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Redefining Parenthood: Surrogacy Amid Legal and Technological Evolution

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Abstract

This paper examines the intersection of law, technology and surrogacy within the framework of Assisted Reproductive Technologies (ART) and the Surrogacy Regulation Act, 2021. With the rapid advancement of reproductive technologies surrogacy has become a significant solution for individuals and couples facing infertility or other barriers to natural conception. However, this progress brings forth complex legal, ethical and socio-cultural challenges. The paper delves into the implications of surrogacy on traditional family structures, parentage, identity and societal norms while addressing the risks of exploitation and commodification of surrogate mothers and children. It emphasizes the necessity of a comprehensive and inclusive legal framework to safeguard the rights of all stakeholders including surrogate mothers, intended parents and children while ensuring ethical use of ART. This paper also explores how surrogacy redefines parenthood and disrupts conventional perceptions of family. Drawing on historical and contemporary examples, it highlights the importance of aligning technological innovations with human rights principles and ethical standards. Recommendations include transparent surrogacy agreements, international cooperation in regulating surrogacy practices and psychological support for all participants. The study underscores the need for a balanced approach that integrates legal protections, ethical integrity and technological progress to foster equitable and dignified surrogacy practices.

Keywords: Surrogacy & infertility, Surrogacy Regulation Parenthood, Reproductive Technology, Assisted Reproductive Techniques

Introduction

Traditionally the legal mother of a child has been identified as the woman who gives birth. This presumption of motherhood has formed the

basis for legal rights and responsibilities associated with parenting. However, advancements in reproductive technology have presented legal challenges to this traditional notion. The rise of surrogacy can be attributed to a confluence of factors, including environmental changes and lifestyle alterations. Deteriorating air quality, contaminated water, and compromised nutrition, exacerbated by environmental degradation, have contributed to rising infertility rates. Concurrently, societal shifts, such as the growing acceptance of same-sex relationships, have challenged traditional family structures. These factors, coupled with personal choices and circumstances, have led to a surge in couples seeking surrogacy as a means of having a child[1]. The increasing possibilities of surrogacy and other assisted reproductive technologies have forced legal systems to reconsider the definition of motherhood and the nature of the mother-child bond[2]. The increasing prevalence of surrogacy has highlighted the complexities of inequality, parentage, the mother-infant bond, and ethical concerns. Issues such as exploitation, human rights abuses, and the social justice system are intertwined with the practice of surrogacy.

Technology refers to the application of scientific knowledge to create tools and devices for practical purposes. These can range from simple objects to complex systems and can help to solve human problems. The decline of spiritual influence within the scientific community, coupled with the rise of materialism, has paved the way for innovations in reproductive technology. This shift has led to the development of Artificial Reproductive Technologies (ART), designed to intervene in the process of human reproduction. Since the mid-20th century, ART has facilitated scientific advancements in surrogacy.

The advent of surrogacy has changed the concept of parenthood. In vitro fertilization (IVF) technology gained popularity with the birth of the first test-tube baby, Louise Joy Brown, on July 25, 1978, thanks to the efforts of Robert Edwards and Patrick Steptoe. According to evidence, approximately five million infants have been born utilizing fertility treatment worldwide[3] On 3 October 1978, the first test-tube baby (the second in the world) was born in India using IVF under the care of Dr. Subhash Mukhopadhyay. However, professional envy and humiliation from his colleagues, along with public ostracism and government indifference, drove Dr. Subhash Mukhopadhyay to commited suicide in 1981[4]. The second test-tube baby was born in Mumbai in 1986 under the direction of Dr. Anand Kumar and Dr. Indira Hinduja, and IVF method did become more popular in the 1980s.

This paper talks about the advancement of technology, how a woman can now become the biological mother of a child without carrying the baby in her womb for 9 months. If due to any reason the husband also gets a serious illness or a life threatening disease, then his sperm can be

stored to fulfill the desire of becoming a mother in future and to carry forward the husband's lineage [5]. All this has become possible only because of technology and assisted reproductive techniques are the best examples for this

RESEARCH METHODOLOGY

The study adopts a descriptive and analytical design to explore the intersection of surrogacy, law, and technology. It critically examines existing legal frameworks, societal perceptions, and ethical dilemmas associated with surrogacy practices in India. Academic articles, legal documents, case laws and policy papers related to surrogacy and ART is also analyzed here. The methodology aims to provide a comprehensive understanding of how surrogacy redefines parenthood in India the legal challenges it presents and the ethical safeguards needed to ensure equitable and humane practices. The study offers policy recommendations for aligning surrogacy practices with technological innovations and human rights principles.

