



ATTITUDE OF DOCTORS TOWARDS BODY DONATION IN INDIA.

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ABSTRACT

The altruistic act of body donation has emerged over centuries but there are still considerable discrepancies among countries regarding procurement of human body for education and research purpose. In most of the countries body donation is governed by laws and ethical framework with well established voluntary body donation programs to utilize donated bodies an important source of cadavers for anatomical study and education. In contrast, there are countries where unclaimed bodies and a few donated bodies are available for dissection purpose. The objective of this study was to assess knowledge, attitude, and practice regarding whole body donation among medical professionals in India. A cross sectional study was conducted thorough out India, among medical doctors. The questionnaires were distributed to the doctors via mail. It was ensured that participation in the questionnaire based study was voluntary. Only 448 individuals returned the consented complete questionnaire. This study revealed that the medical professional who preaches the benefits of body donation mostly, surprisingly fails to apply it on themselves or among their family members. Total 160 (35.7%) of the doctors among the participants agreed to donate organs only and among them only 30 (6.7 %) doctors are ready for whole body donation. Hindrances from psychological, cultural or religious view point may act in unwillingness towards body donation. Thus basic changes in attitude, belief towards the body or organ donation programmes must be implicated in educating medical students and professionals. Multi-focused awareness programs should be conducted to increase awareness among general people.

KEYWORDS : Body donation, Doctor, Attitude, Awareness**INTRODUCTION:**

Training of a medical student is based on extensive knowledge of anatomy. Dissection not only helps in developing a spatial and tactile appreciation of the human body, but also gives opportunity for the surgeons with a simulating environment to enhance their skills and experiment different methods of operating procedure. This can never be achieved by mere table concepts or computerised teaching methods only. The dissected cadaver always remains the best possible means of presenting and understanding anatomy as a dynamic basis for solving medical issues (Sugand et al¹). Donated cadavers now make up 80% of the total cadavers in North American medical schools and all of the cadavers used for dissection in the United Kingdom are donated (Gangata et al²). But in India, most of the cadavers used by educational institutions are usually unclaimed bodies obtained by the police or other authorized bodies (Modi³). These practices are governed by the Bombay Anatomy Act enacted in 1949, which has been uniformly adopted in all states of India with various amendments and modifications (Ajita and Singh⁴). The amendment of 1999 to the (Karnataka) Anatomy Act from 1957 defines an unclaimed body as "the body of a person who dies in a hospital, prison, or public place or a place to which members of the public have got access and which has not been claimed by any person interested within such time as may be prescribed" (Anatomy Act, 1957⁵). Occasionally, some cadavers are donated by relatives of the deceased to teaching medical institutions according to the dead person's wishes (Ajita and Singh⁴). But in the present scenario of increasing number of medical institutes in India, scarcity of availability of donated bodies in India (though the second most populated country in world), is a big question. The same thing happens in case of organ donation after death in our country. Due to the scarcity of stored organ in most of the organ-banks, a large number of people are in waiting list for organ transplantation⁶. Willed body donation programs are still in their infancy in our

country. Ignorance, religion, culture and other factors may create hindrances among people for active participation in body donation programme. There might be some gap between the medical professionals and the common people in conveying the necessity of body donation as a novel purpose. The success of these body donation awareness 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 must support and favour this issue.

MATERIAL AND METHODS:

A cross sectional study was conducted on 504 consenting doctors residing and practicing all over India who were medical doctors with graduate, postgraduate, or higher degrees. The study population included post graduates, assistant professors, associate professors, and professors—all of whom were Indians who had studied only in Indian medical colleges. The purpose of the study was made explicit to the doctors and consent was taken from them before distributing the questionnaire through e-mail. A semi-structured questionnaire designed to assess the knowledge, attitude, and practices of whole body donation was sent via e-mail. The questionnaire was pretested and validated by the interviewers before data collection to minimize interviewer bias. It was ensured that participation in the questionnaire based study was voluntary and that the identities of the participants were kept strictly confidential. Only 448 individuals returned the consented complete questionnaire and hence analysis of baseline characters was done for a final sample size of 448. 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 administered through e-mail

Inclusion Criteria For The Study -

1. Age -- between 30-60 yrs
2. Nationality -- Indians
3. Education – minimum academic qualification is MBBS

Exclusion Criteria -

Nonresident Indian doctors.

