

Original Research Article

DOI: <http://dx.doi.org/10.18203/2394-6040.ijcmph20192108>

Awareness about organ donation in medical and non medical students in Patan city of Gujarat, India

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Received: 29 April 2019

Revised: 09 May 2019

Accepted: 131 May 2019

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ABSTRACT

Background: More than 4 lakh Indians require transplantation annually. However, not even 10% get it. Awareness, positive attitude and consent by relatives for organ donation in brain death patient are the prerequisites organ donation. Lack of understanding, religious attitudes along with myths and misconceptions added to the low percentage of organ donation. To bridge this gap we have conducted this research.

Methods: A cross sectional study was conducted among 300 students of last 4 semesters after getting permission was obtained from Institutional Ethics Committee and principals/dean of above mentioned colleges. Self-administered questionnaires were allotted to students. Questionnaire contained demographic information and questions regarding the knowledge and attitude toward organ donation. After answering, the answer sheets were collected for evaluation.

Results: Satisfactory knowledge was observed regarding consent before OD (58.0%), organ transplantation act (70.6%) and, risk involved in OD (77.7%). However, low level of awareness was found about legalisation of brain death (39.3%), organ donation centre (29.3%) and organ donation card (11.3%) was very low among students. About 3/4th of students (78.3%) were willing to be a donor, and their preferences of the recipient were 49.7% for family members, 31.3% for friend, 24.2% for relative and 43.6% for unknown person.

Conclusions: There is gap between knowledge and attitude about OD among youth. Media should take up the initiative of broadcasting of the legislative laws related to process of OD and also information regarding organ donation card, organ donation centre.

Keywords: Organ donation, Student, Awareness, Attitude

INTRODUCTION

“Organ donation (OD) is the process of giving an organ or a part of an organ for the purpose of transplantation into another person(s).”¹ Expert says that the organs from one donor can save or help as many as 50 people.²

More than 4 lakh Indians require transplantation annually. However, not even 10% get it. Around 1.5 lakh brain death occurs due to road traffic accidents (RTA) and if even 20% of them would donate, organ

transplantation shortage in our country would be fulfilled.³ Once a patient is declared brain dead, almost 37 different organs and tissues can be donated including heart, kidney, liver, lungs, and pancreas. An average of 21 people die each day because organ they need are not donated at time.⁴ Every 10 minutes another name is added to the national organ transplant waiting list.⁵

Awareness, positive attitude and consent by relatives for organ donation in brain death patient are the prerequisites organ donation.⁶ Lack of understanding, religious

attitudes along with myths and misconceptions added to the low percentage of organ donation. Superstitious beliefs have generated fear and mistrust in the minds of the common man and, especially, the terminally ill patients.^{7,8} Although, college students are aware of ideas of blood donation, organ donation after death continues to be a problem. To bridge this gap we have conducted this research.

Aim and objectives

- To assess the knowledge, attitude and practice about organ donation among non medical college students Patan.
- To compare the awareness among students of different streams.

METHODS

A cross sectional study was conducted among 300 students from Shri & Smt. P.K. Kotawala Arts college (n=100), Smt. T.S.R Commerce college (n=100) and GMERS medical college (n=100) during September to December 2018. There are 70 colleges of different streams in Patan district. Out of which three colleges were selected randomly. Student of last 4 semesters were included in the study to evaluate knowledge and attitude regarding OD. Student who denied consent and absent on data collection day were excluded from the study. The permission was obtained from Institutional Ethics Committee and principals/dean of above mentioned colleges. A purposive sampling technique was used for selection students.

The participants were informed of the objective of the study. A self-administered questionnaires were allotted to students and sufficient time was given to them to fill the questionnaires. Questionnaire contained two sections. Section A included demographic information such as age, gender, and history of organ donation in the family. Section B assessed the level of knowledge and attitude toward organ donation. After answering, the answer sheets were collected for evaluation.

Statistical analysis

The data was entered in "Microsoft Excel" and analyzed using the Epi info 7. Qualitative variables were described in percentages. Association between qualitative variables was done by chi- square test. A p values less than 0.05 was considered significant was considered significant.

RESULTS

A total of 300 students were included in the study. Of them, 192 (64.0%) subjects were males. About 217 students (72.4%) are in age group of 18-20 years. Majority of the students (90.6%) were Hindu. There was no significant difference between sociodemographic

characteristics or knowledge about organ donation between two genders.

