

Research Article

A study to assess awareness regarding eye donation among post graduate medical students admitted through NEET pre PG 2014 of Gajra Raja medical college Gwalior, M.P., India

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ABSTRACT

Background: According to WHO estimates India has 10 million blind populations. 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. Objective: To assess the knowledge and attitude of post graduate medical students regarding eye donation and their willingness to pledge eyes for donation.

Methods: The present study was a cross sectional study conducted using a pretested questionnaire on 116 Post graduate Medical Students but only 106 actually participated in the study.

Results: A total of 106 students actually participated in the study. Among them 63 (59.43%) were males and 43 (40.57%) were females. The maximum percentages of the students were of age group 26-29 years. All the students were aware regarding eye donation but still they felt it was necessary to obtain consent from family members.

Conclusion: These data showed that although the awareness is good but still there is imperative need to emphasize to evade myths concerning eye donation to promote eye donation.

Keywords: Awareness, Corneal blindness, Eye donation, Medical students

INTRODUCTION

Vision is the most important sense because it allows interacting freely with the environment and enjoying the beauty of life. Eye is sometimes called the "mirror of soul". It twinkles with humour, sparkles with joy, softens with worry, hardens with anger, and clouds when things go wrong or one loses hope. The eye often reflects physical health.¹ The use of sight is an integral part of early life experience. Most individuals are not consciously aware of the degree to which they depend on it for daily functioning. Once vision becomes significantly limited, it influences the activities of daily

living. Even simple tasks become difficult to perform. So eye care is very important to maintain the eye health.² The disease of the cornea is one of the major causes of blindness in India for which the vision can be restored by eye donation.³

Eye donation is an act of donating one's eyes after his/her death. Only corneal blindness can be benefitted through this process no other blinds. It is an act of charity, purely for the benefit of the society and is totally voluntary.³

Corneal blindness contributes 1% of total blindness.⁴ Corneal blind can regain vision by keratoplasty and there

is a big gap between demand and supply. Even after more than 50 years patients waiting for corneal transplants constitute or considerable backlog which is growing. The need, therefore is to educate the masses about eye donation is an effort to increase the procurement of cornea.⁵ Well informed medical students could be expected to influence the eye donation rates. Education of physicians early in their course may lead to better procurement rates for donor organs.⁶ The study was designed to assess the awareness & perceptions of newly admitted post graduate medical students through NEET pre PG 2014 towards eye donation and their willingness to pledge eyes.

METHODS

This was a cross sectional study and was carried out among post graduate medical students qualified through NEET Pre PG 2014 in Gajra Raja medical college, Gwalior, M.P., India. The study period was from May to September 2014.

A total of 150 students were registered in the college in different rounds of counseling. Informed consent was taken from them for participating in the study. 106 forms were received from them with a response rate of 71%. 17 forms were incomplete and were not taken into consideration, 27 forms were not received at proper time.

A pre tested and semi structured questionnaire forms was used for collecting the necessary information after getting informed consent. Questionnaire included the questions regarding awareness, will, plight to donate eyes, family history of eye donation and reasons for donating and not donating eyes. It also included the source of awareness regarding eye donation. Ethical clearance was taken from the ethical committee of our institute. The data was collected and analyzed using Microsoft excel interpreted.

RESULTS

The present study was conducted among 150 students who were registered in the College in different rounds of counseling and only 106 participants were taken in the study. The sociodemographic profile of the students were shown in Table 1 in which 63(59.43%) were males and 43 (40.57%) were females in which the maximum students were in the age groups of 26-29 years i.e. 53 (50%).

All the students were aware of eye donation but favour for eye donation, willingness to pledge eyes and family history of eye donation in the family was shown in Table 2. Table 3 shows the mode of awareness of eye donation in which maximum awareness was seen by TV 88 (83.02%) followed by newspaper 39 (36.79%).

Table 1: Showing age and origin wise distribution of post graduate medical students.

	Males (n=63) 59.43%	Females (n=43) 40.57%	Total (n=106)	
Age (years)				
23-26	20 (31.75%)	17 (39.53%)	37 (34.90%)	
26-29	29 (46.04%)	24 (55.81%)	53 (50.00%)	
29-32	08 (12.69%)	02 (04.66%)	10 (09.44%)	
32-35	03 (04.76%)	00	03 (02.83%)	
>35	03 (04.76%)	00	03 (02.83%)	
Origin				
Rural	28 (44.44%)	05 (11.63%)	33 (31.13%)	X ² =12.8; df=1 P=0.000
Urban	35 (55.56%)	38 (88.37%)	73 (68.87%)	

Table 2: Showing students' favour, pledge and family history for eye donation.

