



STUDY ON AWARENESS AND KNOWLEDGE OF EYE DONATION AMONG MEDICAL & NON-MEDICAL STUDENTS

Ophthalmology

Dr T. Jyothirmai	Associate Professor (Designated Professor), Department of Ophthalmology, Government Medical College, Srikakulam.
Dr M. Surya Chandra	Assistant Professor, Department of Ophthalmology, Government Medical College, Srikakulam.
Dr T. Monika	Postgraduate, Department of Ophthalmology, Government Medical College, Srikakulam.

ABSTRACT

Introduction: Corneal diseases constitute significant cause of visual impairment and blindness in the developing world. The number of corneal transplantations done are far less than the actual requirement in India and this is due to inadequacy of the donor corneas available. **Aim:** To assess the awareness and knowledge of eye donation among medical and non-medical students. **Study Design:** Cross-sectional study design. **Materials & Methods:** A pretested & semi-structured questionnaire was used to assess awareness and knowledge of eye donation among the students. **Results:** The results were analysed using appropriate statistical methods. It was found that about 94.08% medical and 81.90% non-medical students were aware of eye donation. Knowledge regarding eye donation was found to be comparatively better among medical students, although crucial deficits were noted among both the groups. **Conclusion:** Lack of essential knowledge and awareness could be possible barriers to eye donation. Hence, continuous programmes and camps should be held to improve awareness regarding eye donation among students as well as general population.

KEYWORDS

Eye donation, Cornea, Awareness, Medical and Non-medical students.

INTRODUCTION

Eyes are one of the most important sensory organs in the human body by which 80% of knowledge is gained.

Blindness from corneal diseases is a major public health problem in India.[1] According to WHO, corneal diseases are among the major causes of vision loss and blindness after cataract and glaucoma. Approximately 5% of the world's population is blind due to corneal diseases alone.[2] The various causes include infections, vitamin-A deficiency, congenital diseases, eye trauma, corneal dystrophies & degenerations and post-op complications.

In most cases, loss of sight can be corrected through 'Eye Donation', which is an act of donating one's eyes after his/her death. It is an act of charity, purely for the benefit of the society and is totally voluntary. Visual rehabilitation by corneal transplantation remains the main stay of treatment for restoring vision in patients with corneal blindness.

MATERIALS AND METHODS

Institutional ethics committee approval was obtained. On the occasion of eye donation fortnight, a cross sectional study was conducted in Srikakulam among 268 college going students, out of which 152 were medical students and 116 were non-medical students. The selection criteria included students pursuing their under graduate courses. After obtaining an informed consent, the participants were asked to answer a pretested, semi-structured questionnaire which was self-administered. The questionnaire consisted of 21 questions related to awareness of eye donation, knowledge regarding facts of eye donation, sources of information about eye donation and willingness to donate eyes. The data was collected and analysed. The P value < 0.05 was taken as statistically significant.

RESULTS

It was found that about 143 medical (94.08%) and 95 non-medical (81.90%) students were aware of eye donation.

Of them, according to 105 medical (73.42%) and 68 non-medical (71.57%) students eye donation means donation of one's eyes after death. Remaining 15.10% students believed eye donation as giving sight to blind and according to 11.3% students it is service to mankind. In the present study, the primary source of information for both the groups regarding eye donation was Doctor's/Health care workers, which was 31.02% and 27.84% for medical and non-medical students, respectively. (Figure.1)

Various other responses to eye donation questionnaire include: (Table.1)

