

PERCEPTIONS OF MEDICAL STUDENTS IN A GOVERNMENT MEDICAL COLLEGE TOWARDS ORGAN DONATIONDeepthi Karini¹, Sunitha S², Devi Madhavi B³**HOW TO CITE THIS ARTICLE:**

Deepthi Karini, Sunitha S, Devi Madhavi B. "Perceptions of Medical Students in a Government Medical College towards Organ Donation". Journal of Evidence based Medicine and Healthcare; Volume 2, Issue 44, November 02, 2015; Page: 7998-8005, DOI: 10.18410/jebmh/2015/1075

ABSTRACT: CONTEXT: Organ transplantation is considered one of the greatest advances of modern science that has given many patients a renewed lease of life. Assessing the medical student's knowledge, attitude and perception regarding organ donation is very important for future organ supply as they are the future doctors who needs to motivate the public to pledge their organs for donation. **AIM & OBJECTIVES:** 1) To study the knowledge and attitude of the medical students towards organ donation. 2) To understand the perceptions of medical students regarding organ donation. **STUDY DESIGN:** A cross sectional study of descriptive nature. **STUDY SETTING:** Study was conducted at Andhra Medical College, Visakhapatnam. **METHODS AND MATERIALS:** The study was done among 123 medical students of 9th semester using a semi-structured questionnaire. Knowledge was assessed by giving score to the responses. Those obtaining a score of 50% or above were considered as having adequate knowledge. **STATISTICAL ANALYSIS:** Data was entered in MS excel and analysed using SPSS student version 21. **RESULTS:** Overall 56 % of students were found to have adequate knowledge. Around one fourth of the study population knew about the various organs which can be donated (26%) and about the minimum duration of organ survival (27.6%). Around 48.8% students showed positive attitude towards organ donation and wanted to donate their organs. **CONCLUSION:** It has been found in the study about the gaps in the knowledge levels of medical students about organ donation. These findings draw attention to a need to review medical school curricula to ensure that they contain sufficient teaching on organ donation, with a focus on information needed by physicians to maximize donation rates. This can be utilized as a strategy for the shortage of donor organs for transplantation.

KEYWORDS: Attitude, Knowledge, Medical students, Organ donation, Perceptions.

INTRODUCTION: Organ transplantation is considered one of the greatest advances of modern science that has given many patients a renewed lease of life. The evolution of advanced technologies in the scientific world have made organ transplantation a safe and viable procedure for prolonging the lives of people, suffering with organ failure.¹

Advanced surgical-techniques, perioperative care and immunosuppressive therapy have tremendously improved survival rates in patients undergoing transplantation.² Approximately, 25 different organs and tissues including kidney, heart, lung, liver, pancreas, bone, cartilage, bone marrow, skin and cornea can be transplanted owing to the advances.³

There is an increasing discrepancy between the number of patients on the waiting list for organ transplantation and the available number of deceased donor organs. The inadequate supply of cadaver organs is especially crucial for heart, lung and liver recipients, since these patients cannot

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be maintained for long on mechanical devices, unlike patients with end-stage renal disease (ESRD) who can be maintained on dialysis.⁴

It is estimated that 50-60% of the patients of End Stage Renal Disease can benefit from renal transplant but due to paucity of donors only 10% of patients get it. It is well known fact that a transplanted patient's quality of life is much better than a patient on dialysis. However, only 3000 kidneys are available for transplant to over 80000 people suffering from kidney failure every year. In India, about 2,00,000 people die of liver disease every year out of which many would have survived and lived a normal life if they had received liver transplantation. There are about 50,000 patients dying of heart ailment every year. They are waiting for a heart transplant in absence of a suitable donor.⁵

With improvement in results, the demand for human organs for transplantation has increased but very less organs are available for transplantation. This is due to multiple factors like poor infrastructure for quick and safe transportation of accident victims, lack of ventilatory facilities, limited resources, low levels of awareness, failure to convince the near relatives to donate organs, indifferent attitude of health care professionals, lack of organ sharing agencies and inadequate laws. Public unawareness, religious sentiments, family pressures all contribute to bringing down the number of actual organ retrieval from potential cadaver donors.⁶ This discrepancy creates a challenge for the organ procurement agencies and health professionals involved in the care of patients needing organ transplants.⁷

The Transplantation of Human Organs Act of 1994 provided for the regulation of the removal, storage, and transplantation of human organs for therapeutic purposes in India. The act recognized the concept of Brain Stem Death and gave legal sanction for Donation after Brain death, but it failed to provide a much needed boost to altruistic organ donation.⁸

As future doctors, medical students will take up the role of promoting organ donation as they are the most critical link in the organ procurement process, by educating and motivating the public to pledge their organs for donation.⁹ Therefore, assessing medical student's knowledge & attitude regarding organ donation is very important for the future organ supply¹⁰. With this background, this study was conducted to assess the knowledge and attitude of the medical students towards organ donation and to understand the perceptions of medical students regarding organ donation.

