

## 'Voluntary body donation' - a survey of awareness among teaching staff of medical colleges in Nagpur

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### Abstract

**Objective:** To assess knowledge, attitude and practice regarding 'Body Donation' among the teaching staff of medical colleges in Nagpur

**Method:** The present study included 100 teaching staff members (professors, associate professors and assistant professors) of medical colleges in Nagpur, Maharashtra. The teaching staff of department of anatomy was specifically excluded. Structured questionnaire was prepared and distributed among the teaching staff. The data was collected, compiled and analysed to evaluate awareness and attitude towards body donation.

**Results:** Merely 22% staff member were aware that body donation is also one of the methods of dead body disposal. 85% staff members were not aware about the anatomy act that governs body donation. 75% staff was unaware of the cadaver donation procedure. Only 50% of the staff members were willing for body donation.

### Conclusions:

- Body donation is a generous and unselfish act for those who wish to be useful to living, even after death
- The awareness regarding the altruistic act of body donation is deficient among the medical faculty
- There is need for creating awareness about 'Voluntary Body Donation' among medical teachers as well as general population

**Keywords:** Body donation, Cadaver, Dissection, Medical teaching faculty

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<b>Quick Response Code:</b> 	<b>Website:</b> www.innovativepublication.com
	<b>DOI:</b> 10.5958/2394-2126.2016.00072.4

### Introduction

Learning human anatomy is the basic requirement in the career of a medical professional. The subject of anatomy always comes first in the medical curriculum and serves as the foundation for medical education. Cadaveric dissection has always been integral to studying anatomy. The importance of dissection on human cadavers for learning anatomy is well emphasized. The psycho-visuo-tactile experience of cadaver dissection is an unparalleled means to understand and retain the knowledge of human anatomy.<sup>(1)</sup> Beside dissection, cadavers are also used for practicing as well as developing new surgical techniques.<sup>(2)</sup> It also provides surgeons a simulating environment to polish their surgical skills.<sup>(1)</sup> Neither books nor computers can replace body dissection in learning anatomy.<sup>(3)</sup>

With the start-up of large number of medical institutions in India, the problem of scarcity of human

cadavers has been well recognized by government as well as private set ups. The cadaver to medical/dental students ratio in various teaching institutes of India is 1:25, optimal being 1: 10.<sup>(3)</sup> Although cadavers can be obtained by a variety of different legal methods, voluntary body donation is an important source of cadavers for anatomical study and education.<sup>(1,4)</sup> It can be defined as an informed and selfless act of giving one's body for the purpose of medical education and research after the death. Unfortunately, the number of donors is far low than required, reason being lack of awareness about body donation, familial or social inhibitions, poorly developed willed body donation programs etc.

In our country, such willed body donation programs are still in their infancy. The success of these programs depend on the ability of our health care professionals in motivating the people.<sup>(1)</sup> But, how much the healthcare professionals themselves are aware about body donation? Leave health care professionals, are the medical teachers aware? This question prompted us to undertake this survey with the aim to assess the knowledge, attitude and practices regarding 'Body Donation' among the teaching staff of medical colleges in Nagpur.

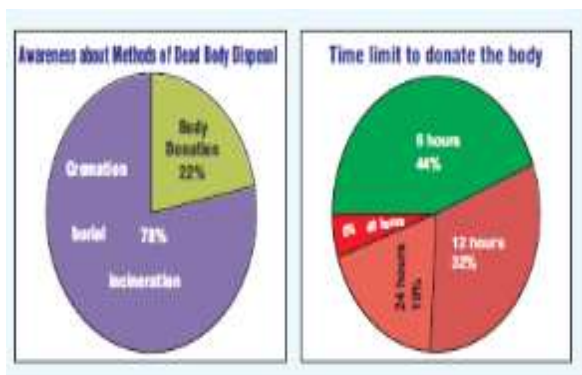
### Material & Methods

The present study is questionnaire based, KAP (Knowledge, attitude& practice) study, carried among

100 teaching staff members (professors, associate professors, assistant professors) in the age group of 25-65 yrs. in the three medical colleges in Nagpur, Maharashtra. The teaching staff members of anatomy department were excluded. A structured questionnaire containing 22 items was administered after due consent by the faculty. The data was analyzed and percentages were calculated and represented graphically.

**Results**

All the study members knew the term body donation. Merely 22% of them were aware that body donation is one of the method of dead body disposal & 78% mentioned about the traditional methods only. 44% of study members knew the correct time limit to donate the body.(Fig. 1)



**Fig. 1: Methods of dead body disposal & time limit**

Majority of study members were unaware about the process of body donation & learnt about the idea only during their first year of MBBS. 62% knew "Who can donate body".

