

**GENDER DISPARITIES IN ORGAN DONATION AND TRANSPLANTATION IN
INDIA: A CRITICAL ANALYSIS OF THE TRANSPLANTATION OF HUMAN
ORGANS AND TISSUES ACT, 1994**

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Abstract

Organ transplantation is an essential medical procedure that saves lives and improves health outcomes for patients with organ failure. In India, this process is governed by the Transplantation of Human Organs and Tissues Act, 1994 (THOTA), along with related rules and guidelines enforced by the National Organ and Tissue Transplant Organisation (NOTTO). While the law is written in gender-neutral terms, the actual practice of organ donation and transplantation in India shows clear and persistent gender inequality. Available national data consistently indicate that men form the majority of organ transplant recipients, whereas women are more likely to donate organs, particularly in cases of living kidney and liver transplantation.

This research paper examines gender disparity in organ donation and transplantation in India through a socio-legal and empirical approach. It analyses statutory provisions under THOTA, national transplant statistics, government reports, and existing policy frameworks to understand how gender-based inequalities continue despite legal neutrality. The study highlights how social expectations, patriarchal family structures, women's economic dependence, limited access to healthcare, and lack of effective institutional safeguards contribute to unequal outcomes. In many cases, women's consent to donate organs is shaped by moral pressure and familial obligations rather than free and informed choice.

The paper argues that a gender-neutral legal framework alone is insufficient to address deeply rooted structural inequalities. Without specific gender-responsive protections, the law unintentionally allows indirect coercion and unequal access to transplantation services. The study concludes by recommending legal and policy reforms such as strengthened consent procedures, enhanced monitoring mechanisms, gender-sensitive data collection, and improved access to transplantation for women. These measures are necessary

to ensure fairness, protect bodily autonomy, and promote substantive gender equality in India's organ transplantation system.

Keywords

Gender Disparity, Organ Donation, Transplantation Law THOTA 1994, NOTTO, Health Equity & Justice, Living Donors, India

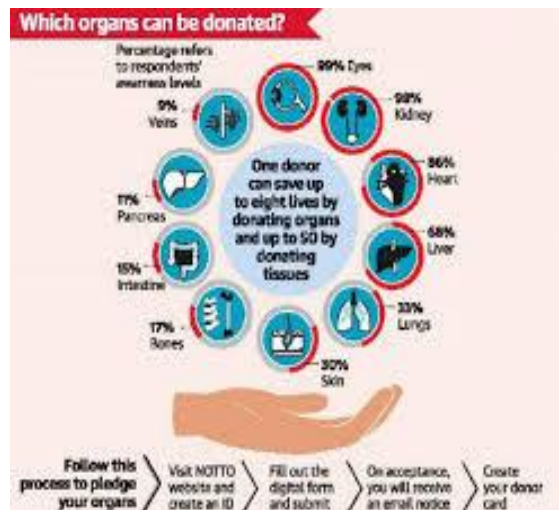
Introduction

Organ transplantation has emerged as a vital medical intervention for patients suffering from end-stage organ failure, particularly in situations where conventional treatment options are no longer effective. By replacing a diseased or non-functioning organ with a healthy one, transplantation not only increases life expectancy but also significantly improves the quality of life of patients. In India, organ transplantation is regulated by the Transplantation of Human Organs and Tissues Act, 1994 (THOTA), which provides the legal framework for the removal, storage, and transplantation of human organs for therapeutic purposes. The Act was enacted to curb commercial dealings in organs, ensure ethical transplantation practices, and protect the dignity and rights of donors and recipients. One of the most significant developments introduced by THOTA was the legal recognition of brain-stem death, which enabled deceased organ donation and expanded the potential donor pool in the country.

The legislation permits the transplantation of a wide range of organs and tissues. Transplantable organs include the heart, kidneys, liver, lungs, pancreas, intestine, uterus, thymus, and eyes, while transplantable tissues include corneas, skin, bones, heart valves, bone marrow, ligaments, cartilage, blood vessels, nerves, and composite tissues such as hands and faces. Among these procedures, kidney transplantation remains the most frequently performed in India as well as worldwide, followed by liver and heart transplants, reflecting the high prevalence of renal disease and the relative feasibility of kidney donation.

