Original Article

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A Study on Knowledge and Attitude about Organ Donation among Medical Students in Sikkim

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Abstract

Introduction: Knowledge and attitude of medical students towards organ donation plays a major role in promoting the concept among general population. The study was done with objectives to assess the Medico-legal awareness, knowledge pertaining to organ donation among Undergraduate Medical Students and to determine the willingness and attitude of undergraduate medical students towards organ donation. *Methodology:* A cross sectional descriptive survey conducted over a period of *3 months* under Forensic Medicine department of Sikkim Manipal Institute of Medical Sciences, Gangtok. *Results:* Students in Clinical years were better aware of the existence of the law on human organ donation in India (92%) as compared among pre-clinical students (71%). Exclusion of sperm and oocyte donation from organ donation was known to 78% of the pre-clinical and 87% of the clinical students. Majority of students (87% clinical) and pre-clinical students (85% pre-clinical) were unaware of possibility of organ donation in infectious and lifestyle diseases. Significantly high level of awareness was seen (96.5%) about kidney donation followed by eye donation (95.5%). Our study revealed that a higher percentage of female participants (96.72%) showed a positive attitude for organ donation. 15.57% of the female participants had donor card as compared to male participants (6.41%). *Conclusion:* Awareness and attitude of the medical students are important as they play a major role to motivate the society and spread awareness among community.

Keywords: Organ transplantation; Awareness; Attitude; Medical students.

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Introduction

Organ donation is the process of giving an organ or a part of an organ for the purpose of its transplantation into another person. It can be done by a deceased donor or a living donor.[1]

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In India, almost 500,000 people die every year due to non-availability of organs.[2] Although the "Transplantation of Human Organs Act of 1994" brought a significant change in the conduct of organ donation and transplantation in India but it had not been able to meet the expected outcomes.[3] Ignorance of the common public regarding the procedures and legal issues still creates an unwanted scenario. Knowledge and attitude of medical students towards organ donation plays a major role in promoting the concept among general population. Since, there has been no available literature in the State of Sikkim, it was imperative to carry out a study to identify the gaps among the future health care providers.

Aims and Objectives

1. To assess the Medico-legal awareness and knowledge pertaining to organ donation among Undergraduate Medical Students.
2. To determine the willingness and attitude

of undergraduate medical students towards organ donation.

3. To find out the difference of attitude towards organ and tissue donation between pre-clinical and clinical MBBS students.

Materials and Methods

Study Design

A cross sectional descriptive survey conducted over a period of *3 months* under Forensic Medicine department of Sikkim Manipal Institute of Medical Sciences, Gangtok. A self-administered, pre-designed, pre-tested anonymous questionnaire was distributed after obtaining an informed written consent from each participant. The content validity of the questionnaire was pre-validated by the subject experts after obtaining permission from Institutional ethics committee.

Inclusion Criteria

The subjects of the study included the undergraduate medical students *i.e.*, 100 Pre-clinical (first MBBS) and 100 clinical MBBS students (final MBBS) of the Sikkim Manipal Institute of Medical Sciences, Gangtok.

Data was analysed using SPSS 22 0 version and Microsoft Excel.

Results

Our study included 200 students, out of which 122 (61%) were female and 78 (39%) were male with the mean age of *20.9 years*. 92 % of the students in clinical years were better aware of the existence of the law on human organ donation in India as compared to 71% of pre-clinical students, (**Fig. 1**). 82.5% of the overall study population were aware that sperm and oocyte donation does not come under the purview of Human Organ Transplantation Act with 78% in pre-clinical years and 87% in clinical years respectively, (**Table 1**). 72.5% of the overall students were aware of blood donation being outside the purview of Organ donation, (**Table 1**). Majority of students (87% clinical) and pre-clinical students (85% pre-clinical) were unaware of possibility of organ donation in infectious and lifestyle diseases.

