



Study to Assess Knowledge and Attitude towards Organ Donation among Interns and Post Graduates of a Medical College in Karnataka, India

Geeta V Bathija¹, Ananthesh B G², Dattatraya D Bant³

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Author's Affiliation:

¹Associate Professor; ²Post Graduate Student; ³Professor & Head, Department of Community Medicine, Karnataka Institute of Medical Sciences, Hubli, Karnataka, India.

Correspondence

Dr. Ananthesh B.G
ananthesh.bg@gmail.com

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ABSTRACT

Introduction: Health-care professionals are the critical link in positively influencing public awareness about organ donation. There is limited research on awareness and attitude about organ donation among Postgraduates and interns.

Objectives: To assess the knowledge and attitude towards organ donation among Post graduates and Interns and to know the reasons for deciding to donate one's organ.

Methodology: A cross sectional study was done among 178 Postgraduates and 122 interns of a Medical college in India by using pretested semi-structured questionnaire.

Results: More number of Postgraduates were aware about donation of cornea(100%), kidney(99.4%) and liver (94.9%) than interns with awareness 95.9%, 90.2% and 82.7% for cornea, kidney and liver respectively. 72.7% of subjects were willing to donate organs and PGs were significantly more registered for organ donation than interns. Most common reason given by the participants for organ donation was 'to be useful after death'.

Conclusion: Our study concludes that most of the subjects have adequate knowledge about organ donation but it is not sufficient. There exists significant gaps in knowledge and attitude on the same between Interns and Postgraduates. Even though many are willing to donate organs, only few registered and have donor card till now.

Keywords: Organ donation, Postgraduates, Interns, Knowledge, attitude.

INTRODUCTION

Organ donation stands above everything because it saves the life of the person and make him enjoy other benefits.¹ Organ donation is defined as the removal of tissues from the human body, from a living or dead person, for the purpose of transplantation as a treatment. Statistics shows that Australia has 11 organ donors per million, Britain has 27, Canada has 14, Spain has 35.1 donors and USA has 26 donors per million whereas India has only 0.08 donors per million population.²

Worldwide, organ transplantation saves thousands of lives³. Organ transplantation is considered one of the greatest advances of modern medical science that has given many patients a renewed lease of life.² Organ transplantation is enabling to enhance the quality of life of patients with end-stage organ failure.⁴

On an average about 106 people are added to an organ waiting list every day and 18 people die each day for an organ.⁵ In India nearly 5 lakh people die every year because of non-availability of organs. Around 1.5lakh people await a kidney

transplant of which only 5000 get it. About 2laks people have liver diseases and 20000 of them are in need of liver transplants but only 500 are fortunate to get transplanted. While annually around 4-5000 patients in India require a heart transplant but so far only 100 heart transplants have been conducted across the country. In 2012-13, India collected only 4417 corneas against a whopping requirement of 80000 to 100000 per year.⁶

Every year thousands of individuals wait for organ transplantation. Therefore, there is a great need for increasing organ donation and harnessing of donor organs.⁷ The shortage in organ supply is due to lack of awareness and correct knowledge among public, misconceptions, myths and beliefs surrounding organ donation due to religious and cultural barriers leading to hesitancy in donation of human organs.²

Health-care professionals are the most critical links in the organ procurement process because they are the first individuals to establish relationship with the potential donors' family and to have the opportunity to raise the option of donation. There is a great need for increasing awareness about organ transplantation and organ donation among the public, beginning with the health-care professionals who in turn, can motivate the public.⁷

Educators should be aware of the need to increase the influence on health professionals in increasing organ donation. To identify educational strategies that give greater emphasis, it is important to assess the degree of knowledge and the attitudes of medical graduates regarding organ donation.⁸ The results of this study support a greater emphasis to improve the knowledge of future health care professionals about organ donation.

Hence this study is carried out with the objective a) to investigate the knowledge and attitude towards organ donation among post graduates and interns and b) to know the reasons for deciding to donate one's organ.

