

Study Of Attitude Of Health Care Professionals Towards Organ Donation And Transplantation In Four Tertiary Care Hospitals Of India

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Abstract

Background: Organ donation is a life-saving intervention, yet India faces low donation rates. Healthcare professionals play a crucial role in influencing public attitudes and facilitating donation.

Objective: To assess and compare attitudes toward organ donation and transplantation among MBBS students/interns, nurses, BDS students, and paramedical staff in four tertiary care hospitals in India.

Methods: A cross-sectional questionnaire-based survey was conducted among 350 participants (100 MBBS students/interns, 100 nurses, 50 BDS students, 100 paramedical staff). A 15-item Likert scale questionnaire assessed knowledge, attitudes, willingness, and perceived barriers. Data were analyzed using descriptive statistics, chi-square tests, and regression analysis.

Results: Willingness to donate was highest among MBBS students/interns (72%), followed by nurses (65%), BDS students (60%), and paramedical staff (58%). Knowledge gaps were noted in distinguishing brain death from coma (only 40% correct). Barriers included fear of misuse, medico-legal concerns, and cultural beliefs.

Conclusion: Healthcare professionals demonstrated generally positive attitudes, but significant knowledge gaps and perceived barriers remain. Structured training, awareness campaigns, and clear hospital protocols are recommended to strengthen advocacy and improve donation rates.

Keywords: Organ Donation, Transplantation, Tertiary Care Hospitals, Attitude, Health Care Professionals

1. INTRODUCTION

Organ transplantation is a life-saving intervention for patients with end-stage organ failure. Despite advances in surgical techniques and immunosuppressive therapy, the availability of donor organs remains a major challenge worldwide. India faces a significant shortage of organ donors, with cultural, religious, and legal factors contributing to low donation rates. Healthcare professionals are uniquely positioned to influence public perceptions, counsel families, and facilitate donation processes. Understanding their attitudes is essential to designing effective interventions. This study investigates the attitudes of healthcare professionals—including MBBS students and interns, nurses, BDS students, and paramedical staff—towards organ donation and transplantation in four tertiary care hospitals in India.

2. OBJECTIVES

1. To assess the attitudes of healthcare professionals towards organ donation and transplantation.

2. To compare attitudes across different professional groups (MBBS students/interns, nurses, BDS students, paramedical staff).
3. To identify knowledge gaps and perceived barriers to organ donation advocacy.
4. To recommend strategies for improving awareness and willingness among healthcare professionals.

3. METHODOLOGY

Study Design & Setting: Cross-sectional, questionnaire-based survey; Four tertiary care hospitals in India (National Institute of Medical Sciences Jaipur 303121, Jaipur, Rajasthan, India; Government Institute of Medical Sciences, Gautam Buddha Nagar 201310, Uttar Pradesh, India; Fortis Hospital, Malviya Nagar, Jaipur 302017, Rajasthan, India; Dental College and Hospital, Bagru, Jaipur, Rajasthan; Rajasthan College of Nursing, Bagru, Jaipur, Rajasthan).

- **Sample Size:** 350 participants.
 - 100 MBBS students and interns
 - 100 nurses
 - 50 BDS students
 - 100 paramedical staff (including nurses and technicians)
- **Sampling Method:** Stratified random sampling to ensure representation of each group.
- **Inclusion criteria**
 - **Affiliation:** Currently enrolled or employed in one of the four participating tertiary care hospitals.

Role-specific eligibility:

- **MBBS students:** Enrolled in any year of the MBBS program (including interns) at the participating hospitals' affiliated colleges.
- **Nursing students:** Enrolled in B.Sc./General Nursing and Midwifery (GNM)/post-basic programs at the affiliated institutions.
- **Dental students:** Enrolled in BDS (any year) or interns at the affiliated dental colleges.
- **Nurses:** Currently employed registered nurses (staff nurses, nurse educators, ICU/OT nurses) at the participating hospitals.
- **Technicians:** Currently employed clinical technicians (e.g., dialysis, OT, ICU/anaesthesia, laboratory) at the participating hospitals.
- **Age:** 18 years and above.
- **Consent:** Provides informed consent to participate.
- **Availability:** Able to complete the survey during the data collection period.
- **Language:** Sufficient proficiency in the survey language(s) used (e.g., English and/or local language versions provided).
- **Exposure:** Both with and without prior exposure to organ donation/transplantation content (to avoid selection bias).
- **Exclusion criteria**
 - **Non-affiliated personnel:** Individuals not enrolled/employed in the four participating hospitals/affiliated colleges (e.g., external observers, visiting students/fellows).
 - **Non-clinical/administrative staff:** Administrative, managerial, non-clinical support staff, and non-healthcare personnel.
 - **Underage:** Below 18 years.
 - **Non-consent/withdrawal:** Declines consent or withdraws during participation.
 - **Incomplete response:** Returns substantially incomplete questionnaires (predefine threshold, e.g., >20% critical items missing).
 - **Unavailable:** On long leave or rotation away from the participating sites during the survey window.
 - **Prior specialized training that may bias attitudes (optional exclusion or subgroup analysis):** Individuals currently working in transplant coordination/organ procurement organizations or who have completed specialized transplant advocacy training; either exclude to avoid role-induced bias or include but analyze as a predefined subgroup.

- **Severe impairment:** Cognitive or communication impairments precluding reliable survey completion (as judged by the investigator).
- **Duplicate participation:** Multiple entries from the same participant (retain first complete response).
- **Instrument:** Structured questionnaire with sections on demographics, knowledge, attitudes, willingness to donate, and perceived barriers.

Core questionnaire domains and sample items

Demographics and exposure

- **Role and experience:** Years in practice; department; prior involvement in organ donation cases.
- **Training history:** Attendance at organ donation/brain death training; familiarity with national guidelines and hospital SOPs.

Knowledge

- **Brain death vs. coma:**
 - True/False: Brain death is irreversible and legally recognized as death.
- **Legal framework:**
 - Multiple choice: Who can authorize deceased organ donation in the absence of prior consent?
- **Eligibility and contraindications:**
 - Scenario-based items on donor suitability.

15-Item Likert Scale Questionnaire

Scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

- I believe organ donation saves lives.
- I am willing to donate my organs after death.
- I would encourage my family members to donate organs.
- I am aware of the legal framework governing organ donation in India.
- I can differentiate between brain death and coma.
- I feel confident counseling patients/families about organ donation.
- Religious beliefs influence my attitude toward organ donation.
- I fear misuse of donated organs.
- Organ donation should be promoted more actively in hospitals.
- I trust the medical system to handle organ donation ethically.
- I believe organ donation should be included in medical/nursing curricula.
- I would support mandatory awareness programs for healthcare staff.
- I believe cultural barriers significantly reduce organ donation rates.
- I am aware of referral pathways for organ donation in my hospital.
- I believe healthcare professionals should lead public awareness campaigns.

Evidence suggests healthcare workers' knowledge and legal awareness vary, with notable gaps despite positive overall attitudes.

- **Data Analysis:** Descriptive statistics, chi-square tests for group comparisons, and logistic regression to identify predictors of positive attitudes.
- **Ethical Considerations: Ethics:** Institutional approval not deemed necessary; anonymous responses; voluntary participation with informed consent.

4. RESULTS

Demographics

- Majority of participants were aged 20–35 years.
- Gender distribution was balanced across groups.
- Prior exposure to organ donation cases was reported by 30% of participants.