**Table 1: Who can Donate Body?**

1	An individual while he is alive	36%
2	A relative who is in possession of a body	16%
3	Police in case of unclaimed bodies	20%
4	Mental Hospitals	5%
5	All of the above	62%

Only 25% of study members were aware about the procedure of body donation and only 15% knew the Act which governs the body donation. Surprisingly, only 35% knew that the death certificate is mandatory during body donation process. (Table 2)

**Table 2: Documents required at the time of body donation**

1	Death Certificate	35%
2	Body donation form duly filled	15%

72% members knew that there is body donation

committee in their institution but only 36% knew about the office bearers. (Table 3)

**Table 3: Office bearers of body donation committee**

1	Dean	16%
2	Professor & Head of anatomy Department	36%
3	Social Worker	2%

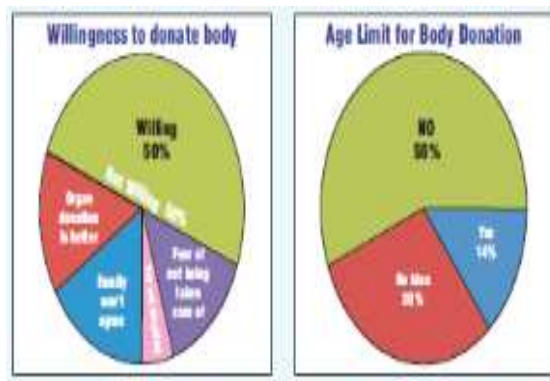
56% knew that there is no age limit for body donation; however 14% were of the opinion that there is an age limit, when actually there isn't any. (Fig. 2)

It was observed that, 92% of study members had clear Idea about the uses of donated body, remaining 8% had incomplete idea.( Table 4)

**Table 4: Use of Donated Body**

1	To learn anatomy by Dissection	5%
2	Anatomical Research	2%
3	To obtain bones by maceration	3%
4	To practice surgical & diagnostic techniques	1%
5	All of the above	92%

50% of the study members were willing to donate their body and maximum of them were comfortable with the Idea of any of their family members donating his/her body.(Fig. 2) At the same time they were keen to propagate the message of body donation at their institution as well as community. But, merely 15% of study members have volunteered in body donation program. Only 18% of study members knew about incentives given at the time of body donation & even if incentives were given only 3% members were willing to donate their bodies.



**Fig. 2: Attitude towards body donation**

**Discussion**

Anatomy i.e. the study of structure of human body is the basic yet one of the most important subjects studied by medical students. Cadaveric dissection has always been integral to studying anatomy. Though body donation is the preferred and major source for cadavers, the proportion of general population willing to donate body is meagre leading to scarcity of cadavers which affects anatomy teaching programs negatively. (1, 3)

To make up one's mind for body donation after death, even for the purpose of medical education is an extremely difficult decision across cultures. People often are reluctant to talk about death as they tend to believe that discussion about death may lead it to come soon.<sup>(6)</sup> The most important reason for denial to 'body donation' in Indians is lack of awareness.<sup>(1,3,5)</sup> Another hindrance to body donation is religious misbelief to, though the word 'donation' has a 'holy' dimension. People are often unaware or may be misled by wrong interpretation of religious texts or teachings. Majority of the population want to get the last rituals to be performed on their body as per their religion even though every religion considers body donation as a pious altruistic act of charity & love. Shankaracharya firmly believed in concept of Body Donation and said "Iddham Sharirum Paropakaram" i.e. the body is for the use of others and death is not the end, it's just the beginning.<sup>(2)</sup> It signifies a pious soul and determined mind dedicated to help humanity by aiding medical teaching. The fear that the dead body will not be treated with dignity and respect is also an important factor preventing one from body donation.<sup>(4)</sup> Medicos, in addition to that, find it more difficult to accept the concept of dissection of their own body.<sup>(5)</sup>

In the present study, only 22% of the study members were aware that body donation is one of the methods of dead body disposal, while 78% just mentioned about the traditional methods like cremation, burial & incineration etc. which highlights the lack of awareness among the teaching staff.

Though mass media is an effective way of communicating the message of body donation, but in our study with medical faculty, majority come to know about the body donation only after entering first year MBBS, when they started learning human anatomy. However, the importance of mass media in propagating the message positively among the population cannot be neglected.<sup>(6)</sup>

Our study highlighted that merely, 25% of members were aware about the procedure of body donation and only 15% knew about the 'Act' which governs the body donation. 56% correctly knew that there is no age limit for body donation in India.<sup>(7)</sup> Moreover, 72% members knew that there is body donation committee in their institution but only 36% knew about the office bearers. This is in contrary to the belief that the medical faculty is aware of body donation procedures and its legal aspects. Like Aneja et al, we too, emphasize the need to mention about the body donation program in medical curriculum & conferences.<sup>(1)</sup>

Surprisingly, the percentage of the faculty volunteering in Body Donation programme is strikingly low i.e. only 15%. The disrespectful behaviour and indignity towards the cadavers negatively affect the volunteering towards body donation. The faculty might have witnessed improper behaviour of peers or students

at some point of time during dissection. Hence, cadavers should be considered as first patient of the doctors during their medical education & must be honoured, as they learn more from cadavers than just dissection.