Socio-demographic data collected from the respondents included gender, age, education, designation, marital status, and religion. Knowledge of the respondents was assessed through questions regarding their awareness in the following areas—sources of bodies for medical education, the term "body donation," the legal aspects of body donation, reasons for body donation, misuse of donated bodies (treated with disrespect at the anatomy table/not properly disposed after use for teaching purpose/sold for profit), the authority for the oversight of body donation, the fate of unclaimed bodies and the authority for decisions on such bodies, screening of and criteria for accepting donated bodies and department/s involved with handling donated bodies. The questionnaire also addressed the source/s of information of their knowledge. Questions used to determine the attitudes of respondents to body donation included issues such as willingness to donate their own bodies in future, religious influence on attitudes towards body donation, acceptance of dissection on their donated bodies, opinions on incentive based organ donation, belief in the usefulness of body donation, and expectations with regards to the general public's duty to donate bodies. Practices were measured through questions such as knowledge of body donors among known circles (friends/colleagues/family members/others), percentage of respondents who had registered their bodies for donation, and whether a personal decision would be in favor of body donation if a known person had donated his/her body. The data obtained were analyzed through descriptive statistics using SPSS statistical software version 11.5 and results expressed as percentage of the total study population. Graphical and tabular representations of the data were prepared.

RESULT:

Results were deduced taking 448 completed proforma in both the Male and female group. Amongst the respondents 330 were males and 118 females. Table 1 depicted the demographic data of the two groups of doctors regarding age and education.

Table 1: Demographic Characteristics Of Study Population

| Variables | Age group /Degree | Male(330) | | Female(118) | |
|-----------|-------------------|-----------|-------|-------------|-------|
| | | Number | % | Number | % |
| Age | <30 | 23 | 6.97 | 15 | 12.71 |
| | 30-40 | 152 | 45.76 | 60 | 50.85 |
| | 40-50 | 110 | 33.03 | 26 | 21.95 |
| | 50-60 | 36 | 10.91 | 17 | 14.41 |
| | >60 | 9 | 2.73 | 0 | 0 |
| Education | MBBS | 124 | 37.55 | 40 | 33.86 |
| | MD/MS | 170 | 51.52 | 64 | 53.81 |
| | DM/MCH | 36 | 10.91 | 14 | 11.86 |

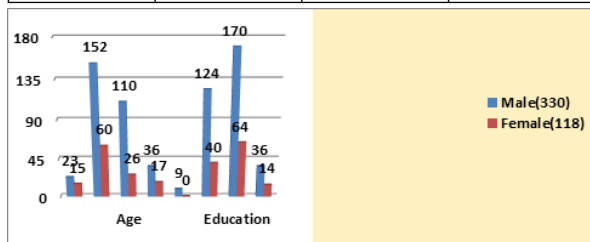


Figure 1: Demographic Characteristics Of Study Population

The importance of dissection was unanimously agreed to. All the subjects knew and understood the term body donation.

Table 2 showed attitude of doctors towards body donation. Total 248 doctors (male 176 and female 72) were not willing to donate body or organ. But it appears that willing doctors were more comfortable donating only organs rather than whole body, that is 108 (males), 22(females), whereas only 24 (males), 6(females) are willing to donate whole body.

Table 2: Attitude Of Doctors Towards Body Donation

| | | Total (448) | Male (330) | Female(118) |
|-------------|---------------------------|-------------|------------|-------------|
| Willing | For organ transplantation | 130 | 108 | 22 |
| | For dissection purpose | 30 | 24 | 6 |
| Not willing | | 248 | 176 | 72 |
| No idea | | 40 | 22 | 18 |

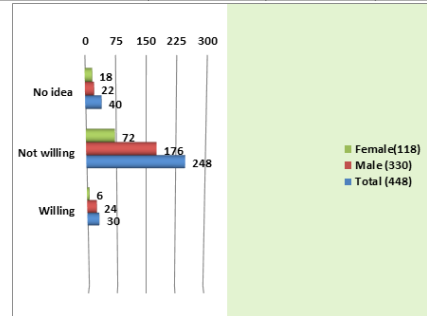


Figure 2: Attitude Of Doctors Towards Body Donation

Table 3 showed different reasons for refusing body donation. The major reason was unacceptability by family (22). Whereas 18 of them did not answer the particular question. The study also showed that both male and female doctors had anxiety of disrespectful behavior towards the cadaver, which prevented them from body donation. Religious faith conflicting with body donation (21 respondents) was also a reason for unwillingness. Surprisingly there were 10 doctors who had no knowledge regarding procedure of body donation, which makes them non interested in body donation. 41 males and 51 females felt jittery about being dissected organ by organ at the anatomy table.

