THE PLANET

Original Article

Attitude, Ethical Perspectives and Willingness Toward Human Organ Donation among Undergraduate and Postgraduate Medical Students in Bangladesh

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ARTICLE INFO

Received: 28 October 2026
Accepted: 02 November 2026
Published Online: 08 November 2026

DOI: 10.5281/zenodo.24047225

Volume: 10, Number: 3, Page: 1227-1233

e-ISSN: 2789-5912
ISSN: 2617-0817

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ABSTRACT

Background: Human organ donation plays an essential role in saving lives, yet donation rates remain far below demand worldwide. Healthcare providers strongly influence public acceptance of human organ donation, making medical students' knowledge, awareness and perception crucial for strengthening future donation practices. This cross-sectional study assessed the knowledge, awareness and perception of undergraduate and postgraduate medical students of Shaheed Suhrawardy Medical College and Hospital, Dhaka, and Bangladesh Medical University (BMU), Dhaka. **Methods & Materials:** A total of 320 respondents were included, comprising 160 undergraduates and 160 postgraduates selected through purposive sampling. Data were collected using a semi-structured questionnaire divided into four domains: socio-demographics, knowledge, awareness and perception. Data were analyzed using SPSS 26.0. **Results:** Mean age of the participants was 27.3±6.2 years with 65.3% were female and 34.7% were male and 87.2% were Muslim. Almost all respondents had heard about human organ donation (99.1%) and transplantation (100%). Saving lives was the most cited motivation for human organ donation (86.6%). However, knowledge regarding donor cards (47.5%), related laws (62.2%) and eligibility of donation across hospitals (53.4%) remained inadequate. Almost all respondents (97.8%) knew that human organ donation saves lives, majority (78.8%) were aware that selling or buying human organs is punishable under the Transplantation of Human Organs Act and most respondents agreed that human organ donation is safe and effective (83.1%) and trusted that hospitals and doctors use donated organs appropriately (79.1%). Postgraduates outperformed undergraduates across all domains. **Conclusion:** The study highlights substantial gaps in medical students understanding of donor cards, laws and ethical frameworks despite generally favorable attitudes and motivation to support donation.

Keywords: *Attitude, Ethical Perspectives, Willingness, Human Organ Donation, Undergraduate, Postgraduate, Medical Students.*

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INTRODUCTION

Human organ donation involves providing organs or tissues for transplantation to another person, offering life-saving benefits and improving long-term survival and quality of life in patients with end-stage human organ disease [1]. Following natural death, tissues such as corneas, skin, bones and blood vessels may be donated, whereas brain death can permit the donation of multiple organs and tissues, including the kidneys, heart, liver and lungs [2]. Despite its importance, human organ donation acceptance varies widely across regions and is influenced by religious and cultural beliefs, knowledge, awareness, social attitudes and trust in healthcare systems [3]. Major barriers include inadequate knowledge, family opposition, concerns about human organ trafficking, mistrust of medical services, fear of inadequate medical care, religious or cultural concerns, and discomfort with posthumous body use [4,5].

In Bangladesh, the human Organ Transplantation Act was introduced in 1999 and amended in 2018 to expand eligible living donors and regulate consent, brain-death donation and organ allocation while prohibiting human organ trade [6]. However, human organ availability remains dependent on public willingness, emphasizing the need for greater awareness and accurate knowledge [7]. Healthcare professionals play an important role in promoting human organ donation because they frequently interact with potential donors and their families and can provide accurate information about the donation process [8]. Adequate knowledge among medical students is therefore essential for developing favorable attitudes and appropriate future professional practices. Studies have reported important knowledge gaps among medical students, including limited understanding of brain death, donor registration and relevant legislation [9]. In India, although 94.6% of participants demonstrated a positive attitude and approximately 83% were willing to donate, knowledge regarding the human organ donation process remained inadequate [10]. Similarly, another study found a favorable willingness to donate among medical students and trainees, but identified limited awareness of transplant legislation and inadequate coverage of human organ donation in the MBBS curriculum [11].

