



**AWARENESS AND STIGMA REGARDING EYE DONATION AMONG COMMUNITY
PEOPLE LIVING IN BUTWAL-6, LAXMINAGAR, NEPAL, 2016**

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ABSTRACT

The joy of sight restoration is incomparable with anything in the world. It is like giving life back to the dead. Eye donation provides people who are blind with an opportunity to regain their vision through corneal transplantation. We can light life of blind people by donating eyes. But people are skeptical in doing this because of social stigma and misconceptions. Moreover there is lack of awareness about eye donation among general population so practice of eye donation is also lacking. **Objective:** To determine the awareness and stigma regarding eye donation among community people. **Methodology:** A cross-sectional descriptive design has been deployed in Laxminagar community of Butwal Municipality among 106 participants who were selected by multistage probability sampling technique. The participants were asked semi structured questionnaire for socio demographic information, for testing awareness level and determining stigma regarding eye donation. Validity and Reliability was maintained by consulting with experts and pre-testing the questionnaire in 10% of sample size with similar characteristics in different setting. Data was checked for completeness and accuracy and collected data was entered in SPSS Software version 20. Descriptive statistics such as number and percentage were used to describe demographic data and for analysis of the level of awareness and stigma related to eye donation, inferential statistics were used. **Results:** The study revealed that majority (49.1%) of the participants were of age group between 30-49 years, majority were female (54.7%) and majority of the people (94.3%) were literate. The study showed that although 76.40% heard that eyes can be donated, only 42.50% had high level of awareness regarding eye donation. Media comprises the major source of information. In front of 49.1 willingness to donate eyes while the reasons for not donating eyes were fear of deformity (15.1%), have an eye problem (12.3%), don't think it will be useful (17.0%) and other reasons (6.6%). There were many social stigmas regarding eye donation like: may born blind in next birth (9.4%), relatives of donor get money for eye donation (0.9%), results in delay in funeral arrangement (19.8%), retrieving personnel take everything along with eye (21.7%), physician will not impart adequate care (12.3%) if one has pledged. **Conclusion:** In this study though the literacy rate among the people was high, only 42.50% had high level of awareness. Moreover it found many people had misconception and stigma regarding eye donation.

KEYWORDS: Eye Donation, Awareness, Stigma, Community, Misconception.

INTRODUCTION

Blindness is the condition of lacking visual perception. (Patil et al. 2015) Blindness may be caused by diseases of the lens, the retina, or the eye structures; diseases of the optic nerve; or lesions of the visual cortex or pathways of the brain.

An estimated 285 million people are visually impaired worldwide, among them 39 million are blind while 246 have low vision. The global causes of blindness in 2010 was cataract (51%), Glaucoma (8%), Trachoma (3%), Diabetic Retinopathy (1%), undetermined (21%), Childhood blindness (4%), Age related macular

degeneration AMD (5%), Refraction error (3%), Corneal Opacities (4%). (Abner et al. 2002)

About 90% of world's visually impaired people live in developing countries. In South East Asian Region including Nepal the visually impaired people are an estimated 27 million among which 23 million are low vision and 3 million are blind. (Abner et al. 2002)

In Nepal, according to National Blindness Survey, 2010 an estimated number of 93400 people are living blind. The causes of blindness in Nepal according to survey 2006-2010 are (62.2%) cataract, (3.4%) aphakia and (0.6%) complication, (1%) Trachoma + Scar, (2.5%)

Phthisis, (5.2%) other scar, (2.5%) Globe, (5.9%) Glaucoma, (16.5%) Posterior Segment and (0.4%) DR. (Committee et al. 2012)

Cornea is the outer transparent layer of the eye. But sometimes it can get ruptured or damaged so people lose their sight. But people can get sight back by the procedure of corneal transplantation. The value of anything is realized only when it is lost, one such thing is vision. Though all the causes of blindness can't be cured, corneal blindness can be reverted by corneal transplantation for which a suitable donor cornea is required at right time. (Patil et al. 2015)

Corneal transplantation helps in restoration of sight however it is hugely dependent on voluntary eye donation by suitable donors. There is huge need for the availability of transplantation donor corneas worldwide to reduce the burden of corneal blindness. (Ronanki et al. 2014)

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. (Biswas et al. 2010)

Eye donation provides people who are blind with an opportunity to regain their vision through corneal transplantation. There is lack of awareness about eye donation among general population so practice of eye donation is also lacking. (Patil et al. 2015)

Eye donation is a selfless act supported by major religions. A decision to become a donor will ultimately change someone's life. Realizing the importance of eye donation, every year 10th June is celebrated as International Eye Donation Day making public aware of eye donation.

