



## Psychiatry

## A SURVEY ON THE ATTITUDES, BELIEFS AND KNOWLEDGE REGARDING ORGAN DONATION IN MEDICAL, PSYCHOLOGY AND DEGREE COLLEGE STUDENTS

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**ABSTRACT** Organ donation is now common medical procedure in most tertiary general hospitals. The aim of the study was to assess the awareness, beliefs, attitudes and knowledge about organ donation in medical undergraduate students, psychology post graduate students and the general population and compare the three groups. All three groups were informed about the nature and purpose of the study and after their consent were administered a semi-structured questionnaire specially designed for the purpose of the study. The validated questionnaire collected data on socio-demographic profile and knowledge, attitudes, beliefs and awareness about organ donation. The data was statistically analyzed using descriptive statistics and Chi square test where appropriate. The survey questionnaire was completed by 118 medical students, 102 psychology students and 102 members of the general population. A significantly greater number of medical and psychology students knew about kidney transplants than the general population. Awareness about bone marrow and pancreatic transplants was scarce in all three groups. Significantly more medical students knew about organ transplant centers, live organ transplantation and awareness of brain death. Medical and psychology students were aware of organ trafficking far greater than the general population and could describe the same. Majority of three groups supported organ donation and said that they would sign up for organ donation. Majority of the participants in all groups (>85%) reported no recent change in their beliefs towards organ donation. Further larger studies in diverse samples across multiple centers shall be needed to corroborate the findings of the study.

**KEYWORDS :** organ donation, transplant, medical students, psychology students, general population.

### INTRODUCTION

Organ donation is an established procedure in the medicine and multiple organ transplants are happening in various centers all over India (1). Organ donation is then used for organ transplantation which is defined as the removal of tissues and organs from the human body of a dead or living person for the purpose of transplantation as a treatment (2).

A number of awareness programs are often conducted in various hospitals and tertiary medical colleges with the purpose of changing societal attitudes towards organ donation and facilitating more donors to come forward for the same (3). Societal attitudes, cultural and religious beliefs, attitudes of the next of kin and attitudes of staff working in critical care and organ donation units play a huge role in the conversion of the potential organ donors to actual organ donors which is poor (4). Organ donation is now also part of the medical curriculum with the aim that medical students be aware and educate their patients and society about the same (5).

The role of doctors and nursing staff in encouraging patients and their relatives towards organ donation is immense and will save many lives by transplantations once donors come forward (6). It is essential to spread awareness about organ donation across all sectors of society and also cultivate a mindset that shall encourage people towards organ donation rather than shy away from the same (7). Studies in attitudes and beliefs towards organ donation have been carried out in healthcare workers (8), critical care staff (9), nursing students (10), medical students (11), nursing staff (12), college students (13) and the general population (14). The following study was aimed at assessing the knowledge, beliefs and attitudes towards organ donation in medical and psychology students and the general population and to compare the same between these three groups.

### METHODOLOGY

This study was undertaken at Lokmanya Tilak Municipal Medical College and General Hospital in Mumbai, which is one of the largest public tertiary general hospitals and medical colleges in the city. The study was conducted in three groups of students viz. 2<sup>nd</sup> year medical students who had finished at least 2 clinical postings (medicine and

general surgery), psychology students (doing 2<sup>nd</sup> year M.A. in psychology) and the general population. The general population was chosen from relatives of patients attending the psychiatry outpatient department and having no psychiatric disorder themselves. All the students were asked to fill a validated anonymous questionnaire made specially made for the purpose of this study. The questionnaire was validated by 5 senior medical professors of the hospital. The questionnaire had basic socio-demographic data and questions related to knowledge, beliefs and attitudes towards organ donation. These questions were adapted from previously used questionnaires and some were constructed by the authors. Ethical clearance for the study was obtained from the institutional ethics committee of the hospital. The survey was conducted during the November and December 2018. The survey was completely anonymous, voluntary, self-administered and collected on the spot. Informed valid consent was obtained from all participants that took part in the survey.

### Statistical Analysis

The data was transferred into an excel sheet and descriptive statistics using frequency, percentage, mean and standard deviation was used where appropriate. Bivariate analysis using the Chi square test was used for certain variables with the help of the Graph Pad statistical software that is free and available online. A p value of < 0.05 was considered significant.

### RESULTS

#### Basic socio-demographic data

The survey questionnaire was converted by 118 medical students, 102 psychology students and 102 members of the general population. 3 medical students, 5 psychology students and 31 members of the general population who were approached declined to fill the questionnaire citing personal reasons for the decline. The mean age of the medical students was  $19.08 \pm 1.78$  years with a range of 18-22 years. The mean age of the psychology students was  $23.02 \pm 6.28$  years with a range of 21-33 years. The general population had a mean age of  $32.18 \pm 9.86$  years with a range of 26-48 years. Thus, we had a wide age range across the three groups. Majority of the participants were Hindu (> 80% in all 3 groups) and majority of the students (>90% in all groups

were unmarried).

