

ENGINEERING SOLUTIONS AND NETWORKS FOR MONITORING AND REGULATING ORGAN TRADE: BALANCING ALTRUISM AND COMMERCIALISM**Cheryl Betsy Mathew¹ and *Surbhi Agarwal²**¹LLM Student, 4th Semester, Kalinga University, Naya Raipur, Chhattisgarh²Assistant Professor, Faculty of Law, Kalinga University, Naya Raipur, Chhattisgarh¹cherylbetty@gmail.com and ²surbhi.agarwal@kalingauniversity.ac.in**ABSTRACT**

Organ Commerce highlights the moral dilemma related to altruism and commercialism in organ trading, underlining the exploitation in organ trafficking and the absence of legal safeguards for reproductive cells. The increase in cases of organ trafficking, credit to dwindling finances and opportunities, spur the market of ready currency and increasing demand, and the lack of legally obtainable organs in India. The nightmare of ethicality, morality and human rights whereby a State-approved organ harvesting program mushrooms, which targets prisoners of conscience is least to say concerning. The global black market for organs, with a value of \$1.7 billion, includes different individuals who take advantage of the less fortunate for profit. Legal structures and global agreements, such as THOTA and the UN Palermo Protocol, are designed to address the issue of organ trafficking. The business of organ and tissue commercialism, the practice of medical tourism in India, and the importance of incorporating reproductive cells into transplant regulations for ethical reasons need to be appropriately regulated so that those prone to abuse are not abused.

Keywords: Organ trading, reproductive cells, altruism, ethicality, harvesting program

1. INTRODUCTION

The commercial organ trade began in the 1980s when American and European transplant surgeons recruited Indian citizens to sell kidneys to wealthy foreign patients, mainly from the Middle East. About 80% of kidneys transplanted in Indian hospitals were for patients from Gulf States, Malaysia, and Singapore. The success of organ transplantation has increased in recent years, but there is a need for better regulation to prevent exploitation and ensure ethical standards. In India, laws like the Indian Penal Code and the Transplantation of Human Organs and Tissues Act (THOTA), with organisations established under it overlooks, provide a framework for the legal and ethical transplantation of organs and tissues.

Reproductive health, including the sale and donation of gametes, is often overlooked in legislation surrounding organ donation. The absence of legal protections for egg and sperm donors can leave individuals vulnerable to exploitation. It is crucial for policymakers to address these gaps in regulation to protect the rights and well-being of those involved in reproductive donation. Ultimately, prioritizing the ethical treatment of organ and gamete donors is essential in creating a system that upholds human dignity and reproductive rights.

2. RESEARCH OBJECTIVES

The objectives of the research are:

- a) Delve into the ethical consequences of altruistic acts versus profit-driven motivations in the realm of organ trade.
- b) Research the international underground trade of organs and how it affects marginalized communities.
- c) Explore how India's status as a medical tourism hotspot impacts the trade of organs and tissues.
- d) Research the omission of gametes from transplant policies and suggest actions to safeguard the rights of donors.

3. ORGAN HARVESTING

Organ Harvesting, also known as Organ Trafficking, is the illicit practice of surgically removing organs from individuals without their consent for commercial purposes. This form of "customized mortality" exploits the critical shortage of available human organs for transplantation, leading to unethical practices such as trafficking in persons for organ removal. In countries like India, private transplant centers operate, catering to foreign clients and continuously adding new victims to their list. Organ trafficking involves the exploitation of vulnerable individuals through coercion, deception, and abuse, with kidneys being the most commonly trafficked organ due to high demand for transplantation.

Kidneys are the most popular organs for transplantation due to high demand, leading to a rise in illicit organ trafficking. Apollo Hospitals was exposed for participating in a "cash for kidneys" racket, targeting impoverished individuals in Myanmar. In India, about 200,000 people need transplants annually, with only 3% of the demand being met. In 2020, there were 7,443 organ transplants conducted, with the majority being kidney transplants from living donors, highlighting the issue of organ trafficking for profit.

