

Perspectives on Organ Donation among Adolescents and Impacting Factors**Ahaana Manchanda***

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Abstract:

Organ donation is a pivotal yet relatively unexplored subject in India, where prevalent myths, misconceptions, and cultural beliefs often shape people's attitudes and perceptions towards organ donation. This research paper delves into the views of adolescents in India on organ donation, as they represent a crucial demographic group that is poised to become future decision-makers and potential donors. Based on a thorough analysis of qualitative and quantitative data collected through surveys, interviews, and focus group discussions, the paper examines the knowledge, attitudes, and intentions of adolescents regarding organ donation. Furthermore, the paper investigates the factors that influence their willingness to donate organs, including their religious and cultural beliefs, family dynamics, educational interventions, and awareness campaigns. The study's results provide valuable insights into the obstacles and enablers of organ donation among young people in India and underscore the significance of targeted educational programs to foster a donation culture and enhance organ donation rates in the country.

Keywords:

Organ donation, Adolescents, India, Perspectives, Attitudes, Knowledge, Barriers, Facilitators, Cultural beliefs, Awareness campaigns.

1.Introduction:

Organ donation involves voluntarily giving one's organs or tissues to another person who requires a transplant due to organ failure or dysfunction. It is a critical aspect of modern healthcare, offering hope to individuals experiencing end-stage organ failure. Despite the life-saving potential of organ donation, it remains a complex and sensitive issue influenced by cultural, religious, and social factors. To address any misconceptions and increase awareness, it is imperative to understand public attitudes toward organ donation, particularly among younger generations who represent the future of our society. India, like many countries worldwide, faces a shortage of donor organs, resulting in a significant demand-supply gap and long waiting lists for transplant candidates. Currently, India's organ donation rate stands at 0.86 donors per million, presenting a significant challenge to healthcare providers and policymakers and exacerbating the suffering of patients awaiting life-saving transplants.

This study aims to explore adolescents' awareness, attitudes, and intentions regarding organ donation in India. By focusing on this demographic group, which represents a significant portion of the population and



future decision-makers, this research seeks to uncover the factors influencing organ donation beliefs and behaviours among young people. Insights gained from students' perspectives on organ donation can help identify misconceptions, cultural barriers, and knowledge gaps that may hinder their willingness to donate organs. Moreover, understanding the factors that influence their intentions to become organ donors can inform targeted interventions and educational initiatives aimed at promoting positive attitudes toward organ donation and increasing donor registration rates.

This study is driven by the pressing need to address the challenges associated with organ shortage in India. Despite efforts to improve organ donation infrastructure and transplant services, the gap between supply and demand persists. As such, engaging the public, particularly young people, in discussions about organ donation and transplantation is critical. In summary, this study aims to contribute to the existing body of knowledge on organ donation by examining adolescents' awareness, attitudes, and intentions in India. By understanding their perspectives on this critical issue, evidence-based strategies can be developed to overcome barriers to organ donation, foster a culture of altruism and compassion, and ultimately save lives through increased organ donation and transplantation.

2. Organ donation in India

In 2020, the data recorded over 112,000 people in India waiting for organ transplants, with a new name added to the national registry every 10 minutes. Unfortunately, every day, 20 patients on the waiting list lose their lives due to the unavailability of organs. As per the report, the number of people on the waiting list for organ transplants in 2020 was 112,568, which is nearly three times the 2019 transplant count of 39,718, despite having 19,267 donors.

Brain stem deaths from accidents alone amount to nearly 1.5 lakh individuals annually in India. Causes other than accidents could potentially increase this number. However, the total number of deceased donors in India for 2017 was only 905, which is a stark contrast to the demand for organ donations. Approximately 5 lakh organs are required annually, but only 2-3% of the demand is met.

Although the number of organ donors, both living and deceased, has shown a gradual increase over the years, the deceased organ donation rate in India has remained consistently below one donor per million population for a decade. In 2014, there were 6,916 donors, and in 2022, the count increased to about 16,041.

The demand for kidney transplants in India is significant, with approximately 200,000 required annually. However, only around 10,000 transplants take place each year. Similarly, the demand for heart and liver transplants is around 50,000 each year, with only around 350 and 700 transplants taking place, respectively.