	Males (n=63)	Females (n=43)	Total (n=106)	
Favour				
Yes	61 (96.82%)	42 (97.67%)	103 (97.17%)	X ² =0.670; df=1 P=0.796
No	02 (03.18%)	01 (02.33%)	03 (02.83%)	
Pledge				
Yes	20 (31.75%)	12 (27.91%)	32 (30.18%)	X ² =0.179; df=1 P=0.672
No	43 (68.25%)	31 (72.09%)	74 (69.82%)	
Pledge by family members				
Yes	14 (22.23%)	17 (39.53%)	31(29.24%)	X ² =3.702; df=1 P=0.054
No	49 (77.77%)	26 (60.47%)	75 (70.76%)	
Family history of eye donation				
Yes	05 (07.94%)	06 (13.95%)	11 (10.38%)	X ² =0.995 df=1 P=0.319
No	58 (92.06%)	37 (86.05%)	95 (89.62%)	

Table 3: Showing different modes of awareness for eye donation.

Source*	Males (n=63)	Females (n=43)	Total (n=106)
Television	54 (85.71%)	34 (79.07%)	88 (83.02%)
Radio	14 (22.22%)	10 (23.26%)	24 (22.64%)
Newspaper	19 (30.16%)	20 (46.51%)	39 (36.79%)
Friends	22 (34.92%)	16 (37.21%)	38 (35.85%)
Relatives	10 (15.87%)	11 (25.58%)	21 (19.81%)
Neighbour	01 (01.59%)	03 (06.97%)	04 (03.77%)
Poster	05 (07.94%)	05 (11.62%)	10 (09.43%)

*The subtotal will not match as multiple options for mode of awareness were given by the participants

Table 4 shows the different aspects regarding eye donation, child registration or donation of eyes during his life time, donor taken to eye bank for removal etc. Table 5 showed the reasons given for eye donation in which 89

(83.96%) believed it as a noble task and 84 (79.24%) also felt that it is a pleasure to help blind. Table 6 showed reasons for not donating eyes.

Table 4: Showing the awareness regarding the knowledge for different aspects for eye donation.

Question	Males (n=63)			Females (n=43)			Total (n=106)			
	Yes	No	Don't know	Yes	No	Don't know	Yes	No	Don't know	
Can child be registered for eye donation?	21 (33.33%)	39 (61.90%)	03 (04.78%)	12 (27.90%)	27 (62.79%)	04 (09.31%)	33 (31.11%)	66 (62.25%)	07 (06.60%)	X ² =1.04 df=2 P=0.594
Can a person donate his eyes during life time?	26(41.26%)	31 (49.22%)	06 (09.52%)	20 (46.51%)	22 (51.17%)	01 (02.32%)	46 (43.39%)	53 (50.00%)	07 (06.60%)	X ² =19.7 df=2 P=0.000
Will donor be taken to eye bank for removal?	16 (25.39%)	41 (65.09%)	06 (09.52%)	05 (11.62%)	34 (79.08%)	04 (09.30%)	21 (19.81%)	75 (70.76%)	10 (09.43%)	X ² =3.15 df=2 P=0.207
Will removal of eye disfigure the body?	07(11.11%)	51 (80.96%)	05 (07.93%)	03 (06.98%)	37 (86.05%)	03 (06.97%)	10 (09.43%)	88 (83.02%)	08 (07.55%)	X ² =0.574 df=2 P=0.750
Can eye of dead be grafted?	44 (69.85%)	13 (20.63%)	06 (09.52%)	38 (88.38%)	03 (06.98%)	02 (04.64%)	82 (77.36%)	16 (15.09%)	08 (07.55%)	X ² =5.10 df=2 P=0.078
Is the whole eye replaced in grafting?	10 (15.87%)	48 (76.19%)	05 (07.93%)	03 (06.97%)	40 (93.03%)	00	13 (12.27%)	88 (83.02%)	05 (04.71%)	X ² =5.93 df=2 P=0.051
If donor has eye problem can that eye be donated?	20 (31.75%)	40 (63.49%)	03 (04.76%)	19 (44.18%)	20 (46.52%)	04 (09.30%)	39 (36.79%)	60 (56.60%)	07 (06.61%)	X ² =3.175 df=2 P=0.204
Can animal eye be used for grafting?	12 (19.04%)	48 (76.19%)	03 (04.77%)	08 (18.60%)	35 (81.40%)	00	20 (18.86%)	83 (78.30%)	03 (07.84%)	X ² =2.139 df=2 P=0.343

Table 5: Showing reasons for willingness for eye donation.

Reasons*	Males (n=63)	Females (n=43)	Total (n=106)
Noble task	53 (84.12%)	36 (83.72%)	89 (83.96%)
Pleasure to help Blind	47 (74.60%)	37 (86.04%)	84 (79.24%)
Can give vision to a person?	53 (84.12%)	36 (83.72%)	89 (83.96%)
Influenced by reading an article	34 (53.96%)	12 (27.90%)	46 (43.395)
Friend or relative has donated eye	30 (47.61%)	10 (23.25%)	40 (37.73%)
Friend or relative has received eye	31 (49.20%)	07 (16.27%)	38 (35.84%)
Influenced by any lecture	34 (54.96%)	08 (18.60%)	42 (39.62%)

*The subtotal will not match as multiple options are given for their reasons

Table 6: Showing reasons for not willing for eye donation.