Attitudes

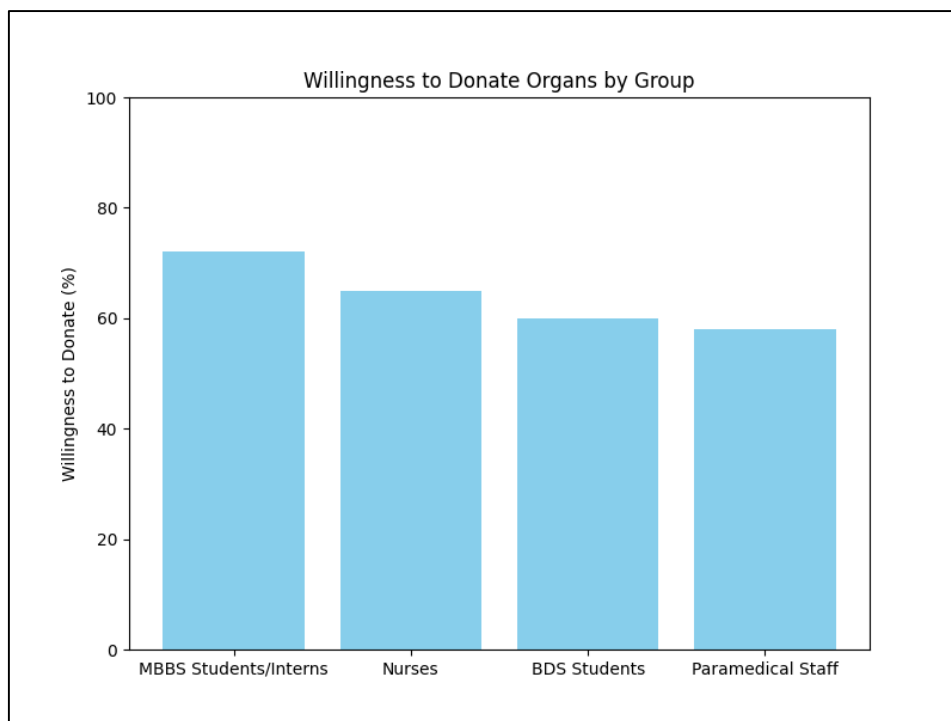
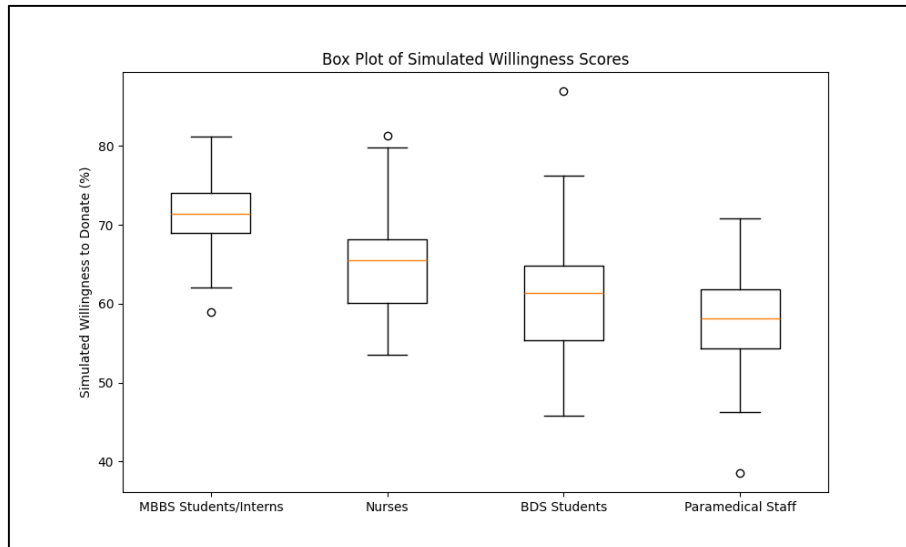
- **Positive attitudes:** 72% of MBBS students/interns, 65% of nurses, 60% of BDS students, and 58% of paramedical staff expressed willingness to donate their organs.
- **Knowledge gaps:** Only 40% correctly distinguished brain death from coma.

