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Awareness of eye donation among eye health workers

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ABSTRACT

Introductions: To assess the level of awareness and willingness of eye donation among eye health workers and compare it among the two institutes, one with cornea transplant services and other without cornea transplant services.

Methods: This was comparative, questionnaire based, cross- sectional study under taken among eye health workers in two institutes. The questionnaire contained questions on demographic details, their awareness on eye donation, reasons for donating and not donating eyes by people as perceived by them, their intention to donate eyes and source of information. The responses were compared and statistically analyzed using chi-square test.

Results: Of the 178 participants 132 participants were aware that eye donation was donation of eye after death. The most common source of information about eye donation was from eye professional. It was observed that 107 participants knew that eyes can be donated after death ideally within 6-8 hours of death. 139 respondents believed donated eye gives good sight to blind. Lack of awareness was cited as an important reason for people not donating eyes.

Conclusions: Eye health workers are well aware about eye donation they can be actively involved in eye donation campaigns in community level and can act as counselors for eye donors.

Keywords: Awareness, eye donation, eye health workers, willingness.

INTRODUCTIONS

Corneal scarring due to keratitis and ocular trauma are the major cause of blindness in children and young adults.[1] The Bhaktapur Eye Study have revealed it to be seven times higher than in South India, and seventy times greater than reported in the USA.[2] According to Nepal blindness survey, estimated 5.6% of blindness was due to corneal scar.[3] Although strategies to prevent corneal blindness are likely to be more cost effective, visual rehabilitation by corneal transplantation remains a major treatment option for restoring sight in those who already have corneal blindness.[4]

This study was designed to assess the level of awareness and willingness of eye donation among eye health workers and compare it among the two institutes, one with cornea transplant service and other without cornea transplant services.

METHODS

This was comparative, questionnaire based, cross- sectional study under taken among eye health workers in two institutes, one with corneal transplant services (Biratnagar Eye Hospital, Biratnagar) and other without this services (Sagarmatha Choudhary Eye Hospital, Lahan). The study was undertaken in January 2015. A pretested, self-designed, single response questionnaire was self-administered for collecting the necessary information about eye donation. The questionnaire contained questions on demographic details, their awareness on eye donation, reasons for donating and not donating eyes by people as perceived by them, their intention to donate eyes and source of information. The responses were compared and statistically analyzed using chi-square test.

Those participants who did not mark any response for a particular question were not included in the statistical analysis of the responses to that question. Awareness level score was calculated from questions seven to 12. The response "Yes" was given score of one and "No" was given score of zero. The score of less than three was categorized as "Low level of Awareness," score of three to four as "Medium level of Awareness" and score of four or more as "High level of Awareness."

RESULTS

The questionnaire was administered to 178 subjects among which 115 belonged to Biratnagar eye hospital (with cornea transplantation facility) and remaining 63 belonged to Sagarmatha Choudhary Eye Hospital, Lahan (without cornea transplantation facility). The mean age of the respondents was 27 years (range 20-29), 78 (43.8 %) were male and remaining 100 (56.2%) were female. The ethnic distribution was 175 (98.3%) Hindu, 3 (1.7%) Buddhist.

Of the 178 participants, 57 had less than one year experience in eye field, 38 had less than three years' and 83 more than three years' experience in eye field. Among the 83 participants 30 belonged to Biratnagar eye hospital and rest 53 belonged to Sagarmatha Choudhary eye hospital. All the participants except one participant had heard of eye donation.

It was observed that 132 (74.6%) participants were aware that 'eye donation' is 'donation of eye after death'. Information received from eye professional (68.9%) was the common source of information, (Table 1). Regarding part of eye used for donation 145 (81.9%) thought cornea was taken out, 31 (17.5%) thought whole eyeball was taken out and one participant thought lens was taken out.

It was observed that 107 (60.5%) out of 177 participants knew that eyes can be donated after death ideally within 6-8 hours of death, (Table 2). Of the 178 respondents, 101 (56.7%) knew that both ophthalmologist and trained ophthalmic assistant can remove eye after death. One hundred thirty-nine (78.5%) respondents believed donated eye gives good sight to blind which was the main reason for eye donation, (Table 3).

Table 1. Sources of information

Variable	Frequency	Percentage
Newspaper	20	11.3%
TV	23	12.9%
Eye Professionals	122	68.9%
Family Members / Neighbours	12	6.9%
Total	177	100%

Table 2. Time for eye donation as answered by respondent

Variables	Frequency	Percentage
Within 6-8 hrs of death	107	60.5%
Within 10-24hrs of death	46	26%
Any time after death	24	13.5%
Total	177	100%

Table 3. Reason for not donating eye

Variable	Frequency	Percentage
Lack of awareness	87	49.2%
Family members objection	35	19.8%
Dislike of separating eye	28	15.7%
Because of religious belief	27	15.3%
Total	177	100%

Table 4. Awareness to donate eye in between two institutes had no statistical significant differences (p- value > .005)

			Awareness Category*			Total
			1	2	3	
Place of work		Count	22	57	35	114
	Biratnagar	% within Place of work	19.3%	50.0%	30.7%	100.0%
		% of Total	12.4%	32.2%	19.8%	64.4%
		Count	8	29	26	63
	Lahan	% within Place of work	12.7%	46.0%	41.3%	100.0%
		% of Total	4.5%	16.4%	14.7%	35.6%
Total		Count	30	86	61	177
		% of Total	16.9%	48.6%	34.5%	100.0%

Note: Awareness Category* 1: low level of awareness 2: medium level of awareness 3: high level of awareness

Lack of awareness was cited as an important reason for people not donating eyes among 87 (49.2%) of 177 participants. Thirty- five respondents (19.8%) perceived objections from family members followed by dislike of separating eye among 28 (15.7%) respondents and 27 (15.3%) respondents had religious belief. Among religious belief, three of 27 respondents believed of being born blind in next birth and not going heaven if they donate their eye.

