionals can enhance eye donation rates by educating and



motivating the relatives in case of patient's death. Hence the present study was undertaken with an objective of assessing the promoting factors for eye donation among medical students. Additional objective of this study was to find out perceptions about eye health care among them.

Material and methods

The present descriptive cross sectional study was carried out among undergraduate students of a Medical College in western Uttar Pradesh in the month of February 2014 using pretested self administered questionnaire. The study population consisted of undergraduate medical students (MBBS) who were currently studying in the institution. All the students currently studying MBBS in the medical college were included in the study. Those students who could not be retrieved even after the third visit to classes were excluded from the study. Students were explained about the nature and purpose of study and requested to fill the questionnaires which were distributed by authors in the classrooms just after the completion of classes.

A detailed proforma containing 24 questions was framed for the purpose of capturing socio-demographic information of the study participants, questions concerning different aspects of eye health care, eye donation and perceived promoting factors for eye donation. The questionnaire was pre tested on 20 students and amended for clarity with the addition of some answer options and was modified accordingly. Informed consent was obtained. Ethical committee approved the study.

All the questionnaires were manually checked and edited for completeness and consistency and were then coded for computer entry. After compilation of collected data, analysis was done using Statistical Package for Social Sciences (SPSS), version 20 (IBM, Chicago, USA). The

results were expressed using appropriate statistical methods.

Results

Out of total 400 students, 386 could be traced and contacted despite maximum efforts. Out of 386, 351 returned the questionnaires. 28 proforma were discarded because they were incomplete. Finally, responses of 323 subjects were included in this study giving a response rate of 92 percent. There were 195 males and remaining 128 were female students. 77% students knew about eye donation. 51% of them were willing to donate their eyes.

Regarding various aspects of eye health care, more than eighty percent respondents were in the view that most of the blindness can be prevented if awareness is generated on eye health. More than ninety percent students agreed upon that they should take active role in spreading awareness among family members/community as per **Table – 1**.

Regarding various aspects of eye donation, TV, newspaper or other media were the most important channels of getting information for majority (60%) of the students. More than ninety percent students agreed upon that blind religious beliefs are important barrier for eye donation as per **Table – 2**.

Regarding perceived promoting factors for eye donation by them, noble cause (57%), pleasure to help the blind (51%) and inspired by advertisement on television (42%) were 3 top most promoting factors as per **Table – 3**.

Discussion

A large proportion of corneal blindness is avoidable [8]. Strategies to prevent corneal blindness are more cost effective than the treatment options like corneal transplantation.



The statistics on eye donation in India shows that there is a considerable and constantly growing backlog of corneal transplantation. According to the consolidated report for the eye donation centres under Nehru Drishti Yojana in Haryana for the year 2010, there were >10,000 corneal blind people in the state of Haryana. In the current situation it is essential to enhance the awareness regarding eye donation among the potential donors in an effort to increase the procurement of corneas.

In the present study 77%, students had heard about eye donation. This is in contrast to another study from Delhi conducted among medical students reported that 99.4% participants were aware of eye donation [2]. This difference could be attributed to the fact that our study place belongs to a college located in rural area of western Uttar Pradesh. In another study among south Indian population, 50.7% respondents were aware of it [9].

Only 39% students knew that the ideal time for eye donation is within 6 hours of death. A study on medical students observed that 41.1% of them knew the ideal time for eye donation [2]. The timing of eye donation is very important. If the eyes can't be collected within 6 hours of death, they may not be utilized for optical purpose. Thus, lack of knowledge regarding optimal timing for eye donation will lead to underutilization of donated corneas.

The current study revealed that large number of students (64%) had knowledge about vitamin A's important role in prevention of childhood blindness. Using mass media to increase the awareness regarding corneal blindness and eye health care to avoid it and at the same time eye donation to treat corneal blindness is not enough. There is a great need to educate students, as they are an important part of our society. If they are educated about the

preventive and curative aspects of corneal blindness, they can spread the message among their friends and family members, thus acting as important motivators. It is also essential to dispel their misconception regarding eye donation.

Although grief counselling of relatives by hospital medical staff has been successful in procuring organs in case of death in hospitals, the consent of family members is important in procuring corneas [10]. If the students are educated they can raise the awareness among their family members thus ultimately enhancing eye donation rates.

It was observed in this study that 51% were willing to donate eyes. These results are not in cohort with others. Dhaliwal observed in his study that 80% students were willing to donate their eyes [11]. 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 41.5% whereas remaining families refused to donate eyes in post-mortem cases [12].

Conclusion

The findings of the study highlight the fact that although most of the students are in favor of active involvement to transmit knowledge, but lack of awareness is the main barrier. Only media publicity is not enough to increase the awareness regarding eye health care and eye donation. Therefore, inclusion of different preventive and promotive aspects of corneal blindness along with basic eye health care into the course curriculum is the need of the hour.

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Table - 1: Responses of the study subjects on different aspects of eye health care.

Responses	Number	Percentage
Most of the blindness can be prevented if awareness is generated on eye health		
Yes	266	82.35
No	23	7.12
Vitamin A has important role in prevention of childhood blindness		
Yes	245	75.85
No	32	9.91
Most of the green leafy vegetables and yellow fruits contain sufficient Vitamin A		
Yes	206	63.78
No	73	22.60
Students should take active role in spreading awareness among family members/community		
Yes	300	92.88
No	5	1.55
First eye screening should be done		
Within 6 months of age	19	5.88
6 months -3 years of age	163	50.46
3 - 6 years of age	74	22.91

Table - 2: Responses of the study subjects on different aspects of eye donation.

Responses	Number	Percentage
Eyes can be collected from donor after death		
Yes	239	73.99
No	25	7.74
Eye can be donated after death		
Within 6 hours	126	39.01
More than 6 hours	155	47.99
Source of information on eye donation		
Medical personnel	53	16.41
Teacher	28	8.67
TV, newspaper or other media	194	60.06
Family member	7	2.17
Blind religious beliefs are important barrier for eye donation		
Yes	297	91.95
No	26	8.05

Table - 3: Perceived promoting factors for eye donation by study subjects.*

Perceived promoting factors	Male No (%)	Female No (%)	Total No (%)
Noble cause	73 (37.4%)	111 (86.7%)	184 (56.9%)
Pleasure to help the blind	55 (28.2%)	108 (84.3%)	163 (50.5%)
Monetary benefits	1 (0.51%)	0 (0.00%)	01 (0.31%)
Inspired by literature on eye donation	22 (11.3%)	23 (17.9%)	45 (13.9%)
Inspired by advertisement on television regarding eye donation	47 (24.1%)	87 (67.9%)	134 (41.5%)
Influenced by knowledge in academics	6 (3.08%)	5 (3.9%)	35 (10.8%)
Friend/relative received cornea	9 (4.6%)	7 (5.4%)	16 (4.9%)
Friend/ relative donated cornea	2 (1.03%)	5 (3.9%)	7 (2.2%)
*Multiple responses permitted			