

Attitude of Indian Medical Fraternity Towards Body Donation - A Cross Sectional Survey

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ABSTRACT

BACKGROUND

There is a worldwide scarcity of cadaver for teaching as well as for research. Many private as well as government medical colleges rely only on unclaimed bodies, but this scarcity of cadaver cannot be replenished with the unclaimed bodies alone. Despite the importance of body donation for medical education, cadaveric donation remains suboptimal worldwide. Body donation programs are still in their infancy in our country. The success of these programs depends upon the ability of our health care professionals in motivating the society at large. Thus, it is crucial that our medical fraternity and health care professionals themselves support and favour this issue. Hence this study was carried out to know the attitude of medical fraternity towards body donation program.

METHODS

A cross-sectional survey was conducted among the faculties of Jawaharlal Nehru Medical College, Sharad Pawar dental college and Ayurvedic college at Datta Meghe Institute of Medical science, Sawangi Meghe, Wardha. Study duration was from July 2018 to July 2019. Inputs from all the study participants were obtained on the basis of questionnaire about the attitude towards body donation after taking their consent. The questionnaire was collected from the participants' and the data obtained was assessed statistically.

RESULTS

The study revealed significant negative attitude of medical fraternity towards body donation. It was observed that 21.7 % male & 3.7 % female faculties from medical colleges, 11 % male and 5.71 % female faculties from dental colleges and 25 % male and 10 % female faculties from Ayurvedic colleges were willing for body donation whereas 96 % of faculties from medical colleges, 92 % from dental colleges and 89 % ayurvedic faculties were not willing to donate their bodies for dissection purpose because they had an awful experience in the dissection hall. They had witnessed the dishonoured condition of the cadaver in dissection hall. 95 % of faculties from medical college, 92 % dental faculties and 90 % ayurvedic faculties stated that to get dissected on the table was an atrocious feeling.

CONCLUSIONS

The success of body donation programs depends upon the ability of health care professionals in motivating the society for voluntary body donation. Negative attitude of medical fraternity towards body donation may interfere with this role. Developing the practice of respecting and honouring the cadaver, from the very beginning of the career will help to change the attitude of medical graduates towards body donation. Competency no AN82.2 from volume 1 UG curriculum, module no 1.5 from ATCOM module may help to change the attitude of budding doctors.

KEY WORDS

Medical Fraternity, Body Donation, Competency No AN82.2, Module No 1.5

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BACKGROUND

Dissection of cadaver is the traditional and effective method to teach anatomy to undergraduate as well as postgraduate students of different courses like MBBS, BDS, Ayurvedic, Homeopathy, Unani, Physiotherapy and Occupational therapy. Cadaver is the first teacher of the students. The visual and the tactile experience students get during dissection of cadaver helps in the development of knowledge, skill, and precision. In India, there are few a medical institution which are providing the facility of Cadaveric Skill Lab / Operation Theatres. Medical professionals practice newer and advanced surgical techniques on cadavers to enhance their skills, become competent enough before operating on the living beings. These cadaveric skill laboratories need cadavers. Cadavers are also needed for research work in anatomy, now with the increasing number of medical colleges in the past few years, the need of cadavers has far exceeded, hence there should be adequate inflow of cadavers for health science courses and research activities. There is worldwide scarcity of cadaver for teaching as well as for research.

Rokade SA & Bahetee BH et al. found a gross insufficiency of cadavers in 90.90 % of medical colleges and 18.18 % of the surveyed colleges did not receive a single cadaver by donation. In the last 5 years. In 63.63 % of these colleges, the number of cadavers available were less than half of the requirement.¹ At present, unclaimed bodies and few donated bodies are the main source of cadavers that are coming from the authorized government institutions. Many private medical colleges rely only on unclaimed bodies but this scarcity of cadaver cannot be replenished with the unclaimed bodies alone. There came the ideology of “deh - daan” or voluntary body donation. ‘Willed body donation’ is a must to maintain a constant supply of cadavers for anatomy teaching. Despite the importance of body donation for medical education and the advancement of medical science, cadaveric donation remains suboptimal worldwide.² Voluntary body donation programs are still in their infancy in our country. The success of these programs depends upon the ability of our health care professionals in motivating the society at large. To encourage the public towards body donation we must first develop a positive attitude in medical professionals towards the same. Thus it is imperative that our medical fraternity and health care professionals themselves support and favour this issue.³

Hence this study was carried out to know the attitude of medical fraternity towards body donation program.

