



Effect of Sensitization to Increase Awareness and Willingness for Eye Donation among Educated Professionals from a Non-medical Background

¹Sarika A Gadekar, ²Akshaya Goyal, ³Jyotika Mishrikotkar, ⁴Supriya Deshpande, ⁵Rahul Verma

ABSTRACT

Aim: To study the effect of sensitization on awareness and willingness for eye donation among educated professionals from a non-medical background.

Materials and methods: Two hundred and twelve participants were asked to fill a pre-designed questionnaire about eye donation before and after sensitization by an interactive audio-visual presentation. Results were analyzed using the Chi-square test and expressed in the form of a percentage. The p-value was checked at 5% level of confidence.

Results: Sensitization efforts showed a statistically significant increase in awareness about eye donation from 94.81% pre-sensitization to 98.58% post-sensitization. Sensitization also improved the knowledge about existing and functioning local eye banks and cleared myths related to eye donation. Whereas before presentation 151 (71.22%) participants were willing to donate eye, after presentation 184 (86.79%) participants were willing.

Conclusion: By increasing the awareness of educated people about eye donation through interactive lectures, the percentage of prospective eye donors increases.

Keywords: Educated professionals, Eye donation, Sensitization.

Educated people also need to be targeted for sensitization for eye donation to meet the increasing demands of the hour.

How to cite this article: Gadekar SA, Goyal A, Mishrikotkar J, Deshpande S, Verma R. Effect of Sensitization to Increase Awareness and Willingness for Eye Donation among Educated Professionals from A Non-Medical Background. *MGM J Med Sci* 2018; 5(3):125-128.

Source of support: MGMIHS

Conflict of interest: None

INTRODUCTION

Corneal blindness affects around 0.90% of India's blind population.¹ Major causes for corneal blindness are trauma, infections, malnutrition, and congenital disorders.² Corneal blindness can be treated to a major extent by penetrating keratoplasty. Eye banks target at collecting

50,000 corneas every year. 59,810 corneas were collected in 2015 to 2016.¹ Only half of the donated corneas can be used for optical keratoplasty.

A study conducted in North Kerala, India, by Prabhu et al.³ found that the awareness amongst population about whether eyes can be donated is 94.4%. Similarly, in a study conducted in Bengaluru, India by Gupta et al.,⁴ 96.8% of the nursing students were aware that eyes can be donated after death. Singh et al.,⁵ in their study conducted on medical students concluded that 99.4% were aware of eye donation and 82.7% were willing for eye donation.

Sensitization and education regarding eye donation are necessary for an individual to make the decision to donate eyes after death. The need, therefore, is to increase the knowledge amongst the masses to increase procurement of corneas.⁶ This can be achieved by launching campaigns to increase sensitization amongst the masses using advertisements and presentations in print and digital media. This study evaluates the effect of sensitization to increase awareness and willingness for eye donation amongst educated skilled professionals from a non-medical background. The study was approved by the ethical committee.

MATERIALS AND METHODS

Two hundred and twelve participants, students and faculty belonging to a professional non-medical institute (MBA and Polytechnic colleges) participated in the study. The participants filled out a pre-tested, semi-structured questionnaire with due informed consent. The questionnaire collected demographic details and contained questions on awareness of blind population, awareness, and knowledge of eye donation, willingness for eye donation, reasons for willingness or unwillingness and awareness about local eye banks.

The questionnaire was filled out by 212 participants before sensitization, following which all participants attended an audiovisual lecture with power point presentation and an interactive session. The presentation included gross anatomy of the eye, causes of corneal blindness, the global and Indian burden of corneal blindness, indications/contraindications for eye donation, dos and don'ts of eye donation, myths related to the same and information about local eye banks. The same

¹Associate Professor, ^{2,5}Resident, ³Professor, ⁴Lecturer

¹⁻⁵Department of Ophthalmology, MGM Medical College and Hospital, Aurangabad, Maharashtra, India

Corresponding Author: Sarika A Gadekar, Associate Professor, Department of Ophthalmology, MGM Medical College and Hospital, Aurangabad, Maharashtra, India, Phone: +918888864171, e-mail: kdmsrk@gmail.com

questionnaire was again filled out by all participants post-sensitization.

