

ASSESSMENT OF KNOWLEDGE AND ATTITUDES TOWARDS ORGAN DONATION AMONG UNDERGRADUATE MEDICAL STUDENTS: A CROSS-SECTIONAL STUDY

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Abstract

Background: Organ donation is a crucial component in saving lives, yet there's a notable gap in awareness and attitudes towards it, especially among medical students who represent future healthcare professionals. This study aims to evaluate the knowledge, attitude, and perceptions of undergraduate medical students regarding organ donation. **Material & Methods:** A cross-sectional survey was conducted among 100 undergraduate medical students, with an equal gender distribution of 50 males and 50 females, and an average age of 22 years. The survey included questions on demographics, awareness, willingness, knowledge gaps, educational influence, sources of information, participation in advocacy groups, and perceptions of organ donation's impact. **Results:** A high level of awareness (96%) was observed, with 80% understanding the medical significance of organ donation. However, only 40% were familiar with legal aspects, and knowledge gaps were identified in donor eligibility criteria and transplantation processes. The study found 85% of students had a positive attitude towards organ donation, yet only 60% were willing to become donors, with a higher willingness observed among female students (70%). The curriculum's influence was significant, with 90% advocating for more comprehensive coverage. The most relied upon sources of information were television (60%) and the internet (30%), with academic lectures being considered the most reliable (75%). Additionally, 65% showed interest in joining advocacy groups, but only 30% were actively involved. Ethical considerations and the role of family in decision-making were prominent concerns. **Conclusion:** The study highlights the need for enhanced educational initiatives in medical curricula to bridge knowledge gaps and positively influence attitudes towards organ donation. Emphasizing ethical considerations and the role of family in decision-making is crucial. Enhancing engagement in advocacy groups and leveraging reliable information sources could further promote organ donation awareness among future medical professionals.

INTRODUCTION

Organ donation is a critical yet often under-emphasized area in medical practice, holding immense potential for saving lives through organ transplants.^[1] It stands at the crossroads of medical science, ethics, and societal values. Despite its lifesaving potential, the global healthcare scene faces a chronic shortage of organ donors.^[2] This

shortfall is largely attributed to a combination of insufficient awareness, diverse attitudes, and various cultural and legal complexities surrounding organ donation. These factors significantly impact the availability of organs for transplantation, thereby affecting patient outcomes.^[3,4]

The significance of organ donation is especially pertinent among medical students, who are the future custodians of healthcare. Their knowledge,

attitudes, and beliefs towards organ donation will inevitably influence their professional practice and the wider community's perception of this crucial issue.^[5,6] Thus, understanding and shaping these perceptions during their formative years of medical education is critical.

This study places a spotlight on undergraduate medical students, delving into their level of awareness, attitudes, and knowledge about organ donation. It aims to explore various facets of their understanding, including the medical significance of organ donation, legal frameworks governing it, and ethical considerations involved. The study recognizes that these students' perceptions are not just individual beliefs but are reflective of broader societal attitudes and knowledge bases that they will carry into their professional lives.

By conducting a comprehensive cross-sectional survey, this study seeks to identify gaps in the current medical curriculum regarding organ donation education. The goal is to uncover areas where additional focus or reformation may be needed to enhance future doctors' preparedness to discuss, manage, and advocate for organ donation effectively.

Additionally, the study aims to explore the ethical dilemmas and decision-making processes associated with organ donation. These include considerations of donor autonomy, consent, family involvement, and the distribution of scarce resources. Such ethical discussions are vital in preparing medical students to navigate complex situations they will encounter in their careers.

In essence, this study endeavours to contribute significantly to the ongoing efforts to improve organ donation rates globally. By enhancing the understanding and attitudes of medical students towards organ donation, it aims to indirectly influence public perceptions and policies, thereby addressing the critical shortage of organ donors and ultimately, saving more lives through successful organ transplants.

