

Awareness and Willingness to Eye Donations among Pakistan community

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ABSTRACT

Objectives: To determine the perception/knowledge of community towards eye donation and determine the willingness of community about eye donations

Methods: A cross sectional survey. Stratified simple random cluster sampling technique was used with a sample size of 400 at UC#22 Islamabad. Study duration was 6 months. A pretested, structured, piloted questionnaire was used and data was entered and analyzed in SPSS version 22.0

Results: Total 400 participants were included in the study, 309(77.2%) males and 91(22.8%) females. From all, 281(70.2%) participants knew about eye donations, 136(34%) participants knew that cornea is transplanted into the receiver's eye. Only 42(10.5%) persons knew about eye banks in Pakistan and 171(42.8%) participants were willing to donate their eyes.

Conclusion: Although the knowledge about awareness is good in this population but further knowledge about eye donation is not good. Awareness programmers should be done to give knowledge to the population especially illiterate persons to make the dream of awareness into willingness to donate corneas, comes true.

Key Words: Eye donation, corneal transplant, willingness, Awareness

Introduction

Act of donating one's eyes after his/her death is Eye donation. Merely corneal blinds can be helped through this procedure not other Blinds.^{1,2} It is an action of help, mainly for the assistance of the society and is totally charitable. It is done after death. Eye-donation should be done on a large scale, as one of the best means of communal service.³ To allow another person get vision is one of the best procedures of charity. Even after death the donor lives in the eyes of recipient. Eyes from a dead person can enable two blind people to acquire vision.⁴⁻⁶ The eyes, which are received through such generous gestures, are of great advantage to the society.⁷ The tissue of the eye called as cornea can be used to return vision to corneal blind person.^{8,9} The Cornea is the clear tissue covering the front of the eye. It is a concentrating component of the eye. This loss of the vision is stated as corneal blindness.¹⁰⁻¹² Corneal blindness can be treated by removing the damaged cornea and replacing it with a healthy cornea.¹³ Corneal grafting is only the alternative for the corneal blindness. Synthetic corneas have not yet been developed and hence the only source for cornea is from human beings. First corneal transplant took place in 1905.¹⁴

The cornea is one of the major refracting media of the eye. The vision of a person is grossly reduced if the transparency of the cornea is lost. In developing world, corneal diseases contribute significantly to visual impairment and blindness.¹⁵ Trachoma, xerophthalmic corneal ulcer, ophthalmia neonatorum, harmful traditional medicine use, onchocerciasis, leprosy and ocular trauma are the major causes of corneal blindness.¹⁶ Year by year, the need for corneal transplant is continuing to grow. The main obstacle for the corneal transplant in Pakistan is lack of awareness of eye donation. So, education about eye donation in the community is highly essential to increase procurement of the cornea.¹⁷

According to World Health Organization (WHO) estimates every 5 seconds someone goes blind. There are currently about 45 million blind people in the world which increases by 1-2 million every year. Damage to cornea is the second most common cause of visual impairment and blindness which accounts for 6-8 million total blind cases in the world.¹⁸

There are six eye donation centers in Pakistan, REDO eye donor organization, LRBT free eye care, Layton Rahmatulla Benevolent Trust Hospital, Alshifa Trust eye Hospital, Pakistan Institute of Ophthalmology, Pakistan eye Bank Society.¹⁹

Material and Methodology

A Cross sectional study was conducted at UC#22 Islamabad. After taking informed consent from ethical committee a six month study was conducted. Using convenient sampling technique 400 participants were included in this study. Data was collected on the basis of specially designed, pre tested, piloted questionnaire. Verbal consent was taken from every participant for ethical consideration. It was difficult to collect data from community most of the people were scared. All male and female age above 18 years and below 60 years. Persons who were willing to participate in this study. Those Persons who were unwilling to participate and Persons with mental illness were excluded from this study. SPSS version 22 was used for analysis of data set.

