



ORGAN DONATION: AWARENESS AND PERCEPTION AMONG MEDICAL STUDENTS

B. S. Payghan^{1*}, Swapna S. Kadam¹, Sameeya Furmeen²

¹Professor, Department of Community Medicine, Basaveshwara Medical College, JMIT campus, Chitradurga, Karnataka, India

²PG, Department of Community Medicine, Basaveshwara Medical College, JMIT campus, Chitradurga, Karnataka, India

*Corresponding Author Email: p.bhagwant@gmail.com

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ABSTRACT

Every personal bereavement hides an even larger tragedy as many lives could have been saved by just a single pledge to donate organs. The present study was conducted to emphasize this attitude among medical students who are the future hopes to improve the poor scenario of organ donation in our society. The aim of this study is to determine the awareness, perception and willingness for organ donation among the medical students. A cross-sectional study with purposive sampling was conducted in medical students of Basaveshwara Medical College, Chitradurga, Karnataka, India. After obtaining consent, information was collected by a self-administered questionnaire. Out of the 340 students, 46 % were male and 54 % were female. Awareness about organ donation was very good in 11.77 %, good in 75.29 % and poor in 12.94 %, with predominant source of information being the media/internet (40 %). Majority (86.76 %) knew that organ donation is legal in India. 75.29 % were aware of the shortage of organs. 97.65 % knew that kidney can be donated, 81 % knew cornea, liver and heart can be donated and only 32 % knew that lungs and pancreas can be donated. Positive perception towards organ donation was seen in 50.29 % and 68.82 % were ready to become organ donors. More willingness for organ donation was seen among females. Overall awareness about organ donation was good, but still fifty percent students had negative perception. Most of them knew about kidney donation, but not much of other organs like lungs and pancreas. Positive attitude towards organ donation could be enhanced among the students by including it in the medical curriculum so that it will also improve the perception of the entire community in the long run and slowly work up in narrowing the vast shortage of organs in India.

Keywords: organ donation, awareness, perception, organ transplantation, cadaver donation

INTRODUCTION

People tend to leave behind their precious belongings for their loved ones after their death. Even organ donation should be viewed with equal respect and alacrity as it is the noblest of all donations. Approximately 25 different organs and tissues including cornea, kidney, heart, lung, liver, pancreas, stomach, intestine, middle ear, bone, cartilage, ligaments, bone marrow, blood vessels and skin can be transplanted¹. A donor can live with one kidney and half of the pancreas and in case he donates three-fourth of his liver, it regenerates to its original size in six weeks². The donation of human organs and tissues not only save lives of terminally ill patients, but also helps in attaining an improved quality of life for many patients. Organ donation rate from brain dead patients is highest in Spain, being 32 per million population³. In USA and UK it is 22 and 14 per million populations; whereas in India it is just 0.16 per million population⁴. This shows how much our country lags far behind when compared to the developed countries. Every year, around 140,000 brain deaths occur due to road traffic accidents and 80,000 of them could be potential organ donors, but only a few are donating the organs. If even 20 % of them were to donate, all requirements for organ transplantation in our country would be fulfilled⁵. People in need of a transplant far exceed than those willing to donate. Hence there is always a shortage in the availability of organ donors. In India, nearly 500,000 people die every year because of non-availability of organs. Around 1, 50, 000 people await a kidney transplant of which only 5000 are fortunate enough to get it⁶. About 2 lakhs people have liver diseases and 20,000 of them are in need of liver transplants but only 500 get transplanted. While annually around 4,000–5,000 patients in India require a heart transplant but so far only 100 heart transplants have been conducted across the country. According to the National Program for Control of