Firstly, Eye donation is the noblest of all causes. Secondly, more importantly, we can light the life of two blind persons by donating our eyes after our death. But it is bitter truth that the need for donated eyes far exceeds the availability of donations.

When we look back to history, first eye bank was set up in 1945 in US, New York City. With the help of tissue banks international, eye banks have sprung throughout the developing world to meet the crushing demand for donor corneas that can restore sight and independence to the blind. (Marseille 1996) Approximately 100,000 procedures of corneal transplants are performed worldwide each year.

In context of Nepal, in 1996, Dr. Sanduk Ruit established Nepal Eye Bank in Tilganga Institute of Ophthalmology (TIO) in Kathmandu. As targeted by Vision 2020; 'The Right to Sight', to eliminate avoidable blindness in the world by 2020 and targets the world's leading causes of avoidable visual impairment: cataract, trachoma,

childhood blindness (including vitamin A deficiency), and refractive error and low vision. (Pizzarello et al. 2004) Nepal Eye Program was officially launched in July 1992 to support the prevention of blindness program in Nepal. TIO is the implementing body of Nepal Eye Program.

Despite the advancement in medical science, most people still live in the dark. Various studies and researchers show that people are not fully aware about eye donation and they are not willing to donate eyes. People are skeptical in doing this because of social stigma. It is perceived that eye donation is against their religion. (Bhandary et al. 2011) Moreover, there are misconceptions like eyes could not be retrieved at the house of the deceased, whole eyeball is transplanted to the patient. (Bhandary et al. 2011)

The medical related people who are more likely to be more aware about eye donation are not free from social stigma. The willingness to donate eyes are low due to stigma like fear of disfigurement, might be born blind in their next birth and some other reasons. (Arya et al. 2014)

Afraid of deformity after death 3(1.5%), will born blind in next birth 8(3.9%), 5(2.5%) due to religious causes, thought it was not useful at all 2 (1.0%), because of eye problem 1(0.5%) are also other perceived reasons for not donating eyes. (Harishchandra 2015)

Methodology

A cross-sectional descriptive design has been deployed in Laxminagar community of Butwal Municipality among 106 participants who were selected by Multistage Probability sampling technique. Semi-structured questionnaire was used as the data collection tool by face-face interview. Validity and reliability was maintained by the extensive review of related literature, consulting supervisor and by taking expert's opinion and pre-testing the instrument in 10% of sample size in different setting with similar characteristics. Internal consistency of tool was assessed by Cronbach's alpha (α) coefficients ($\alpha = 0.916$). The collected data was checked for completeness and accuracy and the data was entered in Ms Excel and analyzed in SPSS Software version 20. Descriptive and inferential analysis was done. Data was interpreted in tabular and narrative form as per necessary. To find out the awareness level and stigma all the awareness and stigma related question were compiled with considering the score of correct answer as 1 and wrong answer as 0. The level of awareness was grouped as:

- High level of awareness: awareness level above 50%.
- Low level of awareness: awareness level below 50%.

Formal approval letter was taken from concerned authority of research committee of Norvic Institute of Nursing Education and from Butwal Municipality. The

written informed consent was taken from each respondent and ethical approval was taken from Nepal Health Research Council (NHRC).

Findings

Demographic Patterns

Majority (49.1%) of the participants were of age group between 30-49 years followed by the age group 18-29 years (27.4%) then follows 50-69 years (22.6%) and >70 yrs (0.9%).

The male and female in the area were 45.3% and 54.7% respectively. Majorities (84.0%) of the participants were

Hindu and 12.3% were Buddhist and only 3.8% were Christian. About 80.2% of the participants were married and were staying with husband.

About 70.8 % of the total participants were employed out of which 32.1% do service for their earnings, 34.9% do business and 3.8% were medical personnel, 13.2% were housewife and 13.2% were students while 2.8% were unemployed. Majority (94.3%) of people were literate out of which 10.4% could simply read and write whereas 16.0 had primary education, 32.1 had secondary education , 17.9 had higher secondary and 17.9 were above higher secondary.

