

Awareness and Attitude of Educated Professionals Towards Organ and Body Donation

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ABSTRACT

Introduction: Availability of cadavers is very important for teaching and learning anatomy. Without dissecting cadavers there remains a gap between the practice and theoretical knowledge. But there is scarcity in the availability of donated bodies. Same situation is faced by people waiting for organ transplantation. For this, efforts to increase cadaveric donation is the need of the hour. So, present study was undertaken to study attitude and awareness of highly educated professionals towards organ and body donation.

Material and methods: A questionnaire based cross-sectional study was conducted among engineers and doctors in Indian population. Total 208 participants answered the questionnaire providing information about the knowledge and attitude towards body and organ donation. Data was analysed and results were tabulated.

Results: It was found that willingness for organ donation was much higher than body donation. Study attempted to find various barriers for unwillingness. At the same time people with positive attitude were prevented from donation as they didn't have knowledge about the procedure.

Conclusion: It was indicated that all these problems can be solved by frequent awareness programme, and effective use of media, voluntary organizations and health care workers.

Keywords: Attitude, Dissection, Cadavers, Donation

as a novel job. There may be so many reasons which prevent Indian population from body donation like ignorance, religion, culture, lack of knowledge, various prejudices etc. Body donation awareness programme is conducted every year in our institution. But it is not attended by people in large number inspite of publicity. Further percentage of educated professionals attending these awareness programme is negligible which includes medical professionals also. Previous studies also showed that medical students and professionals are less willing to donate their bodies for dissection.^{4,5} Many studies also suggested that knowledge about the prerequisites and actual procedure of organ and body donation is very poor in the society and educated people are not exception to it. With this background present work was undertaken to study attitude and awareness of educated professionals towards body and organ donation. It is expected that study will also help in clearing doubts and motivating society towards these noble acts.

MATERIAL AND METHODS

A cross-sectional study was conducted among Engineers and doctors in Nagpur, Maharashtra. Total 104 engineers (73 males+31females) and 104 doctors (52 males+52 females) were participated in the study. All the participants were chosen from the teaching staff of engineering and medical colleges in Nagpur. Their age ranges between 21 to 60 years. Inclusion criteria and exclusion criteria for the participants was as follows-

Inclusion criteria: Age above 18 years. Participant should at least completed graduation in engineering or Medicine along with internship.

Participant must give written consent for participation in the study

INTRODUCTION

Human anatomy is the most important basic subject in medical science taught in first year of almost all courses related to health care system. At the same time, it is considered as one of the hardest subject by almost all 1st year students. Dissection of human body is an integral part of teaching-learning method in anatomy without which there remains a large gap between practical knowledge and theoretic knowledge. Knowledge of anatomy is an indispensable part of the education of health care professionals for which medical students need human bodies for dissection.¹ These are also needed for research purpose by post-graduate students. With increasing number of medical institutions in the country, need for cadavers is also increasing.

Same is the situation in case of organ donation in India. Due to the scarcity of stored organs in most of the organ banks, a large number of people are in waiting list for organ transplantation.² Gradually concept of organ donation is getting popular in India but awareness about body donation is still poor. Though in India, dissection of human cadaver was started by Sushutra in 500 BC as per ancient history³, still there remains a gap between medical professionals and the common people in creating awareness about body donation

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Exclusion criteria: Who has not completed degree in engineering or medicine. Who has not given consent.

For the present study, a questionnaire was prepared providing information about demographic features, knowledge of organ and body donation, causes of unwillingness and reasons behind not to filled up pledge form. Most of the questions were multiple choice and included most commonly expected possible answers and one final option was left blank for the participants to answer as they want. The questionnaire was pilot tested and changes made accordingly. Doctors were considered as exposed group as they are practically exposed to cadaveric dissection and well as they are very well acquainted with the importance of body and organ donation. Engineers are considered as non-exposed group.

All the participants answered the questionnaire. Sufficient time was provided. Assistance was given only to explain some terms in case of engineer group. All explanations were made without influencing the respondents.

STATISTICAL ANALYSIS

Data was collected and analyzed. We used Stata 4 software for data analysis. The chi-square test was used for assessment of differences among different group. All statistical tests were two sided and p-value of < 0.05 was considered as statistically significant.