Evidence from Bangladesh indicates gaps in knowledge and willingness toward human organ donation among healthcare professionals and medical students [12]. Improving education and awareness may promote greater acceptance and facilitate effective communication with potential donors and their families. Assessing knowledge, awareness and perceptions can help identify misconceptions and educational gaps and guide strategies to promote informed attitudes toward human organ donation [13]. Therefore, this study aimed to assess the knowledge, awareness and perception regarding human organ donation among undergraduate and postgraduate medical students.

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METHODS & MATERIALS

Study Design: The study was designed as a cross-sectional study and was conducted at Bangladesh Medical University (BMU) and Shaheed Suhrawardy Medical College and Hospital, Dhaka, over a period of 18 months following approval of the study protocol.

Study Population: All the undergraduate and postgraduate medical students of Shaheed Suhrawardy Medical College and Hospital, Dhaka, and Bangladesh Medical University BMU, Dhaka, during the study period were included as study population.

Sample Size and Sampling Technique : A purposive sampling technique was used to select a total of 320 medical students, comprising 160 undergraduate medical students (Group A) and 160 postgraduate medical students (Group B).

Selection Criteria: Participants were eligible if they were over 18 years of age, of either sex, enrolled as undergraduate or postgraduate medical students, and willing to participate in the study.

Data Collection Procedure: Ethical clearance was obtained from the Institutional Review Board (IRB) of Bangladesh Medical University (BMU). A total of 320 medical students were included according to the eligibility criteria, comprising 160 undergraduate students (Group A) and 160 postgraduate students (Group B) from Bangladesh Medical University (BMU) and Shaheed Suhrawardy Medical College and Hospital. Written informed consent was obtained from all participants. A semi-structured questionnaire adapted from published research was used to assess knowledge, awareness, and perception regarding human organ donation. It included four sections covering socio-demographic characteristics, knowledge, awareness, and perception. Knowledge, awareness, and perception items were primarily binary (Yes/No), with one point awarded for each correct response. The questionnaires were distributed in paper format, and participants completed them independently within 15 minutes. Data were entered and analyzed using SPSS for Windows version 26.0.

Data processing and analysis: After completing data collection, all questionnaires were reviewed for completeness and accuracy before entry into SPSS version 26.0. Data were cleaned, coded and subjected to descriptive and inferential statistical analysis. Categorical variables such as gender, religion, responses to knowledge, awareness and perception items were summarized using frequency and percentage, while continuous variables such as age and total scores were expressed as mean ± standard deviation (SD). Knowledge, awareness and perception scores were calculated by summing the number of correct responses within each domain.

Ethical consideration: Ethical approval was obtained from the Institutional Review Board (IRB) of Bangladesh Medical University (BMU), Dhaka, before commencement of the study. Written informed consent was obtained voluntarily from all participants after explaining the study purpose, procedures, potential benefits and risks, and their right to refuse or withdraw at any time. Confidentiality and privacy were maintained, and all collected data were used solely for research purposes. Participation involved no financial benefit and no collection of organs, tissues, or body fluids. No significant physical, psychological, or social risks were anticipated, and participants' rights and welfare were protected throughout the study.

RESULTS

Table I shows that the participants had an overall mean age of 27.3 ± 6.2 years. More than half (52.2%) were aged 18–28 years, while 46.6% were aged 29–39 years, and only 1.3% were aged ≥40 years. The undergraduate group had a mean age of 21.7 ± 1.4 years, with almost all participants aged 18–28 years, whereas the postgraduate group had a higher mean age of 32.9 ± 3.3 years, with the majority aged 29–39 years. Females constituted the majority of participants (65.3%), compared with males (34.7%). Most participants were Muslim (87.2%), while 12.8% were Hindu. A family history of human organ donation was reported by 9.7% of participants, with a higher proportion among postgraduates (11.9%) than undergraduates (7.5%).