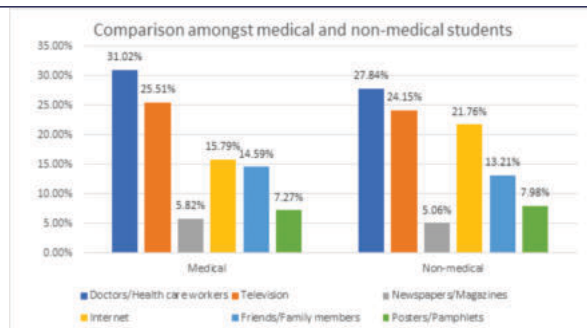


Figure1 Sources Of Information Regarding Eye Donation

Table.1 Responses To Eye Donation Questionnaire

RESPONSE	OVERALL	MEDICAL	NON-MEDICAL
Ideal time to donate eyes is within 6 hours	62.33%	67.83%	56.84%
Whole eyeball will be removed	54.28%	58.04%	50.52%
Only cornea is used for transplantation	71.79%	78.32%	65.26%
Eyes can be removed at donor's house itself	30.99%	31.46%	30.52%
One eye donor can provide vision to two blind persons	66.71%	71.32%	62.10%
Identities of both donor and recipient are kept confidential	68.64%	72.02%	65.26%
Family members can give consent in absence of pledging	68.29%	69.23%	67.36%
Persons with spectacles can donate eyes	53.04%	60.83%	45.26%

How much time does the eye removal take?

It was surprisingly noted that, majority of students (61.20%) were not aware of this fact. Only a few students, around 25.14% were aware of the fact that eye removal takes 15-20 minutes time.

How long can donor cornea be stored?

Remarkably, very less percentage of students (17.22%) only were aware that donor corneas can be stored up to 14 days without affecting success of transplantation.

What do you believe in, after eye removal?

About 40.79% of the study population believe that artificial prosthetic eye is placed in the orbit and face looks normal. Of them, 44.75% were medical and 36.84% were non-medical.

Will the donor's family pay / receive any fees?

More than half of the study population among both the groups admit

that neither donor's family pay nor receive any fees for eye donation.

Do u believe that medical illness (e.g., DM, HTN) is a contraindication to eye donation?

About 60.07% of students believe that medical illness is a contraindication to eye donation, wherein 53.84% were medical and 66.31% were non-medical students.

Are communicable diseases (e.g., AIDS) contraindication for eye donation?

It was shown that majority and equal proportion (67.59%) of medical and non-medical students were aware of this fact.

Are you aware of eye bank? Yes/No

About 69.49% of the study population were aware of eye bank while 30.51% were not aware. 83.21% medical and 55.78% non-medical students were aware of eye bank facility.

Are you willing to donate your eyes in the future? Yes/No

77.22% were willing to donate their eyes while 22.78% were not willing. Of them willingness was noted among 81.81% of medical and 72.63% of non-medical students.

REASONS FOR NOT DONATING EYES?

The major reason among both the groups turns out to be objection by family members followed by lack of awareness. (Figure.2)

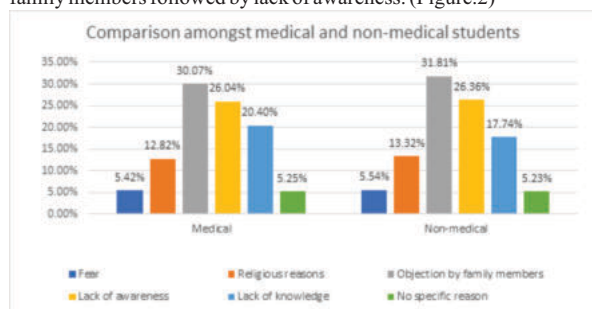


Figure.2 Reasons For Not Donating Eyes

DISCUSSION

In the present study, out of 268 study population about 143 medical (94.08%) and 95 non-medical (81.90%) were found to be aware of eye donation. In a similar study conducted by Muthukrishnan et al awareness was noted among 100% of the study population.[3] In a study done by Jayashree MP et al and Chowdhury et al 100% awareness among medical students while about 90.8% awareness among para-medical students was reported. [4,5].