METHODS

A cross-sectional survey was carried out at Datta Meghe Institute of Medical Science, Sawangi Meghe, Wardha after taking institutional committee clearance references no DMIMS (DU) / IEC / 2016 - 17 / 3039. Study participants were the faculties from Jawaharlal Nehru medical college, Sharad Pawar dental college, and Ayurvedic college from Dutta Meghe Institute of Medical Science. As the minimum sample size required for any study is 35 and to have an easy comparison, we decided to have a sample of fifty. Fifty faculties from

Jawaharlal Nehru medical college gave their consent. The questionnaire regarding the body donation was validated from professors in the Department of Anatomy. The validated questionnaire about the attitude towards body donation was given to all participants to provide their inputs regarding the same. The questionnaire was collected from the participants’ and the data obtained was tabulated.

RESULTS

Faculties from various departments of medical, dental and ayurvedic colleges were included in the study after taking their consent. It was observed that most of the participants belonged to age group of 41 - 50 years and number of female faculties participating in the study from dental colleges were more as compared to males.

Age / Gender	Medical College		Dental College			Ayurvedic College			
	Male	Female	Male	Female		Male	Female		
30 - 40 years	7	9	16	8	10	18	8	4	12
41 - 50 years	5	7	12	7	11	17	13	15	28
51 - 60 years	9	8	17	0	12	12	7	3	10
61 and above	2	3	05	0	2	02	0	0	00
Total	23	27	50	15	35	50	28	22	50

Table 1. Distribution of Study Population

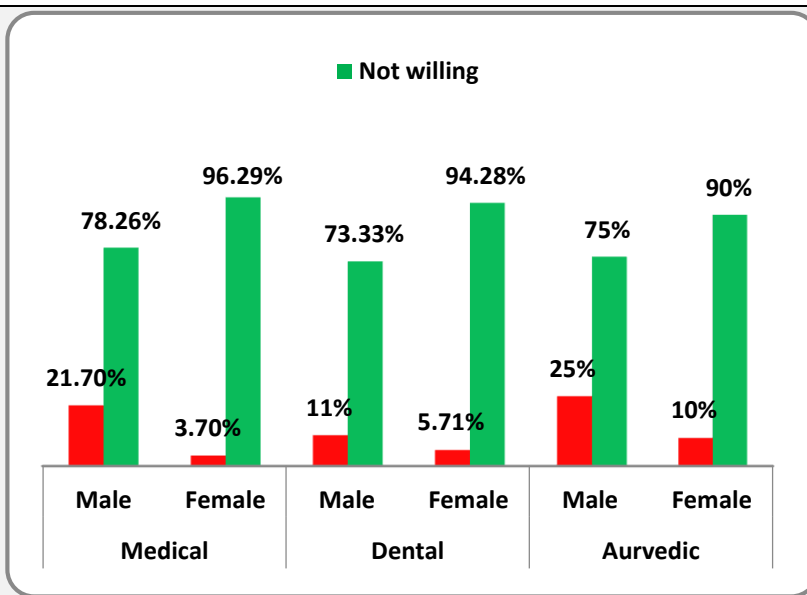
Almost all faculties from Medical (96 %), Dental (86 %) and Ayurvedic (90 %) colleges were of the opinion that cadaveric dissection was a must to learn anatomy and they had knowledge about the sources of procurement of cadavers. But only faculties from medical colleges (98 %) were well acquainted about the scarcity of cadaver. All faculties from medical, dental and ayurvedic colleges knew about the body donation program and also believed that awareness about the programme was the need of the hour but very less number of faculties (46 %) medical (46 %) dental (22 %) and ayurvedic participated in any body donation awareness program.

Very less number of faculties (0 %, 2 %, 4 %) witnessed the body donation by their family members. Only 32 %, 12 %, 22 % faculties from medical, dental and ayurvedic colleges were willing to donate their bodies respectively. Male faculties were more willing than the female faculties for body donation. Number of female faculties (35) willing for donation was more in dental college.

