

# A Study on the Awareness and Attitudes Towards Organ Donation in a Tertiary Care Hospital

Simran R<sup>1</sup>, Muhammed Sabith<sup>2</sup>, Liba Sara<sup>3</sup>

<sup>1</sup>Undergraduate Student, Department of Hospital Administration, Yenepoya (Deemed to be) University

<sup>2</sup>Assistant Professor, Department of Hospital Administration, Yenepoya (Deemed to be) University

<sup>3</sup>Assistant Professor, Department of Optometry, Yenepoya (Deemed to be) University

## Abstract

Shortage of organs available for organ transplantation is a major problem worldwide. The organ donation rate for cadaver currently in India is 0.08 per million, while Spain tops the list with 35 per million, evidently the need for the transplants is higher than the availability. Majority of organ failure patients die while on the waiting list due to lack of timely availability of organs. Prerequisites for the success of transplantation program include awareness and positive attitudes of individuals in the society. This cross-sectional study was undertaken with the aim to assess the awareness on organ donation as well as their attitudes and willingness towards becoming a donor in the future. Analyzing the level of awareness and their attitude towards organ donation can help organizations as well as the government to take corrective action in the form of educational programs to bridge the gap successfully. The data was collected via questionnaires; these 13 questions were divided into 3 sections, demographic section, awareness section and attitudes section. As per the data collected from 114 participants 58.8% participants were males and 41% were females while majority were above the age group of 45 years. Holding an undergraduate degree or being uneducated. While majority of the participants 75.6% are aware of the term organ donation and are also aware of organs that can and cannot be donated. A huge number of participants 92% are unaware of the procedure to register as a donor. The highest reason of refusal to be organ donors was found to be religious belief (43%) and family disapproval (33.3%). These reasons for refusal were observed in other studies as well. Thus, while majority of the participants are highly aware of the term “organ donation”, their attitude and willingness towards becoming an organ donor is found to be negative.

**Keywords:** Organ donation, awareness, attitudes, organ transplantation

## Introduction

In today's time the most preferred mode for the treatment for end-stage organ disease and organ failures is organ transplantation [1]. Transplantation is the moving of an organ from one body to another or from a donor site on the patient's own body, for the purpose of replacing the recipient's damaged or absent organ [2]. Common transplantations include kidney, heart, liver, pancreas, intestines, lungs, bones, bone marrow, skin, and cornea [3]. Significant shortage of organs in India is a major concern, majority of organ failure patients die while on the waiting list due to the lack of timely availability of organs. In India only 5% of all patients with end-stage kidney disease undergo kidney transplantation [4].

As per proven studies, India has higher demands for organ transplantation due to its social inequalities among the population thus the need for organ transplant has risen due to these factors [5]. However, the systems and pre-requisites for successful organ donation are found lacking, the reason can be of difference between the number of the patients undergoing the transplants is way higher than the centers performing organ transplants [6]. In addition to the low supply, there are other limitations and challenges for deceased-donor organ transplant (DDOT) in India [7]. The success of a transplantation program includes awareness and positive attitude of the public toward organ donation [1]. There is a wide gap between the number of transplants awaited, and the organs available [8]. Approximately five lakh people across the India die each year while waiting for organ transplantation indicates to the drastic gap between the demand and dismal supply of organs [9].

