



ASSESSMENT OF KNOWLEDGE AND AWARENESS ON EYE DONATION AMONG STUDENTS IN A TERTIARY TEACHING HOSPITAL--AN ANALYTICAL STUDY

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ABSTRACT **AIM:** The aim of our study was to assess the awareness and knowledge on eye donation among medical, paramedical students in a tertiary teaching hospital. **MATERIALS AND METHOD:** A Cross sectional study was conducted among 448 medical, paramedical students in a tertiary teaching hospital at Sri Ramachandra Institute of Higher Education and Research for three months. A pretested semi structured questionnaire (20 questions) consisting of general information like age, sex, course and various aspects about eye donation and they were requested to select one option. Statistical analysis of results were done using SPSS statistics software 23.0 Version. **RESULTS:** Out of 448 students in our study 64.3% students were aware of the shortage of corneal donors. 77.7% knew that eye has to be retrieved within 6 hours after death. 95.3% considered its their responsibility to spread awareness about eye donation. Mass media (62.1%) was the leading source of information, whereas doctors played only a minor role (2.7%) .18.5% denied eye donation as religious beliefs (43%) found to be the major barrier. **CONCLUSION:** Our study shows that both medical and paramedical students have good knowledge, awareness and willingness for eye donation. A well knowledgeable student can act as a messenger to create awareness about eye donation in the community and they must be encouraged to conduct awareness camps along with other community groups, as they are the future health care providers for the community. Considering the low contribution for the source of eye donation by doctors, it's the responsibility of future health care workers to spread the awareness.

KEYWORDS : Eye donation, blindness, corneal transplantation, corneal retrieval.

INTRODUCTION:

India holds second place globally in blindness with a prevalence of 0.45%¹. Corneal diseases remain an important cause of visual impairment in the developing world, with corneal transplantation as the mainstay treatment. In India to perform 1,00,000 corneal transplants around 2,70,000 donor eyes are expected to be donated². Vision 2020 aims to eliminate the avoidable causes of blindness by the year 2020. In developing countries ocular trauma and corneal ulceration accounts to 90% of the global cases leading to corneal blindness³. Regardless of the underlying causes like corneal ulceration and ocular trauma, eye remains blind throughout the individual's life due to corneal scarring.

Paucity of awareness of shortage of eyes poses a major hindrance in reducing the burden of corneal blindness in spite of advanced surgical techniques. Government of India holds eye donation fortnight every year from August 25th to September 8th which aims to spread the importance of eye donation and motivate the public to pledge their eyes after death. Social and religious myths, lack of motivation among public stays as an evident barriers of eye donation. Therefore it is essential to encounter these misconceptions through proper education and communication.

There is a lack of knowledge and awareness on eye donation and willingness for the same amongst the public especially the youth. Hence the aim of the study is to assess the knowledge, and awareness level regarding eye donation among medical and paramedical students in a tertiary teaching hospital.

MATERIALS AND METHODS:

This cross sectional study was conducted after getting institutional ethical clearance. With expected proportion of 0.979, precision of 1.2% and confidence level of 95% the sample size was calculated as 448. 448 students from medical and paramedical courses of SRIHER who were willing to participate were included in the study. The duration of the study was 6 months. A pretested semi-structured questionnaire in English containing general information and various aspects about eye donation like knowledge, awareness about the shortage of eye donors, the time limit for cornea retrieval, awareness regarding existences of eye bank and various sources for knowing about eye donation was asked for. The major causes for denying pledging were also included. The results of the study were statistical analyzed with SPSS software 23.0 version.

INCLUSION CRITERIA:

- Medical -2nd and 3rd year MBBS students
- Paramedical -Allied health sciences, nursing, nutrition, physiotherapy, trauma care management students were included.

EXCLUSION CRITERIA:

- Students who were not willing to participate in the study.

RESULTS:

All 448 students who participated in the study submitted their responses. 157 students were male and 291 students were female. 64.3% of students were aware of the shortage of eye donors in our country. Only 19.2% of students knew that the eye cannot be donated if the donor has communicable diseases. Regarding the knowledge about the time limit for eye removal 77.7% knew the eye has to be removed within 6 hrs after death, 16.7% by 24hrs, 3.8% by 48hrs and 1.8% by 48 hrs (Figure 1). 21.9% knew the whole globe will be removed during enucleation.

