

Perceptions of a university's faculty members on organ donation

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ABSTRACT

Background. Availability of donated organs may save lives of people with end-stage disease. However, multiple barriers exist for obtaining donated organs such as insufficient knowledge and lack of a positive attitude towards organ donation. We assessed the knowledge and attitude regarding organ donation among faculty members of a university in India.

Methods. We did this observational, cross-sectional study from December 2017 to January 2018. A structured, close-ended questionnaire consisting of 20 items was used to assess knowledge, attitude and practices regarding organ donation. Data for 170 participants were analysed using SPSS version 21. Unpaired *t*-test was used to compare the knowledge and attitude score among different variables.

Results. A statistically significant difference was found between the attitude score of graduate and postgraduate faculty ($p=0.003$), as well as between graduate and doctoral faculty ($p=0.001$). We found that 5.3% of participants had already donated organs, 12.9% had pledged to donate and 63.5% of participants had expressed willingness to donate organs.

Conclusions. There is a need to increase the knowledge regarding organ donation as most people have a good attitude towards organ donation, but their knowledge was insufficient and at times inaccurate.

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INTRODUCTION

In view of the shortage of available organs worldwide, the Sixty-third World Health Assembly in 2010 urged Member States to improve organ availability by maximizing organ donation. Organ donation is the donation of biological tissue or an organ of the human body, from a living or dead person.^{1,2} A living donor can donate multiple organs. Solid organs can also be retrieved from brain dead donors who have provided a previous consent for organ donation and/or if their next of kin consent. Similarly, tissues such as cornea, bone, skin and heart valves can be retrieved within the first 24 hours of cardiac death.³ The availability of donated organs may save life, improve the quality of life of the recipient and contribute to the social well-being of the recipient's family.⁴

An imbalance between the supply and demand of organs results in more than 20% of deaths worldwide.⁴ This imbalance is even higher in developing countries such as India.^{5,6}

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Misunderstandings and insufficient knowledge among the prospective donors, and failure to identify possible donors by healthcare professionals are two key factors contributing to the shortage of available organs.^{7,8} The attitude of health professionals is also critical to improve potential donors' participation.^{9–12} Thus, it is important to improve the knowledge and attitude of the community towards organ donation. However, for effectively developing and planning educational interventions and awareness programmes, the knowledge and attitude towards organ donation should be assessed.¹³ We did this study to determine the knowledge and attitude of faculty members of a university in India regarding organ donation.

METHODS

We did an observational, cross-sectional study from December 2017 to January 2018 among faculty members of Manav Rachna University in the National Capital Region, India. Approval for conducting the study was obtained from the ethics committee of the institution. Written informed consent was obtained from the study participants. Faculty members with educational qualifications related to the health profession were excluded from the study. Information was collected using a structured questionnaire consisting of 20 items, adapted from questionnaires of previous studies.^{4,8} Two medical professionals evaluated the prepared questionnaire to maintain its face and content validity. This questionnaire was then pre-tested on 20 faculty members and the required changes made. The final questionnaire had two sections, the first contained questions pertaining to demographic details of the participants (age, sex and educational qualification) and the second section evaluated their knowledge (8 questions), attitude (7 questions) and practice (3 questions) regarding organ donation.

After obtaining consent, participants were explained the purpose of the survey. The questionnaire was self-administered and one of the authors stood by the participant to answer any query. On average, it took 10 minutes for the participant to complete the questionnaire. For knowledge scores, each 'yes' response was given a score of 1 and 'no' as well as 'don't know' were given a score 0. The mean scores of 8 knowledge questions and 6 attitude questions were 4.5 and 3.5, respectively. Hence, it was considered that the individual had adequate knowledge if he/she obtained a knowledge score of ≥ 5 and inadequate knowledge if scores were < 5 . Similarly, those obtaining an attitude score of ≥ 4 were considered as having a positive attitude and those with a score of < 4 having a negative attitude.

Of the 239 faculty members in the university during the study period, 182 consented to participate (response rate 76%). The final sample was 170 after exclusion of 12 incompletely filled questionnaires. Data were compiled and analysed using SPSS version 21 (IBM Chicago, USA). Unpaired *t*-test was used to compare the knowledge and attitude scores among different variables. The level of significance was set at 5%.