MATERIALS AND METHODS

Study Setting and Design

This research employs a cross-sectional study design to assess the knowledge, attitudes, and perceptions of undergraduate medical students regarding organ donation⁷. The study was done at A.C Subbareddy Government Medical College, Nellore, Andhra Pradesh, India

Participants

Target Population: The target population comprises undergraduate medical students.

Sampling: A systematic random sampling technique was used to select 100 participants, ensuring an equal distribution of 50 males and 50 females.

Demographic Characteristics

Participants' average age was 22 years.

Data Collection

A structured questionnaire was developed for data collection. The questionnaire underwent a thorough development process, including expert validation and pilot testing for reliability. Data collection took place during a 30-day period in April 2018.

Survey Content

The questionnaire consisted of several sections: Demographics Awareness about organ donation, Knowledge regarding medical and legal aspects of organ donation, Attitudes towards organ donation, Influence of the medical curriculum, Sources of information, Interest in and participation in advocacy groups, Perceptions about organ donation's impact, Ethical considerations and family roles in decision-making⁸.

Variables

Key variables examined included awareness, knowledge, attitudes, and willingness to become organ donors.

Data Analysis

Descriptive statistics, such as means, percentages, and standard deviations, were used to summarize the data.

Ethical Considerations

Institutional Ethics Committee approval (ECR/961/Inst/AP/2017/37-21/15-03-18) was obtained from A C Subbareddy Government Medical College, Nellore, Andhra Pradesh, India. Informed consent was obtained from all participants, ensuring their voluntary participation. Participant confidentiality and privacy were strictly maintained throughout the study.

Pilot Testing

The questionnaire underwent pilot testing on a small group of medical students to identify any ambiguities or issues, and necessary revisions were made.

Data Validation

The study ensured data validation by double-checking entries and using a coding system. Test-retest reliability measures were calculated for a subset of participants to establish data reliability.

RESULTS

Demographics

Gender Distribution: 50 males and 50 females.

Age: Average age of 22 years, with a range from 20 to 24 years.

Academic Year: 40% in their first year, 30% in their second year, and 30% in their third and final years.

Geographic Background: 70% from urban areas and 30% from rural areas.

Awareness and Willingness

Awareness: 96% were aware of organ donation; of these, 80% understood its medical significance.

Legal Knowledge: Only 40% were familiar with the legal aspects of organ donation.

Attitude: 85% had a positive attitude, but only 60% were willing to become donors.

Gender Differences: 70% of female students were willing to donate, compared to 50% of male students.

Knowledge Gaps

Donor Eligibility: 70% lacked awareness about specific criteria for donor eligibility.

Organ Types: 60% could correctly identify which organs can be donated.

Transplantation Process: Only 50% had adequate knowledge about the transplantation process.

Educational Influence

Curriculum Inclusion: 90% advocated for more comprehensive coverage of organ donation in their curriculum.

Preferred Learning Methods: 60% favoured case studies, while 40% preferred interactive seminars.

Sources of Information

Primary Sources: Television (60%) and the internet (30%).

Secondary Sources: Academic lectures (10%) and social media (20%).

Reliability Perception: 75% regarded academic lectures as the most reliable source of information.

Participation in Organ Donation Groups

Interest in Advocacy: 65% showed interest in joining organ donation advocacy groups.

Active Participation: Only 30% were already involved in such groups.

Motivators: The primary motivator for participation was personal experience with organ donation (40%).

Perception of Organ Donation Impact

Societal Impact: 80% believed that organ donation significantly impacts society.

Personal Impact: 50% felt that being a donor would positively impact their own lives.

Ethical Perspectives

Ethical Considerations: 75% expressed concerns about the ethical aspects of organ donation.

Decision-Making: 60% believed that family members should have a say in the decision to donate organs posthumously.