METHODS AND MATERIAL: A cross sectional study of descriptive nature was conducted at Andhra Medical College, Visakhapatnam.

Study Population and Sampling: All the final year students of 9th semester who were present in the class on the day of conduct of the study and who gave consent to participate were included. The total number of 123 students was 123.

Study Tool: A pretested, Semi-structured questionnaire was administered to the students after explaining them about the confidentiality of the research. Knowledge of the students was assessed by giving score to the responses given by them. Subjects who secured 50% or more were considered as having adequate knowledge, and those with less than 50% were considered as having inadequate knowledge towards organ donation.

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STATISTICAL ANALYSIS: Data was entered in Microsoft excel and Analysis was done using SPSS statistical package student version 21.

RESULTS: Out of 123 sample, 55 (44.7%) were males and 68(55.3%) were females. In the study 97.6% were aware of organ donation. As shown in Figure no 1, the prime source of information was found to be media – electronic/printed (50 %) where as 32% mentioned multiple sources.

Table no. 1, shows that 87% of the students were able to define the term organ donation correctly. However only 56.9% students were aware that organ donation does not include ova/fetus/sperm. Around one fourth of the study population knew about the various organs which can be donated (26%) and about the minimum duration of organ survival (27.6%). Majority were able to tell about the ideal candidate for organ donation as brain dead person (88.5%).

According to the responses to the questions regarding knowledge about risks, contraindications and other related questions. It is found that 81.3% of the students were able to tell about the risks associated with organ donation in the recipient and specified the risks that can occur. Knowledge on absolute contraindications was not adequate as only 34.9% students could list them. Regarding the consent, 53.7% were aware that family's consent is required for donating organs even if the deceased has signed for organ donation. Also 73.2% responded correctly that the family can decide for organ donation in case the deceased has not signed any such form.

According to the score obtained 64(56%) were having adequate knowledge, of which 27 were males and 37 were females.

Table no 2 shows the attitude of the students towards organ donation, 48.8% of students showed a positive attitude and were willing to donate their own organs and 61 % were willing to donate their family member's organs after their death. 79.7 % believed that there is possibility of misuse of organs and 95.9% were of the opinion that awareness must be created among public about the importance of organ donation

The mostly frequently seen responses to barriers to organ donation shown in Figure 2 are no proper information (26%), fear of organs being misused (13%), religious beliefs (12%), fear of being declared dead earlier if signed an organ donation card (11%), and social and cultural beliefs (1%). Majority of them, gave multiple responses like all of the above together constitute the reasons for keeping the public away from organ donation.

Table no 3 shows students opinion on various methods to promote organ donation, Majority of them said that these days social media is the best way to promote organ donation (30%). Other methods are providing information through health education in educational institutions (25.2%), creating awareness by conducting campaigns and rallies (14.6%). Around 17.1% gave multiple responses, and 13% did not respond to the question.

DISCUSSION: Doctors and Medical students play a pivotal role in creating awareness in the community as they will be the people present at the site of brain deaths in hospitals. So medical students going to be in the doctors cohort should always have the knowledge regarding organ donation such that they can effectively bring awareness and the much required behaviour change in the community.

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In this study overall knowledge was found to be 56 %, it was more among females than male students, which is similar to Juan M. Marques Lespier et al⁷ who also reported that the knowledge among their subjects was 52.4% . However, most of the study population (97.6%) were aware and had heard of organ donation which is similar to the study done by Maseer Khan et al³ and Usha Bhatpat et al⁴ where 99% and 97% were aware respectively.

With the scientific advances taking place rapidly, there is now possibility of transplanting various organs provided organs are obtained and transplanted within the stipulated time. The list of organs include 25 different organs and tissues including kidney, heart, lung, liver, pancreas, bone, cartilage, bone marrow, skin and cornea. In this study only 26 % of the students could list out the names of the various organs. Whereas in contrast to this finding 70% of the respondents in the study by Maseer Khan et al³ were able to enlist the names of the organs.