Table 3: Probable Reasons For Unwillingness Towards Body Donation

| Serial No | Reasons behind refusal of body donation | Males (176) | | Females(72) | | Total(248) |
|-----------|---|-------------|-------|-------------|-------|------------|
| | | Number | % | Number | % | |
| 1 | Organ donation is easier than body donation | 84 | 47.72 | 28 | 38.88 | 112 |
| 2 | Unacceptability of donation by family | 12 | 6.81 | 10 | 13.88 | 22 |
| 3 | Anxiety of disrespectful behavior towards cadaver | 41 | 23.29 | 15 | 20.83 | 56 |
| 4 | Psychological reasons | 8 | 4.54 | 1 | 1.38 | 9 |
| 5 | Religious faith conflict with body donation | 10 | 5.68 | 11 | 15.27 | 21 |

| | | | | | | |
|---|--|----|------|---|------|----|
| 6 | No knowledge of procedure of body donation | 5 | 2.84 | 5 | 6.94 | 10 |
| 7 | No reason | 16 | 9.09 | 2 | 2.77 | 18 |

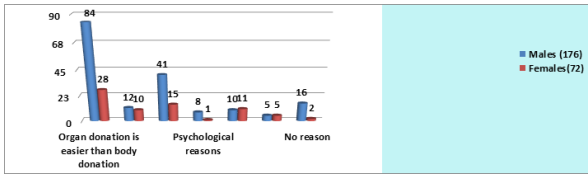


Figure 3: Probable Reasons For Unwillingness Towards Body Donation

Table 4 showed the attitude of doctors towards the body donation of their family members. 48 males and 13 females said that they are comfortable with the idea of their family members donating the body. 202 males and 75 females were not supporting to consider such fate for their loved ones while 80 males and 30 females were not sure and believed this to be an individual's personal decision.

Table 4: Attitude Of Doctors Towards Body Donation Of Family Members

| Do you support if your family members are willing for body donation | Male | Female | Total |
|---|------|--------|-------|
| Yes | 48 | 13 | 61 |
| No | 202 | 75 | 277 |
| Not sure | 80 | 30 | 110 |
| Total | 330 | 118 | 448 |

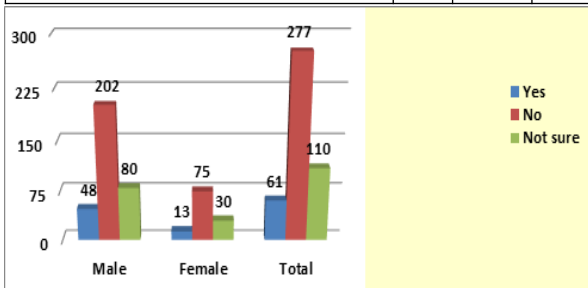


Figure 4: Do you support if your family members are willing for body donation

Table 5 showed the attitude of doctors towards spreading awareness about body donation. Only 21 male and 9 female doctors were participated actively in awareness programmes related to body donation. 237 males and 82 females knew about the various sources of cadaver procurement but only 120 males and 52 females knew about the legal aspects pertaining to body donation and/ or its procurement by the anatomy department.

Table 5: Attitude Of Doctors Towards Spreading Awareness About Body Donation

| Questions | Yes | | No | |
|--|------------|--------------|------------|--------------|
| | Male (330) | Female (118) | Male (330) | Female (118) |
| Awareness of legal aspect and procedure of body donation | 120 | 52 | 210 | 66 |
| Are you creating awareness about body donation | 21 | 9 | 309 | 109 |

Table 6 is a comparative analysis on similar study on populations of different countries throughout the world between willing and not willing participants for body donation.

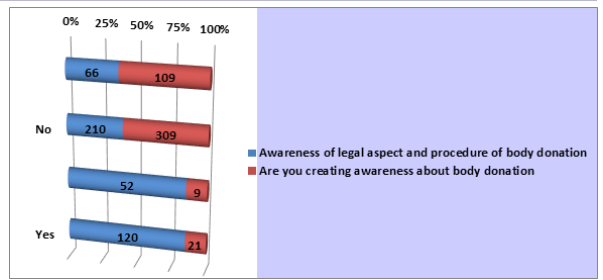


Figure 5: Attitude Of Doctors Towards Spreading Awareness About Body Donation

Table 6: Comparison With Different Studies

| Year | Country | Participants | Willing | Not willing | No idea |
|------|------------------------|---------------------------------------|---------|-------------|---------|
| 2004 | Spain ⁷ | General population | 60% | 33% | 7% |
| 2004 | Turkey ⁸ | Anatomists | 69.9% | 28.9% | 1.2% |
| 2005 | Denmark ⁹ | ICU Staffs | 49% | 11% | - |
| 2006 | China ¹⁰ | University students | 61.3% | 08.5% | 30.3% |
| 2006 | Turkey ¹¹ | Medical students | 58.4% | 22.7% | 18.8% |
| 2009 | France ¹² | 1st year MBBS students | 81.1% | 13.5% | 5.4% |
| 2014 | Malaysia ¹³ | General population | 43.6% | 10.6% | 45.8% |
| 2014 | India ¹³ | Doctor, MBBS and Engineering students | 67.33% | 15.66% | 17% |
| 2020 | INDIA (PRESENT STUDY) | Doctor | 35.71% | 55.35% | 8.92% |