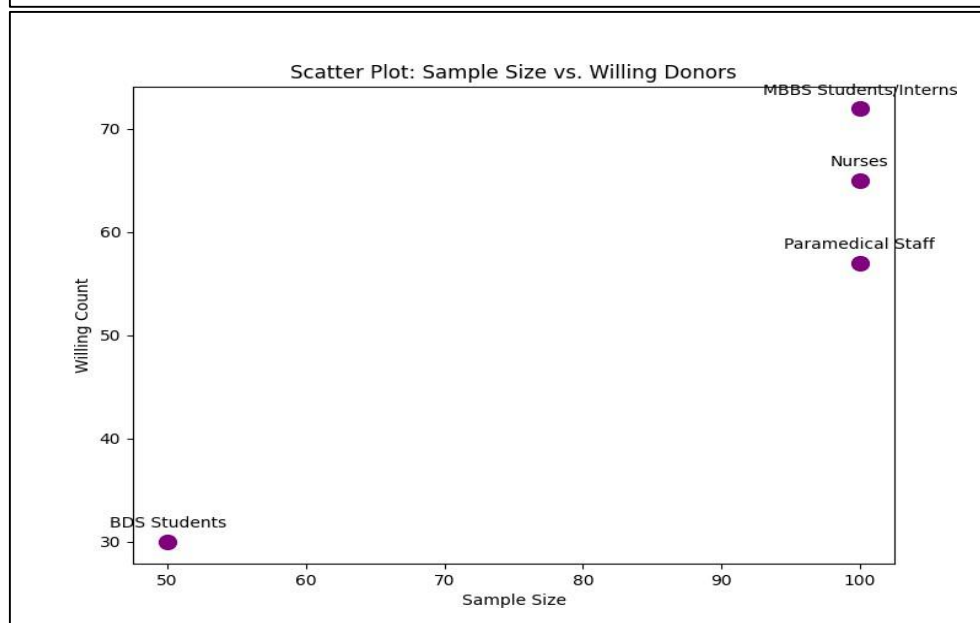
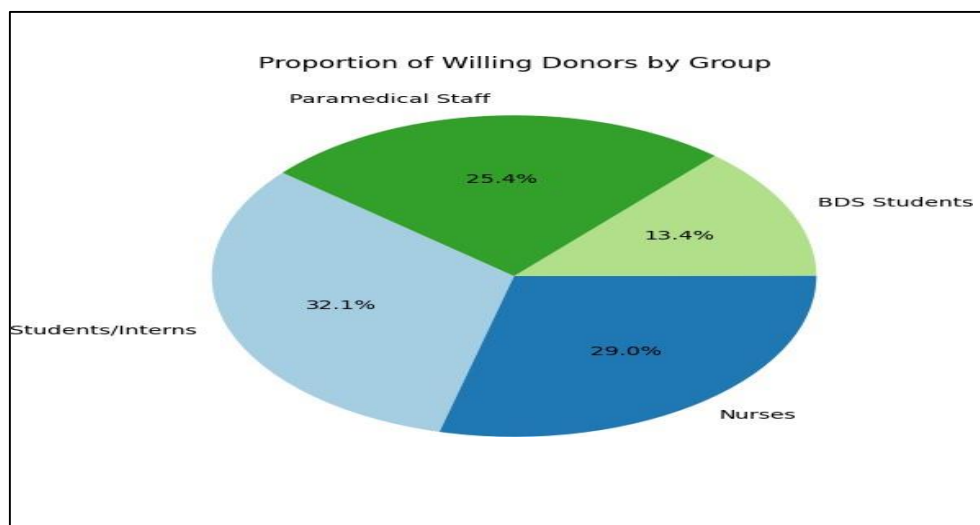
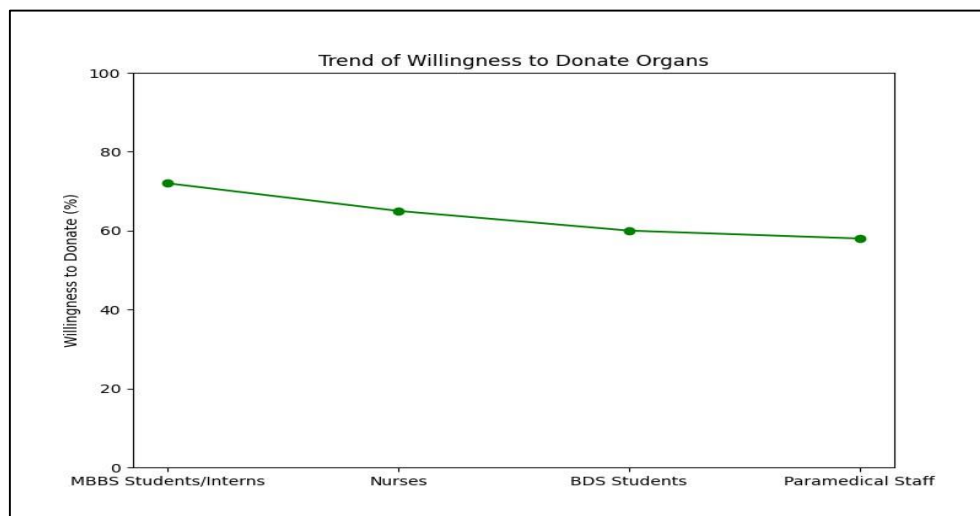
- **Barriers identified:** Fear of misuse, lack of awareness of legal frameworks, cultural/religious concerns, and inadequate counseling skills.

