



Analyzing the knowledge and attitude regarding donation of organs among students of a government medical college of Ajmer city

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I. INTRODUCTION:

Organ donation is the donation of biological tissue or an organ of the human body from a living or dead person to a living recipient in need of transplantation.¹ Organ transplantation is one of the most brilliant developments in the field of medicine during twentieth century. According to GODT (global observatory on donation and transplantation), in 2015 around 1,26,670 solid organs were reported to be transplanted, this is almost $\leq 10\%$ of the global needs. Majority of these transplantations occur in developed regions, mainly America and Europe.

The organ donation rate in India is approximately 1 per million populations, as compared to Spain where 36 and USA 26 donations take place per million populations and the deceased donation rate is almost insignificant. Therefore, efforts are needed to motivate the general public to pledge and donate organs.²

The issue of organ donation is complex and multi-factorial involving ethical, legal, medical, organizational, and societal factors.³ Countries around the world have reported that people's attitudes toward organ donation are influenced by factors such as knowledge, education, and religion.⁴ The demand for organs for transplantation continues to vastly surpass the inadequate supply capacity all over the world. The number of patients awaiting organ donations is increasing every day. However, the number of

organ donations is significantly lower than the number of patients waiting for organ donations⁵.

The shortage in organ supply is due to lack of awareness and correct knowledge among public, myths and misconception surrounding organ donation due to religious and cultural barriers leading to hesitancy in donation of organs⁶.

Health care professionals play a vital role in imparting positive knowledge towards organ donation among the people and medical students as future physicians will take up the role of promoting organ donation. Hence, the objective of the study is to assess the knowledge and attitude of medical students in JLN Medical College, Ajmer regarding organ donation.

II. METHOD AND MATERIALS:

A cross sectional study was conducted among 141 Medical students from JLN Medical College, Ajmer, Rajasthan. Sample size was selected by convenient sampling and inclusion criteria of the study was those who were present and gave oral consent. Data was collected by self administered questionnaire which consists of 2 sections. Section A included demographic information such as age, gender and religion. Section B includes questions to assess the level of knowledge and attitude about organ donation among first year Medical students. The data was analyzed using Microsoft Excel.

III. RESULTS:

Table 1- Demographic characteristics of the study population.

Demographic characteristics	Number (n = 141)	Percentage (%)
AGE (in years)		
18-19	72	51.06
19-20	54	38.29
>20	15	10.63
GENDER		
Female	69	48.93
Male	72	51.06
RELIGION		



Hindu	138	97.87
Muslim	02	1.41
Christian	01	0.70

Table 2- Questions on Knowledge of the study participants.