DISCUSSION

The use of dissection to study human anatomy is the foundation for educational excellence among all health professionals, as it offers an ideal opportunity to learn the body's morphology in all dimensions. Despite the importance of body donation for medical education and the advancement of medical science, cadaveric donation remains suboptimal worldwide. Body donation is important for medical education and academic research. All the respondents in the present study were familiar with the term body donation. Whereas Edwin et al¹⁵ in their study concluded that there is poor understanding of the concept of brain death and organ donation even among the medical students. Our study showed 130 (29%) [108 males and 22 females] out of 448 were willing only for organ donation and only 30 (6%) [24 males and 6 females] were ready for whole body donation. Whereas 248 (55.3%) were unwilling for donating body and 40 (8%) were not sure about it. In contrast, study conducted on anatomists in UK by Arraez-Aybar et al¹⁶ showed that 74% were in favor of body donation, 23% would not donate and 3% did not know or did not answer the question. Of the 74% that favored donation, 41% respondents would only donate organs, 9% would only donate their body, and 25% would donate both organs and body. Males were more in favor of whole body donation than females. In our study we also found that male (7.2%) were more in favor of body donation than female (5.08%). Golchet et al¹⁷ (2000) reported that many factors such as age, religion, culture, personality characteristics, views on death and mortality, body image, and humanitarian concerns influence peoples' opinions towards body donation. In our study we found major reason for unwillingness is anxiety or disrespectful behavior towards dead body (22.5%). Except this, family restriction (8.8%), religious believe (8.4%), psychological factor (3.6%) also played important role. Whereas study done by Anisa B et al¹⁸ showed that the major

reason for not donating body by doctors was unwillingness due to unacceptability by family (28.4%). The study also shows that female doctors have more anxiety of disrespectful behavior towards the cadaver, though in our study we did not find that much difference in gender wise response related to anxiety. Study done by Aneja P et al¹⁹ also highlights the fact that one of the foremost reasons of refusal to donate is the anxiety of disrespectful behavior and improper handling of the body by anatomy staff disposal of dissected parts of donate body. A greater concern lies in the fact that doctors are even more reluctant to approve body donation by a family member. In the present study, 48 males and 13 females said that they are comfortable with the idea of their family members donating the body. 202 males and 75 females were not supporting to consider body donation for their family members. Kevin²⁰ also stated that student opposition to donation by a family member was evident immediately after the initial dissection. Similarly Gary et al²¹ stated that initial ambivalence among respondents to the idea of donation by family member was followed by opposition to this type of donation. 61% doctors were found adequate knowledge of legal aspect and procedure of body donation in the present study. Similar result also found by Ballala et al²², where 60% of the doctors claimed to know the legal aspects of whole body donation, but 13.5% actually knew that no one has the authority to donate a body without prior registration by the individual himself/herself during his/her lifetime. Whereas Anisa B et al¹⁸ showed in their study, that 50% of the doctors are not even aware of the body donation association in the institute and also about the procedure and legal aspects with respect to that. 6% doctors in our study were actively creating awareness about body donation among society. In contrast Anisha B et al¹⁸ found in their study that 39.2% doctors were ready to create awareness regarding necessity of body donation among people.

CONCLUSION:

The success of willed body donation programs depends on people. Thus increase in public awareness about body and organ donation should begin with the health-care professionals as they can motivate people. Health care workers especially doctors has a relationship of trust and compassion with the patients and their relatives. Public rely on them for advice and opinions. Thus, their opinions and beliefs are the key factor in generating public opinion and attitude towards body and organ donation. This reinforces the importance in educating doctors regarding the altruistic act of body donation. If we can able to clear the doubts and apprehensions from the minds of our doctors, we may hope to succeed in addressing the mass public also. Modified approaches suitable for different geographical areas with varied heritage and cultural differences may be considered. A short course as a part of the Personal and Professional Development module may be dedicated to impart knowledge to the medical students about whole body donation and its implications in the study of modern medicine. This will create awareness among the medical professionals about their responsibility and duty towards society. Likewise, inclusion of training sessions in medical education conferences to orient the present medical professionals towards voluntary body donation could be a progressive move in medical education. Media and other social organizations can also play an important role as mediators to remove the hesitation among people regarding body donation.

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