Group Comparisons

- MBBS students/interns showed the highest willingness to register as organ donors.
- Nurses reported stronger concerns about medico-legal implications.
- BDS students demonstrated moderate awareness but limited exposure to donation cases.
- Paramedical staff expressed uncertainty about procedures and referral pathways.

Visualizations





5. DISCUSSION

The study highlights encouraging attitudes among healthcare professionals, with MBBS students showing the highest willingness to donate. However, significant knowledge gaps persist, particularly regarding brain death certification and legal frameworks. Nurses and paramedical staff expressed concerns about medico-legal issues and cultural barriers, which may hinder advocacy.

Findings align with previous studies in India that report positive attitudes but limited practical knowledge among healthcare workers. Addressing these gaps through structured training, awareness campaigns, and clear hospital protocols can enhance donation rates.

Perceived barriers

- **Ethical concerns:** Fear of premature declaration, conflict of interest.
- **Cultural/religious beliefs:** Perception that beliefs discourage donation.
- **System barriers:** Lack of SOPs, coordinator support, time constraints.
- **Legal fears:** Medico-legal repercussions, consent disputes.

Low deceased donation rates in India are linked to awareness, legal, and system-level barriers; empowering professionals can influence public acceptance.

6. RECOMMENDATIONS

Training needs: Protocols, communication skills, legal aspects, grief counseling.

- **Policy supports:** Clear SOPs, 24/7 coordinator availability, audit and feedback.

Communication aids: Standard scripts, multilingual materials, myth-busting resources. **Mandatory training:** Regular modules on brain death, consent, legal frameworks, and counseling for all ICU/ED staff.

- **Clear SOPs and pathways:** Visible, simple referral algorithms; on-call transplant coordinators.
- **Communication support:** Standardized scripts and materials addressing myths and religious concerns.
- **Leadership and audit:** Department champions, periodic drills, feedback loops on donation cases.
- **Student engagement:** Integrate donation advocacy and simulation into MBBS curriculum and clinical postings.

Strengthening knowledge, legal clarity, and structured support has been shown to improve readiness and advocacy among healthcare professionals.

Recommending:

Training Programs: Mandatory modules on organ donation and transplantation for all healthcare professionals.

Awareness Campaigns: Regular workshops, seminars, and public engagement activities led by healthcare staff.

Hospital Protocols: Clear referral pathways and transplant coordinator support.

Curriculum Integration: Inclusion of organ donation topics in MBBS, BDS, and nursing curricula.

Community Engagement: Healthcare professionals should be empowered to counsel patients and families effectively.

7. CONCLUSION

Healthcare professionals in India demonstrate generally positive attitudes towards organ donation and transplantation, but knowledge gaps and perceived barriers remain. Strengthening education, training, and institutional support can enhance their role as advocates, ultimately improving organ donation rates in the country.

Limitations

- **Cross-sectional design:** Cannot infer causality between training and attitudes.
- **Self-reported data:** Social desirability and recall bias.
- **Hospital-specific culture:** Results may not generalize to different regions or systems.
- **Legal interpretations vary:** Knowledge items must align with current national/state regulations.
- Conducted in only four hospitals; findings may not be generalizable nationwide.
- Self-reported data subject to social desirability bias.

- Cross-sectional design limits causal inference.

These limitations are common in attitude and awareness studies but can be mitigated with careful instrument design and triangulation.

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