Table 1 Socio-demographic Information of participants n=106

Variables	Frequency	Percentage
Age		
18-29 yrs	29	27.4
30-49 yrs	52	49.1
>50 yrs	25	23.5
Sex		
Male	48	45.3
Female	58	54.7
Educational status		
Up to secondary	68	64.1
Above secondary	38	35.8
Religion		
Hindu	89	84.0
Non-Hindu	17	16.0
Marital status		
Married	86	81.1
Unmarried	19	17.9
Widow	1	0.1
Occupation		
Service	34	32.1
Business	37	34.9
Medical Personnel	4	3.8
Housewife	14	13.2
Student	14	13.2
None	3	2.8

*Field survey, 2016

Table 1 showed that majority (49.1%) of the participants were of age group between 30-49 years followed by the age group 18-29 years (27.4%) then follows >50 years (23.5%).

The male and female in the area were 45.3% and 54.7% respectively. Majorities (84.0%) of the participants were Hindus and 16.0 % were Non-Hindus. About 81.1% of the participants were married and were staying with husband.

About 70.8 % of the total participants were employed out of which 32.1% do service for their earnings, 34.9% do business and 3.8% were medical personnel, 13.2% were housewife and 13.2% were students while 2.8% were unemployed. Majority (94.3%) of people were literate out of which 64.1% had up to secondary and 35.8 had above secondary level education.

Table 2: Awareness regarding Eye Donation n=106

Component	Frequency	Percent
Can eyes be donated		
Yes	81	76.4
No	25	23.6
If yes (n=81)		
Eye Donation means		
Service to mankind	28.26	34.9%
Giving sight to blind	11.50	14.20%
Donation of eyes after ones death	22.19	27.40%
Don't know	19.05	23.05%
Eyes are donated only after death		
Yes	76	93.8%
No	4	4.9%
Don't know	1	1.2%

*Field survey, 2016

The table 2 shows that the majority (76.4%) of people knew that eyes can be donated. Out of 81, 34.9% thought that eye donation is service to mankind, 14.2% thought that eye donation means giving sight to blind whereas 27.4% thought that eye donation means donation of eyes

after one's death and 23.5% didn't have any idea. Majority (93.8%) of people were aware that eyes are donated only after death while 4.9% thought that eyes are donated before death and 1.2% of people didn't know about it.

Table 3: Awareness regarding Eye Donation n= 81

Component	Frequency	Percent
Ideal time for eye donation		
Within 10-24 hours	44	54.32
Within 6-8 hours	24	29.629
Anytime after death	8	9.87
Don't know	5	6.17
One donor can give sight to		
One blind person	6	7.40
Two blind person	73	90.01
More than two blind person	2	2.4
Who can donate eyes		
Only above 60 years	8	9.8
Only adults	41	50.6
People of any age	32	39.50

*Field survey, 2016

The table 3 represents that only 29.62% of people knew that the ideal time for eye donation is within 6 hours-8 hours of death. Majority of people (54.32%) had the view that the eyes should be donated within 10-24 hours of death. Whereas 9.87% of people thought that eyes can be donated anytime after death and 6.17% of people did not have the idea. about 90.01% knew that one donor can give sight to two blind person and 7.40% thought

one donor can give eye sight to only one blind person while 2.4% of people had the opinion that a donor can give eye sight to more than one blind person. The table shows that 9.8% of people had the opinion that only above 60 years of people can donate eyes, 50.6% of people thought that only adults can donate eyes and 39.50% of people thought that people of any age can donate eyes.

Table 4: Awareness regarding Eye Donation n=81

Components	Frequency	Percent
Regarding transplantation		
only the cornea	21	25.90%
the whole eye ball	55	67.90%
Don't know	5	6.17%
One with communicable disease can donate		
Yes	1	1.20%
No	79	97.50%
Don't know	1	1.20%
Eyes can be removed at donor's house		

Yes	30	37.03%
No	51	62.96%
Name of donor & recipient remain anonymous		
Yes	47	58.02%
No	34	41.90%
Donor eyes can be preserved in eye bank		
Yes	54	66.60%
No	27	33.33%

*Field survey, 2016

The table 4 shows that regarding transplantation 67.9% of participants said that whole eye ball is used for transplantation, only 25.9% of people said that only cornea is used for transplantation and 6.17% had no idea. Majority of people 97.5% thought that people with communicable disease cannot donate eyes while only

1.2% was aware that the people with communicable disease can donate eyes. Only 37.03% of people had the opinion that eyes can be removed at donor's house itself, 58.02% of people said that names of donor and recipient will not be revealed to anyone. About 66.6% of people knew that donor eyes can be preserved in the eye bank.