Willingness of Faculties Towards Body Donation	Medical		Dental		Ayurvedic	
	Male	Female	Male	Female	Male	Female
Willing	5 (21.7%)	1 (3.7%)	6 (11%)	2 (5.71%)	7 (25%)	2 (10%)
Not willing	18 (78.26%)	26 (96.29%)	11 (73.33%)	33 (94.28%)	21 (75%)	20 (90%)
Total	23	27	15	35	28	22

Table 2. Sex Wise Distribution of Faculties Willing to Donate Their Bodies

The major reason for their willingness for body donation was that they wanted to be useful for medical education and research, the profession that had given them an opportunity to serve humanity after death.



Graph 1. Showing Sex Wise Distribution of Faculties Willing to Donate Bodies

Sl. No.	Reasons	Allopathic	Dental	Ayurvedic
1	To donate body is a Nobel altruistic act	44(88 %)	46(92 %)	43(86 %)
2	Initiative taken by medical faculties created awareness among people for body donation	44(88 %)	45(90 %)	42(84 %)
3	A small attempt to reduce the scarcity of cadaver for dissection	45(90 %)	43(86 %)	44(88 %)
4	Want to be useful for medical education and research after death	49(98 %)	49(98 %)	48(96 %)
5	As an act of respect for medical profession who gave an opportunity to live this beautiful life	49(98 %)	48(96 %)	48(96 %)

Table 3. Reasons for Willingness of Body Donation

The most important reasons for non-willingness of body donation among all the faculties were improper handling of the cadaver and disrespectful behaviour by the personnel in the dissection hall. They had seen the cadaver dissected into pieces and they didn't want such a thing to happen with their own bodies. Some religious taboos were also there that prevented them from the act of donation.

Sl. No.	Reasons	Allopathic	Dental	Ayurvedic
1	My religion doesn't allow me to donate body	09 (18 %)	07(14 %)	05(10 %)
2	It is very atrocious feeling to get dissected on table	48(96 %)	46(92 %)	45(90 %)
3	I love my body and don't want anyone to disrespect it any manner	33(66 %)	27(54 %)	34(64 %)
4	I feel my body will not be handled properly	46(92 %)	38(86 %)	37(74 %)
5	Had an awful / unpleasant experience of dissection	48(96 %)	46(92 %)	44(88 %)
6	The remains of body will not be disposed of properly	45(90 %)	38(78 %)	38(76%)
7	Students doesn't make use of the cadaver for learning up the mark	38(76 %)	33(66 %)	27(54 %)
8	My family members do not allow me to donate my body	11(22 %)	17(34 %)	15(30 %)
9	Cadavers are not respected by the students	44(88 %)	33(66 %)	16(32 %)
10	Cadavers are not handled properly by the staff and students	39(78 %)	24(48 %)	27(54 %)

Table 4. Reasons for Non-Willingness of Body Donation

DISCUSSION

Cadaveric dissection is an important and effective method used to learn anatomy. Anatomical models and some anatomy

softwares are helpful as well, but the practical experience of handling the tissue during dissection by the students is unique and this experience will help them in future while dealing with the patient's body. With the establishment of new private as well as government medical colleges and increase in their student intake capacity, they are facing the problem of scarcity of cadavers for dissection.

The number of cadavers available per student is important as this will decide the quality of teaching and understanding. At present the cadaver to student ratio is 1:25 which should be 1:10. Because of this reason it is often seen that most of the students never get a chance to dissect which adversely affects the anatomy teaching. Increasing the cadaver donation worldwide might be a solution to the insufficiency of cadavers but people willing to donate the bodies are negligible or too small which causes undersupply of cadavers to the medical colleges.^{4,5} In 1948, the Anatomy Act was passed in India. This act allows the bodies to be donated by donors and bodies are to be claimed for medical and research purpose if there was no claim to one's body within a 48 - hour timeframe. The act was further amended by state legislative council in 2000 to permit donation of body before death.⁶

Body donation is an informed and selfless act of giving one's body for the purpose of medical, education and research after the death. Though the concept of body donation evolved over centuries, in India it is still in primitive stages.²