MATERIALS AND METHODS

A cross sectional study was undertaken after obtaining Institutional Ethical Clearance and oral informed consent from all Post graduates and interns of Karnataka Institute of Medical Sciences[KIMS], Hubli by using pretested semi-structured questionnaire. KIMS is a Medical College in Hubli, India, is affiliated with Rajiv Gandhi University of Health Sciences, Bangalore, Karnataka . It is one of the oldest Government tertiary healthcare centre and largest multi-speciality Hospital in North Karnataka recognized by Medical Council of India.

Out of 150 Interns and 352 Postgraduates, only 122 interns and 178 PGs who gave consent were included in study making total sample of 300 subjects. This study was carried out for 3 months from 11/06/2016 to 10/09/2016.

Data was collected by questionnaire method. Details taken about awareness of organ donation, duration between harvesting and transplanting different organs. Personal willingness to donate an organ for transplantation, and objections to donation, religious and family opinions towards donation were studied. Lastly, their opinion about how they motivate others were taken.

Statistical Analysis: Results were described in frequency, percentages, mean and standard deviation. Non parametric test like Chi-square test was applied to know association between qualitative variables.

Table 1: Awareness about organs that can be donated in living person and soon after death and organ donation register

Awareness	Interns (n=122) (%)	Postgraduates (n=178) (%)	Total (n=300) (%)	χ^2 value	P-value
Organs that can be donated By living person					
Lung	28 (23)	42(23.6)	70(23.3)	0.017	0.896
Kidney	98(80.3)	175(98.3)	273(91)	28.594	<0.001
Pancreas	20(16.4)	43(24.2)	63(21)	2.630	0.104
Liver	92(75.4)	141(79.2)	233(77.7)	0.604	0.437
Organs that can be donated soon after death					
Lung	53(43.4)	91(51.1)	144(48)	1.711	0.190
Cornea	117(95.9)	178(100)	295(98.3)	7.419	0.006
Kidney	110(90.2)	177(99.4)	287(95.6)	15.019	<0.001
Heart	74(60.7)	127(71.3)	201(67)	3.743	0.053
Pancreas	44(36.1)	84(47.2)	128(42.7)	3.663	0.055
Liver	101(82.7)	169(94.9)	270(90)	11.887	<0.001
Awareness about organ donation register					
Present	45(36.9)	115(64.6)	160(53.3)	22.350	<0.001
Absent	77(63.1)	63(35.4)	140(46.7)		

RESULTS

Among 300 subjects, 122(41%) were Interns and 178 (59%) were Post graduates. Their mean age was 25.31 ± 2.63 years and among them, 54% were male and 46% were female. And 87% were Hindu,10% were Muslims and 3% were Christians.

All subjects were heard about organ donation. Source of information - 60.66% of the respondents heard about organ donation from Television, newspaper-24.66%, magazines-14.66%, brochures-6.33%,family members-9%,others-20.33%, only 4.66% heard from radio.

In the table 1, Postgraduates are significantly more aware than interns that kidney can be donated by living persons. Only few subjects were aware about donation of lung and pancreas in living persons. Also, postgraduates were significantly more aware than interns about donation of cornea, kidney and liver in dead persons. However, 67% were aware that heart can be transplanted soon after death, followed by lung(48%) and pancreas (42.7%). Post graduates were significantly more aware about National organ donor registry than interns and, regarding minimum age for registration for organ donation, only 50.7% of subjects have mentioned the correct answer i.e.18years.

In the present study, 51.33% of the students have correct knowledge regarding time interval between harvesting and transplanting the cornea, whereas for lung, heart, liver, kidney and pancreas they have got less knowledge about time interval between harvesting and transplantation[table 2].

In this study, 72.7% of subjects were willing to donate organs after death.[table 3] with almost equal response from PGs and interns. Among those who

were willing to donate organs, 72.33% told that they will donate for anyone who are in need and 27.67% were willing to donate organs only for family members or friends. It was also observed that among 300 subjects,57.3% are willing to donate their organs only after their death and 4% before death and 11.3% at any time and 27.3% told that they never want to donate organs.