Table 5: Awareness regarding Eye Donation n=81

Component	Frequency	Percent
Who cannot donate eyes		
Diabetes	51	62.9
Hypertensives	55	67.9
Infants	58	71.60
all of the above can donate	18	22.22
Who cannot donate eyes		
people wearing glass	27	33.33
people in whom eye surgery is done	24	29.6
people with previous cataract or glaucoma	70	86.41
all of above can donate	6	7.4

(multiple response was applicable) *Field survey, 2016

The table 5 shows that about 62.9% of people thought that people with diabetes cannot donate eyes and 67.9% thought that people with hypertension cannot donate eyes and 71.60% people thought that infants cannot donate eyes and only 22.2% of people were aware that all three people with diabetes, hypertensive and infants can donate eyes. The table shows 33.33% people thought that

people wearing eye glass cannot donate eyes. Majority (86.41%) thought that people with previous cataract or glaucoma cannot donate eyes and 29.9% people thought that people in whom eye surgery is done cannot donate eyes and only (7.4%) were aware that all of them can donate.

Table 6: Participants' Level of Awareness regarding Eye Donation n=106

Level	Frequency	Percent
Low	61	57.5
High	45	42.5

*Field survey, 2016

The table 6 shows that 42.5% of people have high level of awareness whereas 57.5% of people have low level of awareness.

Table 7: Stigma regarding Reasons for not donating Eye n = 106.

Willing to donate	Frequency	Percent
Yes	52	49.1
No	54	50.9
Reasons for not donating eyes		
Afraid of deformity	16	29.62%
Have an eye problem	13	24.07%
Don't think it will be useful	18	33.3%
Due to other reasons	7	12.96%

*Field survey, 2016

The table 7 shows that 49.1% of people were willing to donate eyes but 50.9% were not willing to donate eyes. Out of 54, who were not willing to donate eyes, 29.62% were afraid of deformity, 24.07% thought that they cannot donate because of eye problem, 33.3% thought

that eye donation will not be useful and 12.96% had other reasons like they were not interested, they have not thought about it yet, they had not heard about eye donation.

Table 8: Stigma Regarding Eye Donation n=106

Components	Frequency	Percent
Born blind in next birth		
Yes	10	9.4
No	79	74.5
Don't know	17	16.0
May not go to heaven after death		
No	88	83.0
Don't know	18	17.0
Relatives get money for eye donation		
Yes	1	0.9
No	52	49.1
Don't know	53	50.0
Family will have to pay		
No	53	50.0
Don't know	53	50.0
Eye retrieval cause delay to funeral		
Yes	21	19.8
No	85	80.2
Retrieving personnel take everything along with eye		
Yes	23	21.7
No	83	78.3
Physician will not impart adequate care if one has pledged		
Yes	13	12.3
No	93	87.7

*Field survey, 2016

The table 8 shows that there were many stigma regarding eye donation among the people like 9.4% people thought that they may born blind in their next birth whereas majority (74.5%) of people didn't believe in that while 16% had no any idea about it.

Similarly, 83.0% of people didn't agree that people who donate eyes may not go to heaven but 17.0% said that they had no idea. Likewise, 0.9% of people had the misconception that relatives of donor get money for eye

donation but 50% of people were unsure whether the family has to pay for eye donation whereas 50% people were aware that family does not have to pay for eye donation. Meanwhile 19.8% of people thought that eye donation would result in delay in funeral arrangement and 21.7% feared that retrieving personnel can take everything along with eye if they pledge for donation. Similarly about 12.3% of people gave the opinion that the physician will not impart adequate care knowing that they have pledged for eyes

Table 9: Association of socio-demographic variable with awareness on eye donation n = 106