3.1.1. The Chinese Case Study: A State Sanctioned Organ Programme

The People's Republic of China is the largest and most populous Asian country. The high population density contributes to financial struggles, leading to crimes driven by monetary gain. This harsh reality is evident in Chinese prisons, where organ harvesting, a term synonymous with organ trafficking, occurs. This illegal and immoral state-run program involves executing prisoners of conscience to obtain their organs for profit. Despite challenges in obtaining evidence, clear indicators suggest innocent individuals, including religious minorities like Falun Gong practitioners and Uyghurs, are unjustly sentenced to death for organ transplants. This inhumane practice fuels a multi-billion dollar industry with tens of thousands of transplants annually, involving complicit physicians who betray their oath to do no harm.

3.1.2. Consented Donors or Forced Victims

China operates the world's largest forced labour camp system, known as the "Laogai" complex, with approximately 1000 camps. An estimated 3-7 million individuals are exploited as slaves within these camps, enduring gruelling conditions and working long hours without adequate rest, food, or medical attention. Many prisoners, including followers of Falun Gong and Uyghurs, are subjected to torture, violence, and organ harvesting. Chinese authorities can detain citizens arbitrarily for up to 4 years without due process or the right to appeal. Organ removal from executed individuals is acknowledged by China, with inmates coerced into donating organs. The death penalty is imposed for non-felony offenses, often based on coerced confessions. This widespread violation of human rights demonstrates a disturbing disregard for human autonomy and dignity in the pursuit of state interests.

3.2. Black Market for Organs

The black market for organs is a criminal trade in organs where such transactions are illegal, valued at 1.7 billion dollars globally. It emerges in response to a shortage of organs, posing a challenge in all countries. People often sell organs for quick cash, like selling a kidney for a new iPhone. A recent case in Pakistan exposed an organ trafficking ring that lured victims with false promises. India is also involved in this illegal trade, known as a 'Medical Tourism Destination' due to its cheap medical procedures.

3.2.1. Trafficking in Persons for the Purpose of Organ Removal (TIP for OR)

It is the nefarious occupation of exploiting vulnerability, of employing deception, abuse and coercion for the gains of an individual's organs. TIP for OR doesn't necessitate the organ to be physically extracted as the person being trafficked constitutes the offense itself. The individual trafficked creates the essence of the entire crime, encompassing the trifecta of motive, action and means. The Palermo Protocol criminalizes this organised criminal activity under Article 3. Various International Statutes and Protocols recognise organ removal as exploitation in cahoots with trafficking.

3.2.2. Trafficking in Organs or Trafficking in Organs, Tissues and Cells (OTC)

Trafficking in OTC, contrary to the working of TIP for OR, is the offence of causing criminal industry of organs for either financial or material gains where the person trafficked is not the modus but procurement of organ without valid consent is the crux which forms the crime. This slight distinction creates wide latitude for its engagement as this crime does not focus on the person for the purpose of organ removal but on the organ or body parts regardless of the state of the donor from whom it was sourced, living or dead.

Among the standing international conventions and protocols like The Declaration of Istanbul and the Palermo Protocol though not being an binding statute, provide uniform definitions which include both TIP for OR and Trafficking in OTC; the Council of Europe (CoE) Convention against Trafficking in Human Organs, 2015, presides as the most credible scale of standards for prevention and fight against trafficking in organ trafficking, criminalizing related commissions, facilitating national and international collaboration, stating and safeguarding victim rights.

