

## ORIGINAL ARTICLE

# Are People Aware About the Eye Donation? A Cross Sectional Study Conducted Among People Attending a Tertiary Care Hospital in Western India

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## ABSTRACT

**Introduction:** Corneal donation is one of important modalities to reduce bilateral blindness in India. Awareness about the eye donation plays important role in eye donation. The objective of this study was to assess the awareness about eye donation among people attending ophthalmology OPD in a tertiary hospital of western India.

**Methodology:** Across sectional study was conducted among people attending OPD of ophthalmology department in a tertiary care hospital. The data were collected using predesigned structured questionnaire which include demographic data, age, sex, marital status, educational status, awareness about eye donation, source of awareness willingness to donate eyes, etc.

**Results:** Among the 105 participants, 35.2% were aged 31 to 45 year and 58.1% were male. Among the 105 participants, 74.3% were aware about eye donation and 51 were willing to donate eye. Among those who were aware, audio-visual media like TV and Radio were the commonest source of awareness about eye donation.

**Conclusion:** There is a immense need to increase awareness about eye donation in the society. Multi prong strategies are needed to improve knowledge and awareness about the eye donation in the society.

**Keywords:** Eye donation, corneal transplant, Awareness, pledge

## INTRODUCTION

One of the important cause of visual deficiency and blindness is disease related to the corneal and this is specifically true for developing countries like India.<sup>1,2</sup> Bilateral or unilateral blindness in children and young adults is commonly due to corneal disease. Corneal ulcers or trauma is commonly found as a cause of these.<sup>3</sup> Trachoma, corneal ulcer, deficiency of vit A, eye injuries and ophthalmia neonatorum are some of the common etiology responsible for blindness. Corneal blindness as fourth leading cause of blindness worldwide<sup>4</sup>.

Modalities of management of blindness due to corneal includes corneal transplantation<sup>5</sup>. Reportedly blind people in India are about 18.7 million<sup>6</sup> and out of which about 190,000 are blind bilaterally due to corneal disease.<sup>7</sup> This is getting longer due to addition of new cases every year.

Dr Muthiah started first eye bank in India and in 1948 successfully performed first corneal transplantation<sup>8</sup> However, progress in cornea donation remains sluggish and there is a sizeable backlog for corneal transplantation. This situation demand efforts to increase awareness about corneal transplan-

tation in the community. According to estimates of The Eye Bank Association of India annually 22,000 cornea are donated in the country, however a good number of them are not suitable for transplantation<sup>9</sup>. This again emphasize need to increase corneal donation. The factors affecting corneal procurement and attitude of public towards corneal transplantation have been received attention in developed countries but not in developing countries.<sup>10</sup>

Considering above scenario, we conducted a hospital based study was conducted to assess the awareness about eye donation among people attending ophthalmology OPD in a tertiary hospital of western India.

## METHODOLOGY

A cross sectional study was conducted in out-patient ophthalmology department in a tertiary care hospital of southern Gujarat after taking approval from institutional ethical committee. The study was conducted in first half of the year 2019. Assuming that around 50% of the participants will ready for eye donation, a sample size of 96 was calculated by using formula sample size (n) =  $(1.96)^2 pq / l^2$ , where p=0.5, q=0.5

and 1=10%. Additional 10% sample was taken to compensate loss of sample during data cleaning and analysis. The data were collected using predesigned structured questionnaire. The questionnaire included demographic data, age, sex, marital status, educational status, awareness about eye donation, source of awareness willingness to donate eyes, etc. Data were collected after informed consent of the eligible participants. All adult cases above 18 year of age attending OPD were included. Only one member from a family was taken.

The collected data was entered in the computer and analyzed Microsoft excel sheet.

## RESULTS

Total 105 participants were included in the study. Highest participants were from age group 31 to 45 year (35.2%) followed by age group below 30 year. Out of 105 participants 61(58.1%) were male. Almost two third (78.1%) were literate and 71.4% were from Urban area (Table 1).