3. State-wise organ donation status in India

In India, living donors comprise 85% of all donors. The deceased donation rate consistently rose from 2012 to 2017, increasing more than four times. But since 2018, it has slowed throughout the country. Only 13 of the 36 States and Union Territories were contributing to deceased donation transplantation in India and in



the last three years, no new state or Union Territory has been added to the list of contributors. The whole of Eastern India, except for a few deceased donations in Kolkata, has not seen any donations happen. In 2018, Karnataka had registered 90 organ donations. Over 90% of the donations came from private hospitals.

Disparities in organ donation rates exist among different states in India.

1. **Tamil Nadu:** Tamil Nadu is often regarded as a leader in organ donation in India. The state has implemented several initiatives to promote organ donation awareness and streamline the donation process, resulting in a relatively higher rate of organ donation compared to other states.
2. **Maharashtra:** Maharashtra also has a significant number of organ donation initiatives and transplant centres. Mumbai, in particular, has seen an increase in organ donation awareness campaigns and transplant surgeries in recent years.
3. **Karnataka:** Karnataka has witnessed steady progress in organ donation activities, with Bangalore being a major hub for organ transplants. The state government has taken steps to improve infrastructure and awareness regarding organ donation.
4. **Andhra Pradesh and Telangana:** Both states have made efforts to improve organ donation rates, with Hyderabad being a key centre for organ transplants. Awareness campaigns and collaborations with hospitals have contributed to increasing donation rates in these states.
5. **Kerala:** Kerala has shown a positive trend in organ donation, with a high level of public awareness and participation in donation drives. The state government has implemented policies to support organ donation and transplantation.
6. **Delhi:** The national capital region has seen growth in organ donation activities, with several hospitals equipped for organ transplants. However, challenges such as infrastructure limitations and public awareness persist.
7. **Gujarat:** Gujarat has also seen an increase in organ donation activities, with initiatives to raise awareness and improve infrastructure for transplantation.
8. **Punjab and Haryana:** Organ donation activities in these states are gradually increasing, with efforts to improve awareness and infrastructure for organ transplants.
9. **Other States:** While organ donation activities are present in other states as well, the rates and initiatives vary. Efforts are being made across the country to promote organ donation and improve access to transplantation services.

4.Challenges faced in India

- **Lack of awareness:** The lack of awareness contributes to low rates of organ donation, as potential donors may not understand the importance of their contribution or how to register as donors.
- **Religious beliefs:** Cultural and religious beliefs can influence attitudes towards organ donation in India. Some communities may hold beliefs that discourage organ donation, viewing it as interfering with the body after death or conflicting with cultural practices surrounding death and burial.
- **Infrastructure:** The infrastructure for organ donation varies across different regions in India. Some areas lack the necessary facilities, equipment, and trained medical personnel to conduct organ transplants effectively.

- Legal and Ethical issues: Despite the Transplantation of Human Organs Act in place, there are still instances of organ trafficking, commercialization, and unethical practices in organ donation and transplantation. Compliance with legal and ethical standards, prevention of exploitation of donors and recipients, and organ trafficking remain significant challenges in India.
- Shortage of OPOs: India faces a shortage of Organ Procurement Organizations that are responsible for coordinating organ donation and retrieval from deceased donors. The lack of OPOs and trained transplant coordinators contributes to inefficiencies in the organ donation process and reduces the number of organs available for transplantation.
- Family consent issues: Family members may be unwilling to consent to organ donation after their death even if the individual is a registered donor. Lack of family support and understanding of the deceased's wishes can result in missed opportunities for organ donation.
- Stigmas and Myths: Stigma and misconceptions surrounding organ donation persist in Indian society. Some people may fear that organ donation will lead to mutilation of the body or believe in myths about the process, leading to reluctance to donate organs.

5. Methodology

The methodology employed in this research aimed to gather comprehensive data on organ donation perspectives among senior secondary students in India, allowing for a nuanced analysis of demographic factors influencing donation attitudes and intentions.

The research employed a cross-sectional survey design, with data collected through a structured questionnaire administered to senior secondary students aged 15-18 years across various schools in Delhi. The questionnaire included items assessing students' knowledge about organ donation, attitudes toward donation, willingness to donate organs, and demographic information such as age, gender, education level, and socioeconomic status. Data were analyzed using descriptive statistics and inferential analyses to identify patterns and trends in students' perspectives on organ donation.

5.1 Sampling Strategy:

A purposive sampling approach was used to select schools and participants for the survey. Schools were selected from different regions of Delhi-Ncr to ensure geographic diversity. Within each selected school, classes or sections comprising senior secondary students were identified, and all students in the age group of 15-18 years were invited to participate in the survey. Informed consent was obtained from both students and their parents or legal guardians prior to participation.