Reasons*	Males (n=63)	Females (n=43)	Total (n=106)
Lack of awareness	18 (28.57%)	04 (09.30%)	22 (20.75%)
Objection by family members	18 (28.57%)	04 (09.30%)	22 (20.75%)
Body's ill treatment after death	13 (20.63%)	02 (04.65%)	15 (14.15%)
Disliking in separation of eyes from body	13 (20.63%)	02 (04.65%)	15 (14.15%)
Unsuitability to donate eyes because of age	11 (17.46%)	02 (04.65%)	13 (12.26%)
Unsuitability to donate eyes because of health problem	13 (20.63%)	03 (06.97%)	16 (15.09%)
Religious restrictions	12 (19.04%)	02 (04.65%)	14 (13.20%)
Signing eye donation is like signing death certificate	11 (17.46%)	02 (04.65%)	13 (12.26%)

*The subtotal will not match as multiple options are given for their reasons

DISCUSSION

In the present study 100% of the students had heard about eye donation but the study done by Priyadarshini et al.⁶ in southern India only 50.69% of the respondents had heard about eye donation. This difference could be attributed to fact that this study has been done among post graduate medical students who were likely to be better informed while that study was done among general population.

Females were more informed than males. The study quoted by Bhandari et al.⁷ also showed similar results. In the present study 103 (97.17%) favoured eye donation but only 32 (30.18%) showed their willingness to pledge eyes for donation. This was very low in comparison to the study done by Dhaliwal et al.⁸ who reported that 80% of the students were willing to donate eyes. The results are not encouraging and they themselves are not much motivated. In another study willingness for eye donation was seen in 66 (41.5%) whereas 93 (58.5%) females refused eye donation in families of post mortem cases.⁹

In the present study 88 (83.02%) had the source of information by television followed by newspaper and friends, 39 (36.79%), 38 (35.85%) respectively. Similar results were shown in the study done by Singh et al.¹⁰ which showed 77.8% source by television.

In the study done by Tondon R et al.⁹ information by mass media was the main reason in 61.3% of students for

the high level of awareness. Mass media in the form of television, news-paper, magazines and posters were important source of information on eye donation, other students also found publicity campaign and the media to be the major source of information on this issue.⁹

In another study by Singh P et al.¹⁰ and Golchet G et al.¹¹ among hospital staff, 97% of them had good to excellent knowledge about transplantation of various human organs. In another study by Dandona R et al. age gender adjusted prevalence of awareness of eye donation was 73.8%.¹²

CONCLUSION

To conclude from the present study it highlights the fact that though post graduate medical students were aware about eye donation but still 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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REFERENCES

1. Richard L. Eye donation, the gift of sight. *Nightingale Nurs Times.* 2009 Jul;5(4):24-5.
2. Kasturi SR. The eye health. In: Kasturi SR, eds. *Community Health Nursing.* 3rd ed. Chennai: K.V. Mothers Publication; 2000.
3. Mohan RK. Eye donation, 2014. Available at: <http://www.mohanfoundation.org>. Accessed 14 July 2014.
4. National Programme for Control of Blindness (NPCB). Consolidated report for the eye donation centres under Nehru Drishti Yojna in Haryana for the year 2010. In: NPCB, eds. *NPCB Report.* India: Government of India, Ministry of Health & Family Welfare; 2010.
5. Kannan KA. Eye donation movement in India. *J Indian Med Assoc.* 1999;97:318-9.
6. Priyadarshini B, Srinivasan M, Padhmavati A, Selvam R, Nirmalan PK. Awareness of eye donation in an adult population of southern India. A pilot study. *Indian J Ophthalmol.* 2003;51:101-4.
7. Bhandari S, Khanna R, Rao KA, Rao LG, Lengman KD, Binu V. Eye donation awareness and willingness among attendants of patients at various clinics in Melaka Malaysia. *Indian J Ophthalmol.* 2011 Jan-Feb;59(1):41-5.
8. Dhaliwal U. Enhancing Eye donation rates. Training students to be motivators. *Indian J Ophthalmol.* 2002;50:209-12.
9. Tondon R, Verma K, Vanathy M, Pandey RM, Bajpayee RB. Factors affecting eye donation from post-mortem cases in a tertiary care hospital. *Cornea.* 2004 Aug;23(6):597-601.
10. Singh MM, Rahi M, Pagare D, Ingle GK. Medical students perception on eye donation in Delhi. *Indian J Ophthalmol.* 2007 Jan-Feb;55(1):49-53.
11. Golchet G, Carr J, Harris MG. Why don't we have enough cornea donors? A literature review and survey. *Optometry.* 2000;71:318-28.
12. Dandona R, Dandona L, Naduvilath TJ, McCarty C A, Rao GN. Awareness of eye donation in an urban population in India. *Aust NZ J Ophthalmol.* 1999;27:166-9.

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