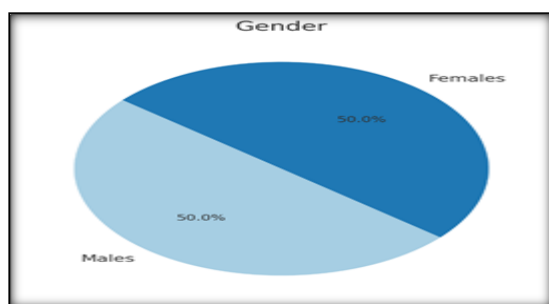


Figure 1: Gender Distribution

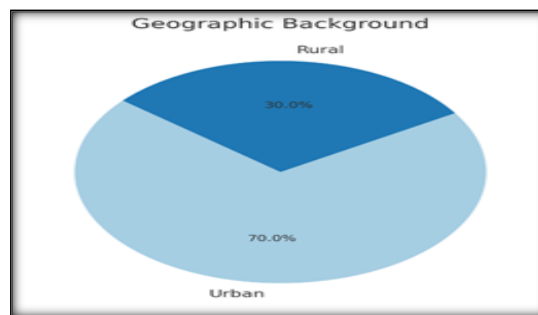


Figure 2: Geographic Background

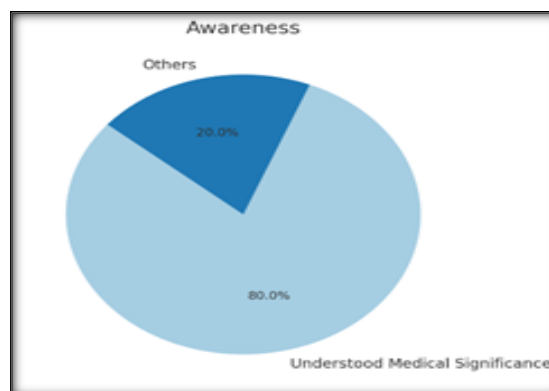


Figure 3: Awareness

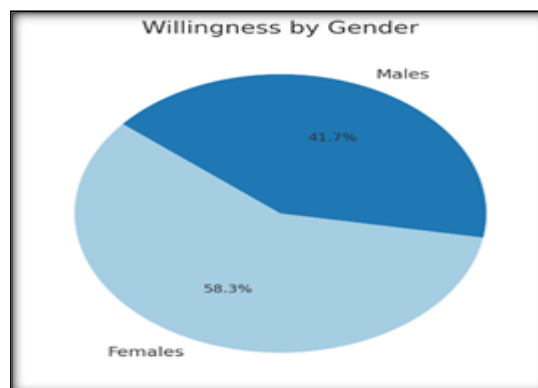


Figure 4: Willingness by Gender

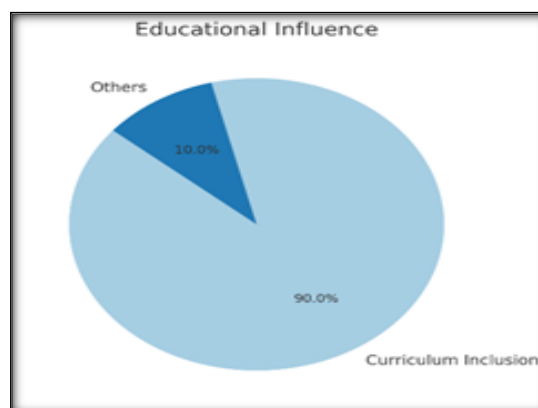


Figure 5: Educational Influence

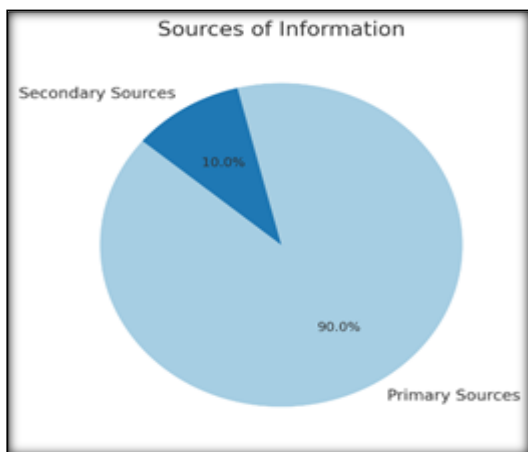


Figure 6: Sources of Information

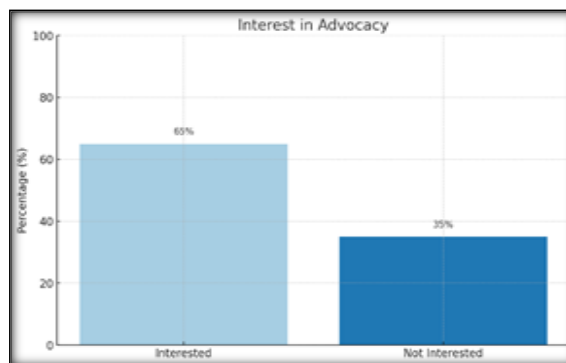


Figure 9: Interest in Advocacy

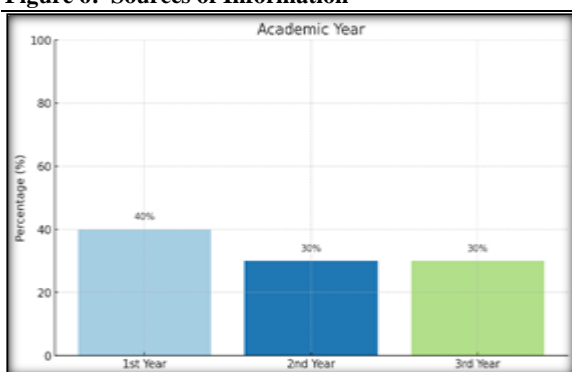


Figure 7: Academic Year

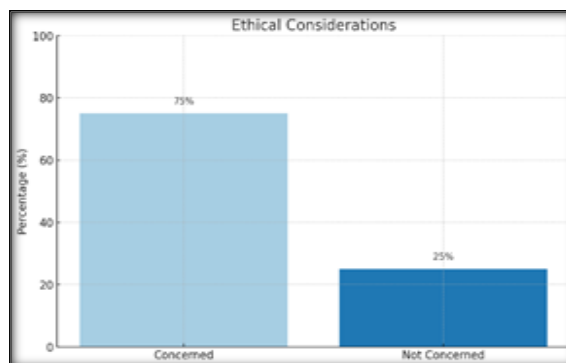


Figure 10: Ethical Considerations

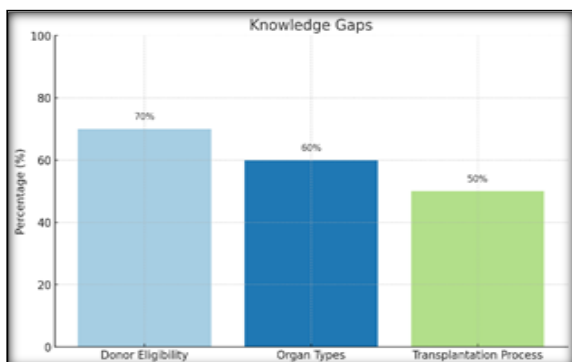


Figure 8: Knowledge Gaps

Table 1: Demographics of Participants

Demographic Factor	Percentage (%)
Gender	- Males: 50%, Females: 50%
Age	- Average: 22 years, Range: 20-24
Academic Year	- 1st Year: 40%, 2nd Year: 30%, 3rd Year: 30%
Geographic Background	- Urban: 70%, Rural: 30%

Table 2: Awareness and Willingness to Donate

Parameter	Percentage (%)	Additional Information
Awareness	96%	80% understood its medical significance
Legal Knowledge	40%	Knowledge about legal aspects
Positive Attitude	85%	Willing to become donors: 60%
Gender Differences in Willingness	Females: 70%, Males: 50%	

Table 3: Knowledge Gaps

Knowledge Area	Percentage (%)	Details
Donor Eligibility	70%	Unaware of specific criteria
Organ Types	60%	Correct identification of organ types
Transplantation Process	50%	Adequate knowledge about the process