Table I
Socio-demographic characteristics of the participants (*n*=320).

Variable	Category	Undergraduate (n=160)	Postgraduate (n=160)	Total (n=320)
Age group (years)	18–28	158 (98.8)	9 (5.6)	167 (52.2)
	29–39	2 (1.2)	147 (91.9)	149 (46.6)
	≥40	0 (0.0)	4 (2.5)	4 (1.3)
	Mean ± SD	21.7 ± 1.4	32.9 ± 3.3	27.3 ± 6.2
Gender	Male	45 (28.1)	66 (41.3)	111 (34.7)
	Female	115 (71.9)	94 (58.7)	209 (65.3)
Religion	Islam	144 (90.0)	135 (84.4)	279 (87.2)
	Hindu	16 (10.0)	25 (15.6)	41 (12.8)
Family history of human organ donation	Yes	12 (7.5)	19 (11.9)	31 (9.7)
	No	148 (92.5)	141 (88.1)	289 (90.3)

Table II presents participants showed good knowledge of human organ donation and transplantation**.** Awareness of human organ donation (99.1%), transplantation (100.0%), brain death (97.8%), and its diagnostic criteria (93.8%) was high. Most recognized saving lives as the main reason for donation (86.6%) and knew that donation can occur both during life and after death (88.7%). However, awareness of parliamentary laws (62.2%) and eligibility for donation at any age (50.3%) was comparatively lower, indicating some gaps in specific knowledge areas.

Table II
Knowledge about human organ donation among the study participants—General awareness (*n*=320).

Knowledge-related items	Undergraduates (n=160) n (%)	Postgraduates (n=160) n (%)	Total (n=320) n (%)
Have you heard about human organ donation?			
+ Yes	159 (99.4)	158 (98.8)	317 (99.1)
No	1 (0.6)	2 (1.2)	3 (0.9)
Have you heard about human organ transplantation?			
+ Yes	160 (100.0)	160 (100.0)	320 (100.0)
No	0 (0.0)	0 (0.0)	0 (0.0)
Is human organ donation a safe and easy procedure today?			
+ Yes	113 (70.6)	117 (73.1)	230 (71.9)
No	47 (29.4)	43 (26.9)	90 (28.1)
Why do you think human organ donation is performed? (Multiple answers)			
+ To save someone's life	153 (95.6)	124 (77.5)	277 (86.6)
Out of empathy	17 (10.6)	27 (16.9)	44 (13.8)
For money	27 (16.8)	30 (18.8)	57 (17.8)
Which human organs can be donated? (Multiple answers)			
I don't know	5 (3.1)	5 (3.1)	10 (3.1)
+ All organs	48 (30.0)	67 (41.9)	115 (35.9)
Bone	22 (13.8)	33 (20.6)	55 (17.2)
Liver	90 (56.3)	65 (40.6)	156 (48.8)
Kidney	95 (59.4)	73 (45.6)	168 (52.5)
Eye	92 (57.5)	59 (36.9)	151 (47.2)
Skin	40 (25.0)	40 (25.0)	80 (25.0)
Pancreas	12 (7.5)	7 (4.4)	19 (5.9)
Lung	33 (20.6)	24 (15.0)	57 (17.8)
When can human organs be donated?			
During life	4 (2.5)	3 (1.8)	7 (2.2)
After death	10 (6.3)	19 (11.9)	29 (9.1)
+ Both	146 (91.2)	138 (86.3)	284 (88.7)
Do you know what brain death is?			
+ Yes	156 (97.5)	157 (98.1)	313 (97.8)
No	4 (2.5)	3 (1.9)	7 (2.2)
Do you know the criteria for diagnosing brain death?			
+ Yes	147 (91.9)	153 (95.6)	300 (93.8)
No	13 (8.1)	7 (4.4)	20 (6.2)
Are you aware of parliamentary laws recognizing brain death?			
+ Yes	101 (63.1)	98 (61.3)	199 (62.2)
No	59 (36.9)	62 (38.8)	121 (37.8)
Is the demand for human organs high compared with current donation rates?			
+ Yes	128 (80.0)	120 (75.0)	248 (77.5)
No	32 (20.0)	40 (25.0)	72 (22.5)
Is any age eligible for human organ donation?			
+ Yes	92 (57.5)	69 (43.1)	161 (50.3)
No	68 (42.5)	91 (56.9)	159 (49.7)