Blindness (NPCB) 2012-13 report, India collected only 4,417 corneas against a whopping requirement of 80,000-1, 00,000 per year⁷. Tamil Nadu, India is the most active state for organ donation in India. Following it is Karnataka, Maharashtra and Andhra Pradesh, India. From 1995 to 2011, Tamil Nadu, India has performed 295 organ donations, Maharashtra 150, Andhra Pradesh 137, Delhi 64, Uttar Pradesh 9 and Chattisgarh 7, India⁵. The Zonal Co-ordination Committee for Transplants in Karnataka, India (ZCCK) is a government body overlooking the entire organ transplantation process in the state of Karnataka, India. According to ZCCK, over the past 5 years only 32 deceased organ donations have taken place in Karnataka, India – 3 in 2007, 2 in 2008, 11 in 2009, 8 in 2010, 6 in 2011 and 2 in 2012⁶. Thus it's clearly seen that there is a huge gap between the requirement and the availability of the donors. The present study was conducted among the medical students in the hopes to improve their awareness of this situation, as they play a vital role in contributing to the better future of our community. Hence the objective of this study is to determine the awareness, perception and willingness for organ donation among the medical students of BMCH.

MATERIALS AND METHODS

A cross-sectional study with purposive sampling was done in medical students and interns of Basaveshwara Medical College. All of them were approached and 340 students responded for the study. After obtaining verbal consent, the data was collected by a pre-designed, pre-structured, self-administered questionnaire. The questionnaire consists of background information, questions on the awareness of organ donation, for which the respondents were to answer either yes, no or don't know. The latter part of the questionnaire had questions on the perception of organ donation for which the

participants were to mark on a scale of 1 to 5, with 1 being strongly agree and 5 being strongly disagree and they were also asked questions about their willingness on organ donation. The data obtained was compiled and analyzed using MS Excel. Chi square test was applied wherever necessary.

RESULTS

Total 340 students participated in the study. Table 1 shows their socio-demographic details. Females (54 %) were slightly more than the males (46 %). The mean age of the participants is being 20.7 ± 2.28 years. The class of the study participants was as follows – 27.65 % of them were in first year, 25 % in the second year, 15.29 % in the third year, 13.24 % in the final year and 18.82 % in the internship. Majority of them (85 %) were Hindus, 10.88 % were Muslims and 4.12 % were Christians and Others. Most (83.23 %) were from the urban area and the remaining 16.76 % from the rural area. The participants mainly (77.94 %) belonged to nuclear family, 15 % from the joint family and 7.06 % from Three generation family. Predominant source of information about organ donation was from the media/internet (40 %), followed by books/newspapers (34.18 %), friends/family/teachers (21.47 %) and others (4.41 %). No statistically significant difference was found in awareness, perception and willingness for organ donation among the

medical students with age, religion and home town, type of family and education of the parents. Table 2 shows awareness among the medical students. The awareness about organ donation was very good in 11.77 %, good in 75.29 % and poor in 12.94 %. 97.65 % were aware that kidneys can be transplanted, 80.88 % knew that cornea and liver can be transplanted; 80.29 %, 32.35 % and 31.76 % knew that heart, lungs and pancreas respectively can be transplanted. Awareness about live donors was as follows - 62.94 % knew about live kidney donation, 31.76 % and 5.29 % knew about live liver and pancreas donors. Most (86.76 %) were aware that organ donation is legal in India. Only 52.65 % knew about brain death and 75.29 % were aware about the shortage of organs in India. Table 3 shows the perception among the medical students. Positive perception was seen in 50.29 % and negative perception in 49.71 %. Table 4 shows the willingness for organ donation among the medical students. Willingness to become organ donors in future was seen in 68.82 %, 8.24 % didn't wish to become donors and the remaining 22.94 % have not made up their mind yet; more willingness seen among the females ($p < 0.001$). There is statistically significant difference between the awareness, perception and willingness for organ donation with the gender and class of the students.