Despite the existence of a detailed statutory framework and institutional mechanisms, India continues to face an acute shortage of donor organs. Beyond this shortage, access to transplantation services is deeply influenced by social, economic, and cultural inequalities. One of the most persistent and ethically troubling issues within India's transplantation system

is gender disparity. Data published by the National Organ and Tissue Transplant Organisation (NOTTO) reveal a stark imbalance in transplant outcomes. Between 1995 and 2021, nearly four out of every five organ transplant recipients in India were men, while women were disproportionately represented among living organ donors.



The low representation of women as transplant recipients highlights a serious concern regarding equitable access to healthcare. It raises critical questions about whether women receive timely diagnosis, referral, and financial support for transplantation, and whether social expectations and family dynamics influence medical decision-making. This contrast between the law's formal commitment to equality and the gendered realities of transplantation practice forms the foundation of the present study. The research critically examines whether the existing legal framework adequately addresses the structural, social, and institutional factors that contribute to gender-based inequality in organ donation and

transplantation in India, and emphasizes the importance of achieving fairness and equity within the healthcare system.

Historical Background of Organ Transplantation

➤ Early Cultural Perspectives on Organ Replacement

Long before organ transplantation became a medical reality, the idea of restoring life through the replacement of body parts existed in cultural and philosophical thought. In the Indian tradition, several mythological narratives symbolically reflect this concept. The story of Lord Ganesha, whose life was restored by attaching the head of an elephant to a human body, illustrates an early imaginative understanding of anatomical substitution. Similarly, the account of Daksha Prajapati, who was revived after his head was replaced with that of a goat, represents the belief that physical restoration could be achieved through replacement. Although these stories are rooted in religious belief rather than science, they demonstrate that the notion of bodily renewal through substitution has long been part of human consciousness.

➤ Scientific Progress and the Rise of Transplant Medicine

Organ transplantation evolved into a scientific discipline during the twentieth century as medical knowledge and surgical techniques advanced. A major breakthrough occurred in 1954 when Dr. Joseph Murray successfully carried out a kidney transplant that resulted in prolonged survival of the patient. This success proved that transplanted organs could function within another human body, marking the beginning of modern transplant medicine. The field advanced further in 1967 when Dr. Christiaan Barnard performed the first human heart transplant. Although early survival outcomes were limited, the procedure demonstrated the feasibility of complex organ transplantation and encouraged continued research and innovation.

➤ Development of Transplantation Regulation in India

India's engagement with organ transplantation began in the 1970s with the introduction of kidney transplant procedures. Initially, transplantation was governed by a collection of state-specific laws that regulated certain organs and tissues. This fragmented legal framework proved inadequate in addressing unethical practices, particularly the commercial sale of organs. Rising concerns over exploitation and illegal trade led the Central

Government to establish the L. M. Singavi Committee in 1991 to examine transplantation practices and recommend reforms. The committee's work resulted in the enactment of the Transplantation of Human Organs Act in 1994, which created a uniform national system to regulate organ removal and transplantation. The Act prohibited commercial transactions, introduced safeguards for ethical donation, and formally recognized brain-stem death, thereby enabling deceased organ donation. Subsequent amendments in 2014 expanded the law to include tissues and strengthened regulatory oversight, forming the basis of the current transplantation framework in India.

Literature Review

Several studies and reports show that there is a large gap between the number of organs needed for transplantation and the number actually available in India. Although medical facilities and transplant procedures have improved over time, organ availability remains very limited.¹ Study of Notto Report for Organ Donation, as discussed in The Tribune, shows that even though the total number of organ transplants in India has increased, the number of organs donated after death is still very low. The main reasons identified include poor implementation of brain-death certification, lack of public awareness about organ donation, shortage of trained staff, and unequal hospital facilities across different states. As a result, many potential deceased donors are not utilised. Data from the NOTTO Annual Report (2023–24) further confirm that there is a serious shortage of organs such as kidneys, livers, and hearts. The report also points out large differences between states, with only a few states performing most deceased organ donations, while many states report very low or no donations. This shows that the problem is widespread and systemic.² Study to compare USA data a comparison with the United States, based on data from [organdonor.gov](https://www.organdonor.gov), shows a clear difference in how organ donation systems function. In the USA, most organ transplants come from deceased donors due to better organisation, effective waiting-list systems, and greater public acceptance of brain death. In contrast, India depends mainly on living donors, which highlights gaps in awareness, administration, and policy implementation.³ Statistics of organ donation and transplantation the legal aspects of organ