Data was compiled in Microsoft Excel sheet and analyzed with Statistical Software for Social Sciences (SPSS) Software version 2.0 using Chi-square test. Results were expressed in the form of percentage and p-value was checked at 5% level of confidence.

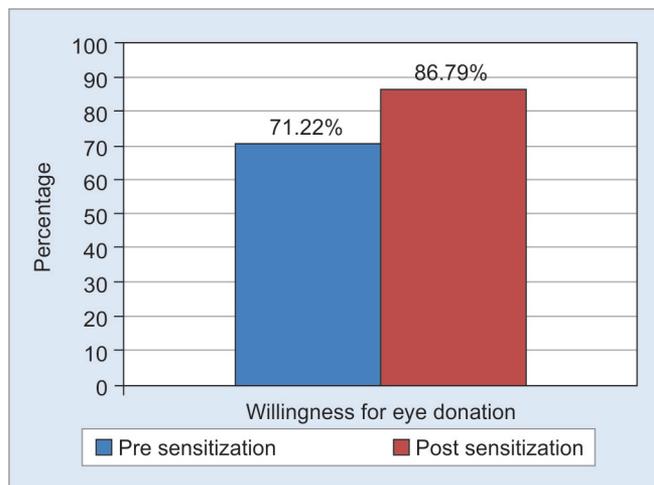
RESULTS

Two hundred and twelve subjects filled and submitted pre-sensitization and post-sensitization questionnaire. Before sensitization 201 respondents (94.81%) were aware that eyes can be donated and post-sensitization 209 (98.58%) respondents showed awareness (p = 0.017 indicating a significant increase in awareness). Similarly, statistically significant increase was seen in the knowledge about collection from home from 71 (33.49%) respondents to 157 (74.05 %), time of collection of eyeball from 94 (44.33%) to 199 (93.86%) respondents and the part of eye used after donation from 67 (31.60%) to 192 (90.56%) respondents (Table 1).

Forty-five (21.20%) participants were aware pre-sensitization that pledging of eyes is not mandatory for eye donation. Post-sensitization 76(35.84%) became aware of the same (p <0.000).

One hundred and nine (51.41%) participants were aware that there is no age limitation for eye donation; however after sensitization 188 (88.67%) respondents became aware of the same (p = 0.000). Sensitization efforts also significantly increased knowledge about pledging of eyes. Many myths related to spectacle use and cataract surgery for eye donation also got cleared.

One hundred and fifty-one (71.22%) respondents were willing to donate eyes pre-sensitization whereas 184 respondents (86.79%) got motivated to do so post-sensitization (p = 0.000). The common reasons listed out for willingness for eye donation included–eye



Graph 1: Willingness for eye donation before and after sensitization efforts

donation is a noble cause, inspired by advertisements/ articles in the print media and relative/friend had donated eyes.

There was not a significant difference in the reasons given for unwillingness for eye donation pre and post sensitization (Tables 2 to 4 and Graph 1).

One hundred and sixty-four (75.34%) of the participants became aware of the burden of blindness in India post-sensitization whereas only 62 (29.24%) were aware pre-sensitization (p = 0.000).

Sensitization improved awareness about existing and functioning local eye banks from 43 (20.28%) pre-sensitization to 173(81.60%) post-sensitization (p = 0.000). (Table 5 and Graph 2).

