



ORIGINAL RESEARCH PAPER

Ayurveda

KNOWLEDGE, ATTITUDE AND WILLINGNESS TOWARDS EYE DONATION AMONG STUDENTS OF CHHATTISGARH AYURVEDIC MEDICAL COLLEGE, RAJNANDGAON: A CROSS SECTIONAL STUDY

KEY WORDS: eye donation, Ayurvedic, Rajnandgaon

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ABSTRACT

Introduction - National Programme for Control of Blindness (NPCB) estimated that there are currently 120,000 corneal blind persons in India, and every year, there is an addition of 25,000e30,000 cases with corneal blindness.

Material and Methods – This cross-sectional study was conducted among students of Ayurveda at Ayurvedic College, Rajnandgaon, Chhattisgarh. Proforma was consist of sociodemographic factors, source of information, 17 questions of knowledge and 7 questions of attitude.

Results – Almost all study subjects i.e. 98.07% had heard about eye donation. 82.69% of the study subjects knew that eye can be donated. 55.76% of the study subjects knew eyes can be donated before death. 67.30% of the study subjects knew that next to kin has right to give consent for eye donation.

Conclusion - Our study shows that there is insufficient knowledge about eye donation, and an alarmingly low willingness to pledge eyes for donation among Ayurvedic students.

INTRODUCTION

National Programme for Control of Blindness (NPCB) estimated that there are currently 120,000 corneal blind persons in India, and every year, there is an addition of 25,000-30,000 cases with corneal blindness. [1]

A major treatment option for restoring sight in those with corneal blindness is through corneal transplantation which can only be accomplished through cornea donation. Presently in India, the donor eye collection is around 22,000 eyes every year, which is insignificant with respect to the requirement. [2]

According to World Health Organization (WHO) estimates, every 5 s, someone goes blind. [3] There are currently about 45 million blind people in the world which increases by 1-2 million every year. [4]

Damage to the cornea is the second most common cause of visual impairment and blindness which accounts for about 6-8 million of the total blind cases in the world. [4,5]

The majority of blinding corneal damage in the form of trachoma affects 4.9 million individuals. Other major causes include ocular trauma, ulceration, xerophthalmia, ophthalmia neonatorum, onchocerciasis, leprosy, and use of traditional eye medicines. [6]

Corneal blindness is an important public health problem in India. [6] Approximately 0.46% of the adult Indian population suffers from corneal blindness which could have been treated by corneal Knowledge and attitude towards eye donation among health professionals of northern India. The Corneal Opacity Rural Epidemiological (CORE) study that was designed to generate population-based data on prevalence and causes of corneal morbidity and blindness in a rural North Indian population revealed prevalence of corneal disease to be 3.7% and that of corneal blindness to be 0.12%. [7,8]

The annual need of corneal transplantation to remove the corneal blindness backlog is about 2.77 lakh corneal transplantations, whereas only 63 256 donor corneas were collected in the country during 2016–17. [9]

Therefore, this study is conducted to increase awareness about eye donation.

AIM AND OBJECTIVE

- a) To study the knowledge, attitude and willingness towards eye donation.
- b) To increase the awareness about eye donation.

MATERIAL AND METHODS

This cross-sectional study was conducted among students of Ayurveda at Chhattisgarh Ayurvedic Medical College, Rajnandgaon.

Inclusion Criteria: Students who have given consent for the study.

Exclusion Criteria: Students of first and second year of Ayurveda.

Sample size:

It was calculated by assuming the knowledge about awareness of the existence of eye donation 97.9% from study awareness and knowledge on eye donation among Allied Health Sciences, medical, and nursing students in Goa. [10] Assuming the absolute error of 5% and 95% confidence interval, sample size calculated was 32.

Data collection:

The data collection was done between January 2020 and February 2020. Permission was obtained from institutional ethical committee and from the Head of the department. All students of third year of Ayurveda were included to met the sample size. Universal sampling was done.

Informed consent was taken before they participate in the study. The aim of the study was explained to each respondent. Participants were contacted after their theory lecture.

Proforma was filled by study subjects. Proforma was consist of sociodemographic factors, source of information, 17 questions of knowledge and 7 questions of attitude. After completion of study, one session about eye donation was taken to increase knowledge and awareness of eye donation. Total 52 study subjects participated in this study.

Statistical Analysis:

Data was analyzed and tabulated using frequency distribution tables and proportions.

RESULTS

Table 1 shows distribution of study subjects according to socio-demographic factors. Majority of study subjects were from age group 21-23. Majority of the study subjects i.e.

57.70% were female and majority of the study subjects i.e. 67.30% were from urban area.

Table 2 shows distribution of study subjects according to source of information. Most common source of information for eye donation was internet i.e. 36.53% followed by family and friends i.e. 34.61%. Other sources of information were newspaper and television.