There is an acute need to identify the reasons for the difference between number of patients who are in need of a transplantation and the organ availability [10]. Analyzing the level of awareness and their attitude towards organ donation can help organizations as well as the government to take corrective action in the form of either education or donation programs and bridge the gap as much as possible. High level of awareness about organ donation is found among the students but, high proportion of the students do not have positive attitudes towards organ donation [1]. Studies found that majority of the students are aware about organ donation and students also have favorable attitudes and perception towards organ donation but the lack of donation can be due to religious belief which are preventing certain strata of populations from donating or accepting organs [3,11]. Another study on assessment of knowledge regarding organ donation among general population found that less than 1/3<sup>rd</sup> of the population had adequate knowledge regarding organ donation and very few had a positive opinion and would register to be donors in future [10]. Studies also stated that majority of the students had adequate knowledge regarding organ donation, though it did not translate into their willingness towards donation at the same intensity [12]. Improving knowledge could translate into the act of donation and effective measures must be taken along with the involvement of doctors and media [10]. More efforts should be made to educate and make people aware about brain death and its effect on organ donation [13]. Studies also proved that there is a statistically significant correlation between attitudes, belief and demographics. Bapat in his study found that the concept of brain death was understood only by a small number of populations [14]. Porredi V. through his study revealed that majority of men than women were aware and in favor of promoting organ donation [15]. Our study aimed to seek an insight into the awareness towards organ donation and to assess the attitude and willingness to become an organ donor.

## **Materials and Methods**

This cross-sectional study was conducted in the year 2022 for a duration of 6 months. The inclusion criteria of participants who qualified for the study were patient bystanders of all departments of the outpatient department and only general medicine inpatient department. The sample size was calculated as 114(47 females and 67 males), out of which 7 were between 18-25yrs, 14 were between 25-35yrs, 40 were between 35-45yrs and 53 were over the age of 45yrs. The exclusion criteria of the study were area wise all remaining inpatient departments of the hospital and population wise no staff, students and patients were considered. Informed Consent for participation of the study was obtained from the participants. A Similar consent for the study was obtained from the institutional ethical committee for the conduction of the study.

In order to assess the awareness and attitudes towards organ donation a pretested self-administrated structured questionnaire was used. The questions were adopted after an extensive review of existing literature and consist of different sections containing different items. The questionnaire comprised of 3 sections with 2 questions in the demographic section, 4 questions in the awareness section and 7 questions in the attitudes section with a total number of 13 questions was used.

**Statistical Analysis** Descriptive statistics were used to analyze the data. Frequency and Percentage are used to summarize the categorical data.

## Results

**Demographic Section:** Based on the data collected from bystanders of the hospital in all the outpatient departments and the general medicine inpatient department, 58.8% were males and 41.2% were females and among the majority of 53 participants out of 114 falls under the age group of over 45 years of age as well as 41% of the participants were college graduates.

**Awareness Section:** Data collected from the questionnaire regarding the awareness on the term organ donation where 85 out of the 144 participants have heard of the term “organ donation” in the past contributing to 74.5% while the remaining of 29 participants with a percentage of 25.4% have not heard of the term, 59.6% participants were aware of the organs that can be donated, while 40.4% of the remaining participants were unaware of the organs that can be donated (Table 1). Further the participants were made to choose among the various options of which organ that CANNOT be donated, Where 60.5% rightly chose stomach to be the organ out of the options that cannot be donated (Table 2). The next question pertained to the awareness on registering to become donors, a minute fraction of 7.8% of the participants were aware on how to register to be donors while the majority of 92.1% were unaware on how to register to be donors (Table 3).

**Attitude Section:** The majority of participants, 87.7% have never donated in the past. The willingness of the participants was seen where 58.8% of participants were not sure whether they wanted to be donors whereas 13.2% participants strongly opted to not become organ donors. While 28.6% chose “yes” towards becoming donors in the future (Table 4). 43% of the participants were most likely to donate an organ in the future to family members the most, while 28.1% to known individuals and the donors at random being 15.8%. (Table 5)

The reason for refusal chosen by the participants were religious beliefs 43% and family disapproval was found to be at 33.33% to be the primary reasons to refuse becoming organ donors (Table 5) (Figure 1). Study indicated that majority of the participants weren't in support of having their family members donate organs, nor would their family support them in registering as donors for the future.