Though 62% knew "Who can donate body" only 18% of study members know about incentives given at the time of body donation. Even if incentives were given, only 3% members were willing to donate their bodies, thus the notion of monetary incentives to promote donation was overwhelmingly rejected in our study too.<sup>(5)</sup> There was unanimous agreement that there is need to procure cadavers in medical institutes, however most of the subjects were uncomfortable about the idea of donating body by a family member. The positive finding of this study was that 50% of the study members were willing to donate their body & volunteer for the body donation program in future.

To raise the awareness about body donation, organized efforts are needed to change the mind-set of the society through 'Body donation programme'. Support from medical professionals is imperative to the success of such programs as their opinions and beliefs will play a major role in shaping attitude towards donation. As recommended by Rokade et al, we also suggest that the 'body donation units' should be mandatory for all medical colleges for effective implementation of 'Body donation programme'.<sup>(5)</sup> The social workers and NGOs can play an important role in this field. Moreover honour and publicity should be given to the religious, political as well as other popular public personalities who have volunteered for body donations.<sup>(6)</sup> The students should be sensitized for honouring the cadaver at the commencement of medical course session.<sup>(1)</sup>

The results of our study suggest that educating medical faculty and professionals regarding the altruistic act of body donation are important for educating the general population and are in congruence with Saritha et al.<sup>(3)</sup> Donation of body in the interest of medical education and research can always be considered as one's final gift which lasts for the next generations. Mere a change in the attitude towards voluntary body donation is the need of the hour. Thus, it is imperative that our medical fraternity and health care professionals themselves should support and propagate this issue.

Society has accepted the notion of donating blood and organs as a noble act of saving someone's life, but donation of body, after death, for medical education and research still seems to be a new concept. Thus, there is a great need for increasing public awareness about body donation, beginning with the medical faculty. Our findings reinforce the significance of educating our medical faculty regarding the altruistic act of body donation, which in turn, can motivate the population. Conesa et al had suggested that body donation is more favourable among subjects who have received

information on an individual basis or at specialized meetings.<sup>(8)</sup> Thus, we would like take the liberty and suggest inculcating literature on body donation, its procedural details, information about 'Anatomy Act' for cadaveric procurement and related legal issues in curriculum at both undergraduate and postgraduate level.

### Conclusions

- Body donation is a generous and unselfish act for those who wish to be useful to living, even after death.
- The awareness regarding the altruistic act of body donation is deficient among the medical faculty
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### Recommendations

- Developing Voluntary Body Donation program/units in each institution to address the issue of scarcity of cadavers by conducting sensitization classes/workshops for medical faculty as well as students & appreciating the volunteers.
- Inculcating literature on body donation, its procedural details, information about 'Anatomy Act' for cadaveric procurement and related legal issues in medical curriculum.
- 'Cadaver pooling' at District/State/National level may help to solve the issue of acute shortage of cadavers.
- Publicity campaigns through media for creating awareness on Body Donation.

### References

1. Aneja PS, Bansal S et al, Body donation- a dilemma among doctors, Journal of Evolution of Medical and Dental Sciences, Vol 2 Issue 16/ April 22 2013,2585-93.
2. Bunprasert T, The new potential of surgical training: surgical training centre. Chula Med J 1998;42:4135.
3. Saritha S, Rao M V et al "Voluntary body donation" The gift that lives on forever. IJOART. October-2012; Vol 1(5).
4. Ballala K, Shetty A et al, Knowledge, attitude, and practices regarding whole body donation among medical professionals in a hospital in India. Anat Sci Educ. 2011 May-Jun;4(3):142-50.
5. Rokade SA et al, International Journal of Research in Medical Sciences, Int J Res Med Sci. 2013 Aug; 1(3):173-177.
6. Chen et al, An Analysis of Tzu Chi's Public Communication Campaign on Body Donation. China Media Research, 2008;4(1):56-61.
7. Bombay Act No. XI of 1949 (The Bombay Anatomy Act, 1949). Available at <http://bombayhighcourt.nic.in/libweb/acts/1949.11.pdf>. Accessed on 15 May 2011.
8. Conesa C, Zambudio R et al, Influence of different sources of information on attitude toward organ donation: a factor analysis. Transplantation Proceedings. June 2004; Vol 36(5):1245-8.