Results:

Total 400 participants were included in the study, 309(77.2%) were males and 91(22.8%) were females (Fig:-1). The age of participants range from 18-60 years with 170(42.5%) participants were of age group 18-25, 104(26%) participants were of age group 26-33, 68(17%) participants were of age group 34-41, 29(7.2%) participants were of age group 42-50 and 29(7.2%) participants were of age group 51-60 (Fig:-2). The education level of participants 36(9%) were illiterate, 72(18%) were primary, 101(25.2%) were secondary, 86(21.5%) were higher secondary while 104(26%) were above higher secondary level (Fig:-3).

281(70.2%), participants knew about eye donations, 229 were male and 52 were females, among those 18 persons were illiterate, 33 persons were primary pass, 74 were secondary pass, 68 were higher secondary pass and 88 studied above higher secondary level while 119(29.8%) participants didn't know about eye donations, 80 were male and 39 were females, among those 18 persons were illiterate, 39 were primary pass, 27 were secondary pass, 18 were higher secondary pass and 16 person studied above higher secondary level. Television was the most common source of information accounting 130(32.5%) participants; other sources include internet 38(9.5%) participants, university/school 21(5.2%) participants, 34(8.5%) participants

while others include 58(14.5%) participants. 212(53%) participants said that the whole eye is transplanted, 54(13.5%) participants said that the whole eye is not transplanted while 15(3.8%) said they don't know. 204(51%) participants said that eye can be donated during life and 73(18.2%) said that eye can be donated after death while 4(1%) said they don't know. 105(26.2%) participants answered that a person undergone cataract surgery can donate eyes and 154(38.5%) answered that eyes can't be donated if a person has undergone cataract surgery while 22(5.4%) didn't know about this. 79(19.8%) participants thought that there is an age limit for eye donation and 196(49%) thought that there is no age limit for eye donation while 6(1.5%) didn't know about age limit (Table:-1).

208(52%) participants said that body needs to be shifted in hospital for eye donation and 72(18%) said that there is no need of shifting the body in hospital and 1(0.2%) didn't know about this subject. According to 136(34%) participants cornea is transplanted into the receiver's eye and 136(34%) participants thought that the whole eye ball is transplanted into the receiver's eye and 9(2.2%) didn't know about this subject. 95(23.8%) participants said that a blind person with normal cornea can donate eyes and 171(42.8%) participants said that a blind person with normal cornea can't donate eyes while 15(3.8%) participants didn't know. 124(31%) participants answered that STD's are the contraindication for eye donation, 74(18.5%) participants answered that retinal diseases are the contraindication for eye donation, 50(12.5%) participants answered other diseases which include 40(10%) Cancer, 1(0.2%) Brain tumor, 8(2%) Diabetes, 1(0.2%) Liver 1(.2%) and 33(8.2%) participants didn't know about this subject. 135(33.8%) participants thought that donor's eye can be preserved in eye banks and 136(34%) participants thought that donor's eye can't be preserved in eye banks while 10(2.5%) didn't know about this (Table:-2).