## Discussion

Organ donation is defined as giving an organ or part of an organ to be transplanted into another person [16]. In India, the legislative foundation for brain death and organ donation was officially established, under Transplantation of Human Organs Act, 1994 amended in 2011 and it provided a legal and transparent system for organ donation, as the deceased donor donation rate in India stands at around 0.34 per million, which is low when compared to the organ donation rate prevalent in other developed countries [3,17]. Hamed H in his study found a significant relation between the public's attitude towards organ donation and the availability of the required organs [18]. In our study majority of the participants

(75.6%) have heard of the term organ donation and are also aware of organs that can and cannot be donated. In the past a study conducted by Panwar et al., he stated that lack of awareness, religious beliefs and superstitions in Asian countries, such as in the Indian scenario influence the decision-making regarding organ donation [19]. In our study we found that the highest reason of refusal to be organ donors were religious belief (43%) and family disapproval (33.3%) as well. Several studies stated that, awareness on organ donation was high but only half of them had adequate knowledge regarding eligibility status for organ donation and place of registration for organ donation. Higher awareness regarding the term organ donation was noticed among the study population was attributed to the higher educational status of the participants [10]. Same was noticed in the present study where the participants were aware and heard of the term organ donation but were unaware on how to register to be donors. The misconceptions and socio cultural beliefs as well as lack of knowledge regarding organ donation needs to be addressed through awareness campaigns.

Primarily public awareness affects the organ donation and transplantation programs [20]. In the current study while majority of the participants are highly aware of the term “organ donation” as well as the organs that can be donated, we found that our participants were unaware of the procedure to register as an organ donor. It was also found that 43% of participants had a negative attitude towards organ donation due to religious belief and 33.3% of the participants opinions were influenced by family disapproval. Our study also looked into participants supporting a family member to become a donor and found that majority of the participants weren't in favor of their family members becoming a donor as well as the family's support towards participants becoming a donor was extremely low. From the result of our study, though the awareness on organ donation is high the attitudes of individuals is influenced by religious beliefs and family disapproval. Hence we suggest measures are required to be taken to improve the attitudes of the individual as India has lowest organ donation rate with high death rate of ailments that could be prevented with the availability of organs.

We recommend awareness programs organized by students in and around the rural areas to educate public on the importance of organ donation, we also recommend introducing an organ donation unit in the OPD to raise awareness as well as council visitors on the importance of organ donation as well as registration process to become donors. We suggest introduction of donor forms at the medical social work office. We think including organ donation topic in the NSS units for the NSS volunteers also will help to promote awareness programs in and around the hospital and community. Past studies also agree that educating people with better knowledge and awareness along with effective campaigns will help promoting organ donation [21]. The major limitation of our study is that it is being conducted in a charity hospital that migratorily cater to the lower socioeconomic status of people who are mostly from the rural area and we recommend to conduct this study further on a larger scale of population.

## Conclusion

Our study suggest that even though the awareness on organ donation is on the higher side, however the attitudes individuals have towards it is still influenced by religious beliefs and family's disapproval. Knowing where the people stand with their view on organ donation can help improve and increase the required measures to raise awareness around it. Hence our study recommends measures are required to be taken to improve the attitudes of the individuals in a positive manner as it is necessary to actively educate people, as organ donation is the most preferred treatment for many of the end-stage organ diseases as it increases life expectancy and the quality of life.

## Acknowledgement

We thank Department of Hospital Administration & Yenepoya Medical College, (Yenepoya (deemed to be) University) for the support in the smooth conduction of this study.

## Authors' Biography

Simran Rodrigues is currently doing her undergraduate degree in Bachelor of Hospital Administration at Yenepoya (Deemed to be University).

Muhammed Sabith completed Masters in Hospital Administration and is currently working as Assistant Professor cum deputy hospital operations officer at Yenepoya Medical college, Yenepoya (Deemed to be University).

