BODY DONATION- A DILEMMA AMONG DOCTORS

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ABSTRACT: BACKGROUND: Dissection of human cadaver forms an integral part of anatomy pedagogy. 'Willed body donation' is a must to maintain a constant supply of cadavers for anatomy teaching. To encourage the public towards body donation we must first develop a positive attitude in medical professionals towards the same. **AIMS:** The present study aims to evaluate the awareness, attitudes, beliefs of doctors towards willed body donation. **METHOD:** A questionnaire was administered to 250 consenting doctors (divided into two groups- male doctors and female doctors) practicing Delhi and NCR India. **RESULTS:** It was observed that though doctors unanimously agree to the importance of dissection in anatomy teaching and understanding they are themselves not keen on donating their bodies. The number of female doctors (29%) consenting to donation is significantly less than the number of male doctors (52%) ($p < 0.0001$). **INTERPRETATION AND CONCLUSION:** Dissection does modulate the attitudes of doctors towards donation. Whether it is the disrespectful behavior they see being observed towards the cadaver in the dissection hall or the detachment and depersonalization they feel bound to develop towards the cadaver in order to dissect it, the outcome remains - they are not eager to consider such fate for their own dead corpse. As the success of willed body donor programs lies in the trust the health care professionals develop with the public, it is imperative to first address and allay their fears – psychological and spiritual. Only when the doctors support this idea in all its entirety can we hope to address and preach the society of the importance of body donation. Inclusion of literature in the curriculum, seminars conducted in medical conferences and media such as television and print media are some of the suggested platform to address this issue. A positive change in society's attitude towards body donation is the ultimate goal.

KEY WORDS: anatomy, attitude, body donation, cadaver, dissection, doctors ,

INTRODUCTION: Anatomy is the study of structure of human body. Dissection of the human cadaver is an important tool not only in anatomy pedagogy, it also provides the surgeons with a simulating environment to polish their surgical skills and experiment various methods to conduct a procedure. The psycho- visuo-tactile experience gained during systematic dissection of the human cadaver is an unparalleled means towards aiding anatomical understanding and retention.

The source of cadaver is either unclaimed body or a bequeathed body. In India medical schools primarily use unclaimed bodies for dissection purposes¹. This has led to two important questions. First, is using an unclaimed body **ethically** correct? As D. Gareth Jones² put forward

'The absence of altruism when unclaimed bodies are used ignores any reservations or opposition there might have been on the part of these people, since no opportunity was provided for expressing an opinion'. One would argue that in the greater interest of humanity using unclaimed bodies is a logical approach, but the fact remains; the body was robbed off from a person who had no means of defending his/her autonomy and integrity. Secondly, with a steep upsurge in the number of medical colleges will we be able to maintain a constant supply of cadavers through unclaimed cadavers alone?

That said, the demand of cadavers remain strong and rising. However, trying to address the question of a shortage of cadavers often means facing the taboo on trading human anatomical goods ^{3,4,5,6}. Human cadavers are not something commercial markets wants to deal with. Their piety renders them inappropriate to be treated as goods. Willing body donation is thus the need of the hour.

Willing body donation is an act of conferring one's body for medical teaching and research. It is a very personal decision as it calls for an ultimate sacrifice on the part of donor. It signifies a determined mind and a pious soul dedicated to help humanity by aiding medical science.

In France, a body donation centre was created in Paris in 1953 with the purpose of obtaining bodies for dissection. These days in France teaching and research in anatomy is mainly based on cadaveric dissection, body donation programs and not unclaimed bodies are the origin of cadavers ⁷. In Germany the body donation programs rather than unclaimed bodies are source of the origin of cadavers for the purpose of anatomy teaching in medical schools ⁸.

Willing 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 imperative that our medical fraternity and health care professionals themselves support and favor this issue.

The present study aims to assess the awareness, attitude and beliefs regarding whole body donation among practicing doctors in Delhi and NCR.

MATERIALS AND METHODS: A cross sectional study was conducted on 250 consenting doctors residing and practicing in Delhi and NCR region. Convenience sampling was used. It was ensured that participation in the questionnaire based study is voluntary and the identities of the participants are kept strictly confidential. The purpose of the study was made explicit to the doctors and consent was taken from them before distributing the questionnaires.

The doctors were divided in two groups –

1. Group A comprised of male doctors
2. Group B comprised of female doctors

Study Design – Questionnaire based ⁹; administered through paper and pencil mode.

Inclusion criteria for the study

1. Age -- between 30-70 yrs
2. Nationality -- Indians
3. Education – minimum academic qualification is MBBS

Exclusion criteria –

Doctors suffering from any terminal illness, tuberculosis, depression etc.

Sample size calculation –

Assuming those likely to donate in Group A at 45% and in Group B at 25%; Type I error at 5% and Type II at 20% ; one needs to take a minimum of 95 cases in each group. Assuming the Response Rate at 90% proformas were distributed to 125 doctors in each group.