Table 1: Distribution of the socio-demographic factors among the participants

Characteristics		Number	Percentage
Gender	Male	157	46
	Female	183	54
	Total	340	100
Class	I year	94	27.65
	II year	85	25
	III year	52	15.29
	Final year	45	13.24
	Internship	64	18.82
Religion	Hindu	289	85
	Muslim	37	10.88
	Christian and others	14	4.12
Hometown	Urban	283	83.24
	Rural	57	16.76
Type Of Family	Nuclear	265	77.94
	Joint	51	15
	Three Generation	24	7.06

Table 2: Awareness about organ donation among the medical students in accordance with their class and gender

Characteristics		Awareness N (%)			'p' value
		very good	good	poor	
Class	I year	1 (1.06)	73 (77.66)	20 (21.28)	p < 0.001
	II year	3 (3.53)	75 (88.24)	7 (8.24)	
	III year	3 (5.77)	40 (76.92)	9 (17.31)	
	Final year	6 (13.33)	31 (68.89)	8 (17.78)	
	Internship	27 (42.19)	37 (57.81)	0	
Gender	Male	19 (12.10)	106 (67.52)	32 (20.38)	p < 0.001
	Female	21 (11.47)	150 (81.97)	12 (6.56)	

Table 3: Perception of the medical students about organ donation according to their class and gender

Characteristics		Perception N (%)		'p' value
		Positive	Negative	
Class	I year	30 (31.91)	64 (68.09)	p < 0.001
	II year	46 (54.12)	39 (45.88)	
	III year	22 (42.31)	30 (57.69)	
	Final year	29 (64.44)	16 (35.56)	
	Internship	44 (68.75)	20 (31.25)	
Gender	Male	64 (40.76)	93 (59.24)	p = 0.001
	Female	107 (58.47)	76 (41.53)	

Table 4: Willingness for organ donation among the medical students according to their class and gender

Characteristics		Willingness to donate N (%)			'p' value
		Yes	No	Don't know	
Class	I year	47 (50)	15 (15.96)	32 (34.04)	p < 0.001
	II year	59 (69.41)	5 (5.88)	21 (24.71)	
	III year	34 (65.38)	6 (11.54)	12 (23.08)	
	Final year	36 (80)	0	9 (20)	
	Internship	58 (90.62)	2 (3.13)	4 (6.25)	
Gender	Male	87 (55.41)	19 (12.01)	51 (32.48)	p < 0.001
	Female	147 (80.33)	9 (4.92)	27 (14.75)	

DISCUSSION

Willingness for organ donation was seen in 68.82 %, less when compared to the study on post graduates⁸, more when compared to studies on patients⁹ and general public^{10,11}. This is because of the better acceptance of the concept of organ donation among the medical students than the general public. 87 % were willing to donate organs to family members and 81 % were willing to accept organs from others if the need arises, similar to the study by Mithra *et al*⁹. Most of them (86.76 %) knew that organ donation is legal in India. The awareness about organ donation was better in 87.06 % and positive perception was seen only in 50.29 %. This shows that inspite of good awareness about organ donation among medical students, almost half of them do not have a positive perception towards organ donation, which in turn only highlights the fact that measures should be taken to clear the misconceptions prevailing among the medical students. Only 17 % of them showed religious beliefs against organ donation, very less when compared to other studies on the public¹⁰⁻¹². This may be due to the lesser prevalence of myths among the medical students than the general population. Even though the study participants were medical students, they were aware about organ donation mostly through the media and the internet and not via the medical books and teachings as one might expect. So this needs the attention while planning the awareness programmes as there is no point in such programmes if the medical students are not actively involved in it. The medical students are in a better position to spread awareness and reduce misconceptions about organ donation in the community; hence the very need to improve their awareness and perception on organ donation.

CONCLUSION

Overall awareness among the students was good. Most of them showed willingness for organ donation inspite of the overall percentage of positive and negative perception being almost the same. The awareness, perception and willingness for organ donation were found to be better among the interns than the students of other class and females when compared to the males. Majority of the students knew about kidney donation. Most of them knew about donation of cornea, liver and heart, but not much of other organs like lungs and pancreas.

Recommendation

As the budding doctors are the future hopes of our country, enlightening and motivating them about organ donation through camps, workshops, discussion with teachers, friends and family and media will definitely have a bigger impact on the entire nation in the long run.

Limitation

The study cannot be generalized due to the small sample size and also because it was done in a specific population (medical students).

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