RESULTS

The mean (SD) age of the study population was 34.5 (9.6) years ($n=170$) and there were 99 females (58.2%). Of all the participants, 22.4% ($n=38$) were graduates and 77.6% ($n=132$) were postgraduates or with higher degrees. The majority of participants (160, 94.1%) had heard of the term organ donation. The source of information for the majority of participants was television followed by doctors, newspapers, internet, friend or colleague, radio, online sources and magazines. However, when knowledge regarding the meaning of organ donation was assessed, it was found that 72.4% ($n=123$) of participants were of the opinion that it was the removal of organs from live people, 25.9% ($n=44$) believed it to be the removal of organs from those who had died and only 1.8% ($n=3$) believed it to be the removal of organs from the living as well as the dead. Only 12.9% of participants ($n=22$) knew where organ donation cards could be obtained. Nearly three-fourths of the respondents knew that a live donor's consent was necessary before organ retrieval (127, 74.7%). Similarly, 84.7% ($n=144$) of participants knew that after death, organs for donation could be retrieved after consent of the next of kin (spouse or family). The majority of participants (64.7%, $n=110$) knew that kidney, blood, heart, eyes, liver, skin, bone marrow and lungs could be donated. One-third (60, 35.3%) of the participants felt that organ donation involved risks to the donor. Most participants (155, 91.2%) were not aware of any local or international legislation with regard to organ donation.

The promotion of organ donation was supported by 91.8% (156) of the study population. A high percentage (99.4%) of participants believed that organ donation was done to save someone's life, out of compassion, sympathy or as a responsibility. The need of effective laws to govern the process of organ donation was felt by 76.5% (130) of participants. Only 63.5% (108) agreed to donate their organs after death and only 32.9% (56) said that they would provide consent to donate their family member's organs after death. The majority of people (86.5%, 147) wished their body to be kept intact after death.

Of all the participants, 14 believed that organ donation should not be promoted. Among these participants, 5 believed that it could lead to organ trade/violation of rights, while 2 participants felt that organs could be wasted/mistreated. One person felt that a donation was harmful for the donor while one felt fear of postoperative pain.

No statistically significant difference was found in the knowledge scores between gender and level of education. The difference between the attitude score of graduates and postgraduates was statistically significant ($p=0.003$). The difference between attitude scores of graduates and postgraduates was found to be statistically significant ($p=0.001$; Table I).

We found that only 9 participants had donated an organ, 7 had donated blood and 2 had donated kidneys. About 12.9% of participants had pledged or signed to donate an organ. Among our participants, 108 (63.5%) had adequate knowledge and 113 (66.5%) had a positive attitude score.

DISCUSSION

The availability of organs is crucial for any successful organ transplantation initiative.¹⁴ The shortage of organs has led to an ever-expanding list of patients requiring transplantation.¹⁵ Hence, we assessed the knowledge and attitude of faculty members of a university in India regarding organ donation.

TABLE I. Difference in knowledge and attitude scores among different demographic variables

Group	Knowledge scores		Attitude scores	
	Mean scores	p value	Mean scores	p value
Males	4.68	0.34	3.80	0.18
Females	4.97		4.13	
Graduates	4.54	0.76	2.62	0.003
Postgraduates	4.81		4.11	
Doctorates	5.07	0.21	4.23	0.69
Postgraduates	4.81		4.11	
Graduates	4.54	0.26	2.62	0.001
Doctorates	5.07		4.23	

About 63.5% of our study population had adequate knowledge regarding organ donation, which was similar to a study in the general population of India.¹⁶ This showed that the level of knowledge of educated university faculty on organ donation was similar to that of the general population. Since these people are mentors and role models for society, it is necessary to improve their knowledge, as they could become instrumental in motivating students towards organ donation.

In a study by Ibrahim and Randhawa, the majority of participants had good knowledge (76.7%) and attitude scores (52.8%).¹⁷ Similar findings were reported in the study done by Zahmatkeshan *et al.* (2014),¹⁸ Kobus *et al.*¹⁹ and Wilczek-Rujyczka, *et al.*,²⁰ where the majority of participants had good attitude scores.