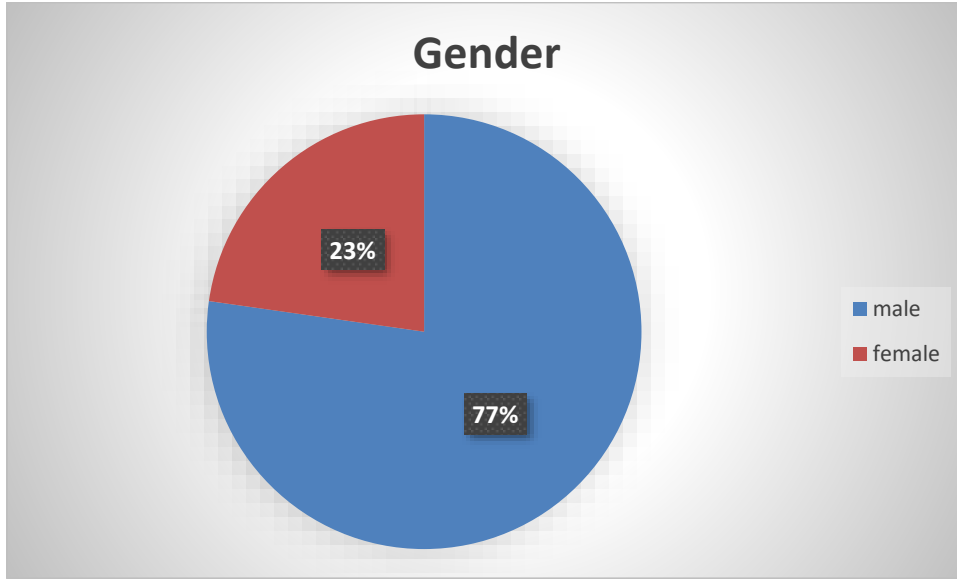


Fig:-1:- Gender Distribution

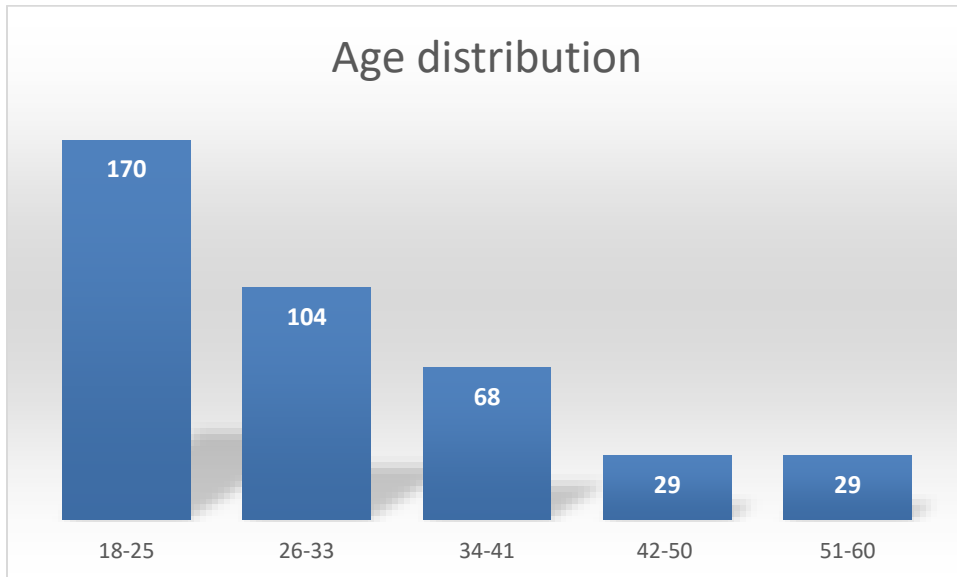


Fig:-2:- Age Distribution

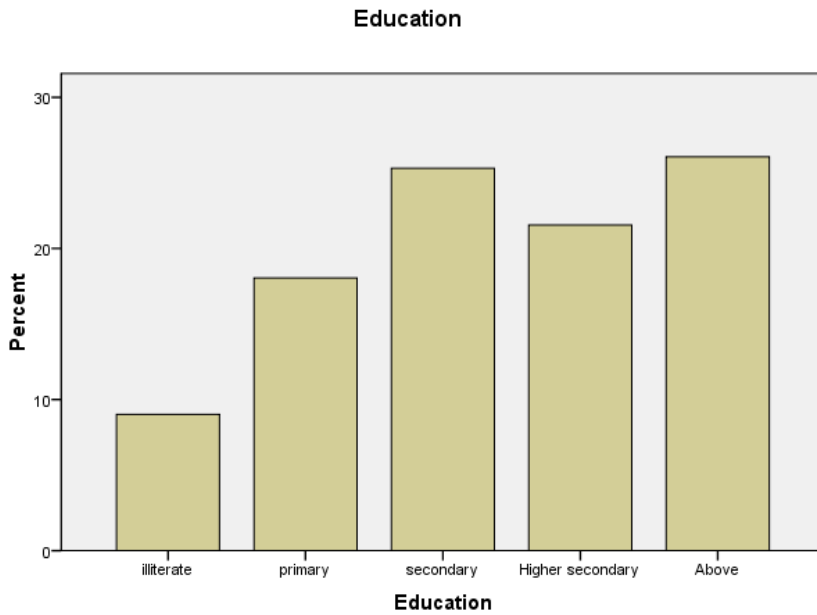


Fig:-3:- Education Wise Distribution

Table: 1:- Descriptive Information about Eye Donations

S.No	Questions	Frequency	Percentage
1	Do you know about eye donations?		
	Yes	281	70.2%
	No	119	29.8%
2	If yes, what is the source?		
	Television	130	32.5%
	Internet	38	9.5%
	University/school	21	5.2%
	Hospital	34	8.5%
	Others	58	14.5%
3	Can the whole eye be transplanted?		
	Yes	212	53%
	No	54	13.5%
	Don't know	15	3.8%
4	When can eye be donated?		

	During life	204	51%
	After death	73	18.2%
	Don't know	4	1%
5	Can a person undergone cataract surgery donate eyes?		
	Yes	105	26.2%
	No	154	38.5%
6	Is there any age limit for eye donations?		
	Yes	79	19.8%
	No	196	49%

Table: 2:- effects related to Eye Donations

S.No	Questions	Frequency	Percentage
1	Does the body need to be shifted in hospital for eye donations?		
	Yes	208	52%
	No	72	18%
	Don't know	1	0.2%
2	Which part of eye is transplanted in the receiver's eye?		
	Cornea	136	34%
	Whole eye ball	136	34%
	Don't know	9	2.2%
3	Can eyes be donated if a person is blind with normal cornea?		
	Yes	95	23.8%
	No	171	42.8%

4	In which conditions eye donation is contraindicated?		
	STD's	124	31%
	Retinal diseases	74	18.5%
	Others	50	12.5%
	Don't know	33	8.2%
5	Can the donor eyes be preserved in the eye bank?		
	Yes	135	33.8%
	No	136	34%
	Don't know	10	2.5%

DISCUSSION

There is scarcity of information on the factors influencing corneal donation in different geographic areas and in populations from varied cultural, social, religious, and economic backgrounds. This is more evident in developing nations, despite the fact that they are the major areas with the burden of corneal blindness. In this study total 400 participants were included, 309(77.2%) males and 91(22.8%) females and in this study 492 total participants, 272(55.3%) females and 220(54.7%) males¹⁶ and in another study total 507 participants, 278(54%) males.¹⁷