Table 2: Distribution of subjects according to their correct knowledge about the time interval between harvesting and transplanting the organs

Organs	Interns (n=122) (%)	Postgraduates (n=178) (%)	Total (n=300)
Lung	14 (11.48)	40 (22.47)	54 (18)
Cornea	48 (39.34)	106 (59.55)	154 (51.3)
Liver	7 (5.74)	27 (15.2)	34 (11.33)
Kidney	5 (4.1)	18 (10.11)	23 (7.66)
Pancreas	6 (5.0)	11 (6.18)	17 (5.66)
Heart	18 (14.75)	32 (18)	50 (16.66)

Table 3 also infers that 29 (9.7%) subjects registered for organ donation. Significantly more proportion of Postgraduates(14 %) have registered for organ donation than interns(3.3 %). It was observed that 21 (7%) subjects have registered for cornea, followed by 5 (1.66%) for kidney, 4 (1.33%) for Liver and 1(0.33%) for heart.

Most common reason to donate one's organs given by subjects were "To Be Useful After Death", followed by " Want To Help Others[table 4]. Among 82 subjects who didn't want to donate organs, most common reason given was "the organs could be wasted" by 56.1%, followed by "organs could be misused" by 26.9% and only 14.6% said due to religious beliefs they are not willing to donate organs.

Table 3: Distribution of subjects according to willingness and registration for organ donation

Variables	Interns (n=122) (%)	Postgraduates (n=178) (%)	Total (n=300) (%)	χ ² value	P-value
Willingness for organ donation					
Willing To Donate	87 (71.3)	131(73.6)	218(72.7)	0.190	0.662
Not Willing To Donate	35(28.7)	47(26.4)	82(27.3)		
Registration for organ donation					
Registered	4 (3.3)	25(14)	29(9.7)	9.609	0.001
Not Registered	118(96.7)	153(86)	271(90.3)		

Table 4: Reason for organ donation given by subjects

Reasons*	Interns (n=122) (%)	Postgraduates (n=178) (%)	Total (n=300) (%)
Contribution To Medical Science	10 (11.5)	29(22.13)	39(17.88)
Want To Help Others	35(40.22)	70(53.43)	105(48.1)
To Be Useful After Death	45(51.72)	62(47.32)	107(49.08)
Loved One Died Because Of Organ Failure	0(0)	4(3.05)	4(1.83)
Detest Burial/ Cremation Ritual	1(1.14)	1(0.76)	2(0.91)
Other Reason	4(4.59)	5(3.81)	9(4.12)

* Multiple reasons were given by subjects.

Around 92% of subjects responded that they wish to motivate among their friends and family for organ donation and the most common response given by subjects about how they motivate others for organ donation was "By Creating Awareness" followed by "By Explaining The Importance of organ donation".

DISCUSSION

The present study provides several important insights into the knowledge and attitude of organ donation among Post graduates and Interns as they were in regular contact with patients in a Medical College. In this study, male and female subjects constitute 54% and 46% respectively whereas in a study done in a medical college in Chitradurga, India,⁶ it was 46% and 54% respectively and in Nisreen firoj ali et al⁹ it was 36.7% and 63.3% respectively. In our study most of them were Hindus and only 10% were Muslims which is similar to study done by Sree T. Sucharitha et al² about 90 % were Hindus.

All subjects heard about organ donation which is similar to a study by H Bilgel et al⁸ and most common source of information about Organ donation was obtained through Television(60.66%) followed by news paper which is similar to study by B.S Payghan et al⁶ and Usha Bapat et al⁷. This may indicate that media plays a powerful role to spread awareness about organ donation. And in Europe, education campaign not only involving public, but also School, colleges, hospital staffs and doctors have resulted in 53% increase in organ donation.¹⁰

According to a study done among Medical students in Chitradurga, India,⁶ only few (62.9%) knew about live kidney donation whereas subject of the present study had better knowledge about live kidney donation i.e. 91%. In the same study, 31% and 5% knew about live liver and pancreas donation whereas better knowledge found in the present study where 77% knew about live liver donation and 21% knew about live pancreas donation but the knowledge is not found to be sufficient both among Interns and Postgraduates.