Table 1: Socio demographic detail of students.

Socio demographic characteristics	Frequency	Percentage (%)
Gender		
Male	192	64.0
Female	108	36.0
Age		
18-20	217	72.4
21-23	83	27.6
Religion		
Hindu	272	90.6
Muslim	28	9.3
Marital status		
Married	6	2.0
Unmarried	294	98.0

Knowledge regarding OD was shown in Table 2. Total 212 (70.6%) students were aware of the "organ transplantation act. More than half of students (174, 58%) knew that consent was essential for OD. Only 119 students (39.3%) were aware about legalisation of brain death by Indian law and organ can be donated by brain dead patient. Most of the students (77.7%) believe that there are no side effects of organ donation. Awareness regarding organ donation centre and organ donation card was very low among students (29.3% and 11.3% respectively). About 33 (11.0%) and 38 (12.6%) students had misbelieved regarding paying extra bill for OD and no regular funeral services after OD respectively. It was reported that awareness regarding eye donation (80.0%), kidney (64.3%), liver (57.0%) among the students. The medical students were more aware about various aspect of organ donation than other students except consent required for OD, organ donation card, misbelieve regarding paying extra bill for OD and no regular funeral service following OD. Major source of information is television (71.33%), followed by newspaper (52.67%), family (39.67%), internet (33%), etc.

Table 3 shows attitude of students towards OD. More than 3/4th of students (179, 78.3%) had strong willingness towards OD and it was more observed in science students (92.0%) as compared to commerce (86.0%) and arts students (57.0%). Among these 179 students, most common preference for OD was family member (49.7%) followed by friends (31.3%) and close relative (24.0%). Whereas 78 students (43.6%) were willing to donate their organs to unknown needy persons.

Total 65 students were not ready for OD. Among them, the reasons for unwillingness were that 8.6% was not ready to go through the disfigurement involved, 7.6% students believed that their organ would be misused and 16.0% stated that their family would not approve.

Table 2: Comparison of knowledge regarding OD among students of different stream.

Statement	Student			Total	χ^2 value p value
	Arts	Commerce	Medical		
OD is legal by Indian law	64 (64.0)	65 (65.0)	83 (83.0)	212 (70.6)	$\chi^2=11.0$; p=0.04
Permission essential for OD	57 (57.0)	58 (58.0)	59 (59.0)	174 (58.0)	$\chi^2=082$; p=0.96
Brain death patient can donate	28 (28.0)	41 (41.0)	49 (49.0)	118 (39.3)	$\chi^2=9.41$; p=0.01
It is not possible for a Brain dead patient to recover	30 (30.0)	46 (46.0)	48 (48.0)	124 (41.3)	$\chi^2=8.02$; p=0.02
Knowledge regarding side effect of OD	74 (74.0)	72 (72.0)	87 (87.0)	233 (77.7)	$\chi^2=7.6$; p=0.02
Knowledge regarding OD centre	24 (24.0)	14 (14.0)	50 (50.0)	88 (29.3)	$\chi^2=33.3$; p=0.02
Knowledge about OD card	8 (8.0)	11 (11.0)	15 (15.0)	34 (11.3)	$\chi^2=2.45$; p=0.29
OD of a family member require extra medical bills	12 (12.0)	12 (12.0)	9 (9.0)	33 (11.0)	$\chi^2=0.61$; p=0.73
No regular funeral service following OD	14 (14.0)	12 (12.0)	12 (12.0)	38 (12.6)	$\chi^2=0.24$; p=0.88
Total	100	100	100	300	NA

Table 3: Comparison of attitude regarding OD among students of different stream.