5.2 Data Collection:

Data collection was conducted in person by trained research assistants or volunteers who visited the selected schools. The survey administration took place during school hours, with arrangements made to minimize disruptions to students' academic schedules. Participants were provided with clear instructions on how to complete the questionnaire and were assured of the confidentiality and anonymity of their responses.



Research assistants were available to clarify any questions or concerns raised by participants during the survey administration.

5.3 Questionnaire Design:

The structured questionnaire comprised several sections covering different aspects of organ donation attitudes and perceptions. The first section collected demographic information, including age, gender, education level, and socioeconomic status. Subsequent sections addressed students' knowledge about organ donation (e.g., understanding of the donation process, awareness of donation laws and regulations), attitudes towards donation (e.g., perceived benefits and barriers, cultural and religious beliefs), and willingness to donate organs (e.g., intention to register as an organ donor, preferences regarding donation consent).

5.4 Data Analysis:

Quantitative data collected through the survey were entered into a statistical software program for analysis. Descriptive statistics, such as frequencies, percentages, means, and standard deviations, were used to summarize participants' responses to survey items. Inferential analyses, including chi-square tests, t-tests, and regression analyses, were conducted to examine relationships between demographic variables and organ donation attitudes, as well as to identify predictors of donation intentions among students.

5.5 Ethical Considerations:

The research adhered to ethical guidelines for research involving human participants. Informed consent was obtained from all participants and their parents or legal guardians prior to data collection. Participants were assured of the voluntary nature of their participation and the confidentiality of their responses. Any identifiable information collected from participants was kept confidential and used for research purposes only.

6. Results:

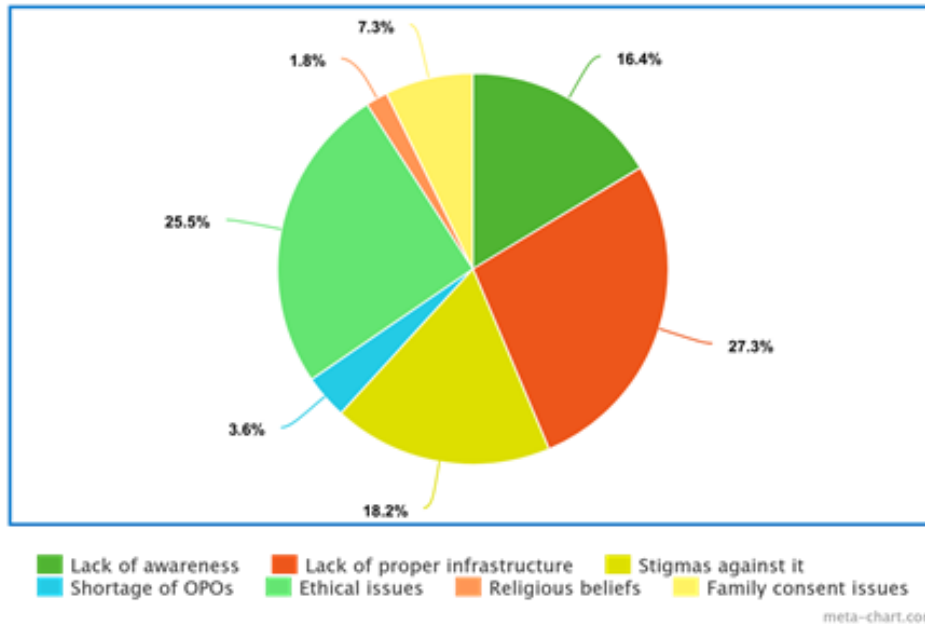


Fig.6.1 data representing different factors impacting the willingness to donate organs among the adolescents

The results section presents the findings related to the main factors affecting organ donation among senior secondary students. The data reveal that ethical issues were cited as a significant factor by 25.5% of participants, followed by stigmas against donation (18.2%), lack of awareness (15.4%), family consent issues (7.3%), shortage of Organ Procurement Organizations (OPO) (3.6%), and religious beliefs (1.8%). Lack of proper infrastructure was also identified as a barrier to donation, although specific percentages were not provided.

6.1 Impact of Age and Religion on willingness to be an Organ Donor.

The demographic characteristics of the participants who expressed a willingness to donate organs are presented in this section. Among the respondents, the majority were 16 years old (60%), followed by 17 years old (30%), and 15 years old (10%). In terms of religion, Hindus comprised the largest group (60%), followed by non-religious (11%), Sikhs (13%), Christians (2%), and other religions (7%), with 7% of participants choosing not to disclose their religion.