ASSISTED REPRODUCTIVE TECHNOLOGY

Assisted reproductive technologies (ART) are medical procedures that help individuals struggling with infertility to conceive. Where Eggs are fertilized with sperm in a laboratory and then transferred to the uterus, sperm is directly injected into an egg, embryos or gametes are frozen for later use, drugs are used to stimulate ovulation and increase the chances of conception, sperm is introduced directly into the uterus etc.

TYPES OF ASSISTED REPRODUCTIVE TECHNOLOGIES

Basic Forms of ART:

- **Fertility drugs:** These medications are given to women to stimulate their ovaries, encouraging the production of more eggs or regulating their timing of release.
- **Sperm treatment:** Therapies may be used to increase sperm count in men, allowing natural fertilization after intercourse.

Advanced Forms of ART:

- **Sperm and zygote banking:** This involves freezing sperm or fertilized eggs for later use in fertility treatments.
- **Artificial insemination (AI):** Sperm is introduced directly into the woman's reproductive tract for fertilization.
- **In vitro fertilization (IVF):** Eggs are retrieved from the woman and fertilized with sperm in a laboratory setting. The resulting embryo is then implanted in the woman's uterus for development.
- **Surrogacy:** A woman carries a pregnancy for another couple, often using an embryo created through IVF.

HISTORICAL CONTEXT OF SURROGACY

Surrogacy is a relatively new practice, yet the notion dates back to ancient India. There are several instances in Hindu mythology in which mothers carried infants for others. Devaki and Rohini's narrative from the Mahabharata is a famous example. Devaki, unable to have children safely owing to a curse, had her unborn kid moved to Rohini's womb[6], where she gave birth to Krishna's brother, Balarama. Due to which Balaram ji was also named Sankarshan. This ancient practice laid the groundwork for modern surrogacy. The birth of 100 kaurvaa's, the birth of Drishtyadhumna and Draupadi etc are other examples from ancient time.

While the modern debate surrounding surrogacy is relatively recent, the concept itself can be traced back to biblical times. The Old Testament story of Sarah and Hegar, in which Sarah persuaded her husband, Abraham, to have a child with their maid, Hagar, provides an early example of surrogacy. Although there were no formal contracts or payments involved in this ancient case, the practice of one woman carrying a child for another couple was established[7]. As society and reproductive technology evolved, the concept of surrogacy gained wider recognition. Advancements in procedures like artificial insemination and in vitro fertilization made surrogacy a feasible option for infertile couples.

MEANING OF SURROGACY

The term "surrogate" originates from the Latin word "subrogate," meaning "to substitute." A surrogate mother is a woman who carries and gives birth to a child with the intention of relinquishing parental rights to another person or couple, known as the intended or commissioning parents. Surrogacy has become an important fertility treatment, especially for women who cannot carry pregnancies due to medical conditions or uterine anomalies. IVF technology has made it possible for these women to achieve motherhood by having embryos created with their own or donor eggs and transferred to a surrogate's uterus. Additionally, surrogacy has enabled same-sex couples and single men to become parents by using their sperm and donor eggs to create embryos[8].

The role of technology in surrogacy

The human reproductive system is a marvel of biological engineering. Through a series of intricate physiological and chemical processes, a sperm fertilizes an egg. These gametes, each with half the genetic information (DNA) from the parent, fuse to create a single cell called a zygote. Under normal circumstances, the zygote develops into a fetus over time, eventually being born as a child around nine months later [9]. The core components of this system are the sperm cells, egg cells, and the act of sexual intercourse between males and females. The sperm carries its

genetic material in a nucleus rich in DNA, while the egg cell houses a large nucleus surrounded by cytoplasm containing cellular components. When fertilization occurs, the resulting zygote possesses the full set of chromosomes, half from each parent. This child inherits its DNA from both parents, carrying on the genetic code for future generations.