3.2.3. Trafficking Circuit Players:**a) International Coordinators**

The organ market thrives on poverty, exploiting those desperate for a means to survive. Organ trafficking networks profit from the vulnerabilities of both donors and recipients, endangering their health for financial gain. International coordinators oversee these transactions, connecting buyers with sellers and facilitating illegal transplant procedures. Recruiters and brokers lure victims into selling their organs, targeting vulnerable individuals in impoverished communities. They manipulate trust, using similar backgrounds or connections to control their victims. Economic hardship drives individuals to seek out recruiters, often deceived by false promises or coercion. The cycle of exploitation continues to spread globally, fuelled by the financial struggles of those seeking a way to provide for their families. The unethical practices of organ trafficking endanger the lives of countless individuals, perpetuating a vicious cycle of exploitation.

b) Recruiters and Brokers

Brokers and recruiters are crucial players in the organ trafficking network, responsible for identifying vulnerable individuals and persuading them to sell their organs. They often come from similar social and economic backgrounds as their targets, gaining their trust and luring them into the illegal trade. Medical personnel and institutions in India have been involved in organ trafficking, with the responsibility to prevent it now placed on authorization committees. However, cases like the Hiranandani kidney scandal in Mumbai in 2016 have revealed the complicity of medical professionals in these illegal activities. The connections between medicine, industry, politics, and organ trafficking are deeply embedded in major Indian cities, with a significant prevalence of transplantation surgeries. Collaboration with medical professionals and transplant hospitals is crucial in combating organ trafficking, as these individuals play integral roles in carrying out transplant procedures.

c) Medical personnel and Institutions

Healthcare professionals play a crucial role in the organ donation process through conducting necessary medical tests to confirm eligibility and compatibility between donors and recipients. Laboratories and facilities assist in matching suppliers with recipients, making the process smoother. The involvement of doctors, brokers, and coordinators in trafficking networks can result in illegal transplant transactions, sometimes without the awareness of hospitals. Effective communication between matching facilities and operational teams is key to preventing such activities. Collaboration with medical professionals and transplant hospitals is vital in tackling illicit organ trafficking, as demonstrated by cases like the Rosenbaum Network in the USA.

4. DECLARATION OF ISTANBUL (DOI) AND UN PALERMO PROTOCOL

The DOI is a significant global initiative to address organ trafficking and transplant tourism issues. Created, 2008, by international experts from the Transplantation Society and International Society of Nephrology, it promotes ethical organ transplantation practices worldwide. The Declaration outlines principles to combat organ trafficking,

protect donors and recipients, ensure transparency in transplantation systems, and discourage unethical organ procurement in transplant tourism.

The UN Palermo Protocol is an international legal tool adopted in 2000 to combat trafficking. It focuses on preventing trafficking, punishing traffickers, and protecting victims, especially women and children. The protocol stresses the importance of a comprehensive, global approach involving countries of origin, transit, and destination to safeguard the human rights of all individuals involved.

5. ORGAN COMMERCIALISM

A consented organ donor, with none profiteering goals, is a far greater ordeal than searching for a compatible organ. The demand for organs supersedes its supply. Worldwide, over 150,000 transplants take place per annum, but this figure only ever meets a fraction of that, <10% of the global demand. Despite this shortfall, certain patients, desperate for treatment, resort to unlawful methods, not wavering at financially exploiting vulnerability and impoverished individuals, to secure organs for transplant procedures.

Organ commercialism is a steady partner in the growth of organ trafficking. Desire and desperation accompanied with an unbarred money flow is capable of finding sellers where only vulnerable buyers exist. DOI was the initial effort against organ commercialization and transplant tourism, specifically providing definitions for transplant tourism and transplant commercialism; CoE's Additional Protocol to the Convention on Human Rights and Biomedicine concerning Transplantation of Organs and Tissues of the Human Origin Article 21 prohibits financial gain from organ sales and advertising for organ solicitation. Article 22 prohibits organ trafficking. Financial gain or advantages from the human body or its parts are impermissible. Reparation for excessive harm caused by donation is allowed.

5.1. Tissue Commercialism

The terms "trafficking in organs" does not strictly adhere to its term of 'organs' but is inclusive of it. The act of trafficking for organs in entirety is a prohibited range of illegal activities encompassing trafficking for OTC is barred under law. In recent year, there has been a notable increase in the use of human tissue, driven by expansions in the medical technology. Tissue commerce helps in understanding and studying ailments and external stimuli which affect the human body, in turn aiding medical progress and increasing the ability and probability of saving and extending lives. These developments have facilitated the widespread adoption of tissue-based treatments, ranging from bone screws, collagen products, acellular dermis matrix, various blood products and injectable fascia lata (FL) etc. This tissue usage is poised for further growth owing to enhancements in procurement, storage, distribution and stringent quality assurance protocols.

