



KNOWLEDGE AND ATTITUDE FOR ORGAN DONATION AMONG UNDER-GRADUATE MEDICAL STUDENTS OF SMS MEDICAL COLLEGE, JAIPUR, RAJASTHAN

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ABSTRACT

Introduction: Organ donation is the legal process by which a person allows their own or their kin's organs to be removed and transplanted into another person, this can happen while the donor is still alive or after death with the donor's next of kin's consent. **Objective:** To assess the knowledge and attitude regarding organ donation of undergraduate medical students of S.M.S. Medical College & Attached Hospitals, Jaipur, Rajasthan. **Method & Material:** Institute based, cross sectional, observation study has been conducted between June 2021 to May 2022 among 120 undergraduate Medical students. **Results:** only 57.5% students correctly knew that organ donation can be done both during life as well as after brain death and this knowledge was associated with age and MBBS year (p value < 0.05). Among them mostly were willing to donate their kidney (58.14%), Blood (61.63%), Liver (34.88%), Heart (31.4%), Cornea (27.91%), Bone marrow (13.95%) and Skin (1.16%). Whereas only 10.83% students were not having willingness for organ donation. **Conclusion:** Overall undergraduate medical students have positive attitude towards organ donation and more than 50% students want to donate their organs and promote among their family and also want to contribute in organ donation camp but very few students have knowledge about its process.

KEYWORDS : Organ Donation, Medical Students, Undergraduate students, Knowledge, Attitude

INTRODUCTION

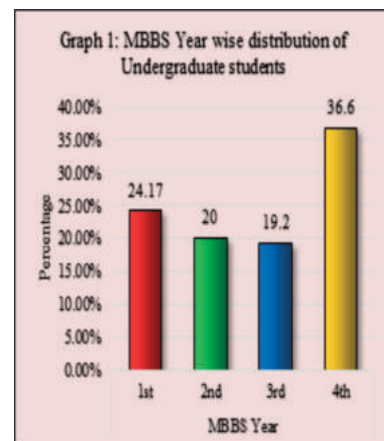
Organ donation is the legal process by which a person allows their own or their kin's organs to be removed and transplanted into another person, this can happen while the donor is still alive or after death with the donor's next of kin's consent.¹ There are two forms of organ donor: (i) Living Organ Donor: A person may donate one kidney, a portion of the pancreas, or a portion of the liver etc. during his or her lifetime. In India the age limit for living organ donation is equal or more than 18 years age. (ii) Deceased Organ Donor (Cadaveric organ donation): A person may donate multiple organs and tissues after brain-stem/cardiac death after the consent of first degree relatives.¹ Global organ donation rate in 2021 was 4.77 per million population. Which was decreased from 5.78 per million population in 2020, in South East Asia it was 0.44 per million population in 2021, 0.47 per million population in 2020.² India lags far behind the western nations like Spain (49 pmp), United States (36.88 pmp) in national organ donation rate of only 0.25 per million population in 2020 and 0.4 per million population in 2021 due to lack of awareness and so many reasons.³ Since medical students are the country's future doctors, and they are the first to form relationships with potential donor's families, their positive attitude and high level of knowledge will help to create a positive environment and encourage organ donation. Hence this study aims to assess the knowledge and attitude towards organ donation among undergraduate medical students.

METHOD & MATERIAL

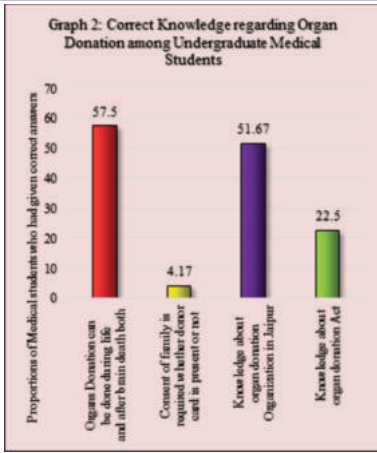
Present study was an Institute based, cross sectional, observation study was conducted between June 2021 to May 2022 among 120 undergraduate Medical students of SMS Medical College, Jaipur Rajasthan after informed consent. This sample size was calculated with 95% confidence level and 10% absolute allowable error and 57% willingness to donate organs among medical students which was sufficient to cover other variables and 20% drop out rate.⁴ Students who were known cases of any chronic or major illness were excluded.

RESULTS

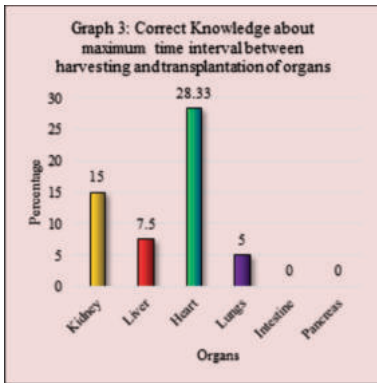
In present study, among 120, 52.5% of students were in age group of 17-21 years while 47.5% of students were in age group of 22-27 years. 36.6% students were male, 37.5% were from rural area, maximum were Hindu (82.5%), 4th year- 36.6%, 3rd year- 19.2%, followed by 1st year (24.17%) and 2nd year (20%) [Graph 1].