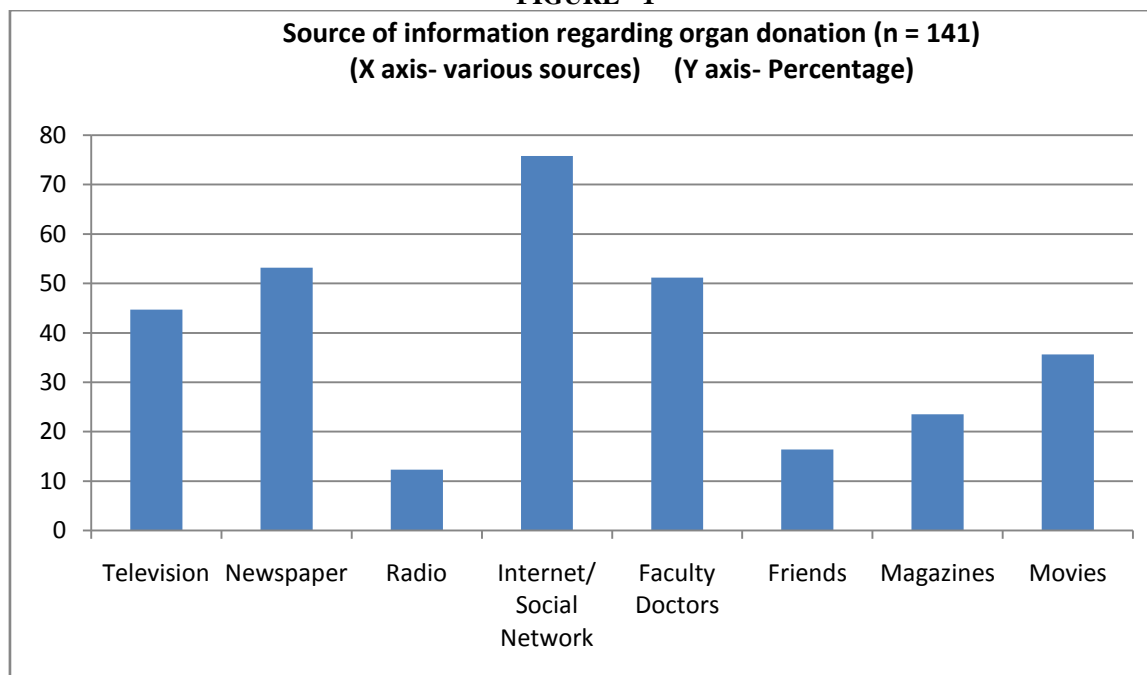
Questions on Knowledge		Correct No. (%)	Not Correct No. (%)
1.	Heard about "Organ Donation" (Y/N)	141 (100)	00 (00.00)
2.	What is definition of organ donation?	45 (31.91)	96 (68.08)
3.	What organs can be donated?	63 (44.68)	78 (55.31)
4.	Who could be an organ donor?	77 (54.60)	64 (45.39)
5.	Will there be disfigurement of donor body after organ donation (Y/N)	110 (78.01)	31 (21.98)
6.	Who should give consent for living donation?	90 (63.82)	51 (36.17)
7.	Who should give consent for donation after death?	91 (64.53)	50 (35.46)
8.	Who should make decision about organ donation in case of unclaimed dead body?	88 (62.41)	53 (37.58)
9.	Can a brain-dead patient's organs be donated?	50 (35.46)	91 (64.53)
10.	Donor's and recipient's blood group MUST be matched?	114 (80.85)	27 (19.14)
11.	There is no age limit for donating organs (T/F)	78 (55.31)	63 (44.68)
12.	Have you heard about donor card (T/F)	77 (54.60)	64 (45.39)
13.	There is shortage of organs in India for transplantation (T/F)	113 (80.14)	28 (19.85)
14.	In case of brain death of a person carrying a donor card, the family still needs to approve the donation of organs (T/F)	74 (52.48)	67 (47.51)
15.	All religions support organ donation (T/F)	111 (78.72)	30 (21.27)

Table 3- Questions on Attitude of the study participants.

Questions on attitude		Yes No. (%)	No No. (%)
1	Would you like to donate your organs	101 (71.63)	40 (28.36)
2	Would you like to motivate others to donate organs	124 (87.94)	17 (12.05)
3	Do you support your family members if they wish to become an organ donor	107 (75.88)	34 (24.11)
4.	Would you like to work in organ donation campaign	112 (79.43)	29 (20.56)
5.	Do you think awareness about organ donation should be made a part of school education	126 (89.36)	15 (10.63)



FIGURE - 1



Out of 141 students, 48.93% were females and 51.06% were males. Majority of the pupils were in the age group of 18-19 years. Maximum of the study participants were Hindu (97.87%) and the remaining were Muslim and Christian that is (1.41%) and (0.70%) respectively. [Table-1]

Knowledge of the study subjects is shown in the Table 2. Analysis of the results showed that 100% First year Medical students had heard about organ donation whereas only 31.91% students knew the definition of organ donation, 63 (44.68%) and 78 (55.31%) students had the knowledge about what organs could be donated and who could be an organ donor respectively. Majority 88 (62.41%) students believed that who should make decision about organ donation in case of unclaimed dead body and 91 (64.53%) knew that who should give consent for donation after death. Only 78 (55.31%) had knowledge that there was no age limit for organ donation. Regarding the consent, 74 (52.48%) were aware that family's consent is required for donating organs even if the deceased had signed for organ donation. Only 77 (54.60%) had heard about donor card. Most 111 (78.72%) of the study subjects knew that all religions lend support to organ donation.