RESULTS

Questionnaires were answered by 208 participants including 104 (50%) engineers and 104 (50%) doctors. Age of the participant ranged between 21 to 60 years. Maximum participants in engineer category were doctorate and remaining were post-graduate and in doctor category maximum were post-graduate, some completed super-specialization and very few were only graduate. Overall literacy rate was very

Age	Participants	Male	Female	Total
21-40 yrs	Engineers	33	15	48
	Doctors	19	23	42
41-60 yrs	Engineers	40	16	56
	Doctors	33	29	62
Total		125	83	208

Table-1: Showing distribution according to age, sex and profession

high. Most of the participants belong to upper or middle socioeconomic class. 60% of the participants were male and 40% were female. Out of 208 participant, 5 were Islamic, 18 were Buddhist, 1 was Christian and rest were Hindu. 50% of participants (doctors) belong to exposed group and (50%) (engineers) to non-exposed group. Distribution of participant according to gender and exposure to cadaveric dissection is given in Table no.1.

Maximum participants 78.84% participant had positive attitude towards cadaveric organ donation. Total 126 (60.5%) participants expressed strongly positive attitude without hesitation in which there were 78 (62.4%) males and 48 (57.8%) females and this difference is not statistically

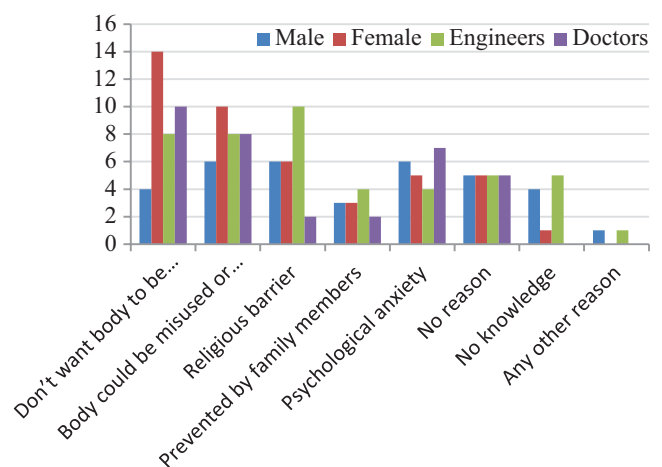


Figure-4: Reasons behind unwillingness for body donation

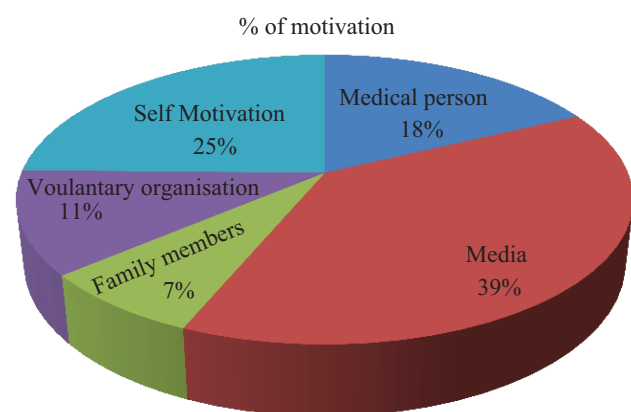


Figure-5: Showing sources of motivation

Attitude towards cadaveric oragan donation	Total (%)	Male (%)	Female (%)	Engineers (%)	Doctors (%)
Stongly positive without any hesitation	126 (60.5%)	78 (62.4%)	48 (57.8%)	49 (47.1%)	77 (74%)
Positive but need persuasion	38 (18.2%)	23 (18.4%)	15 (18.07%)	23 (22.1%)	15 (14.4%)
Absoiutely negetive	16 (7.7%)	9 (7.2%)	7 (8.4%)	9 (8.6%)	7 (6.7%)
No idea	26 (12.5%)	14 (11.2%)	12 (14.4%)	17 (16.3%)	9 (8.6%)

Table-2: Attitude towards cadaveric organ donation

		Total (%)	Male (%)	Female (%)	Engineers (%)	Doctors (%)
Willing	Only far organ transplantation	92 (44.2%)	54 (43.2%)	38 (45.7%)	34 (32.6%)	58 (55.7%)
	For dissection	08(3.8%)	05(4%)	03(3.6%)	05(4.8%)	03(2.8%)
	For both	58 (27.8%)	41(32.8%)	17(20.4%)	38 (36.5%)	20(19.2%)
Unwilling		50 (24.03%)	17(13.6%)	33(39.8%)	25(24.0%)	25(24.0%)

