

A study on awareness about eye health care and eye donation among secondary level students of North Kolkata, India

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ABSTRACT

Background

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.

Objectives

The aim of the study is to assess the awareness of eye health care and eye donation among secondary level school students of North Kolkata.

Methods

It was a cross-sectional study. Settings: Eight Government aided schools of North Kolkata, West Bengal, India. A total of 1525 students of standard VIII, IX and X of Government aided schools of North Kolkata participated in this study. A pre-tested, semi-structured questionnaire was administered on eye health care and eye donation.

Results

1284 (84.2%) participants opined that awareness on eye health care can prevent most of the blindness and 1206 (79.1%) students knew that Vitamin A has important role in prevention of childhood blindness. Majority, 1235 (81.0%) students were aware of eye donation after death while only 489 (32.1%) participants knew that the ideal time for eye donation is within 6 hours of death. 802 (52.6%) participants mentioned printed and electronic media (like newspaper and television) as the major source of information on eye donation.

Conclusions

Media publicity to increase awareness of eye donation and eye health care is not enough. Strategies have to be developed to educate the students, so that they can act as motivators for enhancing eye donation and increasing eye health care awareness in the community.

Key Words

awareness, corneal blindness, eye donation, school students

INTRODUCTION

Corneal diseases are important causes of blindness in developing countries like India.^{1,2} Corneal scarring due to keratitis and ocular trauma are major causes of unilateral and bilateral corneal blindness in children and young adults.³ 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% (95% CI: 0.06-0.24), constituting 9% of all blindness.⁴ There are approximately 18.7 million cases of blindness in India.⁵ Among them

1,90,000 are blind due to bilateral corneal disease.⁶ Each year about 20000 new cases of corneal blindness is added to the existing list.⁷ Though strategies towards prevention of corneal blindness are more cost effective, the major treatment option is corneal transplantation for those who are having corneal blindness. As the current rate of procurement of donor cornea is only about 22,000 per year, the backlog of corneal transplantation is growing.⁸

Students are an important part of our society. Children below the age of 16 years accounts for 40% of Indian population.⁹ If they are educated about different aspects of

eye health care and eye donation, they can act as important present and future motivators.¹⁰ This study was conducted to assess the awareness regarding eye health care and eye donation among secondary level school students of North Kolkata, West Bengal, India.

METHODS

It was a cross-sectional study and conducted between 25th August to 8th September 2008, the period that is observed as National Fortnight on Eye Donation in India. The study was carried out in eight randomly selected Government aided schools of North Kolkata. All the students of standard VIII, IX and X of these 8 schools constituted the study population. After having Institutional Ethical Clearance, all the 8 schools were contacted 2 weeks prior to the study. After explaining the nature and purpose of the

study to the school authority, the respective classes of all the schools were briefed to ensure maximum attendance and participation on that particular day of survey. All the schools were surveyed on separate days. Finally, we could cover all the students present on that particular day of survey and that came to 1525. We used a pre-tested, semi-structured questionnaire to obtain information from the students. Questions were in local language and it included demographic details, student's knowledge and awareness regarding eye health care, eye donation and sources of information regarding eye donation. The ophthalmologists and para medical ophthalmic assistants of a tertiary care level hospital of Kolkata collected all the information.

Table 1. Responses of the study subjects on different aspects of eye health care *n= 1525*

Responses	Number	%
Most of the blindness can be prevented if awareness are generated on eye health		
Yes	1284	84.2
No	150	9.8
No response	91	6.0
Vitamin A has important role in prevention of childhood blindness		
Yes	1206	79.1
No	196	12.9
No response	123	8.0
Most of the green leafy vegetables and yellow fruits contain abundant Vitamin A		
Yes	1049	68.8
No	338	22.2
No response	138	9.0
Students should take active role in spreading awareness among family members		
Yes	1432	93.9
No	25	1.6
No response	68	4.5
First eye screening should be done		
Within 6 months of age	97	6.4
6 months -3 years of age	821	53.8
3 - 6 years of age	328	21.5
No response	279	18.3

Table 2. Responses of the study subjects on different aspects of eye donation *n= 1525*

Responses	Number	%
Eyes can be collected from donor after death		
Yes	1235	81.0
No	95	6.2
No response	195	12.8
Eye can be donated after death		
Within 6 hours	489	32.1
More than 6 hours	613	40.2
No response	423	27.7
Source of information on eye donation		
Medical personnel	201	13.2
Teacher	104	6.8
TV, newspaper or other media	802	52.6
Family member	128	8.4
No response	290	19.0
Blind religious belief is an important obstacle in eye donation		
Yes	1193	78.2
No	239	15.7
No response	93	6.1

RESULTS

Among 1525 students 687 (45%) were male and rest 838 (55%) were female. Out of them 53.9% respondents belonged to age group 13 – 15 years, while 42.2% and 3.9% were in the age group 15 – 17 and 17 – 19 years respectively, with an overall mean age being 14.5 ± 1.1 years.

Majority of the respondents (84.2%) opined that blindness can be prevented if awareness is generated upon eye health care. A large number of respondents (79.1%) knew that Vitamin A has important role in prevention of childhood blindness and 68.8% had the knowledge that it is present abundantly in green leafy vegetables and yellow fruits. Almost all the respondents (93.9%) were in favour of active involvement of themselves in spreading awareness regarding eye donation & eye health care among their family members. Only 97 respondents (6.4%) were in favour of first eye screening within 6 months of age (Table 1).

Among 1525 respondents 1235 (81.0%) students were aware about eye donation but only 32.1% (489) knew that ideally it should be collected within 6 hours of death. Mass media like TV, newspaper and others was the major source of information on eye donation according to 802 (52.6%) students. Blind religious belief was mentioned as an important obstacle in eye donation by 78.2% respondents (Table 2).

DISCUSSION

A large proportion of corneal blindness is avoidable.¹¹ Though strategies to prevent corneal blindness are more cost effective, corneal transplantation remains the major treatment option. The statistics on eye donation in India shows that there is a considerable and constantly growing backlog of corneal transplantation.⁸ In the present scenario 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 81%, students had knowledge of eye donation. In a study conducted among medical students 99.4% participants were aware of eye donation.¹ In another study among south Indian population, 50.7% respondents were aware of it.¹⁴ Only 32.1% 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. Another study conducted on medical and non- medical students revealed that 63.3% of the former group and 62.5% of the non- medical students were aware of eye donation within 6 hours of death.¹⁰ The timing of eye donation is very important. If the eyes can not 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.

Present study revealed that large number of students (79.1%) had knowledge about vitamin A's important role in prevention of childhood blindness and 68.8% had knowledge about the dietary sources of vitamin A. They have acquired this knowledge as they are being taught about it in their classes.

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.^{12,13} If the students are educated they can raise the awareness among their family members thus ultimately enhancing eye donation rates.

CONCLUSIONS

Students are the future of every society, as well as potential messenger to transmit different information. Although most of the students are in favour of active involvement to transmit knowledge, but lack of awareness is the main hindrance. Data from our study suggests that only media publicity is not enough to increase the awareness regarding eye health care and eye donation. Therefore, inclusion of different preventive and curative aspects of corneal blindness along with basic eye health care into the course curriculum is the need of the hour.

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