Table 3 shows distribution of study subjects according to knowledge about eye donation. Almost all study subjects i.e. 98.07% had heard about eye donation. 82.69% of the study subjects knew that eye can be donated. 55.76% of the study subjects knew eyes can be donated before death. 67.30% of the study subjects knew that next to kin has right to give consent for eye donation. 96.15% of the study subjects knew that a person with communicable disease cannot donate eyes. 96.15% of the study subjects knew that the ideal time to retrieve eyes after death. 30.76% of the study subjects knew that eyes can be removed at donor's house itself. 96.15% of the study subjects knew that during transplantation, which part of donated eye is used for transplantation i.e. cornea. 61.53% of the study subjects knew that eye donation does not causes disfigurement of the face of the donor. 57.69% of the study subjects knew that the name of the donor and recipient remain anonymous. 88.46% of the study subjects knew that family will not be charged for donation of eyes. Only 13.46% of the study subjects knew that medical illness patient can donate the eyes. Only 40.38% of the study subjects knew that there is no any age limit for eye donation. Only 3.85% of the study subjects knew that there is an eye bank in our city. Only 51.92% of the study subjects knew that patients using spectacles can donate eyes. Only 28.84% of the study subjects knew that person with eye problem like cataract or glaucoma can donate their eyes. 80.76% of the study subjects knew that prior permission required for eye donation.

Table 4 shows the distribution of study subjects according to attitude about eye donation. 40.38% of the study subjects felt eye donation means donation of one's eye after death and other 40.38% felt giving sight to blind. 17.30% of the study subjects felt that eyes donation is against their religious belief. 67.30% of the study subjects felt that eye donated is misused or abused. 01.92% of the study subjects believed in myths like we will be born blind in the next life after eye donation. 96.15% of the study subjects had opinion that eye donation is good and notable thing. 65.38% of the study subjects said that every person donates their eyes after death. Table 5 shows distribution of study subjects according to willingness towards eye donation. 53.84% of the study subjects were willing to donate their eyes.

Table 1. Distribution of study subjects according to socio-demographic factors.

Socio-demographic factors	Number	Percentage
Age (years)		
21-23	27	51.92
24-26	22	42.30
27-29	03	05.76
Gender		
Male	22	42.30
Female	30	57.70
Residence		
Urban	35	67.30
Rural	17	32.70
Total	52	100

Mean age was 23.71 ± 1.51 (21-29).
 M:F ratio was 1:1.36.
 Urban:Rural ratio was 1:0.48.

Table 2. Distribution of study subjects according to source of information.

Source of information	Number	Percentage
Family and friends	18	34.61

Newspaper	03	05.76
Internet	19	36.53
Television	02	03.84
Total	52	100

Table 3. Distribution of study subjects according to knowledge about eye donation.

Knowledge Question	Response	Number	Percentage
Have you heard about eye donation?	Yes	51	98.07
	No	01	01.93
	No response	00	00
Can eye be donated?	Yes	43	82.69
	No	09	17.31
	No response	00	00
Weather the eyes can be donated only after death?	Yes	22	42.30
	No	29	55.76
	No response	01	01.93
Is next to kin has right to give consent for eye donation?	Yes	35	67.30
	No	04	07.69
	No response	13	25.00
What is the ideal time to retrieve eyes after death?	Up to 6 hours	50	96.15
	Up to 8 hours	01	01.93
	Up to 10 hours	01	01.93
A person with communicable disease can donate eyes?	Yes	00	00
	No	50	96.15
	No response	02	03.85
Can eyes be removed at donor's house itself?	Yes	16	30.76
	No	35	67.30
	No response	01	01.93
During transplantation, which part of donated eye is used for transplantation?	Corneas (layer in front of black portion of the eye)	50	96.15
	Whole eyeball	02	03.85
Eye donation causes disfigurement of the face of the donor?	Yes	12	23.07
	No	32	61.53
	No response	08	15.38
Does the name of the donor and recipient remain anonymous?	Yes	30	57.69
	No	14	26.92
	No response	08	15.38
Will be family charged for donation of eyes?	Yes	04	07.69
	No	46	88.46
	No response	02	03.85
Can medical illness patient donate the eye?	Yes	07	13.46
	No	45	86.53
	No response	02	03.85
Is there any age limit for eye donation?	Yes	28	53.84
	No	21	40.38
	No response	03	05.76
Is there an eye bank in our city?	Yes	02	03.85
	No	41	78.84
	No response	09	17.30
Can patients using spectacles donate eyes?	Yes	27	51.92
	No	13	25.00
	No response	12	23.07
Does person with eye problem like cataract or glaucoma cannot donate their eyes?	Yes	35	67.30
	No	15	28.84
	No response	02	03.85
Is prior permission required for eye donation?	Yes	42	80.76
	No	01	01.92
	No response	09	17.30

Table 4. Distribution of study subjects according to attitude about eye donation.

Attitude Question	Response	Number	Percentage
Eye donation means?	Service to mankind	10	19.23
	Donation of one's eye after death	21	40.38
	Giving sight to blind	21	40.38
	No response	00	00
Is eyes donation against your religious belief?	Yes	09	17.30
	No	41	82.70
	No response	00	00
Do you feel that eye donated misused or abused?	Yes	35	67.30
	No	09	17.30
	No response	08	15.38
Do you believe in myths like we will be born blind in the next life after eye donation?	Yes	01	01.92
	No	50	96.15
	No response	01	01.92
As per your opinion, eye donation is good and notable thing?	Yes	50	96.15
	No	00	00
	No response	02	03.84
According to you, should every person donate their eyes after death?	Yes	34	65.38
	No	06	11.53
	No response	12	23.07

Table 5. Distribution of study subjects according to willingness towards eye donation.