A semi-structured, questionnaire designed to assess awareness and attitudes towards whole body donation was provided to the study population (n>125 in each group). A maximum of two attempts were made to collect the completed questionnaire. The completed questionnaire **was** then assessed and results deduced.

The data obtained will be analyzed through descriptive statistics using SPSS statistical software and results expressed as percentage of the total study population. Graphical and tabular representations of the data will be obtained from Microsoft Excel 2007 (Microsoft, Redmond, WA).

PROFORMA

Name: - _____ Age (in years):- _____

Gender:- _____ Education:- _____

Q No.1 Do you know about the term '**body donation**' and what does it mean?

(i) Yes (ii) No

Q No.2 Do you know the various sources from which bodies are obtained for dissection **in anatomy**

(i) Yes (ii) No

Q No.3 Do you know about the legal aspects of body donation and procurement?

(i) Yes (ii) No

Q No.4 Do you agree with importance of dissection in medicine?

(i) Yes (ii) No

Q No.5 Do you think

(A) Donated bodies are disrespected at the anatomy table

(a) Never (b) sometimes (c) Often (d) Always

(B) Donated bodies are not handled properly in the anatomy department

(a) Never (b) sometimes (c) Often (d) Always

(C) Donated bodies and dissected parts are sold for monetary gains

(a) Never (b) sometimes (c) Often (d) Always

(D) Dissected parts and remains of cadavers are not properly disposed off after dissection

(a) Never (b) sometimes (c) Often (d) Always

Q No.6 What is your beliefs regarding religion & body donation?

(i) Religion is against body donation. For the attainment of salvation proper cremation is a must.

(ii) Religion is always for helping others. So religions will always support body donation

Q No.7 Does being dissected on an anatomy table organ by organ gives you a jittery feeling?

(i) Yes (ii) No

Q No.8 Do you think organ donation (for transplant & other purposes) is easier than body donation?

ORIGINAL ARTICLE

(i) Yes (ii) No

Q No.9 Are you comfortable with the idea of your family member donating the body

(i) Yes (ii) No

Q No.10 (A) ***I am FOR BODY DONATION***

(i) Yes (ii) No

(B) If yes, what should be your body's final fate?

(i) Buried/ cremated after dissection

(ii) Make specimens for further use.

RESULTS: The results were deduced taking 100 completed proforma in both the group

Table 1 depicts the demographic data of the two groups of doctors

Variables	Degree	Male	Female
Age	<40yrs	90	78
	40 – 60yrs	06	20
	>60yrs	04	02
Education	MBBS	24	32
	MD/MS	58	68
	DM/MCH	18	00

Demographic data of the two groups of doctors

The importance of dissection was unanimously agreed to. All the subjects knew and understood the term body donation. 82% males and 72% females knew about the various sources of cadaver procurement but only 42% males and 10% females knew about the legal aspects pertaining to body donation and/ or its procurement by the anatomy department.

Table 2 depicts the views on the treatment of donated bodies and dissected parts.

Views on treatment of *D.B. & †D.P.	Male				Female			
	Never	s/t	Often	Always	Never	s/t	Often	Always
*D.B. are disrespected at anatomy table	00	13	73	14	20	24	56	00
*D.B. are not handled properly in the anatomy department	40	44	12	04	62	26	12	00
*D.B. and †D.P. are sold for monetary gains	96	04	00	00	100	00	00	00
†D.P. and remains of cadavers are not properly disposed off after dissection	88	06	05	01	93	07	00	00

*D.B. – donated bodies, †D.P. – dissected parts, ‡ s/t - sometimes

76% males and 68% females believed that religion supports body donation.

34% males and 58% females felt jittery about being dissected organ by organ at the anatomy table. However 28 (83%) of these males and 35 (65%) of these females feel that organ donation is easier than whole body donation. 64% males and 54% females felt it easier to donate organs than whole body donation.

12% males and 04% females said that they are comfortable with the idea of their family members donating the body to anatomy. Out of these 8 (66%) males and 4 (100%) females also agreed to donate their own bodies. 68% males and 85% females refused to consider such fate for their loved ones while 20% males and 11% females believed this to be an individual's personal decision. They felt it improper to influence the decision of their loved ones either ways.

The final decision is depicted in Figure 1

Figure 2 illustrates the preferences for disposal of remains of body parts after dissection (for those who agreed to donate)

DISCUSSION: Dissection of the human cadaver is important in anatomy pedagogy. Supply of unclaimed bodies alone cannot fulfill the rising demand for cadavers in Indian medical schools. This paucity is negatively affecting anatomy teaching programs. Thus willed body donation is the need of the hour.

In our country willed body donation programs are still in budding stages. Support of doctors and health-care professionals is imperative to the success of such programs. They are the most critical links in the body procurement process because they are the first individuals to establish relationship of trust and humanity with the potential donors' family and to have the opportunity to raise the option of donation.