Note: + denotes the correct answer. Multiple responses were permitted for questions indicated as "multiple answers."

Table III shows participants demonstrated generally good knowledge of human organ donation and transplantation. Awareness was high regarding transplantation waiting time (77.8%), donor decision-making (75.9%), changing decisions (84.7%), transplantation time frame (84.7%), and swap donation (73.8%). However, knowledge of donor cards (47.5%) and family donation without a donor card (45.0%) was comparatively low. Postgraduates showed slightly better overall knowledge, with mean scores of 16.9 ± 2.5 versus 16.7 ± 2.3 among undergraduates.

Table III
Knowledge about human organ donation among the study participants—Donor cards and transplantation (*n*=320).

Knowledge-related items	Undergraduates (n=160) n (%)	Postgraduates (n=160) n (%)	Total (n=320) n (%)
Do you know what a donor card is?			
+ Yes	39 (24.4)	113 (70.6)	152 (47.5)
No	121 (75.6)	47 (29.4)	168 (52.5)
Does the donor card have legal validity?			
+ Yes	88 (55.0)	121 (75.6)	209 (65.3)
No	72 (45.0)	39 (24.4)	111 (34.7)
Can the family donate organs even without a donor card?			
+ Yes	67 (41.9)	77 (48.1)	144 (45.0)
No	93 (58.1)	83 (51.9)	176 (55.0)
Does human organ donation disfigure the body?			
Yes	83 (51.9)	74 (46.3)	157 (49.1)
+ No	77 (48.1)	86 (53.8)	163 (50.9)
Can transplantation be performed in any hospital?			
Yes	113 (70.6)	58 (36.3)	171 (53.4)
+ No	47 (29.4)	102 (63.8)	149 (46.6)
Is there a long waiting time for human organ transplantation?			
+ Yes	129 (80.6)	120 (75.0)	249 (77.8)
No	31 (19.4)	40 (25.0)	71 (22.2)
Is brain death important for transplantation?			
+ Yes	105 (65.6)	115 (71.9)	220 (68.8)
No	55 (34.4)	45 (28.1)	100 (31.3)
Does treatment change after signing a donor card?			
Yes	71 (44.4)	60 (37.5)	131 (40.9)
+ No	89 (55.6)	100 (62.5)	189 (59.1)
Is the donor's decision final regarding which human organs to donate?			
+ Yes	120 (75.0)	123 (76.9)	243 (75.9)
No	40 (25.0)	37 (23.1)	77 (24.1)
Can a donor change their decision later?			
+ Yes	125 (78.1)	146 (91.3)	271 (84.7)
No	35 (21.9)	14 (8.8)	49 (15.3)
Can donors ask for money for human organ donation?			
+ Yes	69 (43.1)	91 (56.9)	160 (50.0)
No	91 (56.9)	69 (43.1)	160 (50.0)
Must transplantation be performed within a specific time frame?			
+ Yes	140 (87.5)	131 (81.9)	271 (84.7)
No	20 (12.5)	29 (18.1)	49 (15.3)
Is swap donation possible for incompatible blood groups?			
+ Yes	119 (74.4)	117 (73.1)	236 (73.8)
No	41 (25.6)	43 (26.9)	84 (26.2)
Total knowledge score (mean ± SD)	16.7 ± 2.3	16.9 ± 2.5	16.8 ± 2.4