Liba Sara Varghese completed Masters in Optometry and is currently working as Assistant Professor cum Optometrist at the Yenepoya School of Allied Health Sciences, Yenepoya (Deemed to be University). Mrs. Liba has been awarded with the Best Teacher Award & department headed by her got the Academic Excellence award in the month of September 2022. She is currently heading as the Chief Coordinator and Chairperson of Internal Quality Assurance Unit (IQAU) of Yenepoya School of Allied Health sciences, Member of the Board of Studies, member of the Research & Development Cell and also the Associate Editor of Annual Report of Yenepoya university as well as the Green Horizon Bi-yearly Newsletter issues of Yenepoya University.

## References:

1. Mithra P, Ravindra P, Unnikrishnan B, Rekha T, Kanchan T, Kumar N, Papanna M, Kulkarni V, Holla R, Divyavaraprasad K. Perceptions and attitudes towards organ donation among people seeking healthcare in tertiary care centers of coastal South India. Indian journal of palliative care. 2013 May 1;19(2):83-7.
2. Ghose TK, Deo J, Dutt V, Agarwal R, Patel BB, Ganesh M, More VK, Pandya KH, Sharma R, Sharma D, Singh H. Knowledge and attitude towards organ donation: a study among medical and nursing students of a medical college. Int J Community Med Public Health. 2021 Nov;8:5398.
3. Tamuli RP, Sarmah S, Saikia B. Organ donation—"attitude and awareness among undergraduates and postgraduates of North-East India". Journal of family medicine and primary care. 2019 Jan;8(1):130.
4. Sakhuja V, Sud K. End-stage renal disease in India and Pakistan: burden of disease and management issues. Kidney International. 2003 Feb 1;63:S115-8.
5. Ramesh V, Pal C. Organ Donation and Transplantation in India in 2019. Experimental and Clinical Transplantation: Official Journal of the Middle East Society for Organ Transplantation. 2021 Oct 19.
6. Yadla M. Transplantation of human organs act: Act of transplantation—Time to act on the act!- Narrative review. Indian Journal of Transplantation. 2021 Jul 1;15(3):260.
7. Kute V, Ramesh V, Shroff S, Guleria S, Prakash J. Deceased-donor organ transplantation in India: current status, challenges, and solutions. Exp Clin Transplant. 2020 Jul 1;18(Suppl 2):31-42.
8. Goklany T. In Numbers: The Status of Organ Donation in India. NDTV.
9. Bathija G, Ananthesh BG, Bant DD. Study to assess knowledge and attitude towards organ donation among interns and post graduates of a medical college in Karnataka, India. National Journal of Community Medicine. 2017 May 31;8(05):236-40.