The THOTA 1994 in India prohibits the unauthorized removal of tissues and receiving payment for providing human tissues. Under section 19A of the Act, it bars the illicit transactions in human tissues, providing the reds of operations like participating in the sale or purchase of human tissue, providing it for a fee, arranging payment, overseeing a team, or advertising for it will result in imprisonment for one to three years and a fine of five to twenty-five lakh rupees. The same consequences apply to those who aid in submitting fake documents regarding the donation of human tissues.

There has been a lack of focus on illegal and unethical practices related to the acquisition and medical application of other human-derived substances, like tissues. This may be because tissue transplantation is not as well-known or common in society as organ transplantation, even though the latter occurs less often. In addition, there is a lack of global consensus on defining illegitimate and immoral practices involving human tissues, there needs to be an inclusion as well of reproductive cells under the defining ambit "trafficking in human tissues" must be established globally, with the participation of all relevant parties. Tissues are typically not scarce rather considered in surplus, largely due to the availability of synthetic alternatives. Annually, large biobanks store vast quantities of processed tissues, which are utilized for therapeutic and research purposes. The commercialization of tissues is thriving, turning Biobanking into a lucrative multi- million dollar industry

6. TRANSPLANT TOURISM

Transplant tourism relies on four groups:

- 1) Patients in dire need, willing to travel far and face risks for transplants
- 2) Sellers of organs who are also desperate and mobile
- 3) Rogue surgeons willing to break laws and norms; and
- 4) Middlemen with connections to the underground world of transplant tourism.

Transplant tourism boosts the economy of developing countries with growing medical facilities but financial struggles. It includes patients seeking treatments in developed countries, as well as donors and recipients traveling for transplants in nations with less strict regulations. DOI details how organ trafficking and commercialization can turn travel for transplantation into transplant tourism, impeding a nation's capacity to provide for its residents.

6.1. Medical Tourism

Medical tourism, also referred to as medical travel, health tourism or global healthcare, is the burgeoning trend of people traveling to different countries for healthcare services. Travellers commonly seek a variety of services, ranging from elective procedures to complex surgeries. India is a top destination for medical tourism due to its top-rated hospitals, skilled medical staff, and advanced technology. The country offers a wide range of medical treatments, including elective surgeries and alternative therapies. Indian nurses are highly regarded globally, with nearly 1000 accredited training centers producing around 10,000 nurses annually. Healthcare providers are skilled in English, facilitating easy communication with patients from around the world. Doctors frequently possess global experience, and medical procedures in India are frequently cheaper in comparison to Western nations, rendering it an appealing choice for high-quality healthcare at reduced prices.

7. LDOC AND DDOC

Living Donor Organ Commercialism (LDOC) and Deceased Donor Organ Commercialism (DDOC) are two strains of Organ Commercialism, bifurcated on the basis of the status of the corpus when the organ was extracted, in essence, was the organ extracted from a living donor or from a cadaver. LDOC involves the illicit exchange of organs obtained from living donors for monetary compensation or other material incentives for transplantation purposes. It is a practice that takes undue advantage of an individual's vulnerability and desperation, feeds the fodder of greed and money lust to trafficking rings which sustain of man's desire to survive, to see the next sunshine. Such organ transactions raise concerns for ethicality and legality.

LDOC faces exploitation and organ trafficking due to supply-demand imbalance. Promoting cadaveric donation can reduce exploitation and dismantle the black market for organs, shifting away from commercialism and embracing an optimistic view of the economic system.