¹<https://www.tribuneindia.com/news/braindeathcertification/deceased-organ-donation-alarmingly-low-in-country-notto-report?utm>

² <https://www.organdonor.gov/learn/organ-donation-statistics/detailed-description#>

³ https://notto.mohfw.gov.in/WriteReadData/Portal/News/858_1_Updated_NOTTO_ANNUAL_REPORT_08-05-24_.pdf

donation in India are discussed in legal articles and case law published on Live Law, ⁴ Study of case law focusing on the Transplantation of Human Organs and Tissues Act, 1994. This law recognises brain-stem death as legal death and aims to regulate organ transplantation while preventing illegal trade. However, studies show that the law is not properly implemented in practice. Problems related to consent procedures, delays, and weak enforcement continue to limit deceased organ donation. Overall, the literature clearly shows that the low rate of deceased organ donation in India is mainly due to poor implementation of existing laws and policies rather than the absence of legal provisions. This study aims to examine these gaps and evaluate how the current legal and policy framework can be improved to increase deceased organ donation in India.

Objectives of the Act

The Transplantation of Human Organs and Tissues Act, 1994 was enacted to create a clear and lawful system for organ and tissue transplantation in India. The Act aims to regulate every stage of the transplantation process, including the removal, preservation, storage, and transplantation of human organs and tissues, so that these activities are carried out only for genuine medical treatment and in accordance with ethical standards.

A major objective of the Act is to completely prohibit the buying and selling of human organs and tissues. The law recognizes that commercial organ trade leads to serious exploitation, especially of poor and vulnerable individuals. By banning such practices, the Act seeks to protect human dignity and prevent misuse of the medical system.

To ensure proper implementation, the Act provides for the establishment of authorization committees and regulatory authorities. These bodies are responsible for approving transplant cases, monitoring hospitals and transplant centers, and ensuring that all procedures follow legal and ethical guidelines. The Act also sets out clear rules for donor consent, both for living donors and for organs donated after death.

Another important objective of the Act is to prescribe strict penalties and punishments for individuals, medical professionals, or institutions that violate its provisions or engage in

⁴<https://www.livelaw.in/columns/transplantation-of-human-organs-and-tissues-act-organ-donation-living-donor-organ-donation-deceased-donor-organ-donation-181127>

illegal organ trafficking. These penalties act as a deterrent and help maintain transparency and accountability in the transplantation system.

Overall, the Act seeks to promote voluntary, informed, and ethical organ donation, encourage public trust in organ transplantation, and ensure that lifesaving medical treatment is provided in a fair, safe, and human manner.

Objectives of the Research

- To examine the implementation and effectiveness of the legal framework governing organ transplantation in India, with specific reference to the Transplantation of Human Organs and Tissues Act, 1994.
- To identify the factors responsible for the low rate of deceased organ donation in India.
- To assess the role of transplant governance bodies and coordinators in regulating and monitoring organ transplantation activities.
- To analyse the legal and ethical issues associated with organ transplantation in India.
- To evaluate public awareness and perceptions regarding organ donation and brain-death certification.
- To examine gender disparities in organ donation and transplantation, particularly the differences in donation and access between men and women.
- To analyse socio-economic and cultural factors influencing women's participation in organ donation.
- To compare India's organ transplantation system with selected international practices and suggest reforms to promote transparency, fairness, and gender-equitable access.

This research highlights the hidden gender inequality within India's organ transplantation system and contributes to the development of gender-responsive legal reforms. The study is significant for policymakers, legal scholars, healthcare administrators, and human rights advocates.

Research Methodology

The research follows a doctrinal and analytical research approach. It examines the legal framework governing organ transplantation in India, particularly the Transplantation of Human Organs and Tissues Act, 1994, along with relevant rules and guidelines.

Primary sources include statutory provisions, judicial decisions, and official policy documents.

Secondary sources consist of NOTTO annual reports, Ministry of Health data, WHO publications, academic literature and policy documents.

Secondary statistical data published by national authorities is used to analyse trends, gaps and gender disparities in organ donation and transplantation. The analytical method is used to assess the effectiveness of the existing legal framework and identify areas requiring reform.