**Awareness, attitudes, knowledge and beliefs towards organ donation**

A significantly greater number of medical and psychology students knew about kidney transplants than the general population (p=0.00003). More medical students knew about skin and lung transplants than psychology students or the general population. Awareness about bone marrow and pancreatic transplants was scarce in all three groups (Table 1).

On assessing the awareness about organ transplantation, it was noted that significantly more medical students knew about organ transplant centers, live organ transplantation and awareness of brain death. They were also able to describe the concept of brain death far better than the other two groups (Table 2).

Majority of participants from all groups were aware of organ transplantation from the newspapers and sadly none of the three groups including medical students were aware of laws and legalities in organ transplantation. Medical and psychology students were aware of organ trafficking far greater than the general population and could describe the same. All three groups supported organ donation (>90% in all groups). Majority of people in all 3 groups (>75%) said that they would sign up for organ donation and also exhort their family members to do so. More psychology students admitted that religious beliefs interfered with their desire for organ donation and more than 50% participants in all groups believed that one continues to live after death via organ donation. Majority of the participants in all groups (>85%) reported no recent change in their beliefs towards organ donation (Table 2).

**Table 1: Awareness of organs that can be donated**

Organs which can be donated		Medical Students (n=118)	Psychology Students (n=102)	General Population (n=102)	Statistics
		N (%)			
Kidneys	Yes	114 (96.6)	98 (96.1)	83 (81.4)	X <sup>2</sup> = 20.4 p = 0.00003*
	No	4 (3.3)	4 (3.9)	19 (18.6)	
Liver	Yes	79 (66.9)	62 (60.7)	53 (51.9)	X <sup>2</sup> = 5.14 p = 0.07
	No	39 (33)	40 (39.3)	49 (48.1)	
Heart	Yes	84 (71.1)	73 (71.5)	59 (57.8)	X <sup>2</sup> = 5.77 p = 0.057
	No	34 (28.9)	29 (28.5)	43 (42.2)	
Eyes	Yes	109 (92.3)	98 (96.1)	97 (95.1)	X <sup>2</sup> = 1.55 p = 0.45
	No	9 (7.7)	4 (3.9)	5 (4.9)	
Bone Marrow	Yes	12 (10.1)	8 (7.8)	5 (4.9)	X <sup>2</sup> = 2.12 p = 0.34
	No	106 (89.9)	96 (92.2)	97 (95.1)	
Skin	Yes	56 (47.4)	25 (24.5)	25 (24.5)	X <sup>2</sup> = 17.8 p = 0.0001*
	No	62 (52.6)	77 (75.5)	77 (75.5)	
Lungs	Yes	13 (11)	32 (31.4)	17 (16.6)	X <sup>2</sup> = 15.22 p = 0.003*
	No	105 (89)	70 (68.6)	85 (83.4)	
Pancreas	Yes	8 (6.7)	8 (7.8)	6 (5.8)	X <sup>2</sup> = 0.3 p = 0.85
	No	110 (93.3)	94 (92.2)	96 (94.2)	

**Table 2 – Awareness, attitudes and beliefs about organ transplantation**

Parameter		Medical Students(N=118)	Psychology Students (N=102)	General Populations(N=102)	Statistics
		All data in format N (%)			
Knowing hospitals/ centres undergoing organ donation	Yes	91 (77.1)	45 (44.1)	52 (50.9)	X <sup>2</sup> = 27.9 p = 0.00001*
	No	27 (22.9)	57 (55.9)	50 (49.1)	
Organ donation happens only after death	Yes	4 (3.3)	17 (16.7)	32 (31.4)	X <sup>2</sup> = 31.2 p = 0.00001*
	No	114 (96.7)	85 (83.3)	70 (68.6)	
Awareness of Brain Death	Yes	107 (90.7)	76 (74.5)	78 (76.5)	X <sup>2</sup> = 11.35 p = 0.003*
	No	11 (9.3)	26 (25.5)	24 (23.5)	
Able to describe properly term brain death	Yes	71 (60.2)	56 (54.9)	42 (41.2)	X <sup>2</sup> = 27.9 p = 0.00001*
	No	47 (39.8)	46 (45.1)	60 (58.8)	
Read about organ donation	Books	12 (10.2)	23 (22.5)	12 (11.8)	No statistics applied as data overlaps
	Magazines	15 (12.7)	23 (22.5)	10 (9.8)	
	T.V.	42 (35.6)	57 (55.9)	49 (48.1)	
	Newspapers	60 (50.8)	54 (52.9)	59 (57.8)	
	Awareness Camps	13 (11)	7 (6.9)	7 (6.9)	
Aware of laws regarding organ donation	Yes	14 (11.8)	12 (11.7)	12 (11.7)	X <sup>2</sup> = 0.05 p = 0.973
	No	104 (88.2)	90 (88.3)	90 (88.3)	
Heard about organ trafficking	Yes	71 (60.2)	74 (72.5)	59 (57.8)	X <sup>2</sup> = 5.56 p = 0.06
	No	47 (39.8)	28 (27.5)	43 (42.2)	