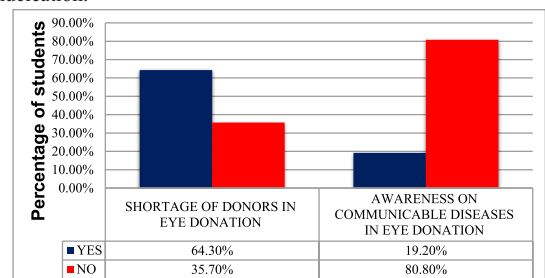


Figure 1: Questionnaire- Knowledge On Eye Donation

75.7% knew that corneal causes are the leading cause of blindness. 75% were aware of the existence of the eye bank. 95.3% of students considered that it's their responsibility to spread awareness about eye donation among society. Among the source for knowing eye donation mass media played a major role 62.1% followed by a hospital (21.2%), campaign (14.1%) and doctors (2.1%) (Figure 2).

18.5% were not willing to pledge their eyes. Religious reasons (43%) were the major cause for denying pledging followed by facial disfigurement 24.3%, family objection 24.2% and 8.7% didn't know

where to contact for donating the eyes (Figure 3).

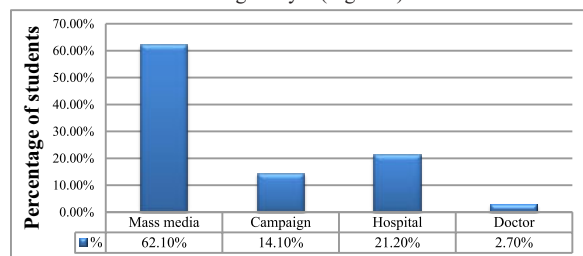


Figure 2: Questionnaire -source For Knowing About Eye Donation

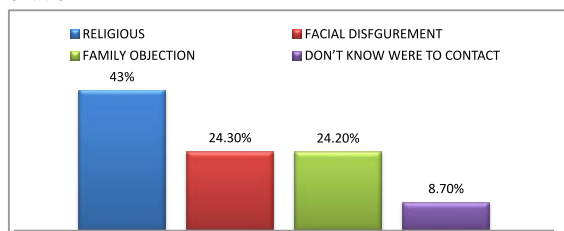


Figure 3: questionnaire-reasons for denying pledging of eyes.

DISCUSSION:

Blindness due to corneal causes can be treated only if we have enough number of eyes. 1 billion people have the preventable causes of blindness in which corneal opacities account for 4.2 million. Adults and children in Asia have 20 times higher incidence of cornea related vision loss when compared to industrialized countries⁴. In India 11 lakh people are waiting for transplantation and approximately 25000 new cases are being reported⁷. This burden of corneal blindness can be reduced only with corneal transplants for which eye donation acts as a bridge. Our study focused on assessing the awareness and knowledge on eye donation in medical and paramedical students in tertiary teaching hospital at SRIHER.

In our study 98.4% of students were aware of the eye donation which was similar to other studies by Barsha et al (97.7%)⁶, Dandona et al (73.8%)⁷ and Patilet al (80.6%)⁸. Mass media played a major role in spreading awareness (62.1%) which was similar to study by Dandona et al and Krishnaiah et al⁹. We found a low contribution from doctors in spreading the awareness (2.7%). Doctors who stand at the forefront in treating and creating awareness amongst patients were however found to give forth a very low contribution with regards to eye donation awareness in our study contributing to 2.7% of the total. Priyadarshini et al found that campaigns were major source for eye donation¹⁰. Shortage of donors pose a major problem for eye donation. We consider that awareness of the shortage of donors will be the first step to overcome the shortage. In our study 64.3% were aware about this shortage.