Number of Faculties Willing / Unwilling for Body Donation

From our study it was observed that 21.7 % male & 3.7 % female faculties from medical colleges, 11 % male and 5.71 % female faculties from dental colleges and 25 % male and 10 % female faculties from ayurvedic colleges were willing for body donation. Umit s (2004) reported that anatomy teachers were generally in favour of donation with 86.5 % especially of organs alone 52.7 %. Only 15.7 % were willing for body donation.⁷ Prachi et al. 2013 observed that though doctors unanimously comply with the importance of dissection in anatomy teaching and understanding they themselves are not

keen on donating their bodies. Only 29 % of female doctors and 52 % of male doctors were willing to donate their bodies.⁴ Rokade SA Gaikwad A (2012) stated that, though health care professionals were more aware of body donation programs than general population, only 44.9 % of health care professionals were willing to donate their bodies for anatomical education.¹ Ballala K, et al 2011 in a study among medical professionals also showed that only 22 % physicians were willing to donate their bodies for medical education.⁸ Saha Anubha stated that merely 2 % of doctors in their study were willing to donate their bodies for dissection purpose.⁹ Hiwarkar MP 2016 reported that merely 15 % of the staff members were willing for body donation. From various studies carried out to estimate the number of doctors willing for body donation it was being observed that, medical professionals were reluctant about the body donation.¹⁰

Reasons for Willingness and Unwillingness for Body Donation

There are many reasons for unwillingness towards body donation. These are demographic and socio-economic factors like age, sex, education, race, ethnicity, occupation, and income, attitude about religion, spirituality, marital status, or member of dependents.¹ In our study, 96 % of faculties from medical colleges, 92 % from dental colleges, and 89 % ayurvedic faculties were not willing to donate their bodies for dissection purpose because they had an awful experience in the dissection hall. They had witnessed the dishonoured condition of cadavers in dissection hall. 96 % of faculties from medical college, 92 % dental faculties and 90 % ayurvedic faculties stated that to get dissected on the table was an atrocious feeling. They themselves had seen the neglect of corpse in the hall, cadavers kept in formalin tank, pulled and dragged to the dissection table and they also had seen the rags of their bodies, they didn't want such type of behaviour to happen with their bodies. The attachment and love for one's body is the reason behind this. In addition to these factors, faculties were also of the opinion that cadavers were not disposed of properly and also disrespected by the students and themselves. Prachi et al. stated that foremost reason for refusal to donate is anxiety of disrespectful behaviour observed towards cadavers, and improper handling and disposal of the part of the cadaver by the anatomy staff features a psychological meaning.⁴ A study among Turkish anatomist reported that 63.9 % wouldn't consider themselves to donate their bodies as they weren't prepared. Umit S (2004) doctors were against donation because of psychological reasons. The other reasons cited were unacceptability for getting dissected by colleagues and the unacceptability of donation by family.⁷ Ballala K, Shetty A (2011) in a study among medical professionals showed that 85 % believed that donated bodies were misused.⁸

But some of the doctors were of the opinion that in this era of evolving technology, competent software's, and simulation were enough to learn anatomy and there was no need of cadaveric dissection and so they were against body donation. Among the faculties who were willing for body donation, 98 %, 98 %, 96 % of medical, dental, ayurvedic faculties respectively wanted to be useful to the medical sciences after death and express their gratitude to the medical profession.¹

Measures to Improve the Attitude of Medical Professionals toward Body Donation

Changing person's attitude can change his behaviour. The cognitive components of attitude are more fundamental and more constant over time and more closely connected to the basic values. Behavioural attitudes are manifestations of underlying cognitive and affective attitudes. To create awareness among the population is one of the responsibilities of the medical professionals. For this they should have positive attitude towards body donation One of the ways to change the attitude of doctors is to imbibe in them the practices of respecting and honouring the cadavers from the commencement of medical course session as in Korea and Thailand.¹² Medical council of India with the introduction of competency based medical education since 2019 added two competencies in the curriculum, competency no AN82.2 from volume 1 UG curriculum, 'Demonstrate respect and follow the correct procedure when handling cadaver and other biologic tissue' and module no 1.5 from ATCOM module 'The cadaver as first teacher' which deals with the ethical aspect of cadaveric dissection will help to change the attitude of Indian medical graduate towards body donation.^{13,14} Practices like cadaveric ceremonies, oath taking ceremonies during first phase of medical under graduation should be routinely conducted which will provide an ethical framework in the dissection hall as well as imbibe in them the values of professionalism, ethics and empathy.

CONCLUSIONS

The success of body donation programs depends upon the ability of health care professionals in motivating the society for voluntary body donation. Negative attitude of medical fraternity towards body donation may interfere with this role. Developing the practices of respecting and honouring the cadavers, from the very beginning of career will help to change the attitude of doctors towards body donation. Competency no AN82.2 from volume 1 UG curriculum, module no 1.5 from ATCOM module will help to change the attitude of medical students.

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