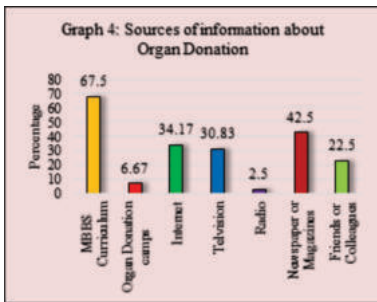
Among 120 undergraduate students, only 57.5% students correctly knew that organ donation can be done both during life as well as after brain death whereas this knowledge was associated with age and MBBS year of undergraduate students ($p < 0.05$). only 4.7% students and significantly knew that For organ donation, consent of family is required in both condition whether it is living or cadaveric. This knowledge was correct among only 4.7% students and significantly associated with MBBS year. In present study, significantly few students correctly know that organs i.e. kidney (29.17%), Blood (0.83%), Liver (39.17%) can be donated both during life and after brain death, and Heart (46.67%), Cornea (31.67%) can be donated only after brain death. 51.67% students know about organ donation organization in Jaipur and only 22.5% students know about The THOA (Transplantation of Human Organs and Tissues Act 1994) [Graph 2].



Also very few had knowledge about correct time intervals between harvesting and transplantation of organs [Graph 3].



Major sources of information about organ donation among students were MBBS curriculum (67.5%) and internet (34.17%) [Graph 4].



Maximum students were willing for organ donation only during life (34.17%) and 26.67% students were willing to donate their organs only after brain death [Table 1].

Table 1: Positive attitude of medical students towards organ donation

Attitude	n	%	
Willing for organ donation	After brain death only	32	26.67
	During life only	41	34.17
	Both	13	10.83
	Not willing	34	28.33
Total	120	100	
Reasons for opting against organ donation	Do not know the process for organ donation	9	26.47
	Fear of body Disfigurement	8	23.53
	Against my religious beliefs	5	14.70
	Family will not support	12	35.3
	Total	34	100

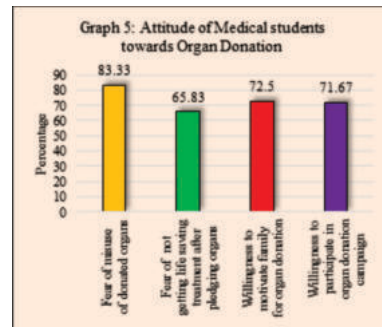
Among them mostly were willing to donate their kidney (58.14%), Blood (61.63%), Liver (34.88%), Heart (31.4%), Cornea (27.91%), Bone marrow (13.95%) and Skin (1.16%).

Whereas only 10.83% students were not having willingness for organ donation [Table 2].

Table 2: Willingness of medical students to donate their organs

Organs	Family only (%)	Anyone (%)	Total (%)
Kidney	34.88	23.26	58.14
Blood	4.65	56.98	61.63
Heart	13.95	17.44	31.4
Cornea	0	27.91	27.91
Liver	24.42	10.47	34.88
Skin	1.16	0	1.16
Bone marrow	4.65	9.3	13.95
Lungs	1.16	2.33	3.49
Intestine	1.16	5.81	6.98
Pancreas	1.16	1.16	2.33

Their major reasons for opting against organ donation was not being aware of any process for organ donation (26.47%), fear of disfigurement of body (23.53%) and 35.3% undergraduate students showed concern that their family will not support them to donate organs [Table 1]. Major students (83.33%) had fear of misuse of their donated organs, 65.83% students had fear that they will not get life saving treatment after pledging organs, 72.5% students want to motivate their family to donate their organs and 71.67% students showed willingness to contribute in organ donation campaign [Graph 5].



DISCUSSION

The studies by Kaur A et al. (2020)⁵ conducted a study on 332 first and third year students of SGRDIMSAR and other medical colleges of Punjab, In student's opinion the most common organs donated was kidney (46.6%) followed by Cornea (24.7%), Liver (17.6%), and Skin (6.6%), 88.9% students knew that more than one organ can be donated after death.

Study by Tamuli RP et al. (2019)¹ resulted that 82.5% medical students correctly know that liver and kidney can be donated after brain death and during life also; a study by Dr Akhila Jose et al. (2020)⁸ conducted among 100 MBBS students resulted that 98% undergraduate students correctly knew about Living Organ donation and 92% undergraduate students correctly knew about after brain death organ donation, 71% undergraduate students correctly knew that kidney is most common organ to be donated.

A study by Vinay KV et al. (2016)⁷ conducted among 136 medical students in their first year and final year, which concluded that only 13.9% students correctly knew about organ donation act; a study by Srinivas Rao G et al (2020)⁹ 3.6% medical students knew about organ donation law in India.

A study by Jothula KY et al. (2018)⁹ concluded that 10.6% interns correctly knew the time limitations for specific organ donation; a study by Sindhu A et al. (2017)¹⁰ which found that 41.1% final year students knew about specific time interval between harvesting and transplanting the specific organ.

A study by Sahana et al. (2015)¹¹, which resulted that 57.4% students had fear that donated organs could be misused or

abused.

In study by Vinay KV et al. (2016),⁷ 76.5% students were willing to motivate others to donate organs and 98% students wanted to promote organ donation. In study by Alex P et al. (2017)¹² major sources of information were media (66%), medical staff (64%), internet (53%), family (8%); in study by Bathija GV et al. (2017),¹³ major source of information was Television (60.66%) newspaper (24.66%), magazines (14.66%), brochures (6.33%), family members (9%); study by B.S. Payghan et al. (2014)¹⁴ concluded major source of information about organ donation were internet (40%), newspaper (38.18%), family (21.47%).

CONCLUSION

Undergraduate medical students are future practicing doctors and their approach and attitude towards Organ Donation will affect the awareness and attitude patients and their relatives. Overall undergraduate medical students have positive attitude towards organ donation and more than 50% students want to donate their organs and promote among their family and also want to contribute in organ donation camp but very few students have knowledge about its process.

Limitations

The study was done among undergraduate students only rather than all medical personnel or general population, hence it limits the generalization of findings.

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