Table-3: Attitude towards body donation

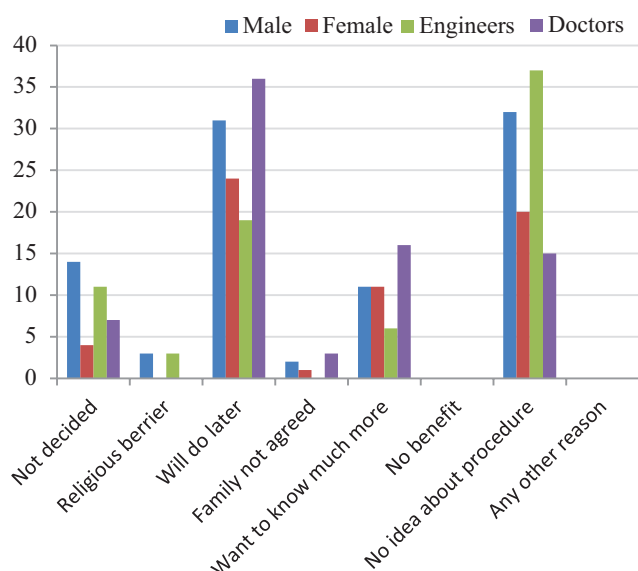


Figure-6: Reasons of not filling pledge forms

significant. 38(18.2%) participants (23 males and 15 females) were positive but said to need persuasion. Only 16 participants chose absolutely negative option among which males and females were almost same (males = 9, females=7). On the other hand, 26(12.5%) participants (males=14 and females=12) were expressed as 'no idea' about organ donation.

In the first category (strongly positive without hesitation), there were 49 (47.1%) engineers and 77(74%) doctors and the p-value for this difference was highly significant. In rest three categories, difference of opinion between exposed and non-exposed groups was not significant. Table no.2 shows details of attitude towards cadaveric organ donation among various parameters.

In case of body donation, maximum (44.2%) participants wanted to donate their bodies only for organ transplantation. This included 54 males and 38 females. In this group, doctors (55.7%) out numbered engineers (32.6%) with highly significant difference (p-value <0.001). 27.8% participants wanted to donate their bodies for both purpose i.e. organ transplantation and dissection. In this there was no significant difference among males (32.8%) and females (20.4%) but engineers (36.5%) were significantly more than doctors (19.2%). Overall total responses for organ transplantation were high but willingness for body donation only for dissection purpose was given by negligible number of participants (3.8%).

50 (24.03%) participants were unwilling for body donation. Here females significantly outnumbered the males but no difference was observed between exposed and non-exposed group (table-3). Different causes of unwillingness had been shown by bar diagram (figure-4). According to it, 'don't want body to be dissected' and 'body could be misused or abused' were the main causes given by doctors also followed by psychological anxiety. These were also main causes of unwillingness in case of females. Religious barrier was the most common reason given by engineers followed by first two reasons.

Different sources of motivation for body donation has been shown in pie chart (figure-5). Maximum doctors were self motivated. Some of them were motivated by other medical person and media. In case of engineers, role of media and voluntary organizations was maximum. Though high percentage of participants expressed willingness for body and organ donation, very few of them (only 13 out of 208) had filled pledge form till now. The reasons of not filling pledge form were shown in bar diagram (figure-6). Maximum participants (55) expressed that they will fill and submit the forms later. About 52 participants (37 engineers and 15 doctors) admitted that they had no idea about the procedure and some (22 participants) said that they wanted to know much more about body and organ donation. Familial and religious barrier were almost negligible.

DISCUSSION

Donation is a clear will made by people free and informed.⁶ Donation of one's body either for organ transplantation or for dissection is a personal decision or it may be taken by the relatives many times. Individuals donating their bodies to the science are guided by altruistic attitude suggesting the compassion of an individual towards the society and a determined will to be useful even after death.⁶

Many studies have been undertaken to assess the awareness and attitude to whole body donation and organ donation among people of different social and religious backgrounds. But most of the comparative studies between exposed and non-exposed groups were done among students. No study actually compared the attitudes and beliefs of two different sets of people who are highly educated professional people (one group actually delivering health care services and one not related to medical field) and having similar demographic profile, social, cultural and economic background. In present study, we have compared the views of highly educated professional people. One group includes doctors who are also the teaching staff in medical college and are often exposed to cadavers, dissection and patients with end stage organ failure. They are well acquainted with the importance of organ donation and importance of dissection for medical education. Other group included teaching staff of engineering college who are not acquainted with these things. The transplantation of organ is the only treatment for end stage organ failure at most of the time.⁴ Organs available in the organ banks are not sufficient to meet the increasing demands. To meet these demands, more awareness is needed for cadaveric organ donation. In present study, 60.5% participants showed strongly positive attitude without hesitation and 18.2% were willing but needed persuasion. Doctors were more positive than engineers. Many researchers reported percentage of people willing for organ donation all over the world. Bogh and Madsen (2005)⁷ reported that 49% ICU health care professionals in Denmark were willing for organ donation. Rios B et al (2010)⁸ studied organ donation rate among Spanish school teachers which is found to be 91% in case of related donation and 20% in case of non-related donation. Luis A. and Jose Luis (2014)⁹ surveyed views

of anatomists from 29 countries and found that 41% were willing for organ donation, 9% for body donation and 25% for both. About 69.9% Turkish anatomists gave willingness for their own organ donation as reported by Sehirli et al. (2004).¹⁰ In China, 61.3% university students indicated willingness for organ donation.¹¹ In France, 81.1% 1st year MBBS students showed willingness.¹² Organ donation rate in general population reported in three countries and it is 60% in Spain, 74% in Denmark and 43.6% in Malaysia. Thus overall willingness organ donation is high all over the world.^{13,10,14}