10. Sarveswaran G, Sakthivel MN, Krishnamoorthy Y, Arivarasan Y, Ramakrishnan J. Knowledge, attitude, and practice regarding organ donation among adult population of urban Puducherry, South India. *Journal of education and health promotion*. 2018;7.
11. Vincent BP, Kumar G, Parameswaran S, Kar SS. Knowledge, attitude, and perception on organ donation among undergraduate medical and nursing students at a tertiary care teaching hospital in the southern part of India: A cross-sectional study. *Journal of education and health promotion*. 2019;8.
12. Adithyan GS, Mariappan M, Nayana KB. A study on knowledge and attitude about organ donation among medical students in Kerala. *Indian Journal of Transplantation*. 2017 Jul 1;11(3):133.
13. Misra P, Malhotra S, Sharma N, Misra MC, Vij A, Pandav CS. Awareness about brain death and attitude towards organ donation in a rural area of Haryana, India. *Journal of Family Medicine and Primary Care*. 2021 Aug;10(8):3084.
14. Bapat U, Kedlaya PG. Organ donation, awareness, attitudes and beliefs among post graduate medical students. *Saudi Journal of Kidney Diseases and Transplantation*. 2010 Jan 1;21(1):174.
15. Poreddi V, Sunitha TS, Thimmaiah R, Math SB. Gender differences in perceptions and attitudes of general population towards organ donation: An Indian perspective. *Saudi Journal of Kidney Diseases and Transplantation*. 2017 May 1;28(3):599.
16. Job K, Antony A. Organ Donation and Transplantation: "Life after Death.". *Organ Donation and Transplantation: Current Status and Future Challenges*. 2018 Jul 25;17.
17. Srivastava A, Mani A. Deceased organ donation and transplantation in India: Promises and challenges. *Neurology India*. 2018 Mar 1;66(2):316.
18. Hamed H, Awad ME, Youssef KN, Fouda B, Nakeeb AE, Wahab MA. Knowledge and attitudes about organ donation among medical students in Egypt: A questionnaire. *J Transplant Technol Res*. 2016;6(1):1-4.
19. Panwar R, Pal S, Dash NR, Sahni P, Vij A, Misra MC. Why are we poor organ donors: a survey focusing on attitudes of the lay public from northern India. *Journal of clinical and experimental hepatology*. 2016 Jun 1;6(2):81-6.
20. Afshar R, Sanavi S, Rajabi MR. Attitude and willingness of high school students toward organ donation. *Saudi Journal of Kidney Diseases and Transplantation*. 2012 Sep 1;23(5):929.
21. Balwani MR, Gumber MR, Shah PR, Kute VB, Patel HV, Engineer DP, Gera DN, Godhani U, Shah M, Trivedi HL. Attitude and awareness towards organ donation in western India. *Renal failure*. 2015 Apr 21;37(4):582-8.
22. Bharambe VK, Arole VU, Puranam V, Kulkarni PP, Kulkarni PB. Knowledge and attitude toward organ donation among people in Lanja: A rural town in India. *Saudi Journal of Kidney Diseases and Transplantation*. 2018 Jan 1;29(1):160.
23. Alghanim SA. Knowledge and attitudes toward organ donation: a community-based study comparing rural and urban populations. *Saudi Journal of Kidney Diseases and Transplantation*. 2010 Jan 1;21(1):23.
24. Edwin AR, Raja D. Attitudes of health care professionals towards organ donation. *Indian Journal of Urology*. 2000 Jan 1;16(2):98.
25. Chakradhar K, Doshi D, Reddy BS, Kulkarni S, Reddy MP, Reddy SS. Knowledge, attitude and practice regarding organ donation among Indian dental students. *International Journal of Organ Transplantation Medicine*. 2016;7(1):28.

## Annexure:

Table 1: Distribution table of knowledge on donatable organs/ Distribution based on awareness of the term organ donation

Parameter	Frequency (N)	Percentage (%)
Yes	85	74.6
No	29	25.4
Total	114	
Parameter	Frequency (N)	Percentage (%)
No	46	40.4
Yes	68	59.6
Total	114	

Table 2: Distribution table of knowledge on non-donatable organs

Parameter	Frequency (N)	Percentage (%)
Liver	30	26.3
Kidney	5	4.4
Stomach	69	60.5
Eyes	10	8.8
Total	114	

Table 3: Distribution table on the awareness to become organ donors

Parameter	Frequency (N)	Percentage (%)
No	105	92.1
Yes	9	7.9
Total	114	

Table 4: Distribution table of data on past donors / willingness to become donors

Parameter	Frequency (N)	Percentage (%)
Yes	14	12.3
No	100	87.7
Total	114	
Parameter	Frequency (N)	Percentage (%)
Yes	32	28.6
No	15	13.2
Not sure	67	58.8
Total	114	

Table 5: Distribution data on choice of recipient

Parameter	Frequency (N)	Percentage (%)
Family	49	43
Known individuals	32	28.1
Anyone	18	15.8
NIL	15	13.2
Total	114	

Table 6: Distribution table of reason for refusal

Parameter	Frequency (N)	Percentage (%)
Don't believe	nil	nil
religious beliefs	49	43
Disfigurement	16	14.03
Family disapproval	38	33.3
NA	18	15.8
Total	114	

Figure 1: Reason for refusal to be donors