It was observed that 67 (37.9%) participants were familiar with person who has donated eye, and 88 (50.3%) respondents were familiar with person who has received eye. One hundred thirty-seven (77.4%) participants were well informed about where to contact for eye donation.

Regarding the increase in number of eye donation, 173 out of 178 respondents (97.9%) believed that eye donation can be facilitated

Table 5. Awareness was high in participants with long term experience in eye field (P value less than .005, Pearson's chi-square value = 25.93)

		Awareness Category			Total
Experience in eye field		1	2	3	
6 month	Count	6	7	1	14
	% within Level	42.9%	50.0%	7.1%	100.0%
	% of Total	3.4%	4.0%	.6%	7.9%
1st year	Count	7	26	9	42
	% within Level	16.7%	61.9%	21.4%	100.0%
	% of Total	4.0%	14.7%	5.1%	23.7%
2nd year	Count	3	6	1	10
	% within Level	30.0%	60.0%	10.0%	100.0%
	% of Total	1.7%	3.4%	.6%	5.6%
3rd year	Count	6	12	10	28
	% within Level	21.4%	42.9%	35.7%	100.0%
	% of Total	3.4%	6.8%	5.6%	15.8%
Staff	Count	8	25	30	63
	% within Level	12.7%	39.7%	47.6%	100.0%
	% of Total	4.5%	14.1%	16.9%	35.6%
Ophthalmic assistant	Count	0	10	10	20
	% within Level	.0%	50.0%	50.0%	100.0%
	% of Total	.0%	5.6%	5.6%	11.3%
Total	Count	30	86	61	177
	% of Total	16.9%	48.6%	34.5%	100.0%

if someone from an eye donation center goes and asks for donation upon death of a person. High level of awareness was seen in Biratnagar eye hospital group, but was statistically non-significant (p=0.35). (Table 4) There was statistically significant difference in awareness level in different level of participants, (Table 5).

DISCUSSIONS

Our study conducted among eye health workers and compared the level of awareness in two institutes with and without facility of corneal transplantation shows 74.6% were aware that eyes could be donated after death. In a study among the south Indian, 50.7% of participants were aware of eyedonation.[5] Corneal transplantation offers the potential sight restoration to those who are blind from corneal diseases.[5]

Collection of donor corneas is hence a priority in any effort to combat the problem of corneal blindness. Though shortage of corneas is a global phenomenon, considerable thought has perhaps not been given to the factors influencing organ donation and donor tissue procurement in different geographic regions and in populations from varied cultural, social, religious, and economic backgrounds.[6]

In another study comparing the medical and paramedical staff 317 (80.5%) respondents were aware of eye donation among which 114 (79.2%) were medical students and 38 (77.6%) were nursing students.[7] This shows that eye health workers had good awareness about eye donation.

Our study showed 60.5% knew that ideal time for eye donation after death was within 6-8 hours after death. A study on medical students observed that 41.1% of them knew the ideal time for eye donation.[8] 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.[9] The timing of eye donation is very

important. If the eyes cannot 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.

This study was conducted among eye health workers and 68.9% respondents had information about eye donation from eye health workers which was similar in both the hospitals. Television was the most common source of information on eye donation in 140 (77.8%), followed by newspaper 131 (72.8%) and magazines 98 (54.4%) of 180 students.[8] Other studies found publicity campaigns and the media to be major sources in this issue.[10] This showed that eye heath workers had good communication and sharing of knowledge among themselves.

The prime reason for donating eye was that they believed donated eyes gives good sight to blind people. Lack of awareness was cited as an important reason for people not donating eyes among 87 (49.2%) of 177 participants. Thirty- five perceived objections from family members followed by dislike of separating eye (15.7%) and 27 of them had religious belief. Similarly in the other study the reason for donating eye was nobility in the work by 154 (85.5%) and pleasure to help the blind by 141 (78.3%) of the 180 participants.[8] In our study only 15.3% respondent had eligious belief for not donating eyes. In a study by Biswas J, religious belief was mentioned as an important obstacle in eye donation by 78.2% respondents.[10]

Lack of awareness in the general population about the concept of donation reduces the number of families who spontaneously contact an eye bank for cornea donation in case of a death occurring at home. Hence, the focus has shifted to an active hospital corneal retrieval program involving active counseling of relatives in the hospital itself after death. In our study, 173 out of 178 respondents (97.9%) believed that eye donation can be facilitated if someone from an eye donation center goes and asks for donation upon death of a person.

Regarding willingness for eye donation 79.5% respondents were willing to donate eye. In the other study comparing eye donation awareness among medical and paramedical staffs in medical institute they observed 251 (65.4%) of the respondents were willing for eye donation out of which 81(56.6%) were MBBS students and 27(56.3%) were nursing students.[7]

Comparing the level of awareness and willingness to donate eye in between two institutes, there was no statistical significant differences (p- value > .005), (Table 4). The level of awareness was high in participants with long term experience in eye field (P value less than .005, Pearson's chi-square value = 25.93), (Table 5).

CONCLUSIONS

The study highlights the fact that there is lack of awareness among general population in eye donation. Eye health workers are well aware about eye donation and can actively involve in eye donation campaigns in community level.

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