RELIGION

AGE

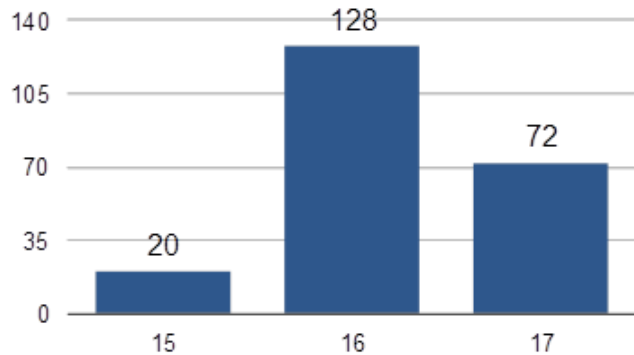
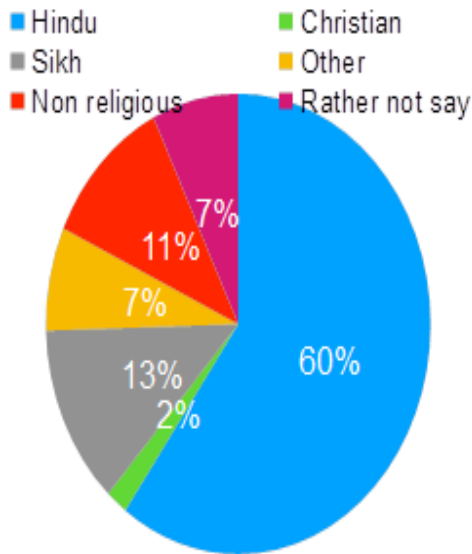


Fig 6.2The response of the individuals from different religious beliefs , fig 6.3 showing impact of age on willingness to become an organ donor

When participants were asked about their awareness of beating heart donation, the data revealed that a significant proportion (75%) had never heard about beating heart donations, while only 25% were aware of it.

Regarding the impact of religion on organ donation decisions, the responses varied. Thirty-one per cent of participants were doubtful about whether their religion would impact their organ donation decision, while 53% believed that their religion would indeed influence their decision. Conversely, 16% of participants stated that their religion would not impact their organ donation decision.

Fig6.4

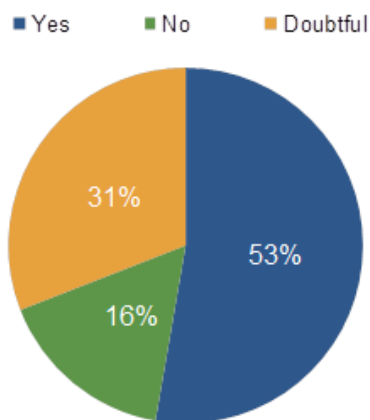


Fig 6.5

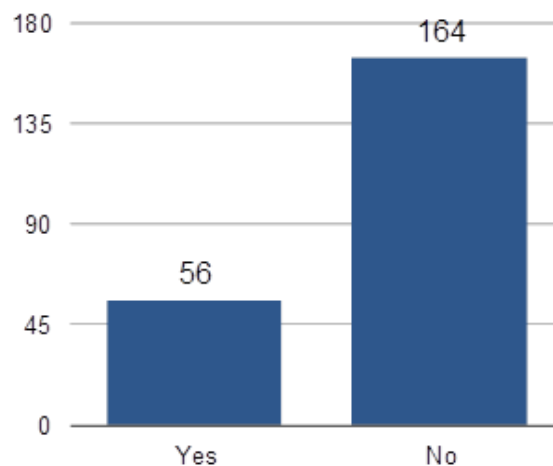


fig 6.4 the response of people when they were asked whether their religion allows them to be a donor

fig 6.5 shows the response of the participants when they were asked whether they are aware about beating heart donation

6.2 Impact of Family support on willingness for Organ Donation

When participants were asked whether any of their family members had been a donor in the past or had given consent for donation posthumously, 16% indicated that their family members had been donors or had given consent for donation. (fig 6.7) Conversely, 84% of participants stated that none of their family members had been donors or had given consent for donation posthumously.