DISCUSSION

This study suggests that higher education and literacy neither co-relate with increased awareness about the burden of blindness in our country nor with the willing-

Table 1: Comparison of awareness of eye donation in pre-sensitization and post sensitization

Question	Answer	Pre-sensitization	Post-sensitization	Chi-square value	p-value
1. Can eyes be donated	Yes	201(94.81%)	209 (98.58%)	8.16	p = 0.017 S*
	No	03 (1.41%)	03 (1.41%)		
	Don't Know	08 (3.77%)	0		
2. How many hours after death can eyes be donated	Correct answer (within 6hrs)	94 (44.33%)	199 (93.86%)	110.23	p = 0.000 S*
	Incorrect answer	61 (28.77%)	13 (6.13%)		
	Don't know	57 (26.88%)	0		
3. Which part of the eyeball can be donated	Cornea	67 (31.60%)	192 (90.56%)	154.01	p = 0.0000 S*
	Whole eye ball	89 (41.98%)	18 (8.49%)		
	Don't know	56 (26.41%)	2 (0.94%)		
4. Can eyes be collected from home of donor	Yes	71 (33.49%)	157 (74.05 %)	72.7	p = 0.000 S*
	No	86 (40.56%)	41 (16.59)		
	Don't know	55 (25.94%)	14 (6.60%)		

*S–Significant and NS–Not significant

Table 2. Comparison of knowledge about eye donation before and after sensitization efforts

Question	Answer	Pre-sensitization	Post-sensitization	Chi-Square value	p-value
1. Is pledging of eyes mandatory	Yes	86 (40.56%)	122 (57.54%)	43.38	p = 0.000 S
	No	45 (21.22%)	76 (35.84%)		
	Don't know	81 (35.20%)	14 (6.60%)		
2. Age limitation for eye donation	Yes	65 (30.66%)	24 (9.90%)	77.9	p = 0.000 S
	No	109 (51.41%)	188 (88.67%)		
	Don't know	38 (17.92%)	0		
3. Can a person with glasses donate eyes	Yes	108 (50.94%)	166 (78.30%)	52.7	p = 0.0000 S
	No	39 (18.39%)	36 (16.98%)		
	Don't know	65 (30.66%)	10 (4.71%)		
4. Can a person who has under gone cataract surgery donate eyes	Yes	38 (17.92%)	115 (54.24%)	85.3	p = 0.000 S
	No	58 (27.35%)	64 (30.18%)		
	Don't know	116 (54.71%)	33 (15.56%)		

*S–Significant and NS–Not significant

Table 3: Willingness for eye donation before and after sensitization efforts

Question	Answer	Pre-sensitization	Post-sensitization	Chi-square value	p-value
Willingness for eye donation	Yes	151 (71.22%)	184 (86.79%)	15.5	p = 0.000 S*
	No	61 (28.77%)	28 (13.20%)		

* S–Significant and NS–Not Significant

Table 4: Reasons of willingness and unwillingness for eye donation before and after sensitization efforts

Question	Answer	Pre-sensitization	Post-sensitization	Chi-square value	p-value
Reason for willingness for eye donation	Noble cause	93 (43.86%)	111 (52.35%)	6.80	p = 0.078 NS*
	Monetary benefit	26 (12.26%)	17 (8.01%)		
	Inspired by ad/article	46 (21.69%)	58 (27.35%)		
	Know someone who has donated/received eyes	47 (22.16%)	34 (13.03%)		
Reason for unwillingness for eye donation	Lack of awareness	32 (15.09%)	19 (8.96%)	2.67	p = 0.757 NS*
	Family objections	32 (15.09%)	25 (11.79%)		
	Religious restrictions	06 (2.83%)	7 (3.30%)		
	Body disfigurement	08 (3.77%)	8 (3.77%)		
	Unsure of appropriate use of eyes	24 (11.32%)	17 (8.01%)		
	Health restriction	19 (8.96%)	20 (9.43%)		

* S–Significant and NS–Not significant

Table 5: Awareness about blind population and local eye banks before and after sensitization