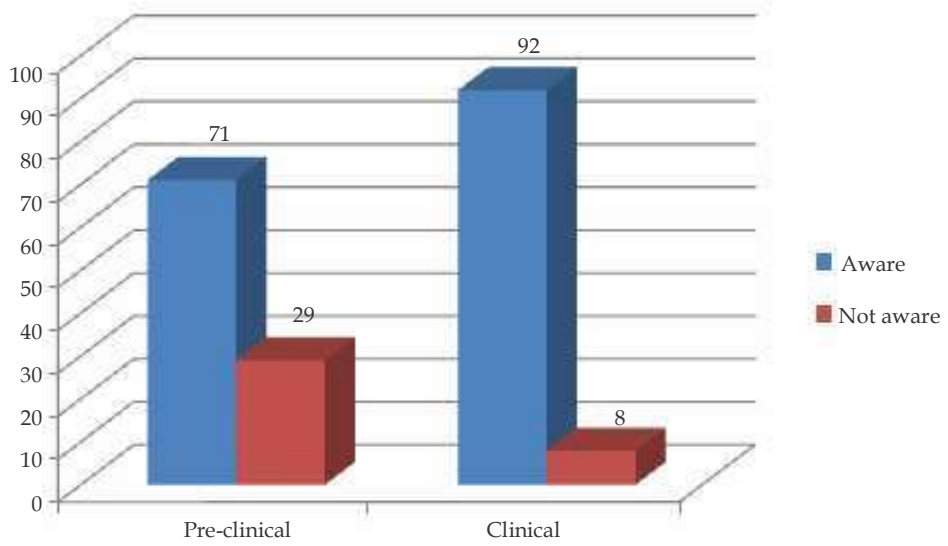

Fig. 1: Awareness about THOA among study population

A significantly high level of awareness was seen (96.5%) about kidney donation followed by eye

Table 1: Awareness about sperm, oocyte and blood from organ donation

Year of study	Exclusion of Sperm and oocyte from organ donation		Exclusion of Blood from organ donation	
	Aware (%)	Not aware (%)	Aware (%)	Not aware (%)
Pre-clinical (n = 100)	78	22	71	29
Clinical (n = 100	87	13	74	26
Total	82.5	17.5	72.5	27.5

donation (95.5%) when compared to awareness regarding transplant of Skin (43.5%), Pancreas (38%) and Bones (29.5%), (**Table 2**).

It was observed that students in clinical years were more aware about organ donation than the pre-clinical years. The study reflected that the participants had low awareness about organ donation by next of kin, which was only 37% in clinical years followed by 33% in pre-clinical years. With the question pertaining to organ donation in medico-legal cases, only 28% of the pre-clinical students were aware of its possibility compared to 45% in clinical students, (**Table 3**).

Table 2 : Awareness about commonly donated organs among clinical and pre-clinical year

Organs being donated	Pre-clinical Students (n = 100)	Clinical Students (n = 100)	Total (n = 200)
Kidney	94%	99%	96.5%
Heart	87%	97%	92%
Eye	95%	96%	95.5%
Liver	80%	94%	87%
Lung	47%	64%	55.5%
Skin	33%	54%	43.5%
Pancreas	35%	41%	38%
Bones	24%	35%	29.5%

Commercialization of human organs has been curbed long-back in India and a good awareness of the same was seen in the pre-clinical (81%) as well as in clinical students (89%). 43% of pre-clinical and 63% of clinical students still believe that people can accept money and other benefits for donating their organs. Our study pointed out that the participants showed a mixed response while asked about their willingness to donate organs as a living donor in future, (**Fig. 2**). While 42% of the students were of view that they can donate their organ to any unknown person in great need, 68.5% responded that they will donate only to loved ones like family or friends.

Table 3: Awareness regarding organ donation after death and in medico-legal cases

Year of study	Organ donation is possible by next of kin without prior wish of deceased		Organ donation is possible in Medico-legal cases	
	Aware (%)	Not aware (%)	Aware (%)	Not aware (%)
Pre-clinical (n = 100)	33%	67%	28%	72%
Clinical (n = 100)	37%	63%	45%	55%
Total (n = 200)	35%	65%	36.5%	63.5%

Our study revealed a higher percentage of female participants (96.72%) had a positive attitude

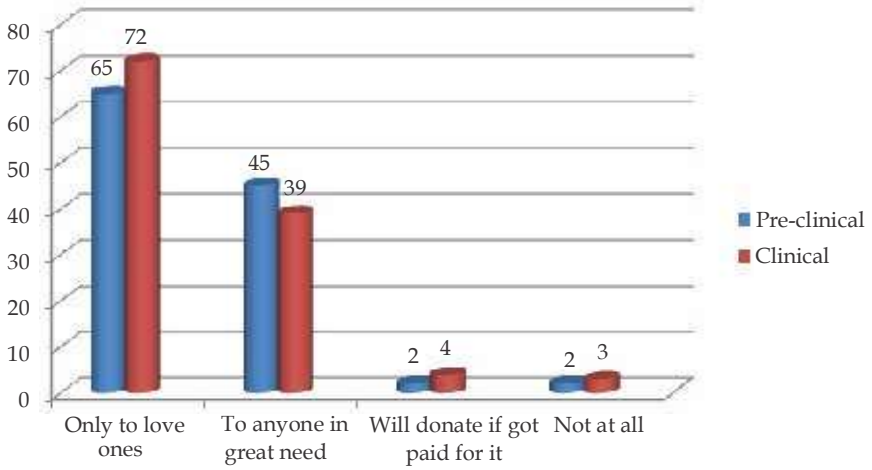

Fig. 2: Reasons of students as future organ donors

regarding motivating their friends, family and community at large for organ donation as compared to 94.87% of male respondents, (**Table 4**). 12% of the total participants were having a donor card with 20% in clinical years and 4% in pre-clinical years respectively. Our study showed, a higher preponderance (15.57%) among female participants who were already registered donors and had a donor card as compared to male participants (6.41%), (**Table 5**).