Willingness question	Response	Number	Percentage
Are you willing to donate your eyes?	Yes	28	53.84
	No	16	30.76
	No response	08	15.38

DISCUSSION

Similar results were found in study conducted by Barsha Lal, et al. In that study, mass media (62.9%) was the foremost source of information regarding eye donation. [10] In this study, most common source of information for eye donation was internet i.e. 36.53% followed by family and friends i.e. 34.61%. Total mass media source for information was 46.13%.

Out of 340 participants, only 145 (42.6%) were willing to donate their eyes whereas only 70 (20.6%) were willing to donate their relative's eyes. [10] In this study, 53.84% of the study subjects were willing to donate their eyes.

In that study, twenty-nine (8.6%) participants were not aware of whom to contact for eye donation. Most of the participants, 301 (88.8%), knew that an eye specialist/doctor/surgeon should be contacted for eye donation. The majority of the participants, 189 (55.6%), were aware of the existence of eye banks in Goa i.e. the Rotary Eye Bank. The ideal time for eye donation which is within 6 h of death was known to 201 (59.1%) participants. Only 60 (17.6%) participants were aware that the whole eye can be removed from the donor while 215 (63.2%) were aware that the cornea can be removed separately. Most of the participants, 238 (70.0%), knew that the cornea is the part of the eye which is used for transplantation. 100 (29.4%) participants did not know for how long the donor eye can be stored before transplantation. Third and final year participants were more aware of eye donation. [10]

Another study conducted by Neelam Rudra, et al had some different findings. In that study, of the 600 participants, 138 participants (23%) had 'excellent' knowledge and 234 participants (39%) had 'good' knowledge about eye donation. [11]

CONCLUSIONS

Our study shows that there is insufficient knowledge about eye donation, and an alarmingly low willingness to pledge eyes for donation among Ayurvedic students. Concerted efforts are required to alter their knowledge, attitude and willingness to strengthen the eye donation.

RECOMMENDATION

There should be regular session about eye donation in schools and colleges to increase knowledge and to improve awareness and willingness about eye donation among students and people of India.

ACKNOWLEDGEMENT

We acknowledge the contribution of Ayurvedic students (study subjects) who played an important role in successful implementation of the study and Dr Sandip Zurmure who played an important role in successful analysis of the results.

REFERENCES:

- [1]. National Programme for Control of Blindness; 2017. <http://pbhealth.gov.in/pdf/Blindness.pdf>. Accessed 23 October 2017.
- [2]. Dafne LP, Dangre DM, Patil AB, Wangikar VD. Who cares for eye donation. *Int J Public Health Hum Rights*. 2012;2(1):11e15.
- [3]. World Health Organization. Media Centre. <http://www.who.int/mediacentre/news/releases/pr79/en/>; 2017. Accessed 23 October 2017.
- [4]. World Health Organization. Bulletin of the World Health Organization; 2001. [http://www.who.int/bulletin/archives/79\(3\)itmb.pdf](http://www.who.int/bulletin/archives/79(3)itmb.pdf). Accessed 23 October 2017.
- [5]. World Health Organization. Prevention of Blindness and Visual Impairment; 2017. <http://www.who.int/blindness/causes/en/>. Accessed 23 October 2017.
- [6]. Gupta N, Tandon R, Gupta SK, Sreenivas V, Vashist P. Burden of corneal blindness in India. *Indian J Community Med Off Publ Indian Assoc Prev Soc Med*. 2013;38(4):198e206.
- [7]. Gupta N, Vashist P, Tandon R, Gupta SK, Dwivedi S, Mani K, et al. Prevalence of corneal diseases in the rural Indian population: The corneal opacity rural epidemiological (CORE) study. *Br J Ophthalmol* 2015;99:147-52.
- [8]. Cornea collection during 11th Five-Year Plan. National Programme for the Control of Blindness. Available at www.npcb.nic.in/writereaddata/mainlinkfile/File324.pdf (accessed on 3 Jun 2017).
- [9]. Eze BI, Okoye O, Eze JN. Knowledge and attitudes regarding eye donation and corneal transplant: Medical versus nonmedical university students in a developing country in Africa. *Exp Clin Transplant* 2014;12:454-61.
- [10]. Barsha Lal, Ugam Usgaonkar, Harshada Narvekar, Dinesh Venugopal. Awareness and knowledge on eye donation among Allied Health Sciences, medical, and nursing students in Goa. *Journal of Current Ophthalmology*, 2018;30:255-62.
- [11]. Neelam Runda, Anita Ganger, Noopur Gupta, Archita Singh, Praveen Vashist, Radhika Tandon. Knowledge and attitude towards eye donation among health professionals of northern India. *The National Medical Journal of India*, 2019; 32(1):9-12.