The ideal candidate for organ donation is a brain dead person. Around 88.5% of the students in this study had knowledge about this. Other studies have reported it as 41.6% (Marques et al⁷) and 68.9% (Bilgel et al).¹⁰

Regarding the age of the donor, there is no set age limit exists for organ donation. But not many students were aware of this as only 47.2 % answered correctly. Marques et al⁷ and Sree T Sucharitha et al¹ reported it as 23% and 19.2% respectively. As per the United Network for Organ sharing (UNOS) the maximum organ preservation time for organs varies from 4-6 hrs to 24-36 hrs, which differs for different organs, therefore knowledge about the viable period for different organ is essential. The minimum duration for organ survival is 4-6 hrs for heart.

Organ transplantation is associated with some risks in the recipient such as Rejection, Infections etc. Regarding knowledge about risks, in this study, majority were able to tell about the risks associated with organ donation in the recipient and also specified the risks that can occur. Most common risk mentioned was graft vs host reaction and infection. However knowledge on absolute contraindications was not adequate as only one third of the students could list them. This result is similar to that of Marques et al⁷ who reported it as 26.5%.

Family's consent is required for donating organs as an important prerequisite even if the deceased has signed for organ donation about which only fifty percent of the students were aware of. But in absence of consent of the deceased, the family can decide for organ donation and this fact was known to about two thirds of the students. This is similar to study done by Maseer Khan et al³, where 55% of the study population know about the consent.

Regarding attitude of the students, although 97.6% were in favour of organ donation and approved it as life saving measure, only about fifty percent of students showed a positive attitude and were willing to donate their own organs and 61 % were willing donate their family members organs after their death. Similar low responses were reported by other studies. Sree T Sucharita¹ et al reported that only 32.4% were showing positive attitude and was reported as low as 8% by Maseer Khan et al³, Bilgel et al¹⁰ reported that only 12.5% were willing to offer their family members organs for donation. Majority (79.7 %) believed that there is possibility of misuse of organs and were of the opinion that awareness must be created among public about the importance of organ donation. Promoting or spreading the information on organ donation using social media and through health education in schools and colleges were the preferred methods by the students.

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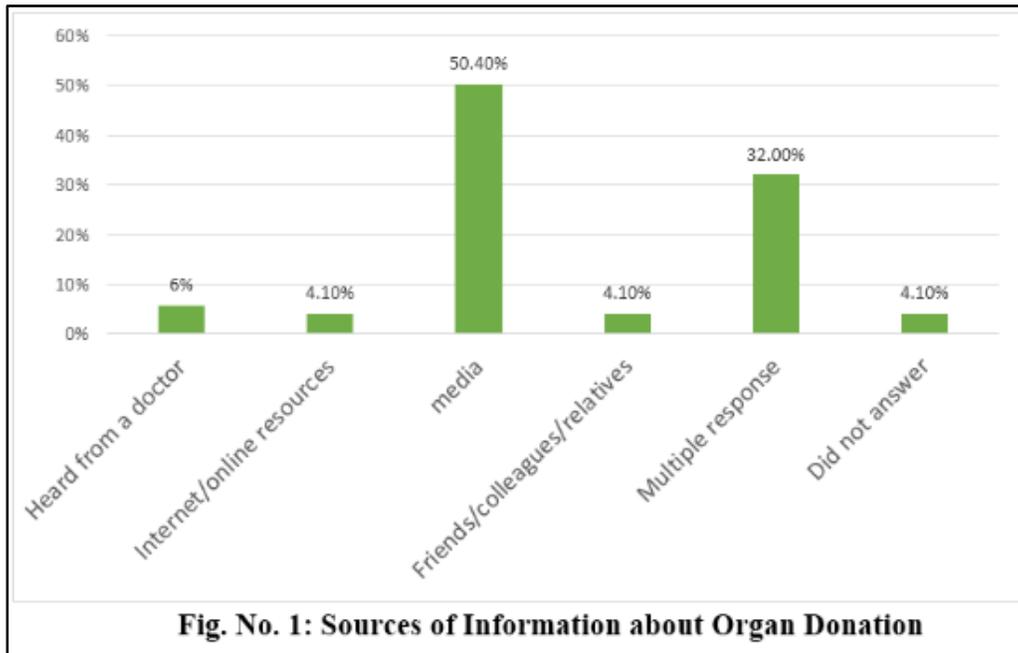
CONCLUSION: Although majority of the undergraduate medical students were aware of certain aspects of organ donation, we found that their knowledge is lacking and there exists significant gaps in certain aspects like the viable period, the risks associated and contraindications etc. which is essential among future medical professionals. The results of this study indicate the need for more intensive interdisciplinary discussion and information to prepare the next generation of healthcare professionals about transplants and organ donation.