Of the total study population, 73.10% (73.42% medical and 71.57%) believed that eye donation means donation of one's eyes after death and according to 15.10% it is giving sight to blind. In a study done by Gotekar et al, majority of students (76.3%) believed it as giving sight to blind.[6]

Comparative analysis of various facts between other studies with the present study –(Table.2)

Table.2 Comparison Among Various Studies

Study	Knew about ideal time of eye donation		Knew that whole eyeball is removed		Knew that cornea is used for transplantation		Aware of eye bank facility		Family member can give consent in the absence of pledging	
	M	NM	M	NM	M	NM	M	NM	M	NM
Present study	67.83%	56.84%	58.04%	50.52%	78.32%	65.26%	83.21%	55.7%	69.23%	67.36%
Muthukrishnan et al	29.50%	27.86%	54.90%	52.80%	83.03%	70.64%	74%	66.19%	68.30%	51.24%
Jayashree MP et al	93%	83%	-	-	-	-	-	-	-	-
Chowdhury et al	69%	60.9%	-	-	-	-	84%	64.3%	55.6%	46%

Note. M – Medical students NM – Non-medical students

One eye donor provides vision to two blind persons. 66.71% of students were aware of this fact in this study. In Muthukrishnan et al

study, 74.08% of the study population were aware of this fact.[3]

Doctors/Health care workers (29.43%) and Television (24.83%) followed by Internet (18.77%, Friends/Family members (13.90%) form the major source of information for eye donation in both the groups in the present study. Television (38.10%) turns out to be the most common source of information in studies done Muthukrishnan et al and Chowdhury et al. [3,5]

In our study, only 30.99% of the participants knew that eyes could be retrieved at the house of the deceased itself thereby causing no delay in the funeral process. In Hosamani et al study, about 57.2% of the study population were aware of this fact.[7]

Disfigurement of the face as a result of eye donation was documented by 3.89% of the participants in our study which was similar to the result (6.8%) obtained in Hosamani et al study.[7]

Eye donation is an act of charity, which is purely voluntary. The donor's family neither pay nor receive any fees. In our study only 54.98% of the participants were aware of this fact which was in contrast to 91.6% observed in Hosamani et al study.[7]

Of the study population, about 60.07% of the participants believe that persons with medical illness cannot donate eyes. This was similar to that of Muthukrishnan study which showed 64.07%.[3] Whereas persons with communicable diseases cannot donate eyes was known to 67.59% of study population which was relatively high.

In our study, about 53.04% (60.83% of medical and 45.26% of non-medical) of the students believe that spectacle users can donate eyes. In Hosamani et al study, about 64% of the study population were aware of this fact.[7]

It is interesting to note that about 77.27% of the study population were willing to donate their eyes in future which includes 81.81% of medical and 72.63% of non-medical students. This is a significantly high percentage who are willing to donate, resembling the study by Muthukrishnan et al (84.80%), Jayashree et al (81.5%) and Chowdhury et al (83.75%). [3,4,5]

In the present study, objection by family members (30.94%) and lack of awareness (26.19%) followed by lack of knowledge (19.07%) were found to be major reasons for non-donation of eyes. Similar results were also observed in Muthukrishnan et al study.[3] In contrast to the above result, about 60.4% of the participants in Hosamani et al study who were muslims by religion felt that eye donation is against their religion.[7]

CONCLUSION

Corneal diseases constitute a significant cause of visual impairment and blindness in the developing world. In developing countries, the demand for corneal transplantation is considerably increasing, but the supply of donor corneas is significantly low. Therefore, there is need for awareness of eye donation among the general population in an effort to increase the procurement of the donor corneas.

Although medical students have better knowledge regarding various aspects of eye donation, as a whole there are crucial deficits in knowledge on eye donation and corneal transplant in both the groups. Besides medical students, well informed non-medical students could influence the eye donation rates significantly among the general population. Lack of essential knowledge and awareness could be possible barriers to eye donation. Hence, continuous programmes and camps should be held to improve awareness regarding eye donation among students as well as general community.

Well informed students will act as role model in the noble cause of eye donation and thus shall help in reducing the demand supply gap for corneal transplants.

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