7.1. Deceased Donor Organ Commercialism (DDOC)

DDOC appearance varies based on transaction type, market boundaries, legal standing, parties, and exchanged commodity for organs. In a futuristic 'futures market,' sellers agree to future organ sales. Buyers purchase the privilege to extract organs after sellers pass away. Sellers may receive compensation during their lifetime or posthumously. In vivo payments are expected to be small due to low chances of organ donation.

Post-mortem payments are typically higher due to successful organ retrieval. Secondary commodification occurs when organ buyers interact with the deceased's beneficiaries or hospital staff. DDOC and LDOC can operate domestically or internationally. Legal or illegal markets for organs from deceased donors exist, with most cases being regulated or semi-regulated. Sellers of organs from deceased donors may include the deceased themselves, individuals with a stake in the body (such as family), or those in physical control (like hospitals).

Cadaveric donation whether compensated or not can bridge gaps in the survival and supply of people and organs. But it is imperative to note that adding of commercialization to the sensitive task of reaching out to the bereaved

relatives can jeopardize the integrity of the organ transplant procedure. Providing monetary rewards in this delicate situation could lessen the comfort that organ donation after death, especially for those with religious or cultural reservations. Potential donors may have concerns about being involved in organ donation programs due to worries about being declared dead too early or having their death sped up. Therefore, the idea of participating in a futures market for organs, in which one's organs are pledged prior to death, is extremely disturbing in an environment characterized by doubt and distrust.

While there are law and policies for governing the hard and soft tissues, legislations prohibiting organ trafficking and its minions, there prevails a gaping hole of absent legislations which govern the reproductive cells; their sale, extraction or purchase. THOTA, although not brazenly, forgets to include gametes- male and female- under the ambit of soft tissues which makes them prone to abuse, mistreatment and trade.

8. INCLUSION OF REPRODUCTIVE CELLS UNDER “SOFT TISSUES”

The Transplantation of Human Organs and Tissues Act (THOTA) primarily focus on regulating the transplantation of solid organs like kidneys, hearts, and livers, excluding reproductive cells such as eggs and sperm. This absence in legislation creates a legal gap in governing the removal, storage, and transplantation of reproductive tissues, leaving room for potential misuse and unethical practices. The Surrogacy (Regulation) Act, 2021 initially banned donor gametes but later allowed their use for married couples in surrogacy. India lacks specific laws on egg and sperm transplants, but the Indian Council of Medical Research regulates assisted reproductive technology (ART) clinics to ensure ethical and safe fertility treatments.

Inclusion of gametes in transplantation laws can impact medical tourism and provide a legislative framework for regulating a crucial aspect of reproductive medicine. Increased male factor infertility, such as teratozoospermia, underscores the importance of following proper guidelines in semen analysis as per the WHO Manual. Incorrect classification of sperm morphology by technicians can lead to unnecessary diagnoses and ineffective treatments, causing wasted resources and looted patients.

9. CONCLUSION

Global organ trafficking is a major issue, highlighting exploitation and the need for improved regulation. Legislation gaps exist for reproductive cells, with a call for comprehensive laws to prevent misuse. Medical tourism in India raises ethical concerns in organ transplantation. Ethical practices in organ donation are crucial, advocating for systems that respect human dignity and reproductive rights.

The omission of gametes in medical laws creates gaps in oversight, allowing unregulated reproductive practices that can exploit patients seeking treatment overseas. Nations with relaxed gamete regulations attract medical tourists seeking affordable and faster reproductive treatments. Including gametes in regulations ensures quality assessments, informed consent, and cultural sensitivity, promoting ethical and accountable behaviours in reproductive medicine. Legislation should balance donor rights with patient welfare and promote international consistency in laws to prevent abuse. Overall, addressing the oversight of reproductive tissues in transplantation laws and ensuring compliance with quality standards can enhance the ethical and responsible practice of fertility treatments in India. Research and innovation in the ethical use of gametes are crucial for advancing reproductive medicine responsibly. Integrating gametes into healthcare policies enhances transparency, quality, and patient safety, influencing patient decisions and clinic choices in the medical tourism industry.

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