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Sl.No.	Questions	% answered correctly
1.	Organ donation means	107(87%)
2.	Does organ donation include transfer of ova/fetus/sperm	70(56.90%)
3.	Is there any age limit in donating organs	58(47.20%)
4.	Minimum time duration for which organ remains viable	34(27.20%)
5.	What organs can be donated	32(26%)
6.	Ideal candidate for organ donation	109(88.50%)
7.	Does Organ Donation include any risks to the recipient	100(81.30%)
8.	Absolute contraindications for organ donation	43(34.90%)
9.	Is family members consent required even if deceased has signed an organ donation card	66(53.70%)
10.	Can family wish to donate organs even if deceased has not signed an organ donation card	90(73.20%)
11.	Will any incentives be provided to family members for donating organs	86(69.90%)
12.	Will identity of the recipient be provided to donor family	50(40.70%)
13.	Which factor holds great importance when donating organs	104(84.60%)

Table No. 1: Responses of the Study population to the questions regarding Knowledge on Organ Donation

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Sl. No.	Question	Yes
1.	Attitude towards possibility of their own organs being donated	60(48.8%)
2.	Wish to donate their family members organs after their death	75(61%)
3.	Believes that there is danger that donated organs could be misused	98(79.7%)
4.	Is there a need to create awareness in the public to promote organ donation	118(95.9%)

Table No. 2: Attitude of the study population towards organ donation

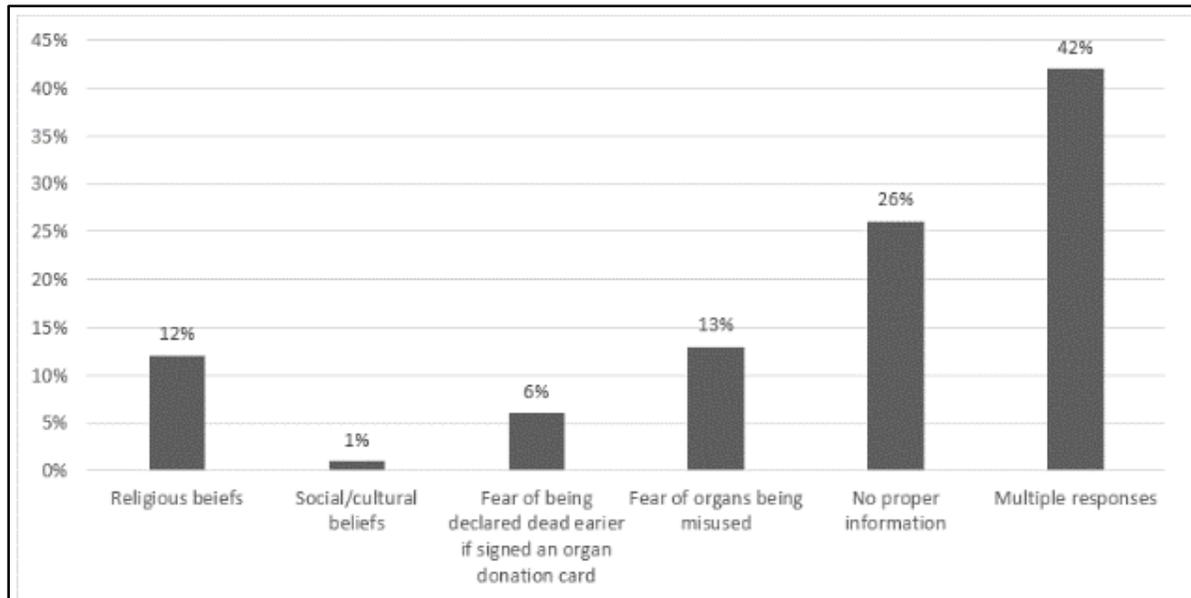


Fig no 2: Student responses on Barriers to Organ Donation

Sl.No.	Ways to promote Organ donation	% of study population opted
1.	Health Education in institutions	31(25.2%)
2.	Awareness through conducting campaigns or Rallies	18(14.6%)
3.	Social Media	37(30.1%)
4.	Multiple Responses	21(17.1%)
5.	No Response	16(13%)

Table No. 3: Student responses on various methods to promote organ donation

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