Question	Answer	Pre	Post	Chi-square value	p-value
Awareness of blind population	Yes	62 (29.24%)	161 (75.34%)	92.2	p = 0.000 S*
	No	150 (70.75%)	51 (24.05%)		
Awareness of local eye banks	Yes	43 (20.28%)	173 (81.60%)	110.23	p = 0.000 S*
	No	169 (79.71%)	39 (18.39%)		

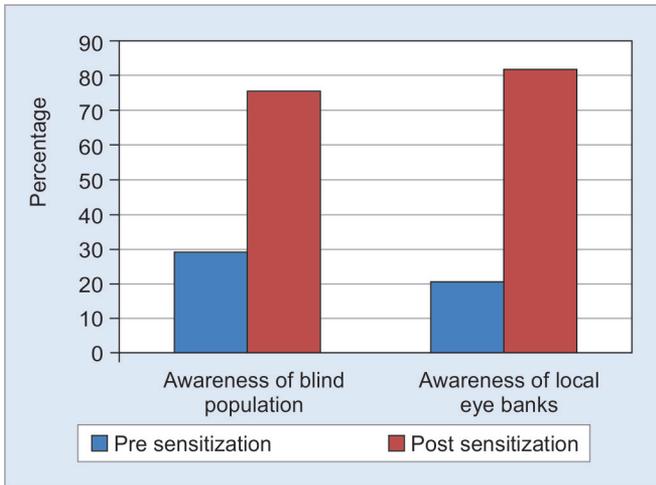
* S–Significant and NS–Not significant

ness for eye donation. We can deduce from the above results that sensitization efforts significantly improve knowledge and awareness about the burden of blindness in our country and increases willingness for eye donation. A positive attitude toward organ donation and transplantation is prevalent predominantly with widespread publicity campaigns organized by mass media, community programs, and hospitals.⁷ Sensitization efforts

in the form of print or digital media including articles, advertisements or powerpoint presentations can be used to increase awareness.

CONCLUSION

Sensitization significantly improves knowledge and awareness about eye donation. For an individual to decide to donate eyes, he/she has to be aware of the



Graph 2: Awareness about blind population and local eye banks before and after sensitization

need of donating eyes. To meet the requirements of donor corneas, we need to make a target oriented approach to motivate more people for eye donation. Educated people also need to be targeted for sensitization for eye donation to meet the increasing demands.

FURTHER SCOPE

Study which type of sensitization efforts, i.e., print media, articles, advertisements or powerpoint presentations

or one-on-one interactions show better results with the masses regarding the improvement of awareness and willingness of eye donation.

REFERENCES

1. National Programme for Control of Blindness (NPCB) statistics for the year 2015-2016. Available at: <http://npcb.nic.in/writereaddata/mainlinkfile/File320.pdf>.
2. Rekhi GS, Kulshreshtha OP. Common causes of blindness: a pilot study in Jaipur, Rajasthan. *Indian J Ophthalmol* 1991 Jul-Sep;39(3):108-111.
3. Prabhu PB. Concerns regarding eye donation among health seekers attending a reputed eye care institution in North Kerala. *Kerala J Ophthalmol* 2016 Jan-Apr;28(1): 43-47.
4. Gupta A, Jain S, Jain T, Gupta K. Awareness and Perception Regarding Eye Donation in Students of a Nursing College in Bangalore. *Indian Journal of Community Med* 2009 Apr; 34(2): 122-125.
5. Singh M, Bhardwaj A, Ahluwalia SK, Saini S, Qadri S. Eye Donation: perception and promoting factors among medical students. *Indian J Community Health* 2012 Jul-Sep;24(3)175-178.
6. Kannan KA. Eye donation movement in India. *J Indian Med Assoc* 1999 Aug;97(8):318-319.
7. Priyadarshini B, Srinivasan M, Padmavathi A, Selvam S, Saradha R, Nirmalan PK. Awareness of eye donation in an adult population of southern India. A pilot study. *Indian J Ophthalmol* 2003 Mar;51(1):101-104.