In this study, 281(70.2%) participants knew about eye donations and in this study from the total participants , 152 (30.9%) were aware of eye donation.¹⁸ In this study 257(50.69%) participants were aware of eye donation.¹⁹ In this study only 136(34%) participants knew that cornea is transplanted into the receiver's eye.²⁰ in

this study 403(79.50%) persons were not aware of corneal transplantation.²¹ In this study only 42(10.5%) persons knew about eye banks in Pakistan and only 56(11.04%) of the participants were aware of the existence of an eye bank at center at Madurai.²²

In this study 73(18.2%) participants said that eye can be donated after death.²³ In this study only 22 (4.34%) persons were aware that eye donation had to be done within 6 hours after death.²⁴ In this study, 171(42.8%) participants were willing to donate their eyes.²⁵

CONCLUSION

Although the knowledge about awareness is good in this population but further knowledge about eye donation is not good. Awareness programs should be done to give knowledge to the population especially illiterate persons to make the dream of awareness into willingness to donate corneas, comes true. Strategies should be developed on larger scale to meet the demand of corneal donation for corneal blind persons.

RECOMMENDATIONS

- Seminars should be held for awareness of eye donation.
- Campaigns should be planned for awareness.
- Media promotions for eye donations should be done.
- There should be any eye bank on national level to facilitate people with mobile teams and cost affordable corneas.

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