On asking whether eye can be donated, 74.3% gave positive response while only 2 people denied it, however, 25 people don't know whether eye can be donated or not or choose not to answer. More than 64% participant know that eye can be donated only after death. Among the 105 participants, 51 were willing to donate eye. However only four participant has pledged earlier for eye donation (Table 2)

Among those who were aware, audio-visual media like TV and Radio were the commonest source of awareness about eye donation followed by New paper and magazine like print media (Table 3). Among the 68 participants who knew that eye can be only be donated after death 31 said that it should be donated immediately after death while 10 participant said that it can be donated up to 6 hours after death (Table 4).

## DISCUSSION

In any society corneal blindness causes lots of financial and social burden, not only among the family of the affected person but also society as a whole. There are estimated 190,000 people suffering from bilateral blindness due to corneal disease in our country<sup>11</sup> and approximately another 20,000 added to these existing backlog annually<sup>7</sup>.

Corneal transplantation is a great hope for these visually impaired person who were affected because of corneal disease. However, corneal transplantation depend upon the donated cornea. Being a voluntary donation, eye donation or corneal donation entirely depend upon willingness of the people to donate their eye after death. Our study revealed that the awareness regarding donation of eye was poor.

**Table 1: Demographic Data about Respondents (n=105)**

Demographic variables	Patients (%)
Age (In Years)	
18-30	26 (24.8)
31-45	37 (35.2)
46-60	18 (17.1)
>60	24 (22.9)
Gender	
Male	61 (58.1)
Female	44 (41.9)
Literacy	
Illiterate	82 (78.1)
Literate	23 (21.9)
Residence	
Urban	75 (71.4)
Rural	30 (28.6)

**Table 2: Source of Awareness about Eye Donation among 342 Subjects (n=105)**

Response	Patients (%)
Can Eyes Be Donated?	
Yes	78 (74.3)
No	2 (1.9)
Don't know or No response	25 (23.8)
Eyes Can Be Donated Only After Death	
Yes	68 (64.8)
No	19 (18.1)
Don't know or No response	18 (17.1)
Willing For Eye Donation	
Yes	51 (48.6)
No	35 (33.3)
Don't know or No response	19 (18.1)
Already Pledged For Eye Donation	
Yes	4 (3.8)
No	98 (93.3)
Don't know or No response	3 (2.9)

**Table 3: Questionnaire Response about Eye Donation (n=78)**

Source of information	Patients(%)*
TV, Radio, etc Magazines & Other Media	56 (71.8)
Internet, Online Social media, etc	10 (12.8)
Magazine / New paper like print media	31 (39.7)
Neighbours, Family & Relatives	19 (24.4)
Any Others mean	11 (14.1)

\*Multiple response

**Table 4: Awareness about Optimal Time For Eye Donation (n=68)**

Time of Eye donation	Patients (%)
Immediately After Death	31 (45.6)
Within 6 Hrs of Death	10 (14.7)
Any time after death	4 (5.9)
Don't know the time	23 (33.8)

Among ever four people one was nor aware about eye donation and we could find only 4 people who

had pledged their eyes for donation.

More health educational campaign for eye donation is required to increase awareness regarding eye donation in our society. Along with this, motivation of family members of sick people to pledge their eye for donation may be helpful in increasing donation. Female also need more focus in educational campaign as their awareness and pledge were low compared to male. Similarly above 50 year of age people may be a good community to target educational campaign. Despite a good number of people being aware about eye donation, poor level of pledge for eyes donation was due to lack of awareness about importance of eye donation as revealed in our study. This situation emphasized that we need to provide complete information about when to donate eyes, how to pledge for eye donation, discussion with family members, providing donor card and informing about optimal timing for corneal donation. Motivating young medical student about corneal transplantation is a good investment for motivating younger generation for enhancing eye donation.<sup>12</sup> Following deaths of patients, motivation of relatives by the hospital staff<sup>13,14</sup> have been successful in donation of body organs. Some of studies also found that training of hospital staff about eye donation is associated with better eye donation rate.<sup>15</sup> Thus, it is important to involve the hospital staff, nurses and counselors for motivating the relatives of diseases whenever there is a death.

## CONCLUSION

From the present study we conclude that there is a immense need to increase awareness about eye donation in the society. Multi prong strategies are needed to improve knowledge and awareness about the eye donation in the society. Medical student and hospital staff have good potential to increase eye donation in the society.

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