Table IV shows participants demonstrated good awareness of human organ donation. Most knew that human organ donation saves lives (97.8%), that human organ trading is punishable by law (78.8%), and that family consent is required for human organ retrieval from brain-dead patients (91.9%). However, awareness regarding family members' ability to stop pledged donation was lower (47.8%). More than half (54.4%) considered most human organ transplants legally performed, while 76.9% recognized the possibility of errors in brain-death declaration. The mean awareness score was 4.5 ± 1.0, with slightly higher scores among postgraduates (4.6 ± 1.1) than undergraduates (4.3 ± 0.9).

Table IV
Awareness about human organ donation among the study participants (*n*=320).

Awareness measurement items	Undergraduates (n=160) n (%)	Postgraduates (n=160) n (%)	Total (n=320) n (%)
Do you know that human organ donation saves lives?			
+ Yes	157 (98.1)	156 (97.5)	313 (97.8)
No	3 (1.9)	4 (2.5)	7 (2.2)
Are you aware that buying or selling human organs is punishable under the Transplantation of Human Organs Act?			
+ Yes	114 (71.2)	138 (86.2)	252 (78.8)
No	46 (28.8)	22 (13.8)	68 (21.2)
Is family consent mandatory for human organ retrieval from a brain-dead patient?			
+ Yes	153 (95.6)	141 (88.1)	294 (91.9)
No	7 (4.4)	19 (11.9)	26 (8.1)
Can family members stop human organ retrieval even if the deceased had pledged donation?			
Yes	86 (53.8)	81 (50.6)	167 (52.2)
+ No	74 (46.2)	79 (49.4)	153 (47.8)
What is your opinion regarding the legality of human organ transplantation?			
+ Majority are legally performed	67 (41.9)	107 (66.9)	174 (54.4)
Majority are illegally performed	93 (58.1)	53 (33.1)	146 (45.6)
Is there a possibility of serious error in declaring a living patient brain dead?			
+ Yes	127 (79.4)	119 (74.4)	246 (76.9)
No	33 (20.6)	41 (25.6)	74 (23.1)
Total awareness score (mean ± SD)	4.3 ± 0.9	4.6 ± 1.1	4.5 ± 1.0

Note: + denotes the correct answer.

Table V presents about half of the respondents (52.2%) believed that the treatment cost of ICU care for a brain-dead donor should be recovered from the treating hospital of the recipient, while 47.8% thought it should be borne by the patient's relatives. A majority of participants (74.4%) stated they would motivate relatives or friends to donate organs of a brain-dead family member, with post-graduates more willing than undergraduates (79.4% vs. 69.4%). Regarding ethical ways to encourage donation, 49.1% suggested refund of the entire treatment cost to the family, 45.9% recommended government priority in education or employment for donor families, and 15.3% favored an opt-out system.

Table V
Attitudes toward Ethical and Financial Aspects of human Organ Donation among the Study Participants (*n*=320).

Attitude status	Undergraduates (n=160) n (%)	Postgraduates (n=160) n (%)	Total (n=320) n (%)
Treatment cost of ICU care for brain-dead donor should be recovered from:			
Treating hospital of recipient	80 (50.0)	87 (54.4)	167 (52.2)
Patient relatives	80 (50.0)	73 (45.6)	153 (47.8)
Would you motivate relatives/friends to donate organs of a brain-dead family member?			
Yes, professionally satisfied	111 (69.4)	127 (79.4)	238 (74.4)
No, fear of being tagged as human organ trader	15 (9.4)	29 (18.1)	44 (13.8)
No, religion doesn't support	34 (21.2)	4 (2.5)	38 (11.8)
What should be done ethically to motivate donation? *			
Refund entire treatment cost to family	87 (54.4)	70 (43.8)	157 (49.1)
Government priority in education/employment for donor family	74 (46.3)	73 (45.6)	147 (45.9)
Opt-out system (considered consent unless objected)	25 (15.6)	24 (15.0)	49 (15.3)