For a success of a corneal transplant, retrieval of the cornea within 6hrs after death, health status and cause of death of the donor play an important role. Due to emotional affliction and loss experienced by the family of the deceased individual, there occurs a significant time delay in informing the concerned hospital authorities regarding the willingness for eye donation and retrieval. Cornea from donors due to communicable diseases cannot be used. Only 19.2% knew that eyes cannot be donated if the deceased had communicable diseases. 77.7% knew the eye should be removed within 6 hrs which is better when compared to study done by Rangu et al (63.3%)¹¹. 81.5% were willing to pledge their eyes which were similar to other studies by Gupta et al (85.1%)¹² and Singh et al (87.2%)¹³. However in a study by Tandon et al 58.5% were not willing to pledge their eyes and the reason being refusal to discuss about donating eyes and dissuasion by distant relatives and religious beliefs¹⁴. Singh et al found that lack of awareness about eye donation found to be the major reason but in our study we found that the religious cause (43%) was the major reason.

CONCLUSION:

Our study shows that both medical and paramedical students have good knowledge, awareness and willingness for eye donation. Doctors who stand at the forefront in treating and creating awareness amongst patients were however found to give forth a very low contribution with regards to eye donation awareness in our study. Students can act as a

messenger to create awareness about eye donation in the community. Students must be encouraged to conduct awareness camps along with other community groups, as they are the future health care providers for the community.

LIMITATION OF STUDY:

This study was conducted among medical and paramedical students. However these results cannot be extrapolated to the general public.

REFERENCES:

1. Visual Impairment & Blindness Global Data & Statistics. (2018, August 2). LESH. <https://www.lasereyesurgeryhub.co.uk/visual-impairment-blindness-data-statistics/>
2. Directorate General Of Health Services. (n.d.). Retrieved October 16, 2020, from https://dghs.gov.in/content/1354_3_NationalProgrammeForControlOfBlindnessVisual.aspx
3. Kumar, A., & Vashist, P. (2020). Indian community eye care in 2020: Achievements and challenges. *Indian Journal of Ophthalmology*, 68(2), 291.
4. Whitcher, J. P., Srinivasan, M., & Upadhyay, M. P. (2001). Corneal blindness: A global perspective. *Bulletin of the World Health Organization*, 79(3), 214–221.
5. Eye Bank Association of India. (n.d.). Retrieved December 6, 2020, from <http://www.eba.org.in/>
6. Lal, B., Usgaonkar, U., Narvekar, H., & Venugopal, D. (2018). Awareness and knowledge on eye donation among Allied Health Sciences, medical, and nursing students in Goa. *Journal of Current Ophthalmology*, 30(3), 255–262.
7. Dandona, R., Dandona, L., Naduvilath, T. J., McCarty, C. A., & Rao, G. N. (1999). Awareness of eye donation in an urban population in India. *Australian and New Zealand Journal of Ophthalmology*, 27(3–4), 166–169.
8. Patil, R., E., R. P., Boratne, A., Gupta, S. K., & Datta, S. S. (2015). Status of Eye Donation Awareness and Its Associated Factors Among Adults in Rural Pondicherry. *Journal of Clinical and Diagnostic Research*: JCDR, 9(2), LC01–LC04.
9. Krishnaiah, S., Kovai, V., Nutheti, R., Shamanna, B. R., Thomas, R., & Rao, G. N. (2004). Awareness of eye donation in the rural population of India. *Indian Journal of Ophthalmology*, 52(1), 73.
10. Priyadarshini, B., Srinivasan, M., Padmavathi, A., Selvam, S., Saradha, R., & Nirmalan, P. K. (2003). Awareness of eye donation in an adult population of southern India. A pilot study. *Indian Journal of Ophthalmology*, 51(1), 101–104.
11. Rangu, V. L., Rangu, R. V., & Akhade, N. (2014). Study to Assess the Awareness and Perception of Eye Donation among Medical Students. 11(1), 3.
12. Gupta, A., Jain, S., Jain, T., & Gupta, K. (2009). Awareness and Perception Regarding Eye Donation in Students of a Nursing College in Bangalore. *Indian Journal of Community Medicine*: Official Publication of Indian Association of Preventive & Social Medicine, 34(2), 122–125.
13. Singh, M. M., Rahi, M., Pagare, D., & Ingle, G. K. (2007). Medical students' perception on eye donation in Delhi. *Indian Journal of Ophthalmology*, 55(1), 49.
14. Tandon, R., Verma, K., Vanathi, M., Pandey, R. M., & Vajpayee, R. B. (2004). Factors affecting eye donation from postmortem cases in a tertiary care hospital. *Cornea*, 23(6), 597–601.