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Original Research Article

Knowledge, Attitude and Willingness towards Whole Body Donation among Indian Population

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Abstract

Background: Cadaveric dissection remains one of the most effective ways to teach anatomy for anatomist worldwide in spite of the arrival of newer technologies. The study aims to evaluate the knowledge, attitude and willingness towards whole body donation among Indian population.

Methods: A cross-sectional study was conducted by providing a semi structured questionnaire. The response was noted and analysed.

Results: A total of 153 participants (mean age 38.9 ± 8.5 years) were included in the study, with 51.6% males and 41.2% females. Most respondents were graduates (46.4%), followed by postgraduates (31.4%), and 78.4% were aware of organ and body donation. However, 64.1% lacked knowledge of the legal aspects of body donation, 35.9% had no knowledge of cadaver sources, and 57.5% were unaware of existing body donation programs. The internet and social media were the main source of information (36.6%). More than half (54.9%) were uncertain ("Maybe") about donating their bodies, while only 19.0% expressed willingness to donate. Although 58.2% reported that religious beliefs would not restrict body donation, 60.1% had never discussed the topic with their families, and 41.2% were unsure of family support. Nevertheless, 92.2% agreed that public awareness campaigns are necessary, 68.0% considered body donation very important for medical education and research, and 62.7% were willing to promote body donation.

Conclusion: More awareness programme should be plan to increase the awareness amongst the general population.

Keywords: Whole Body Donation, Embalming.

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Introduction

Cadavers are vital resources which provide students with invaluable hands-on experience and a deep understanding of anatomical structures which are essential for their foundational learning and clinical practice in the future. [1,2] The importance of cadaver is not only limited to anatomy but also to all the surgical allied subjects for their skill training. [3]

Soft embalmed cadavers are generally used in many institutes to hone the surgical skills. [4] Over the recent years, India has seen a significant increase in the number of medical colleges thereby increasing the demand for cadavers. [5] Lack of availability of cadavers hinders effective anatomy education. [6] With the global advancement in technology and its applications, virtual dissection tables have been introduced in many medical colleges across the country. Studies have shown that learning from the virtual dissector lack anatomical variations and the tactile experience of the different structures of a real cadaver. [7,8] Virtual dissector provides an easy, repetitive and interactive learning experience which is also free from chemical exposure used to preserve the body from decay. [9,10] Most of the studies concluded that a hybrid method involving traditional cadaveric dissection and virtual dissector is ideal for learning. [11]

The most common source of cadaver is through voluntary body donation. [5] The collection of

deceased bodies for educational purposes in academic institutions is govern by the Bombay Anatomy act 1949 and the Karnataka Anatomy Act 1957. [12] Donation of a dead body is frequently associated with societal stigma and misconceptions, hindering its acceptance and practice. [13] Many individuals lack sufficient information about whole body donation. This study aimed to assess knowledge, attitude and willingness towards body donation.

Material and Methods

A cross-sectional study was conducted by providing a semi structured questionnaire. Convenient sampling was done, Individual aged 18 years and above who gave informed consent to participate in the study were included.

Individual who was under 18 years of age or those who were above 18 years but refused to give consent were excluded. The questionnaire consists of 18 questions covering several aspects of whole-body donation, A total of 153 response was noted within 6 weeks and analysed.

Findings: A total of 153 respondents participated in the study. The mean age of the respondents was 38.9 ± 8.5 years, with ages ranging from 18 to 77 years. Males constituted 51.6% (n = 79) of the sample, while females accounted for 41.2% (n = 63). Regarding educational attainment, the majority of respondents were graduates (46.4%), followed by postgraduates (31.4%). Professional degree holders constituted 14.4% of the participants. In terms of occupation, government employees formed the largest occupational group (16.3%), followed by homemakers (7.2%), medical professionals (7.8%), and defence personnel (6.5%). Most respondents identified as Hindu (77.8%), while smaller proportions belonged to Christian, Muslim, Sikh, Jain, Baha'i, and Meitei religious groups.