Table VI shows most respondents agreed that human organ donation is safe and effective (83.1%) and trusted that hospitals and doctors use donated organs appropriately (79.1%), with post-graduates showing higher positive perception than undergraduates for both items (91.9% vs. 74.4%; 85.6% vs. 72.5%). More post-graduates disagreed that it is important to have all body parts during burial (64.4% vs. 53.1%). Regarding personal and ethical beliefs, undergraduates more often believed that human organ donation allows something positive to come out of a person's life (92.5% vs. 78.1%) and that discussing willingness to donate with family members is important (92.5% vs. 70.0%). In contrast, more post-graduates believed that donating organs in this life would affect possession in the next life (33.8% vs. 10.0%). The overall mean perception score was 7.8 ± 1.8.

Table VI
Perception about human Organ Donation among the Study Participants (*n*=320).

Perception items	Undergraduates (n=160) n (%)	Postgraduates (n=160) n (%)	Total (n=320) n (%)
I think human organ donation is a safe and effective practice for donor and recipient.			
+ Yes	119 (74.4)	147 (91.9)	266 (83.1)
No	41 (25.6)	13 (8.1)	54 (16.9)
I trust that the hospital and doctors use donated organs as intended.			
+ Yes	116 (72.5)	137 (85.6)	253 (79.1)
No	44 (27.5)	23 (14.4)	67 (20.9)
I think doctors try hard to save my life whether I am a donor or not.			
+ Yes	153 (95.6)	148 (92.5)	301 (94.1)
No	7 (4.4)	12 (7.5)	19 (5.9)
Human Organ donation is consistent with my values and beliefs.			
+ Yes	111 (69.4)	125 (78.1)	236 (73.8)
No	49 (30.6)	35 (21.9)	84 (26.2)
It is important for a person to have all parts of the body during burial.			
Yes	75 (46.9)	57 (35.6)	132 (41.2)
+ No	85 (53.1)	103 (64.4)	188 (58.8)
Regular funeral cannot be carried out for a deceased donor.			
Yes	49 (30.6)	54 (33.8)	103 (32.2)
+ No	111 (69.4)	106 (66.2)	217 (67.8)
The recipient should pay some money to the donor family.			
Yes	88 (55.0)	87 (54.4)	175 (54.7)
+ No	72 (45.0)	73 (45.6)	145 (45.3)
No extra bill should be paid by the donor family for retrieving the human organ.			
+ Yes	116 (72.5)	115 (71.9)	231 (72.2)
No	44 (27.5)	45 (28.1)	89 (27.8)
Human Organ donation allows something positive to come out of a person's life.			
+ Yes	148 (92.5)	125 (78.1)	273 (85.3)
No	12 (7.5)	35 (21.9)	47 (14.7)
If I donate human organs in this life, I will not have them in the next life.			
+ Yes	16 (10.0)	54 (33.8)	70 (21.9)
No	144 (90.0)	106 (66.3)	250 (78.1)
It is important to discuss willingness to donate human organs with family members.			
+ Yes	148 (92.5)	112 (70.0)	260 (81.3)
No	12 (7.5)	48 (30.0)	60 (18.8)
Total perception score (mean ± SD)	7.5 ± 1.7	7.8 ± 1.8	7.8 ± 1.8

DISCUSSION

In the present study, the mean age was 27.3 ± 6.2 years, with undergraduates being younger than postgraduates. Females predominated, 87.2% of participants were Muslim, and only 9.7% reported a family history of human organ donation. Similar findings have been reported among medical students and healthcare professionals, with female predominance and younger participant populations [14,15].