Variables	Low	High	*p-value
Age			
18-29 yrs	29	27.4	0.695
30-49 yrs	52	49.1	
>50 yrs	25	23.5	
Sex			0.987
Male	48	45.3	
Female	58	54.7	
Educational status			0.000
Up to secondary	68	64.1	
Above secondary	38	35.8	
Religion			0.188

Hindu	89	84.0	
Non-Hindu	17	16.0	
Marital status			
Married	86	81.1	0.313
Unmarried	19	17.9	
Widow	1	0.1	
Occupation			
Service	34	32.1	0.113
Business	37	34.9	
Medical Personnel	4	3.8	
Housewife	14	13.2	
Student	14	13.2	
None	3	2.8	

* Chi-square p- value < 0.05

Field survey, 2016

According to above table it was found that educational status had significant association with awareness (Chi-square 'p' value = 0.000 which is < 0.05).

DISCUSSION

Concerning the socio-demographic characteristics, the study revealed that among 106 participants majority (49.1%) of the participants were of age group between 30-49 years followed by the age group 18-29 years (27.4%) then follows >50 years (23.5%). Similar findings was reported in a study done by Tiwari et al among adult population where majority (78.57%) were in the age group of 30-50 years. (Tiwari et al. 2014) Also in a similar study done among subjects aged 18 and older found that 39.61% belonged to the age group 31-50 years. (Rachana et al. 2014) This finding is contrast to a study done by Sadana et al among medical students which found that majority (53%) were in the age group of 19-21 years. This can be because the study was being done among college students who are likely to be younger than general population. (Sadana et al. 2014)

In this study the male and female in the area were 45.3% and 54.7% respectively. Female (79.40%) were also found relatively higher than male (77.75%) in a study done by Tiwari et al. (Tiwari et al. 2014) This may be due to the fact that the both of the studies have been done in residential areas and the number of housewives are also significantly high in both studies. This finding is contradictory to the study done in out-patient departments of hospital which found 103(51.5%) were males and 97(48.5%) were females. (Yajaman et al. 2015)

This study showed, majority (84.0%) of the participants were Hindu followed by 16.0 % Non-Hindus. Similar to a study done in Bhopal where 73.58% participants were Hindu (Rachana et al. 2014) and in Gwalior district, India where 95.35% were Hindus. But just opposite was found in a study done in Singaporean youths where majority belonged to Islam (25 %) and Buddhism (24.6 %), Christianity (20.8 %) and Hinduism were only (7.6 %). (Mariella et al. 2016)

Regarding educational status, majority (94.3%) of people were literate out of which 64.1% had up to secondary and 35.8 had above secondary level education. The

finding is similar to a study by Yajaman et al where out of 200 participants, 48 participants had primary education, 88 participants had secondary education, 58 participants were graduates and only 6 participants were illiterates. (Yajaman et al. 2015)

In the current study, 81.1% of the participants were married and were staying with husband as in the study done by Tiwari et al where majority (98.52%) respondents were married and 47.42% were engaged in service, 41.92% were housewives and 4.22% had own business. (Tiwari et al. 2014) However, in the present study relatively greater number of people (34.9%) were involved in business, whereas 32.1% do service for their earnings, 13.2% were housewives, 13.2% were students, 3.8% were medical personnel and 2.8% were unemployed.

In this study out of 106 participants, 76.4% were aware that eyes can be donated contrasting to a study done by Prabhu et al where 94.4% participants had heard about eye donation. (Prabhu et al 2016) The contrast may be due to educational status because in the study 100% were literate but in our study 94.3% was found literate and awareness in both studies was found related to educational status.

This study is also in contrast to the study done by Singh M et al among medical students that found 96.6% had heard about eye donation. (Singh M et al 2012) Likewise in another study done by Ali et al among 1010 medical students in 2016 also found that almost all students had heard of eye donation (99.8%). (Ali et al. 2016) A study among nursing students in Bhopal showed 98% of the total students had heard about eye donation. (Kumar et al. 2012) This difference can be due to the fact that the study was being done among medical students who are likely to be better informed about eye donation.