Further it is needed to create awareness about brain death and its importance for organ donation.¹⁶ Vaishaly K. (2105)¹⁵ in her study in Maharashtra also reported similar findings on awareness about brain death. Wig et al¹⁶ stated that discussion with the grieving relatives regarding organ donation following brain death is very difficult. If relative is unfamiliar with the concept of organ donation following brain death, then discussion process become more challenging. This can be made easy by spreading awareness about these two. Similar findings were reported by Dolatabadi et al.¹⁷ Although questions about brain death were not included in present study, authors had similar experience with the non-exposed group. Very few engineers were knowing about concept of brain death and its importance for organ donation. Thus present study shows that attitude towards cadaveric organ donation is good and results are consistent with other study. On the other hand, willingness to donate bodies for teaching purpose was very poor. In present study, only 3.8% participants were willing to donate their bodies for dissection purpose and 27.8% for both purposes. Females were less willing to donate their bodies for dissection purpose. Very few doctors wished to donate their bodies for dissection purpose. Findings were similar to other studies. In the study done by Anubha Saha et al⁴ only 5.6% people wanted to donate the body for dissection purpose. Sehirli U S et al¹⁰ indicated that 15.7% Turkish anatomists wanted to donate their bodies. In the study of Luis A. Arraez-Aybar⁹, only 9% anatomists were willing to donate their full bodies. Thus overall data showed that body donation rate is really poor even among educated people. Reasons for this are studied in present study. Condition of cadavers in dissection hall and fear that the body and organs are misused or abused are the main reason given by exposed group. This finding is similar to the other studies. Bowlware et al¹⁸ stated that demographic and attitudinal factors were found to be strongly related to willingness to consider whole body donation and these factors develop after exposure to dissection. Religious barrier is the most common reason given by non-exposed group. Those who are willing, failed to fill pledge form due to no knowledge about the procedure and some want to know more about body and organ donation. For this, more information, education and awareness is needed regarding body and organ donation. This can be achieved by organizing awareness programmes more frequently. Media such as TV, Newspaper can play important role in propagating awareness. Literature can also be included in

medical curriculum so that medical student and other health care professionals themselves develop awareness and can address the society about importance of body donation.

Lastly dishonored condition and mishandling of cadavers are major obstacles for body donation among medical professionals. Most of the studies support this fact.^{4,5,10} Present study is also not an exception to this. Only 22% doctors are willing to donate their bodies for dissection purpose. Most of them think that body can be misused. Savita Bansal et al⁶ also stated that dissection pessimistically modulate the attitude of student towards donation. In her study, students admitted that they have witnessed impertinent behavior towards the cadavers in dissection hall. They are also forced to think of cadavers not as dead human being with former life but as commodities to advance their knowledge. And such emotions hinder them from donation of their own bodies. These barriers can be overcome to some extent by giving cadaveric oath to medical students on very first day in dissection hall and time to time they are made to respect the cadaver they are actually dissecting. Practice of honoring cadavers by students and teachers from the commencement of medical course session is followed in Korea and Thailand^{19,20} In Japan it is practice to hand over the ashes of the dissected cadaver of donated body to their relatives.²¹ Such acts can promote body donation for dissection purpose and can clear the doubts and hesitation from one's mind.

Thus even if all religions in the world support and encourage the act of donation, the final decision depends on personal conscience. This can be brought about by proper counseling and guidance, which can turn the potential donor into an actual donor.

CONCLUSION

Thus authors conclude that though highly educated, lack of awareness and knowledge of prerequisites and procedure prevent these people from donation. For this, body donation awareness programme is need of hour. For exposed group, honouring cadavers during dissection, including literature in curriculum, arranging seminars and lectures can solve the problem. Media, voluntary organizations, trained health care workers can effectively provide knowledge to the society and can remove fear and hesitation from one's mind so that people start realizing that it is better to donate their bodies after death for organ donation and medical education purpose. In this way cadaveric donation rate can be improved.

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