Table 4: Educational Influence

Aspect	Percentage (%)	Details
Curriculum Inclusion	90%	Advocacy for comprehensive coverage
Preferred Learning Methods	Case Studies: 60% Interactive Seminars: 40%	

Table 5: Sources of Information

Source Type	Percentage (%)	Details
Primary Sources	Television: 60%, Internet: 30%	
Secondary Sources	Academic Lectures: 10% Social Media: 20%	
Reliability Perception	75%	Academic lectures as most reliable

Table 6: Participation in Organ Donation Groups

Parameter	Percentage (%)	Details
Interest in Advocacy	65%	Willingness to join groups
Active Participation	30%	Already involved in such groups
Motivators for Participation	40%	Personal experience

Table 7: Perceptions of Organ Donation Impact

Impact Type	Percentage (%)	Details
Societal Impact	80%	Belief in significant societal impact
Personal Impact	50%	Positive impact on own life

Table 8: Ethical Perspectives on Organ Donation

Aspect	Percentage (%)	Details
Ethical Considerations	75%	Concerns about ethical aspects
Decision-Making	60%	Role of family in posthumous donation decisions

DISCUSSION

Awareness and Knowledge Levels

The study found a high level of awareness (96%) among undergraduate medical students regarding organ donation. This is consistent with the importance of healthcare professionals being informed about organ donation.

However, knowledge gaps were identified, particularly in areas related to legal aspects, donor eligibility criteria, and transplantation processes. This highlights the need for more comprehensive education on these topics in medical curricula.^[9,10]

Attitudes and Willingness

Despite knowledge gaps, the majority (85%) of participants exhibited a positive attitude towards organ donation. This suggests that attitudes may not solely depend on knowledge but could be influenced by other factors.

Only 60% of students expressed a willingness to become organ donors themselves, with a higher percentage among female students (70%). This difference between attitudes and willingness underscores the complexity of the decision-making process.^[11]

Educational Influence

The study revealed a significant influence of the medical curriculum, with 90% of participants advocating for more comprehensive coverage of organ donation topics.

This underscores the importance of medical education in shaping students' perspectives on organ donation and the need for curriculum enhancement.^[12]

Sources of Information

Television (60%) and the internet (30%) were the most relied upon sources of information about organ donation among participants.

However, academic lectures were considered the most reliable source (75%), emphasizing the role of formal education in disseminating accurate information.^[13]

Participation in Advocacy Groups

While 65% of students expressed interest in joining advocacy groups related to organ donation, only 30% were actively involved. This indicates a potential gap between interest and action in promoting organ donation awareness.^[14,15]

Ethical Considerations and Family Roles

The study highlighted the prominence of ethical considerations and the role of family in decision-making regarding organ donation. These ethical concerns need to be addressed in both medical education and public awareness campaigns.^[16]

Implications and Recommendations

The findings of this study have several implications: Medical curricula should be updated to provide more comprehensive coverage of organ donation topics, addressing knowledge gaps. Educational efforts should focus not only on increasing awareness but also on promoting a deeper understanding of the legal and ethical aspects of organ donation. Strategies to bridge the gap between positive attitudes and actual willingness to become donors should be explored. Efforts to engage students in advocacy groups and promote reliable sources of information can enhance organ donation awareness.

Limitations and Future Research

This study has limitations, including a relatively small sample size and potential response bias. Future research could explore the impact of specific educational interventions on knowledge and willingness to become donors among medical students.

CONCLUSION

Our findings emphasize the critical influence of education and ethical considerations in shaping these perspectives within the medical student community. To foster increased organ donation awareness and willingness, it is imperative for future initiatives to take into account these multifaceted factors, ensuring a comprehensive approach that addresses both knowledge gaps and the ethical dimensions of this vital healthcare issue. This research contributes to the ongoing discourse on organ donation among medical students and provides a foundation for the development of targeted educational programs and advocacy efforts aimed at facilitating positive changes in attitudes and behaviours related to organ donation.

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