**DISCUSSION**

It was seen in our study that kidney transplants were far better known to all groups than other organs. This is keeping with the fact that far more renal transplants have happened than other organ transplants and there has been far more awareness due to newspaper coverage of the same (15). Brain death as concept is not something common public know and it was reflected in the answers given by psychology students and the general population. This indicates a need to create public awareness of the concept of brain death and particularly in the context of its significance for organ donation (16). Organ trafficking is often in the news and has been depicted in the media and this could explain the fact that majority of people in all three groups were aware of the same (17). While majority of participants in all 3 groups said that they would sign up for organ transplantation, the conversion of this to reality remains a distant dream. Many societal, cultural and religious factors serve as a hindrance to organ donation in India and the conversion from desire to action goes unfulfilled (18). There is need for further awareness of organ donation in medical and psychology students and the general population. There is also a need for further studies to assess such beliefs and attitudes in larger samples to corroborate the findings of the current study and plan areas to target in organ donation awareness drives. There is also need for students and the general population to understand the ethical and legal ramifications of organ donation which largely goes unspoken of (19). The current study was circumscribed to one center and a limited number of questions that were raised. There is need for further research in this direction in diverse student populations and the general population across rural and urban settings.

Described trafficking properly	Yes	68 (57.6)	73 (71.6)	55 (53.9)	$X^2 = 7.49$ $p = 0.023^*$
	No	50 (42.4)	29 (28.4)	47 (46.1)	
Support Human Organ donation	Yes	116 (98.3)	101 (99)	100 (98)	$p = 0.841$
	No	2 (1.7)	1 (1)	2 (2)	
Would Sign up for organ donation	Yes	113 (95.8)	93 (91.1)	78 (76.4)	$X^2 = 24.17$ $p = 0.00007^*$
	Not Decided	1 (0.8)	2 (2)	12 (11.7)	
	No	4 (3.3)	7 (6.9)	12 (11.7)	
Ask family members for organ donation	Yes	113 (95.8)	84 (82.4)	76 (74.5)	$X^2 = 19.83$ $p = 0.00004^*$
	No	5 (4.3)	18 (17.6)	26 (25.5)	
Seen advertisements	Yes	32 (27.1)	40 (39.2)	46 (45.1)	$X^2 = 8.04$ $p = 0.017^*$
	No	86 (72.9)	62 (60.8)	56 (54.9)	
Cultural belief of body to be kept intact after death	Yes	8 (6.8)	8 (7.8)	13 (12.7)	$X^2 = 2.62$ $p = 0.269$
	No	110 (93.2)	94 (92.2)	89 (89.3)	
Fear of surgical procedures	Yes	23 (19.4)	38 (37.2)	22 (21.6)	$X^2 = 10.4$ $p = 0.005^*$
	No	95 (80.6)	64 (62.8)	80 (78.4)	
Religion agree with organ donation	Yes	98 (83.1)	63 (61.7)	74 (72.5)	$X^2 = 40.9$ $p = 0.00001^*$
	No	7 (5.9)	4 (3.9)	19 (18.6)	
	Don't Know	13 (11)	35 (34.3)	9 (8.2)	
Believe that you live after death via organ donation	Yes	57 (48.3)	25 (24.5)	34 (33.4)	$X^2 = 13.9$ $p = 0.00009^*$
	No	61 (51.7)	77 (75.5)	68 (66.6)	
Beliefs changed recently	Yes	34 (28.8)	15 (14.7)	24 (23.6)	$X^2 = 6.27$ $p = 0.0434^*$
	No	84 (71.2)	87 (85.3)	78 (76.4)	
Accept organs from	Unknown donor	102 (86.4)	87 (85.2)	89 (87.2)	No statistics applied as the data overlaps
	Relative you dislike	106 (89.8)	80 (78.4)	67 (65.6)	
	Parents	97 (82.2)	70 (68.6)	74 (72.5)	
	Spouse	100 (84.7)	80 (78.4)	76 (74.5)	

All calculations done using the Chi square test, \*significant ( $p < 0.05$ )

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