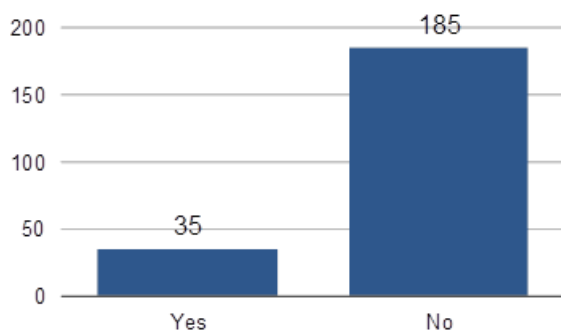


Fig 6.6

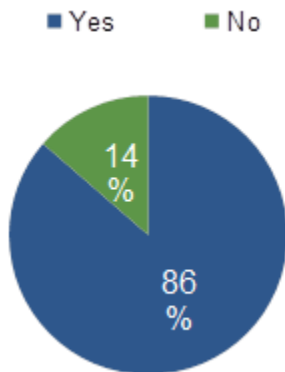


Fig 6.7 shows the response of participants when they were questioned about whether they would like to be donors in future

Regarding participants' willingness to be donors in the future, the data revealed that 86% expressed a desire to be donors, while 14% stated that they would not like to be donors in the future.(fig 6.7)

7. Discussion:

In the discussion section, the identified factors affecting organ donation are analyzed in the context of existing literature and their implications for organ donation promotion efforts in India. The prevalence of

ethical concerns, stigmas, and lack of awareness underscores the need for targeted educational campaigns and awareness-raising initiatives to address misconceptions and increase public understanding of organ donation. Strategies to improve infrastructure, enhance OPO capacity, and address family consent issues are also discussed, along with the importance of cultural sensitivity and religious considerations in donation advocacy efforts.

By integrating the additional data on factors affecting organ donation into the research paper, a more comprehensive understanding of the challenges and barriers to donation among senior secondary students in India is achieved. This information can inform the development of effective interventions and policies aimed at promoting organ donation awareness and increasing donation rates in the country.

The findings regarding family members' donation history or consent for posthumous donation provide insight into the influence of familial experiences and attitudes on participants' own donation decisions. The relatively low percentage of participants reporting family involvement in donation may reflect a lack of exposure to or discussion about organ donation within families. However, the high percentage of participants expressing willingness to be donors in the future suggests a potential shift in donation attitudes and an opportunity for increased donation rates among youth.

The discrepancy between the low reported family involvement in donation and the high willingness to be donors in the future may indicate a disconnect between personal beliefs and familial experiences. Efforts to increase family discussions about organ donation and raise awareness about the importance of donation may help bridge this gap and encourage more individuals to register as donors. These insights can inform targeted interventions and educational campaigns aimed at increasing donation rates and fostering a culture of donation among senior secondary students and their families.

It further explores the implications of the demographic findings for organ donation promotion efforts and addresses any potential correlations between demographic variables and donation attitudes. For example, the higher proportion of 16-year-old participants willing to donate organs may suggest a developmental aspect to donation attitudes among adolescents. Similarly, differences in donation attitudes across religious groups may highlight the importance of cultural and religious considerations in donation advocacy campaigns. By considering demographic factors such as age and religion, policymakers and healthcare professionals can tailor interventions to effectively reach diverse populations and address specific concerns related to organ donation.

By incorporating the demographic data into the research paper, a more comprehensive understanding of the characteristics of participants willing to donate organs is provided. This information can help inform targeted strategies for organ donation promotion and advocacy efforts aimed at increasing donation rates among senior secondary students in India.

The findings regarding awareness of beating heart donation highlight a critical gap in knowledge among the surveyed senior secondary students. The majority of participants were unaware of this specific aspect of organ donation, indicating a need for targeted education and awareness campaigns to increase understanding and dispel misconceptions about different donation methods.

The data on the perceived impact of religion on organ donation decisions reveal interesting insights into the influence of cultural and religious beliefs on donation attitudes. The high percentage of participants expressing doubt or belief in the influence of religion underscores the importance of culturally sensitive approaches in organ donation advocacy efforts. Efforts to address misconceptions and provide accurate information about the compatibility of organ donation with various religious beliefs may help alleviate concerns and increase donation rates among diverse religious communities.

By integrating these additional findings into the research paper, a more comprehensive understanding of the awareness levels and religious considerations surrounding organ donation among senior secondary students in India is provided. These insights can inform the development of targeted interventions and educational initiatives to promote organ donation awareness and encourage informed decision-making among youth.

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