Awareness about donation of cornea, kidney and liver soon after death was good in our study which is similar to a study done among medical college students in Northeast Brazil¹¹ where 99.1% answered kidneys, 98.3% corneas and 88.2% answered liver could be transplanted soon after death. Our results also go along with the study done by B.S Payghan et al⁶. But knowledge regarding other organs like lungs and pancreas which can be transplanted after death was less (less than 60%) in both the above said studies,^{6,11} even our study also concludes the same. Very few had correct

knowledge regarding time interval between harvesting and transplanting various organs. And approximately half of the study subjects were aware about National organ donor registry and minimum age for registration for organ donation. This gap in knowledge may reflects the lack of adequate information or exposure to this discipline among medical students. One more important barrier may be that few discuss about this topic and future doctors will be ideally situated to foster this discussion.¹²

In the present study, 72.7% were willing to donate organs where as in the study done by Usha Bapat et al⁷ 89% of Postgraduates were willing to donate their organs and a small percentage of the respondents were not willing. Similar attitude were found out among Medical students in a study conducted in Brazil¹¹, Turkey⁸ and Chitradurga, India⁶. In an Egyptian study¹³ among Medical students, only 57.9% were willing to donate organs to any recipient, but more proportion of subjects in the present study were not selective in their desire to donate organs which is also similar to findings in Undergraduates Medical students conducted by Ramdurg UY et al.¹⁴ Postgraduates were having more positive attitude may be because of more experience gained during PG training and thus more aware of need of organs.

In a study done on registered organ donors in Netherland,¹⁵ 93% of the donors indicate that the desire to be useful after death played a major role in their decision to become body donors, and about half of them(49%) opined body donation as a way to express gratitude. Similar findings were present in our study. But a few donors (15%) seem to be motivated by a negative attitude towards funeral rites and practices in contrast to our findings where only 0.91% cited these reasons for their decision of organ donation.

The reasons given for not willing to donate organs were "the organs could be wasted", "organs could be misused" or subjected for mutilation. Our results go along with H. Bilgel et.al,⁸ MMD Dutra et.al¹¹ and Usha Bapat et al.⁷ Lack of confidence in Health care system and fear of commercialization were important reasons for not donation according to Hosam Hamed et al.¹³ only 14.6% said due to religious beliefs they were not willing to donate organs.

Only a minority of subjects (14.6%) said that they were not willing to donate organs due to religious beliefs which is similar to a study by Usha Bapat et al⁷ and MMD Dutra et al¹¹ where religious belief played minor role for negative attitude for organ donation. And according to study done in Medical School in Italy by P Burra et al¹⁶, religious beliefs

had no influence on students' attitudes to organ donation.

Even though many were willing to donate organs, only few (9.7%) subjects registered for organ donation most common being cornea and kidney. Similar results were seen in studies done by Ilango et al¹ and Dardavessis T et al.¹⁷ In Contrast to this results, in a study done in Italy,¹⁶ 63% of final year students have registered and had Donors card. Healthcare professionals and medical students can serve as role models for patients and also for public and achieve greater success for organ procurement for transplantation.

The main strength of this study being inclusion of both Interns and Post graduates so that it was an opportunity to improve their awareness and attitude towards organ donation and several barriers for involvement of future Physicians in this field can be addressed. It also helps to stress more about this concept and inclusion of separate topic on "Organ Donation" in both Undergraduate and Post graduate curriculum. The limitations being less response from Postgraduates as many had peripheral postings and few didn't give consent which resulted in small sample size, and as this study was conducted only in KIMS Hubli, it would be better if we had included other Medical colleges, both Private and Government, for an overall perspective on organ donation and for generalizing the findings.

CONCLUSION

Our study suggests that majority of the subjects were aware of organ donation, mainly through the audiovisual media. There exists significant gaps in knowledge and attitude on the same between Interns and Postgraduates. Even though many are willing to donate organs, only few registered and have donor card till now. The results of this research indicates that there is urgent need for more intensified interdisciplinary discussion and information to prepare the next generation of health-care professionals about transplantation and organ donation.

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