Overall, the present study demonstrated high knowledge and awareness of human organ donation. Almost all participants had heard about human organ donation and transplantation, while 71.9% considered donation safe and easy. Awareness of brain death and its diagnostic criteria was also high. However, knowledge of relevant laws (62.2%), age eligibility, and donor cards (47.5%) was comparatively lower. Postgraduates demonstrated better knowledge of donor cards, legal validity, hospital eligibility, and the right to change donation decisions than undergraduates. Similar findings have shown high awareness but gaps in donor-card knowledge, age eligibility, and brain-death concepts, with better knowledge among participants with greater professional exposure [14].

In the present study, 74.4% of participants were willing to motivate relatives or friends to donate human organs from a brain-dead family member, with greater willingness among postgraduates than undergraduates. Ethical approaches to encouraging donation included refunding treatment costs (49.1%) and providing government priority in education or employment (45.9%). Higher willingness to promote donation has also been reported elsewhere, whereas studies from Bangladesh have documented comparatively lower willingness to donate. Differences may reflect variations in professional exposure, awareness, cultural influences, and study populations [12,14,16].

The present study showed generally positive perceptions toward human organ donation. Most participants considered donation safe and effective (83.1%), trusted hospitals and doctors to use donated human organs appropriately (79.1%), and believed that doctors would try to save a patient's life regardless of donor status (94.1%). Furthermore, 73.8% considered donation consistent with their values and beliefs, while 81.3% supported discussing donation with family members. Postgraduates had a slightly higher mean perception score than undergraduates (7.8 ± 1.8 vs. 7.5 ± 1.7). In contrast, lower levels of adequate knowledge and positive attitudes have been reported among healthcare workers, indicating the importance of continued education and awareness initiatives [15].

Participants aged 29–39 years and those belonging to the Hindu religion demonstrated better knowledge in the present study. Gender and family history did not significantly influence knowledge, although participants with a family history of donation showed more positive perceptions. Religious beliefs have been associated with differences in human organ donation attitudes among postgraduate students, while other studies have found limited effects of gender and religion on knowledge and understanding of brain death. Personal and familial exposure may therefore influence perceptions alongside broader demographic and cultural factors [17,18,19].

Overall, the present study indicates that medical students had high knowledge, awareness, and generally favorable perceptions regarding human organ donation, although gaps remained in legal provisions, donor cards, and certain ethical aspects. Structured education, greater clinical exposure, and targeted awareness programs may further strengthen informed and positive attitudes toward human organ donation.

CONCLUSION

The study found generally good knowledge, high awareness, and favorable perceptions of human organ donation among medical students. Postgraduates showed better overall knowledge and awareness, while undergraduates demonstrated strong altruistic and family-oriented perceptions. Despite high overall awareness, gaps remained regarding donor cards, legislation, and eligibility. Strengthening structured education and ethical awareness may further promote informed human organ donation among future healthcare professionals.