Unfortunately, not everyone can conceive naturally due to various factors causing infertility in one or both partners. Fortunately, modern science provides solutions through Assisted reproductive technologies (ART**)**. ART encompasses a range of basic and advanced procedures designed to help infertile couples build families[10]. In 1999, a groundbreaking assisted reproductive technology (ART) was developed that allowed men with certain diseases to become biological fathers without transmitting them to their children. This innovative program offered a new hope for couples facing fertility challenges due to genetic conditions. Sperm washing, a procedure where sperm is separated from HIV-infected semen, has shown remarkable success in preventing HIV transmission among discordant couples. A comprehensive analysis published in Fertility and Sterility in 2016 reviewed 40 studies and reported zero HIV transmissions from 11,585 sperm washing procedures conducted prior to IVF or IUI in nearly 4,000 women[11].

The CDC (Center for Disease Control) acknowledges that sperm washing combined with HIV medications and PrEP (Pre – exposure prophylaxis) for the uninfected partner further reduces the risk of transmission. However, even when only the man is on antiretroviral therapy, studies have demonstrated a very low transmission risk, estimated at 0.16 per 10,000 exposures[12]. All this was possible because of technology.

Discussion

The rise of surrogacy has transformed reproductive possibilities for individuals and couples facing infertility, same-sex partnerships, and other challenges. However, it has also brought to light significant ethical, legal, and social concerns. Surrogacy arrangements, especially those involving donor sperm, can create complex parentage issues and raise questions about child welfare. The vulnerability of surrogate mothers and the potential for exploitation in surrogacy are also major concerns. Additionally, the social and psychological impact on children born through surrogacy, as well as the ethical implications of commercializing reproduction, must be carefully considered.

To ensure ethical and safe surrogacy practices, comprehensive legal frameworks, transparent regulations, ethical guidelines, and psychological support are essential. Laws should protect surrogate mothers and children, while regulations should prevent exploitation. Ethical principles must guide

the application of ART in surrogacy, prioritizing human dignity and rights. Additionally, psychological counseling for all involved parties is crucial to address emotional and social challenges, because it promoting ethical surrogacy, including altruistic arrangements, can help safeguard the welfare of all parties involved and uphold the dignity of motherhood and parenthood.

Surrogacy, made possible by advancements in assisted reproductive technologies (ART), offers a valuable option for individuals and couples facing infertility A comprehensive approach to surrogacy regulation, emphasizing human rights and ethical principles, is crucial to ensure that the practice benefits all parties involved and prevents exploitation. Technology, when used responsibly and aligned with ethical values, can be a powerful tool for promoting human well-being and progress.

The Assisted Reproductive Technology (Regulation) Act, 2021, while a positive step, has room for improvement. Expanding access to include single individuals and LGBTQ+ couples, reviewing eligibility criteria, clarifying key terms, addressing ethical concerns, and increasing regulation are essential to ensure the act effectively regulates ART and protects individual rights. By addressing these shortcomings, the act can better serve the needs of those seeking to use assisted reproductive technologies in India.

Conclusion

The rise of surrogacy has brought forth significant socio-cultural concerns. Traditional surrogacy arrangements using donor sperm can lead to complex parentage issues, as the child may not be genetically related to either parent. This disconnect, coupled with potential behavioral challenges arising from genetic imbalance, can result in difficulties in meeting the child's needs. Without adequate legal protections, surrogate children with genetic defects may be at risk. Abandonment by commissioning parents can lead to disastrous consequences for the child's upbringing, especially when the surrogate mother is not emotionally or financially prepared for the role. In some instances, when the child born through surrogacy is not genetically related to the commissioning parents, they may disown the child. This can result in the child being placed in an orphanage. Despite well-intentioned motives, the phenomenon of "anonymous paternity" can create a high potential for child abuse.

Humans thrive within complex social relationships, starting with the family. The concept of surrogacy challenges traditional family values by separating procreation from marriage. This can lead to psychological and social issues for the child, including stigma, integration difficulties, and

potential personality crises. Without proper family integration, a surrogate child's development may be hindered, raising serious justice concerns for the most vulnerable.

The advancements in Artificial Reproductive Technologies (ART) and the subsequent rise of surrogacy are significant achievements in human innovation. They have brought joy to infertile couples and those facing repeated miscarriages, as well as provided hope for those with genetic diseases or late marriages. However, these technological breakthroughs have also raised fundamental ethical questions. Technology should serve as a tool for human progress and well-being. It is essential to ensure that technological innovations align with universal moral principles and prioritize human rights. The philosophy of technology emphasizes the importance of a value-driven society where technological growth is balanced with human development. Technology should be a servant to humanity, not its master. Its purpose is to contribute to the overall material, spiritual, and moral betterment of individuals.

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