Variable	Student			Total	χ^2 value p value
	Arts	Commerce	Medical		
Willingness level for OD					
Strong willingness	33 (33.0)	67 (67.0)	79 (79.0)	179 (78.3)	
Will think about it	24 (24.0)	19 (19.0)	13 (13.0)	56 (18.6)	$\chi^2=57.6$ p<0.01
Unwillingness	43 (43.0)	14 (14.0)	8 (8.0)	65 (21.7)	
Total	100	100	100	300	
Priority for OD					
Family member	24 (72.5)	26 (38.8)	39 (49.4)	89 (49.7)	
Friends	18 (54.5)	18 (26.9)	20 (25.3)	56 (31.3)	$\chi^2=3.80$ p=0.13
Relative	12 (36.4)	13 (19.4)	18 (22.8)	43 (24.0)	
Unknown	27 (81.8)	19 (28.4)	32 (40.5)	78 (43.6)	
Total	33	67	79	179	
Reasons for opting against organ donation					
Thinking that family members would not approve	16 (37.2)	11 (78.6)	6 (75.0)	33 (50.8)	
Do not wish to go through the disfigurement involved	12 (27.9)	8 (57.1)	5 (62.5)	25 (38.5)	$\chi^2=0.83$ p=0.93
Misuse of organ which are donated	13 (30.2)	6 (42.9)	3 (37.5)	22 (33.8)	
Do not believe in organ donation1	6 (14.0)	4 (28.6)	2 (25.0)	12 (18.5)	
Total	43	14	8	65	

DISCUSSION

Organ donation and transplantation is an important treatment modality of many end organ diseases.⁹ A total of 300 students were enrolled in present study. Satisfactory knowledge was observed regarding consent before OD (58.0%), organ transplantation act (70.6%) and, risk involved in OD (77.7%). However, low level of awareness was found about legalisation of brain death (39.3%), organ donation centre (29.3%) and organ donation card (11.3%) was very low among students. The medical students were more aware about various aspect of organ donation than other students except consent required for OD, organ donation card, misbelieve

regarding paying extra bill for OD and no regular funeral service following OD.

Sam et al observed satisfactory knowledge regarding organ transplant act (54.0%) and risk involved (49.0%).¹⁰ A study conducted by Ramadurg reported that only 12.9% were aware about the laws legalizing brain death in India.¹¹ This deficiency might be due to lack of awareness about legal terminologies and information. Knowledge about donor card was also reported low in different studies (42.0%, 35.0%).^{10,12}

In the present study, eye (80.0%), kidney (64.3%), liver (57.0%) were the most commonly donated organs

according to students opinion, This observation was similar to the study conducted by Annadurai et al In the present study, major source of information is television (71.3%), followed by newspaper (52.6%) and family (39.6%) and internet (33%).¹³ Bapat et al reported major source of information as television (61.0%), newspaper (60.0%) and magazines (51.0%).¹⁴ The role of effective communication to family members was highlighted by many researchers.^{15,16}

In the present study, about 3/4th of students (78.3%) were willing to be a donor, and their most common preferences of the recipient were family members (49.7%) followed by friend (31.3%), relative (24.2%) and unknown person (43.6%). Similar findings were observed by Sam et al.¹⁰ It was reported 70.4% willingness level and their preferences were 32.7% for family members, 23.7% for friends, and 43.6% for unknown persons.

In the present study, total 56 (18.6%) were in the undecided category. By giving right knowledge, they can be pooled into the category of future organ donors. Total 65 students (21.6%) were not ready for OD. The reasons for unwillingness for OD were their misbelieve regarding disfigurement (8.6%), misuse of organ (7.6%) and 16.0% students stated that their family would not approve. Sam et al reported similar reasons for unwillingness.¹⁰ About 13.6% was not willing to go through the disfigurement, 29.4% had no trust in the legal system, and 49.2% stated that their family would not approve.

CONCLUSION

There is gap between knowledge and attitude about OD among youth. As media is major source of information, they should take up the initiative of broadcasting of the legislative laws related to process of OD and also information regarding organ donation card, organ donation centre. Motivational messages and facts, advertisements on internet, campaigns and exhibitions can improve the awareness and attitude about OD among youth.

Limitation

The study was conducted among the students who were present within the colleges on the particular day which restrict generalization the findings.

ACKNOWLEDGEMENTS

I express my sincere gratitude to Dr. Nitin Solanki, Associate professor to sharing her wisdom during the course of this research. I am thankful to Dr. Rakesh Ninama, Assistant Professor for their valuable suggestions. Last but not the least I want to thank whole heartedly to the students without whom this study would not have been completed.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Amaliyar J, Patel P. Awareness about organ donation in medical and non medical students in Patan city of Gujarat, India. *Int J Community Med Public Health* 2019;6:2435-9.