REFERENCES

1. Gupta P. Organ donation perception and beliefs: a cross sectional study amongst degree college students and teachers in Mumbai, Maharashtra, India. International Journal of Advances in Medicine. 2021 Jan 1.
2. Ghose TK, Deo J, Dutt V, Agarwal R, Patel BB, Ganesh M, More VK, Pandya KH, Sharma R, Sharma D, Singh H. Knowledge and attitude towards organ donation: a study among medical and nursing students of a medical college. Int J Community Med Public Health. 2021 Nov;8(11):5398-403.
3. Soqia J, Ataya J, Alhomsi R, Soqia H, Kakaje A, Saadoun R, Hamzeh A. Attitudes and factors influencing organ donation decision-making in Damascus, Syria: a cross-sectional study. Scientific reports. 2023 Oct 24;13(1):18150.
4. Bolatov A, Asanova A, Daniyarova G, Sazonov V, Semenova Y, Abdiorazova A, Pya Y. Barriers and willingness to express consent to organ donation among the Kazakhstani population. BMC Public Health. 2025 Mar 3;25(1):842.
5. Da Silva IR, Frontera JA. Worldwide barriers to organ donation. JAMA neurology. 2015 Jan;72(1):112-8.
6. Siraj MS. The human organ transplantation act in Bangladesh: Towards proper family-based ethics and law. Asian Bioethics Review. 2021 Sep;13(3):283-96.
7. Naidoo JP, Kumar N, Dayaratna OC, Wijayapura AS, Hemachandra PD, Aithal AP. Perception, knowledge, and attitude on organ donation among the medical and nonmedical Students. Indian Journal of Transplantation. 2023 Oct 1;17(4):425-30.
8. BHANDARI K, PRASAD S, Acharya S. Organ donation: Perception among medical students. IP INDIAN JOURNAL OF ANATOMY AND SURGERY OF HEAD, NECK AND BRAIN Учредители: IP Innovative Publication Pvt Ltd. 2020;5(4):118-23.
9. Chu ST, Chung PP, Hui YL, Choi HC, Lam HW, Sin LL, Law CS, Yan NY, Choi KY, Wan EY. Knowledge and attitude regarding organ donation among medical students in Hong Kong: a cross-sectional study. Postgraduate Medical Journal. 2023 Jul;99(1173):744-52.
10. Bhuyan G, Rabha AM. Knowledge, attitude and perception on organ donation amongst undergraduate students, post-graduate students and senior residents at a tertiary care teaching hospital in North-eastern India: A cross-sectional study. Journal of Clinical and Scientific Research. 2024 Jan 1;13(1):25-9.
11. Tamuli RP, Sarmah S, Saikia B. Organ donation–"attitude and awareness among undergraduates and postgraduates of North-East India". Journal of family medicine and primary care. 2019 Jan;8(1):130.
12. Anwar AT, Lee JM. A survey on awareness and attitudes toward organ donation among medical professionals, medical students, patients, and relatives in Bangladesh. InTransplantation Proceedings 2020 Apr 1 (Vol. 52, No. 3, pp. 687-694). Elsevier.
13. Ahmed AE, Shajeri MA, Ayashi SM, Hurubi MY, Moafa FH, Sumayli AH, Awadalla SM. Knowledge, attitudes, and practices regarding organ donation among students of Jazan university: a cross-sectional study. Saudi Journal of Kidney Diseases and Transplantation. 2023 Dec 1;34(Suppl 1):S5-13.
14. Krishna E, Debbarma S, Ranjan A, Pandey S, Kumar V, Singh MP, Yadav A, PANDEY S. Knowledge and attitudes toward organ donation among students and professionals in medical colleges in the Eastern part of India. Cureus. 2024 Sep 30;16(9).
15. Kotamarthy HB, Sirga S, Somasekhar DA, Subba K, Panigrahi N, Jupally R, Gunnampati K. Knowledge, attitude, awareness of organ donation among health care professionals: a prospective observational study from Hyderabad. Apollo Medicine. 2026 Feb;23(1_suppl):S23-8.
16. Billah MM, Farzana H, Latif A, Mitra P, Chowdhury TA, Rahim MA, Hossain MJ, Iqbal S, Mansur MA, Faruq MO, Khoda MM. Knowledge and attitude of Bangladeshi physicians towards organ donation and transplantation. Bangladesh Critical Care Journal. 2016 Jun 1;4(1):23-7.
17. Apak U, Akbulut S, Kucukakcali Z, Saritas H. Assessment of the relationship between organ donation attitudes and religious beliefs among postgraduate students. Frontiers in Public Health. 2025 Jul 17;13:1596640.
18. Shrivastav V, Murugan Y, Gandhi R, Nagda J, Shrivastav Sr V. Knowledge, attitudes, and practices regarding organ donation among medical students in India: A mixed methods study. Cureus. 2024 Mar 14;16(3).
19. Rumsey S, Hurford DP, Cole AK. Influence of knowledge and religiousness on attitudes toward organ donation. InTransplantation proceedings 2003 Dec 1 (Vol. 35, No. 8, pp. 2845-2850). Elsevier.