The study showed, among those who were aware ($n = 81$) of eye donation, 93.8% knew that eyes can be donated only after death almost similar to the findings revealed in the study by Bhandary S et al in Malaysia

and Prabhu et al in North Kerala where 88.8% and 88% had known that eyes are donated only after death respectively. (Bhandary et al. 2011) (Prabhu et al 2016)

A study done by Prabhu et al found that only (10.8%) believed in eye should be removed within 6 hours of death that can be called similar to the findings of our study where 29.62% knew the ideal time for donation. But in contradictory to our study, in a study done by Sudesh K et al among medical and paramedical staffs found that 76% knew that the ideal time for eye donation is within 6 hours of death. (Arya et al. 2014) This suggests that comparatively medical students are more aware than general people. However, in a study done by Tigga et al among nurses and paramedical staffs only 39.39% had correct knowledge that eye should be removed from dead donor within 6 hours. (Tigga et al. 2016) A study conducted among the students in Bhopal by Kumar et al showed that only 21.7% of nursing students had correct knowledge about it. (Kumar et al. 2012)

The study showed, 67.90% of participants said that whole eye ball is used for transplantation and only 25.90% of people said that cornea is used for transplantation. This finding is supported by a study done by Bhandary et al where 43.3% felt that the whole eyeball was transplanted to the patient and contradictory to the study done by Tigga et al where 43.93% respondents knew that only cornea is donated for eye transplantation. (Bhandary et al. 2011) (Tigga et al. 2016)

Our study revealed, only 1.2% of participants were aware that the people with communicable disease can donate eyes supporting to this study, a study done in Africa found that 9.9% was aware of the fact. (Eze et al. 2014) Conflicting finding is demonstrated in a study done in Hubli which found that 41% were aware of it. (Nekar et al. 2012)

In the study of Sudesh Kumar et al 81% were aware that people of any age can donate eyes. (Arya et al. 2014) Similarly a study conducted in Hubli, Karnataka, revealed that 69% of the participants believed that there was no age limit for eye donation. (Nekar et al. 2012) But in the present study majority (50.6%) of participants thought that only adults can donate eyes and only 39.50% of people thought that people of any age can donate eyes.

A study conducted in Bhopal showed, 56.06% knew that eyes retrieval could be done at home (Tigga et al. 2016) whereas in this study only 37.03% were aware of it.

In this study, 58.02% of people said that names of donor and recipient will not be revealed to anyone which is in contrast to the study done by Bhandary et al where anonymity about the donor and recipient was known to 74.5% of participants. (Bhandary et al. 2011) and by Tigga et al where majority (62.12%) of the participants

were aware that recipients should not be informed of the donor's details. (Tigga et al. 2016)

This study showed that 33.33% of people were unaware that donor eyes can be preserved in the eye bank. Similar finding was found in a study by Bhandary et al where 36.2% were still unaware that the eyes could be preserved after retrieval. (Bhandary et al. 2011)

In a study done by Sudesh Kumar et al, it was found that (27.8%) of the subjects thought a diabetic cannot donate his eyes and 22.5% responded that eyes of an infant cannot be donated and 12% of the respondent thought that a person who has undergone eye surgery cannot donate. (Arya et al. 2014) However in the present study about 62.9% of people thought that people with diabetes cannot donate eyes and 67.9% thought that people with hypertension cannot donate eyes and 71.60% people thought that infants cannot donate eyes and only 22.2% of people were aware that all three people with diabetes, hypertensive and infants can donate eyes

In this study major source of information was media (64%). Media was also the major source of information in the study done by S.D Joshi in Nepal. (Anon 2010) Similar finding was found in a study by Yajaman et al in rural Karnataka, in a study by Ronanki et al among medical students in India. (Yajaman et al. 2015) (Ronanki et al. 2014) Likewise, as per M K Bharti et al, major source of information was mass media/TV/radio/movies (71%). (Bharti et al. 2009)

This study revealed that 42.5% of people had high level of awareness. Similar to this study, a study conducted by S.D. Joshi in Nepal (2010) among community people found that 30.7% were aware of eye donation. (Anon 2010) Also in not much contrast to this study, a study done by Bhandary S et al (2011) among attendants of patients at various clinics in Melaka, Malaysia found that 69% were aware of eye donation. (Bhandary et al. 2011) Similarly in a study done by Tiwari R et al (2012) in India among 2192 people residing in central and state govt. colonies it was found 62.30% were aware of eye donation. (Tiwari et al. 2014) This may be due to the fact that these studies have been done among general population.