Present study shows that though doctors are well aware of the term 'body donation' and the various sources from which bodies are procured for dissection, there is a lack of knowledge regarding its legal and procedural details especially in female doctors. In a similar study conducted to understand the attitudes and beliefs of medical postgraduate students on organ donation the author concluded that education about organ donation is lacking in the medical curriculum at the undergraduate and the postgraduate levels in our country¹⁰. Similarly Edwin AR¹¹ concluded that there is a poor understanding of the concept of brain-death and organ donation even among the medical students.

The study highlights the fact that one of the foremost reasons of refusal to donate is the anxiety of disrespectful behavior observed towards the cadavers. Majority of the doctors state that they have witnessed improper behavior being observed by their peers at some point of time during dissection. They further opine that proper handling of the body by anatomy staff and disposal of dissected parts is also not conducted. Lynch¹² stated "The meaning of 'disrespectful behavior' should not be understood as inappropriate behaviors toward cadavers as in the past, disrespectful behavior has a psychological meaning. Whatever the reason, there is indignity in any activity that dismembers the corpse, whether that dismemberment is in the service of organ donation, medical education/research, or forensic investigation". Jones DG¹³ felt that "The dissection of cadavers also has the potential of depersonalization or being treated as a property".

Though one cannot argue with that fact that medical students are required to develop an attitude of depersonalization and detachment towards the cadaver in order to dissect it, there is another side of the coin too. A good physician is required to inculcate these very attitudes. Cadavers are future doctor's first patient and students learn more on cadavers than just dissection. As stated earlier "The anatomy dissection laboratory is a unique experience

where medical students begin the transition from layman to physician, and may be a student's first experience with death. Hence, dissection on cadavers is a landmark, to recognize emotional issues that students may confront and to guide them toward becoming humane physicians" 14.

Majority of the respondents believe that religion supports body donation. Any act done in the interest of the society with the sole motive of helping fellow human being will always be valued. In Korea too the transition of religions and social ethics has greatly facilitated body bequeathal programs, benefiting both medical education and the Korean public health administration¹⁵. None of the religions object to organ donation in principle although in some, there is varying thought ¹⁶.

Psychological barrier is an aspect which needs to be addressed. More than half of the female doctors and a good number of male doctors were hesitant towards donating their bodies. There was unanimous agreement to the importance of dissection and hence the need to procure cadavers but doctors were jittery to consider such fate for their own dead corpse. In a similar study conducted to evaluate the attitudes of Turkish anatomists toward cadaver donation, majority of the respondents objected to donating their bodies due to psychological reasons ⁹. However many agreed that it is easier to donate an organ for transplant and other purposes. Even those not comfortable with the idea of whole body donation stated that they can consider organ donation.

Table 3 illustrates the various reasons put forwards by respondents which govern their decision in refusal to donate.

S. No	Major reasons for refusal to donate	Males (%)	Females (%)
1	Disrespectful behavior observed towards the cadaver	44	31
2	Religious faith conflicts with donation	24	32
3	Psychological reasons	34	58
4	Organ donation is easier than body donation	64	54

Still greater concern lies in the fact that doctors are even more reluctant to approve body donation by a family member (Table 4 depicts the views of doctors regarding body donation by a family member). Kevin also stated that student opposition to donation by a family member was evident immediately after the initial dissection ¹⁷. Similarly Perry stated that initial ambivalence among respondents to the idea of donation by family member was followed by opposition to this type of donation ¹⁸.

Table – 4

Are you comfortable with your family member donating their body	Male	Female	Total
Yes	12	04	16
No	68	85	153
Not sure	20	11	31
Total	100	100	200

The success of willed body donation programs relies on public support. Society has accepted the notion of donating blood, it is considered a noble act as it directly helps save patient's life but donation of body after death is a totally new concept. There is a great need for increasing public awareness about body and organ donation, beginning with the health-care professionals who in turn, can motivate the same. Health care workers especially doctors establish a relationship of trust, compassion, and humanity with the potential donors - patients and their relatives. Their viewpoint can have far-reaching effects on increasing organ donation for transplantation and body donation for dissection, as they are a unique bridge between lay public and qualified professionals. They are the ones, public look up to for advice and opinions. Their opinions and beliefs are the governing factor in shaping public opinion and attitude towards donation.

This reinforces the significance of first educating our doctors regarding the ultimate altruistic act of body donation. Only when we succeed in allaying the doubts and fears – psychological and spiritual from the minds of our doctors can we hope to succeed in addressing the public. Conesa et al 19 observed that the medium with the greatest impact on the population is television. They concluded that opinion on donation is more favorable among subjects who have received information on an individual basis and at specialized meetings. Thus the author here takes the liberty to suggest some plausible platforms to propagate this issue. Starting with seminars and lectures at various medical conferences we can reach a great number of audience through print and other audio-visual media. Inculcating literature regarding body donation, its legal and procedural details, details of 'Anatomy Act' for cadaveric procurement and various other related subjects such as the criteria to become a donor in medical books at both undergraduate and post-graduate level will go a long way in addressing the future health care professionals and society at large.

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Figure 1

Decision regarding body donation

Figure 2

Preferences for disposal of remains after dissection (for those who agreed to donate)