Research Problem & Hypotheses

Research Problem

- The organ transplantation law in India is written as gender-neutral, but in practice, women face inequality.
- Women donate organs more often than men but receive organ transplants far less frequently.
- Many women donate due to financial dependence, family pressure, and social expectations, especially in marriages.
- In spousal transplants, wives are much more likely to donate organs than husbands.
- The current legal and administrative system does not adequately protect women from these pressures.
- This gap between law and practice raises concerns about fairness, consent, and women's rights in organ donation and transplantation.

Hypotheses

- The gender-neutral organ transplantation law does not ensure equal treatment of women in practice.
- Women are more likely to donate organs but less likely to receive transplants due to social and economic factors.
- Financial dependence and family pressure significantly influence women's decisions to donate organs.

- Spousal organ donation patterns reflect gender bias rather than voluntary and equal choice.
- Stronger gender-sensitive legal and governance measures can reduce inequality and protect women's rights in organ transplantation.

Analysis and Interpretation

1. Statistical Overview of Organ Transplantation in India

India performs the third highest number of organ transplants globally, yet its per capita organ donation rate remains extremely low. According to national data frequently cited in policy discussions, India's deceased organ donation rate is less than 1 donor per million population, while the WHO recommends a rate of 65 donors per million. This sharp gap between global ranking and population-adjusted performance indicates structural inefficiencies rather than lack of medical capability.

At present, more than 3 lakh patients are on transplant waiting lists, and nearly 20 patients die every day due to non-availability of organs. This shortage creates a scarcity-driven system where access becomes selective rather than equitable.

2. Gender-wise Donor and Recipient Distribution

Statistical evidence consistently shows a reverse gender pattern in organ donation and receipt.

Category	Percentage
Women among living donors	60–70%
Women among kidney recipients	~37%
Women among liver recipients	<30%
Men among total recipients	~81%

This data highlights a donor–recipient imbalance, where women contribute more organs but receive fewer transplants. Such a pattern cannot be explained by biological or medical factors alone and points towards social and economic decision-making within families.

3. Spousal Donation Trends and Gendered Outcomes

Spousal organ donation reveals a significant gender imbalance. Nearly 90% of donors in spousal cases are wives, while husbands rarely donate to their wives. This shows that donation decisions are influenced more by societal expectations than by medical necessity. Women are often expected to sacrifice for their family's well-being, whereas men's health is prioritized due to their economic role. Even though the law treats such donations as voluntary, family and social pressures can limit a woman's real freedom to decide.

4. Economic Dependency and the Breadwinner Effect

Financial dependence significantly affects women's decisions to donate organs. Nearly 33% of women donors state that their dependent status influenced their choice, highlighting the "breadwinner bias" where families prioritize the health of earning members. Conversely, women who need organ transplants often experience delays or are unable to access treatment due to the high costs of surgery, lifelong medications, and post-transplant care, which are not fully supported under schemes like Ayushman Bharat for certain organs.

5. Organ-Specific Demand–Supply Analysis

A detailed examination of organ-specific requirements and actual transplants in India reveals a significant and systemic shortage across all major organs. The following table summarizes the annual demand, number of transplants performed, and the resulting supply gap:

Organ	Annual Requirement	Actual Transplants	Supply Gap
Kidney	~1,75,000	~13,500	~92%
Liver	~50,000	~700	~98%
Heart	~50,000	~30	>99%
Cornea	~1,00,000	~25,000	75%

The data clearly indicates that the organ shortage in India is severe and widespread. Such scarcity creates a context where allocation of organs is not determined solely by medical need but is heavily influenced by social, economic, and familial factors. Women, in

particular, are disproportionately affected in this scenario. Societal biases and economic dependence often result in women being under-prioritized as recipients, despite their higher participation as living donors. This trend underscores the intersection of organ scarcity with gender inequality in the Indian transplantation system.

6. Regional Patterns and Institutional Impact

Regional statistics reveal that states like Tamil Nadu, Telangana, and Maharashtra have higher deceased donation rates due to better coordination and infrastructure. Conversely, states dependent on living donations show higher pressure on family members particularly women to donate.

This uneven state-level implementation demonstrates that institutional capacity directly affects gender outcomes. Where deceased donation systems function well, reliance on women donors decreases.