We found no difference between the knowledge and attitude scores of male and female participants akin to Zampieron *et al.* who studied undergraduate nursing students of Iran.²¹ However, Chakradhar *et al.*⁸ found that females had better knowledge compared to males but males had a positive attitude compared to females. In contrast, studies by Burra *et al.*²² and Mekahli *et al.*²³ revealed that females had a positive attitude. The reason could be that females tend to be more emotional compared to males.

Saleem *et al.* found that 23% of the people knew that donated organs came both from living as well as deceased persons.²⁴ However, in our study, only 1.8% knew that organs can be donated by living and deceased people. Saleem *et al.* also found that 26.2% of individuals knew that kidneys, blood, heart, liver, skin, bone marrow and lungs could be donated.²⁴ Dasgupta *et al.* found that about half the participants were aware that kidney and eye can be donated, but nobody knew about the donation of other organs.⁴ Our study observed adequate knowledge regarding organs to be donated, with 64.7% of participants responding correctly.

Saleem *et al.* found that 55.8% of respondents were aware that organ donation is associated with some risk for the donors and 56.8% felt that organ donation should be promoted.²⁴ In our study, 35.3% of participants believed that organ donation was associated with some risk for the donors and 91.8% felt that organ donation should be promoted. Therefore, participants of our study had a positive attitude regarding organ donation.

Attitude scores between graduates and postgraduates were found to be significant. Similar to the study on Iranian physicians by Salmani Nadoushan *et al.*,²⁵ 99.4% of participants in our study believed that organ donation was done to save someone's life, out of compassion, sympathy or as a responsibility.

A study among medical students showed that the primary source of knowledge was the media (64.6%), followed by friends and family (50%), newspapers and magazines (42.4%), seminars (32.9%) and only a few (27.2%) said healthcare providers.²⁶ A study done by Dasgupta *et al.* in urban areas of West Bengal reported that the media was the only source of information regarding organ donation.⁴ However, in our study television was the main source of information for the majority of the participants. The results were similar to other studies conducted among medical students.^{27,28}

Afshar *et al.* reported that 92% of high school students expressed a willingness towards deceased organ donation and 47% towards living organ donation.²⁹ Keten *et al.* did a study on mosque imams and found that 99.4% of imams did not agree to have an organ donor card and only 22.4% agreed to donate their organs.³⁰ A study among medical students, by Sađirođlu *et al.*, showed that none of the participants had a donation card; 33.8% of them thought to donate.³¹ Ali *et al.* reported that 44.9% of medical students showed a willingness to donate their organs.²⁶ In the study done by Dasgupta *et al.* on the general population, 35.5% of them were willing to donate their organs if required.⁴ However, in our study, 63.5% of participants showed a willingness to donate organs. This variation in willingness could be due to our participants being faculty in an educational institution.

A study conducted among laypersons by Panwar *et al.* reported only 1.4% had registered themselves as organ donors.³² In our study, most participants (91.2%) were not aware of any local or international legislation with regards to organ donation. Similar findings have been reported by Wig *et al.* in school-children and office goers in New Delhi where it was between 76% and 93%, respectively.^{33–35} Further, Mithra *et al.* found that 40% of the population receiving general healthcare in tertiary hospitals perceived a risk about organ donation and 59.6% showed their willingness to donate organs.³⁶ Similar results have been observed in our study where 35.3% of participants believed that there is some risk involved with organ donation and 63.5% showed their willingness to donate organs. Hence, these results depict that the teaching curriculum does not provide education regarding organ donation as the knowledge and attitude of the general population and university faculties were similar.

Our study has certain limitations. First, it assessed the combined attitude regarding living and cadaveric organ donation, while some studies explored cadaveric organ donation exclusively.³⁷ Second, we could have explored marital status, religion and socioeconomic status as factors contributing to the knowledge and attitude of the participants. Further, the results of our study should be generalized with caution to the general population because most participants in our study were educated and belonged to a higher socioeconomic status.

Conclusions

We found a good attitude but only a fair level of knowledge regarding organ donation. Therefore, increasing awareness regarding organ donation should be promoted at various levels. There is a need to increase the knowledge of even the educated population regarding organ donation by organizing awareness programmes or by suitably modifying the teaching curriculum as it was observed that the knowledge and attitude of the general population and our participants were similar. Further studies could be done after conducting an awareness programme

to evaluate the change in knowledge and attitude scores of the population.

Conflicts of interest. None declared

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