The willingness of the study subjects to donate their organs was 71.63% and 75.88% of the participants were positive regarding their family members becoming an organ donor. In regards to working in an organ donation campaign 79.43% had a positive attitude towards it. Maximum (88.7%) of the study participants felt that

awareness about organ donation should be included in school education [Table 3].

Most common source of information about organ donation was found to be internet and social network (75.8%) followed by newspaper (53.2%) and television (44.7%) respectively [Figure 1].

IV. DISCUSSION:

Organ transplantation is the most preferred treatment modality for end-stage organ disease and organ failure. It offers a better quality of life with a better survival benefits. In the present study, all (100%) the first year medical students had heard about organ donation which is similar to the study done by Sucharitha et al (97.2%), Agarwal (100%) and Jothula KY et al (100%)^{6,7,8}. Only 31.91% students knew the proper definition of organ donation, whereas (44.68%) and (54.60%) students knew that what organs can be donated and who could be an organ donor respectively. Similarly study done by Abdullah and Giri PA^(9,10) et al revealed that only 29.8% and 35.71% knew the proper definition of organ donation. This limited knowledge of medical students about organ donation is most likely a result of a deficient teaching on the subject of organ donation in the undergraduate medical curriculum.

Internet and social network was found to be the main source of information about organ donation (75.8%) and newspaper (53.2%). Similar findings were observed by Bathija et al and Payghan et al.^(11,12) These findings emphasize the



role of media, social network in bringing awareness about organ donation.

Majority (78.01%) of the participants knew that donor body will not get disfigured after organ donation. Similar findings were observed by Jothula and Ali et al.^(8,13) 55.31% of students knew that there is no age limit for organ donation which is similar to the findings of Agarwal (43%), Karini et al (47.2%) and in contrast Sucharitha et al reported it as only 19.2%^(6,7,14) The present study found that only 54.60% knows about donor card indicating the need to sensitize the medical students regarding donor card. Majority (77.5%) of the students were aware about the shortage of organs in India for transplantation which is similar to the findings of Payghan et al (75.29%)¹². Our study also goes along with the results of Karini et al (53.7%)¹⁴ in context of the consent matter, 52.48% were aware that family's consent is required for donating organs even if the deceased has signed for organ donation. All the religions are not against organ donation but there is presence of some myths and misconceptions even among medical students as is revealed by only 78.72% mentioning that all religions allows organ donation which is similar to the findings of Jothula et al.⁸

In our study, majority (71.63%) of the students got positive attitude and are willing to donate organs which is similar to the findings of Bathija (71.3%)¹¹ and Jothula et al (77.5%)⁸. Karini et al and Ali et al studies in different settings found that 48% of final year students had positive attitude towards organ donation^(13,14) The present study found that there is a significant association between knowledge acquired regarding organ donation and willingness to donate organs. Similar finding was observed in Pakistan study done by Ali et al and in a study conducted by Dasgupta et al in urban community of West Bengal state.^{13,15} These findings reflect the importance of bringing awareness about organ donation among medical fraternity and general public as well.

Majority (89.36%) felt that awareness about organ donation should be included in school education (88.7%) Adithyan et al observed that 91.2% of the subjects felt the need of increasing the awareness on organ donation in school education at an early stage.¹⁶ Majority (87.94%) of the study subjects would like to motivate others for organ donation which is similar to the Vinay et al study (98%).¹⁷

V. CONCLUSION:

Our study suggests that there is limitation in knowledge among undergraduate medical students regarding organ donation. Medical students will take up the role of promoting organ

donation as future physicians. Hence there is a need to increase the knowledge gap amongst undergraduate medical students on this topic. It is important to introduce the subject at an early stage in medical curriculum to bridge the gap that exists in their knowledge on the same. Medical curriculum should incorporate modules specifically directed at increasing factual knowledge and addressing problems that impede organ donation. It was however good to find out that majority of the students had a positive attitude towards organ donation and such students should be further encouraged and educated about organ donation. By giving right knowledge and orientation medicos can become future organ donors who can then easily motivate their patients to follow the path. A well informed healthcare provider will certainly play a vital role in motivating the community to donate organs.

Limitations:

The study population represents only a small fraction of the medical community. So, the results available from this cannot be generalized for the whole community.

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