7. Interpretation of Legal and Institutional Performance

From a legal standpoint, THOTA focuses on preventing commercial exploitation and regulating procedures. However, statistical trends show that procedural compliance alone does not ensure fairness. Authorization Committees assess documentation and relationships but rarely examine power imbalance, economic pressure, or long-term impact on women donors.

The absence of mandatory gender-disaggregated reporting, psychosocial evaluation, and donor follow-up mechanisms allows inequality to persist unnoticed within the legal framework.

The statistical analysis demonstrates that gender disparity in organ transplantation is not incidental but structural. Scarcity of organs, economic inequality, social norms, and uneven institutional capacity interact to produce outcomes where women donate more but receive less. While the law regulates transplantation processes, it fails to regulate the social conditions under which consent and access operate.

Findings of the Study

- The organ transplantation law applies equally to everyone, but women do not benefit equally from it.
- Women play a larger role as organ donors than as organ recipients.
- Family traditions and expectations often push women to donate organs.
- Women's financial dependence reduces their freedom to refuse donation.
- Authorities focus on legal paperwork instead of real-life pressure.
- There are no strong systems to support or counsel women donors.
- Poor deceased donation systems increase the burden on women.

Conclusion

Gender imbalance in organ donation and transplantation in India shows that social values and family traditions still influence medical decisions. Women often become donors because of emotional and social pressure, while men receive more medical priority and financial support. Even though the Transplantation of Human Organs and Tissues Act, 1994 gives legal rules for organ donation, it does not clearly protect women from these inequalities.

To improve the situation, India must focus on gender-sensitive reforms. Hospitals should collect separate data for men and women, increase counselling for families, and ensure that women receive equal chances of getting organs. Awareness programmes are also needed to teach people that organ donation should be based on medical need, not gender.

If gender concerns are included in law and practice, the organ transplant system in India can become more fair, transparent, and inclusive. This change is important for protecting women's health rights and building public trust in the donation process.

Suggestions and Recommendations

- **Raise Public Awareness About Gender Equality:** Conduct campaigns and workshops to educate families and communities that organ donation should be equal for men and women.
- **Promote Deceased Organ Donation:** Strengthen brain-death certification and encourage

donation after death to reduce pressure on women as living donors.

- **Gender-Impact Assessment in Living Donation:** Introduce mandatory assessments to ensure women are not pressured and give voluntary, informed consent before donating organs.
- **Provide Counselling and Psychosocial Support:** Ensure women donors and recipients receive proper counselling, both before and after transplantation, to protect their mental health and rights.
- **Train Medical and Legal Staff:** Equip doctors, transplant coordinators, and authorization committees to identify and prevent gender bias during the transplant process.
- **Maintain Gender-Disaggregated Data:** Collect and publish data on male and female donors and recipients separately to monitor inequality and guide policy changes.
- **Enforce Legal and Ethical Standards:** Ensure strict implementation of THOTA, 1994, to prevent exploitation, illegal trade, and coercion in organ donation.
- **Financial and Healthcare Support for Women:** Provide government aid, insurance, and special healthcare support to women recipients to remove economic barriers.
- **Strengthen Transplant Infrastructure:** Expand hospitals, transplant centers, and trained medical teams to improve access and efficiency across the country.
- **Community and Family Counselling Programs:** Offer guidance programs to families and women to help them make informed and voluntary decisions about organ donation.



References

ForumIAS. (2023). Organ donation in India: An overview. <https://forumias.com>

Government of India. (1994). the Transplantation of Human Organs and Tissues Act, 1994. Ministry of Law and Justice.

Indian Express. (2023). Gender disparity in organ transplantation in India. <https://indianexpress.com>

McGill Centre for Human Rights. (2022). Gender disparities in organ donation and transplantation in India. <https://www.mcgill.ca/humanrights>

National Organ and Tissue Transplant Organisation. (2022). Organ donation and transplantation data (1995–2021). Ministry of Health and Family Welfare. <https://notto.mohfw.gov.in>

National Organ and Tissue Transplant Organisation. (2024). *NOTTO* annual report 2023–24. Ministry of Health and Family Welfare, Government of India.

NextIAS. (2025). Gender disparity in organ donation in India. <https://www.nextias.com>

Drishti IAS. (2024). Organ donation in India: Issues and challenges. <https://www.drishtiias.com>

World Health Organization. (2020). Global observatory on donation and transplantation. WHO Press.

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