Table 1: Demographic Characteristics of the Study Participants (N = 153)

Variable	Category	N	%
Gender	Male	79	51.6
	Female	63	41.2
	Missing	11	7.2
Age Group (years)	18–29	12	7.8
	30–39	68	44.4
	40–49	49	32.0
	≥50	12	7.8
	Missing	12	7.8
Educational Qualification	Graduate	71	46.4
	Postgraduate	48	31.4
	Professional Degree	22	14.4
	Others	2	1.3
	Missing	12	7.8
Religion	Hindu	119	77.8
	Christian	8	5.2
	Muslim	3	2.0
	Other Religions	5	3.3
	Missing	18	11.8

Age (years), Mean ± SD: 38.9 ± 8.5, Median (Range): 39 (18–77)

A majority of respondents (78.4%) were aware of organ and body donation. Regarding knowledge of cadaver sources, 35.9% reported no knowledge, while 31.4% were unsure.

The internet and social media were the most common sources of information about body donation (36.6%). Most participants (64.1%) lacked knowledge of the legal aspects of body donation. Nearly half of the respondents (49.7%) identified research and study as the primary purpose of body donation.

Concerning misuse of donated bodies, 37.3% were unsure, while 30.7% believed misuse occurred sometimes.

Table 2: Distribution of Responses to Questions 1–6 (N = 153)

Question	Response Category	Frequency(n)	Percentage(%)
Q1. Awareness of Organ/Body Donation	Yes	120	78.4
	No	29	19.0
	Missing	4	2.6
Q2. Knowledge of Sources of Cadavers	Yes	46	30.1
	No	55	35.9
	Not Sure	48	31.4
	Missing	4	2.6
Q3. Source of Information About Body Donation	Internet/Social Media	56	36.6
	Newspaper/TV/Radio	35	22.9
	Anatomy Class	18	11.8
	Friends/Relatives	17	11.1
	Others	12	7.8
	Missing	15	9.8
Q4. Knowledge of Legal Aspects of Body Donation	Yes	29	19.0
	No	98	64.1
	Not Sure	22	14.4
	Missing	4	2.6
Q5. Reasons for Body Donation	Research and Study	76	49.7
	Organ Harvesting	27	17.6
	Financial Gain	8	5.2
	Others	38	24.8
	Missing	4	2.6
Q6. Perception of Misuse of Donated Bodies	Never	32	20.9
	Sometimes	47	30.7
	Most of the Times	12	7.8
	All the Time	1	0.7
	Not Sure	57	37.3
	Missing	4	2.6

Table 3: Distribution of Responses to Questions 7–12 (N = 153)

Question	Response Category	Frequency (n)	Percentage (%)
Q7. Authority to Give Consent for Body Donation	Both Donor and Next of Kin	90	58.8
	Donor	43	28.1
	Next of Kin	14	9.2
	Doctor	1	0.7
	Missing	5	3.3
Q8. Decision-Maker for Donating Unclaimed Bodies	Not Sure	68	44.4
	Magistrate	51	33.3
	Police	16	10.5
	Doctor/Medical Authorities	13	8.5
	Missing	5	3.3
Q9. Factors Excluding Acceptance of a Body for Donation	All of the Above (a, b & c)	100	65.4
	Decomposed Body	28	18.3
	Suicide/Homicide	7	4.6
	Emaciated Body	6	3.9
	Autopsied Body	3	2.0
	Obese Body	1	0.7
	Missing	8	5.2
Q10. Department Handling Body Donation in a Medical College	Anatomy	105	68.6
	Forensic Medicine	29	19.0
	Pathology	9	5.9

	Community Medicine	4	2.6
	Missing	6	3.9
Q11. Willingness to Donate Body for Medical and Research Purposes	Maybe	84	54.9
	No	36	23.5
	Yes	29	19.0
	Missing	4	2.6
Q12. Religious Beliefs Restricting Body Donation	No	89	58.2
	Not Sure	36	23.5
	Yes	24	15.7
	Missing	4	2.6

The majority of respondents (58.8%) believed that both the donor and the next of kin have the authority to provide consent for body donation. Regarding unclaimed bodies, 44.4% were unsure who makes the decision, while 33.3% correctly identified the magistrate as the responsible authority. For factors excluding acceptance of a body for donation 65.4% selected all listed exclusion criteria. Most participants (68.6%) correctly identified the Anatomy Department as the department responsible for handling body donation in a medical college. When asked about their willingness to donate their body for medical education and research, more than half (54.9%) responded "Maybe," while only 19.0% expressed willingness to donate. Concerning the influence of religious beliefs on body donation, 58.2% reported that their religious beliefs would not restrict body donation, whereas 15.7% felt that such beliefs would act as a barrier.