In contrast to this study, in many studies, done among college level students awareness level was found high. For instance, a study done by Biswas J et al (2010) in North Kolkata among secondary level students found that 81.0% were aware of eye donation. (Biswas et al. 2010) Similarly in a study done by Manjunath S Nekar et al (2012) among college students of Hubli City, Karnataka found that 96% were aware of eye donation. (Nekar et al. 2012) Also in contrast to this study, a study done among medical and paramedical staffs found that 80.5% were aware of eye donation. (Arya et al. 2014)

Thus, this suggests that awareness level is found more in college level students and medical students than general population.

However, in a study done by Tigga et al among nursing and paramedical staffs found that 37.85% had good knowledge, 87.78% had fair knowledge and 32.05 had poor knowledge. Likewise, in other study done by Subodh Kumar Yadav et al among nursing students found that, more than half (57%) students had average knowledge; nearly 1/3rd (30%) good knowledge 1/7th (13%) had poor knowledge on eye donation. In a study done by Sadana et al only 8.2% of the medical students had good knowledge; 57.2% of the students had satisfactory knowledge while 34.5% of the students had poor knowledge regarding eye donation.

Study conducted by Sudesh K et al (2010) among medical students revealed that 87.8% were willing to donate eyes (Arya et al. 2014) whereas in this study only 49.1% people were willing to donate eyes. This finding is supported by a study done in Nepal by S.D Joshi that showed only 32.9% were willing to pledge eyes.(Anon 2010) and by Bhandary S et al in Malaysia where only 34.42% were willing to donate eyes (Bhandary et al. 2011) and by Paraz CM et al among Singaporean youth where 31 % were willing to donate their corneas.(Mariella et al. 2016)

However, a study done among nursing and paramedical staffs done by Tigga et al reveals that the willingness to donate eyes was much less (21.71%) (Tigga et al. 2016) Similarly in a study done by Kumar et al though 98% were aware about eye donation only less than half of them (46.75%) were willing to donate their eyes. A similar finding was revealed in a study by Vidhusa et al among medical students in which 99.3% of students are aware of eye donation out of which only 9% pledged for donation. (Vidusha & Manjunatha 2015) This shows that though medical students are seemed to be more aware than other people about eye donation, willingness to donate is less among them.

In this study the reasons for not donating eyes were 29.62% were afraid of deformity, 24.07% thought that they cannot donate because of eye problem, 33.3% thought that eye donation will not be useful and 12.96% had other reasons like they were not interested, they have not thought about it yet, they had not heard about eye donation. Similar type of reasons was found in a study done by Nekar et al. (2012) among college students of Hubli: lack of interest 60%, weak eye sight, religious belief, afraid of invasive procedure 40%. (Nekar et al. 2012)

However in other studies many other reasons were reported. In a study done by Singh M et al (2012) among medical students, regarding the reasons for not donating eyes, 13% reported objection by family and 3.2% reported religious factors as restrictions for eye donation.

There were many misconceptions regarding eye donation like 27% thought that eye donation would result in delay in funeral arrangement.(Anon n.d.) Also, a study done by Bhandary S et al (2011) among attendants of various clinics the reasons for not donating eyes were like fear of disfigurement, religious reasons, may be time consuming to funeral process. (Bhandary et al. 2011) Similarly, in a study done by Yajaman SR et al (2015) in India found that main reasons for not pledging eyes were: lack of information regarding pledging eyes (39.18%), objection by family members (33.78%) and religious belief (17.56%) (Yajaman et al. 2015) And a study done in Sirkakulam found that the reasons for unwillingness to donate eyes were objection by family members (3.4%), dislike of separating eyes from the body (0.8%), health problems (2.8%), religious restriction (0.6%) and family members being unwilling (2.8%). (Ronanki et al. 2014)

CONCLUSION

In this study though the literacy rate among the people was high, the awareness level on eye donation is found low. The study revealed that many people had misconception and stigma regarding eye donation. By the study we got to know that fear of deformity, have an eye problem, don't think it will be useful, were not interested, have not thought about it yet, had not heard about eye donation were the main reasons for not donating eyes. Moreover, the social stigma like may born blind in next birth, relatives of donor get money for eye donation, results in delay in funeral arrangement, retrieving personnel take everything along with eye, physician will not impart adequate care if one has pledged were also found in people. Thus, there needs to be more eye donation awareness program to motivate people and to encourage positive attitude in people towards eye donation to overcome social stigma regarding eye donation.

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