Table 4: Attitude of students towards motivation for organ donation

Students showing positive attitude regarding motivating others for organ donation	Pre-clinical (n = 100)	Clinical (n = 100)	Female (n = 122)	Male (n = 78)
Yes	97%	95%	96.72%	94.87%
No	3%	5%	3.28%	5.13%

Table 5: Registered organ donors according to year of study and gende

Registered organ donors	Pre-clinical (n = 100)	Clinical (n = 100)	Female (n = 122)	Male (n = 78)
Students with Donor's Card	4%	20%	15.57%	6.41%

Discussion

In this present study, the participants were better aware of the existence of the law on human organ donation in India as compared to 54% students (no pre-clinical/Clinical group specified) according to study done at Thiruvallur & Chennai.[4] The female participants were more in our study owing to high percentage of female students in our institute as compared to prior studies done at Maharastra (30.2%).[5] The participants in this present study, were aware of the fact that blood, sperm and oocyte donation were outside the purview of Human Organ Transplantation Act. With regard to organ donation in infectious and lifestyle diseases the awareness level of the participants in the present study was quite low as compared to study done at Kerala (54.45%).[6] This could be due to less awareness drive about organ transplantation and limited exposure to such programme. With respect to organ which could be transplanted, a significantly high level of awareness was seen about kidney donation followed by eye donationas compared to awareness regarding other organs which could be transplanted. It was seen that students in clinical years were more aware about organ donation than the pre-clinical years.

A moderate level of awareness was seen in the present study with respect to organ donation by next of kin and organ donation in medico-legal cases in clinical year and lower in pre-clinical year. This could be attributed to the fact organ transplantation covered as didactic lectures had not been able to create the cognition base among the students.

Although the participants in this present were aware of the fact that commercialization of human organs is illegal in India but still a moderate percentage believed that people could accept money and other benefits for donation. These reflect that the participants were aware of existence of the act but were not aware of details of the content. Our study pointed out that the participants showed a mixed response while asked about the reason as a living donor in future. Their preference was mostly towards loved ones followed by unknown person in great need and willingness of the participants was comparable to the studies done at Kerala and Gujrat.[6,7] Findings of our study, were in accordance with study done at Kerala where 36.6% of had strong willingness and 49.5% contemplated of donating their organs during need.[6]

Our study pointed out that only 12% of the participants were already having a donor card with more students in clinical year which was slightly higher than study done at Kerala (7.2%) but similar to a study done at Saudi Arabia (15%).[6,8] It was also similar in that aspect that students in clinical years were more motivated and had a donor card during the study similar to studies done at Saudi Arabia and Turkey.[8,9]

The reasons for the low registration could be due to insufficient awareness drive programs and limited literature exposure by the medical students. Lack of awareness of registration procedures have been stated as a reason for low donor registration

by an earlier study.[5] Our study revealed a high percentage of participants showed a positive attitude regarding motivating their friends, family and community at large for organ donation with female participants slightly more than male. Female participants were more than male participants as registered donors which could be attributed to existence of high emotional aspects in female gender.

Majority of the participants showed willingness in favor of the promotion of donation among their relatives and friends and in community at a large proving the altruistic aspect of the undergraduate students towards this noble cause which was similar to the study done at Saudi Arabia where almost half of the students were considering donation with no significant difference between pre-clinical and clinical students.[8] The authors from an earlier study had stated that health professionals positively influence the opinions and attitudes of patients and their relatives, leading to higher rates of organ procurement.[10] Thus, this attitude of the health professionals would lead to better counselling practice in future.

Conclusion

This study was novice attempt on the part of authors to identify the gaps in relation to the medico-legal knowledge, awareness and willingness to donate. The limitation of this study is its cross sectional design and students representing from one medical college. The medical students being the first contact physicians of the future, their role in informing the general public and driving the organ donation is very essential. Awareness and attitude of the medical students are important as they play a major role to motivate the society and spread awareness among community. Organ donation has to be covered by interactive small group teaching methods rather than didactic lectures.In the community level awareness camps, small group discussion about ethical and legal issues shall be helpful in creating awareness among the students.

Ethical Clearance: Obtained prior to study by IEC.

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Conflict of Interest: None.

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