Table 4: Distribution of Responses to Questions 13–18 (N = 153)

Question	Response Category	Frequency (n)	Percentage (%)
Q13. Discussion of Body Donation with Family Members	No	92	60.1
	Yes	57	37.3
	Missing	4	2.6
Q14. Family Support for Body Donation Decision	Not Sure	63	41.2
	Yes	56	36.6
	No	30	19.6
	Missing	4	2.6
Q15. Awareness of Existing Body Donation Programs	No	88	57.5
	Yes	61	39.9
	Missing	4	2.6
Q16. Need for Public Awareness Campaigns on Body Donation	Yes	141	92.2
	No	8	5.2
	Missing	4	2.6
Q17. Importance of Body Donation for Medical Education	Very Important	104	68.0
	Important	38	24.8
	Not Sure	7	4.6
	Missing	4	2.6
Q18. Willingness to Promote Body Donation Among Others	Yes	96	62.7
	Maybe	39	25.5
	No	14	9.2
	Missing	4	2.6

Most respondents (60.1%) had not discussed body donation with their family members. Regarding family support, 41.2% were uncertain whether their family would support such a decision, while 36.6% believed they would receive support. More than half of the participants (57.5%) were unaware of existing body donation programs.

An overwhelming majority (92.2%) agreed that public awareness campaigns on body donation are necessary. Most respondents considered body donation to be very important for medical education and research (68.0%), while 24.8% considered it important. Furthermore, 62.7% expressed willingness to promote body donation among others, and 25.5% indicated they might do so in the future.

Discussion

The present study was undertaken to explore the level of awareness regarding body donation in Indian population with a diverse demographic distribution across age, gender and education level.

The present study found that male respondent is slightly more than female respondent which is similar to Delma D et al (2014) [14]. Number of respondents who had heard about organ or whole-body donation is 78.4% which is relatively high compared to Rokade et al. [15]

Similarly, a recent cross-sectional study conducted in a semi-urban population in India by Shukla et al. [16] observed that although awareness was reasonably high, willingness to donate was considerably lower because of inadequate knowledge and persistent misconceptions which is similar to the present study finding.

Social media and the internet were the most common sources of information, followed by television, newspapers, and radio. This observation agrees with recent evidence showing that digital media has become the primary source of health-related information, particularly among younger populations as seen in a study by Kumar et al. [17]

General awareness was satisfactory, knowledge regarding the legal aspects of body donation was poor, with the majority of participants unaware of the legislation governing body donation, consent procedures, and the allocation of unclaimed bodies. Similar deficiencies have been reported in previous Indian studies, which concluded that public awareness often remains superficial and does not extend to practical or legal aspects of body donation. Rokade et al [15] also emphasized that lack of procedural knowledge constitutes one of the major barriers to voluntary body donation.

A notable finding of the present study was that 86.3% of respondents believed body donation contributes to the advancement of medical science, reflecting a positive perception of its educational value. This finding is in agreement with Thengal et al [18] where the desire to contribute to medical education were consistently identified as the strongest motivations for body donation

Despite favourable attitudes, actual willingness to donate remained limited, with most respondents selecting "Maybe" rather than expressing definite willingness. This attitude-behaviour gap has been consistently reported in the literature. Shukla et al. [16] similarly observed that although participants appreciated the importance of body donation, uncertainty, insufficient information, and family concerns reduced their willingness to register as donors.

The present study also found that religious beliefs were not considered a major barrier by most respondents. Another important finding was the extremely low proportion of registered body donors despite positive attitudes toward donation. Similar findings have been reported across India, where favourable opinions rarely translate into donor registration because of limited awareness of registration procedures, inadequate counselling, and lack of family discussions.

Conclusion

The findings of the present study are comparable with previous national and international studies, which consistently demonstrate that while awareness and positive attitudes towards body donation are gradually increasing, significant deficiencies remain in legal knowledge, procedural awareness, and actual commitment to donation. Strengthening public education through healthcare professionals, educational institutions, digital media, and community-based awareness programmes may help bridge the gap between favourable attitudes and actual donor registration.

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