



A REVIEW WITH SPECIAL REFERENCE TO INDIA ON EMPOWERING WOMEN'S REPRODUCTIVE RIGHTS & SOCIAL EGG FREEZING

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Abstract

In the framework of advancing women's reproductive rights, this paper analyzes the practice of social egg freezing, with particular attention to the Indian setting. By conserving their fertility for later use, social egg freezing has become a way for women to have more control over their reproductive decisions. It is important to comprehend the consequences of social egg freezing in India, where cultural norms and societal expectations frequently impact reproductive decisions. This essay examines availability, price, and cultural perspectives in relation to social egg freezing in India, as well as ethical, social, and legal issues. This study seeks to shed light on the significance of social egg freezing in improving women's reproductive autonomy in the Indian setting by examining the body of literature and policy frameworks that are currently in place.

Keywords:- egg freezing, Indian Constitution, Reproductive Rights.

INTRODUCTION

All living things are naturally inclined to produce children, but humans are especially predisposed to this tendency. Having offspring is driven by psychological and social demands in addition to natural wants. The ability to produce and raise children is known as the right to reproductive autonomy. Reproductive rights, are closely linked to the unalienable human right to life, respect for one's dignity, integrity, etc., which are seen to be the newest personal non-property rights of the fourth generation.

The 1968 International Human Rights Conference in Teheran is credited with helping to shape the idea of reproductive rights as human rights. According to which, each parent has the fundamental human right to determine for themselves how many children to have and how much space between them. The World Conference on Population in Bucharest in 1974 subsequently proclaimed in a similar fashion that parents had a basic human right to make decisions regarding their children. In addition, worldwide gatherings including the 1975 Women's Conference, the 1993 Vienna Conference on Human Rights, and the 1994 International Conference on Population and Development; Out of all of them, the ICPD is regarded as the most significant turning point in the history of the advancement of reproductive rights. The right to control the timing, number, and spacing between children is one of the three fundamental components of reproductive rights identified by the ICPD. The same term is also supported by the World Health Organization. Reproductive rights were supported when the Fourth World Conference on Women, held in Beijing in 1995, issued a Declaration and Plan of Action. Despite not having legal force behind them, the Declaration and Plan of Action have brought attention to the fact that women's human rights include the freedom to manage and make their own reproductive decisions.

Adopted in 2000, the UN Millennium Development Goals underscored the extent of the right to procreate and urged nations to give reproductive issues priority as development components. Women's reproductive rights are human rights according to Article 14 of the 2003 Protocol to the African Charter on Human and Peoples Rights on the Rights of Women in Africa, which states at the regional level. At the World Summit in 2005, several countries reaffirmed their commitments, pledging to take a variety of actions to ensure that everyone has access to reproductive health care services by 2015. The right to reproductive health and education is specifically granted under Article 23 (1) (b) of the International Convention on the Protection and Promotion of the Rights and Dignity of Persons with Disabilities, 2006. The right to reproduce was solidified as a human right by the first legally binding international human rights treaty, the 2006 Convention on the Rights of Persons with Disabilities, among other international agreements. Every member state shall take appropriate steps to remove obstacles and prejudice against people with disabilities in matters of parenting, as stated in Article 23 of the Convention. This confirms that individuals of that kind are entitled to the same rights as others, including the ability to choose the number and spacing of their children.

Eventually, the right to sexual and reproductive health was also emphasized in the General Comment No. 22 of 2016 about Article 12 of the International Covenant of Social, Economic, and Cultural Rights of 1966. The



General Comment offers a comprehensive outline of State Parties' responsibilities to protect these rights.¹ Numerous reproductive rights are guaranteed under the European and InterAmerican human rights systems, including the right to family life, the freedom to marry, the right to get reproductive services, and others. Reproductive rights are therefore acknowledged as fundamental human rights within both international and state human rights frameworks.

RESEARCH OBJECTIVE

With an emphasis on the Indian context, the main goal of this study is to critically examine the social egg freezing practice in the context of advancing women's reproductive rights. Examine the moral, legal, and social implications of social egg freezing in India is the goal of this study.

Examine the social conventions, cultural views, and personal reasons that impact women's decisions to have their eggs frozen for social reasons. Consider the costs and accessibility of social egg freezing services in India, as well as the effects they may have on women from a range of socioeconomic situations. Examine the current legal frameworks and regulatory measures that control social egg freezing in India and determine if they are sufficient to protect women's right to self-determination.

RESEARCH METHODOLOGY

Secondary data was gathered for a doctrinal study by the researcher from a variety of publications, blogs, and articles. Using a doctrinal research technique, the current study thoroughly examines the body of existing literature as well as pertinent legal frameworks. Data is gathered from secondary sources, including scholarly journals, reputable blogs, and articles from trustworthy publications. By merging information from several sources, this approach aims to provide a comprehensive understanding of the topic and facilitates critical analysis and interpretation. The utilization of secondary sources enables a thorough examination of the concepts, beliefs, and legal precedents surrounding umbilical cord stem cell research. Finding gaps, patterns, and trends in the literature aids the researcher in formulating well-informed conclusions and recommendations.

RIGHTS TO REPRODUCTION UNDER INTERNATIONAL SCENARIO

The freedoms or rights that an individual is guaranteed with regard to reproduction and reproductive health are known as reproductive rights. The World Health Organisation (WHO) specifies that "Reproductive rights rest on the recognition of the basic right of all couples and individuals to decide freely and responsibly the number, spacing and timing of their children and to have the information and means to do so, and the right to attain the highest standard of sexual and reproductive health". Thus, reproductive rights are substantial to the realisation of all human rights.¹ The World Health Organization (WHO) states in its Preamble to its Constitution that having the best possible degree of wellness is one of every person's fundamental rights. The phrase "wellbeing" includes women's reproductive rights within its definition.

A thorough definition of reproductive rights was published at the Cairo International Conference on Population and Development (ICPD) in 1994. "Reproductive rights rest on the recognition of the basic right of all couples and individuals to decide freely and responsibly the number, spacing and timing of their children and to have the information and means to do so, and the right to attain the highest standard of sexual and reproductive health. They also include the right of all to make decisions concerning reproduction free of discrimination, coercion and violence."² Article 16(1) of the Universal Declaration of Human Rights (UDHR) Charter, which can be interpreted to guarantee reproductive rights as a fundamental human right, has a similar idea. In addition, the CEDAW's Articles 11, 12, and 14 mandate that States take the required steps to end all kinds of discrimination against women in the health care sector in order to guarantee that they have access to family planning information and counseling.³ In a similar vein, in accordance with Article 12(1) of the ICESCR, the member states have agreed to grant each person the right to obtain appropriate levels of bodily and mental health. Furthermore, some reproductive rights are acknowledged in Clause (2). As a result, advancements in the international framework concerning reproductive rights are improving local judicial norms pertaining to these rights.⁴

THE SCOPE OF REPRODUCTIVE RIGHTS

¹ The Society for Constitutional Law Discussion <https://www.tsclcd.com/reproductive-rights-under-theindian-constitution> (Last Accessed on 25th April, 2024)

² Rights of Women and Children, <https://ebooks.inflibnet.ac.in/hrdp05/chapter/reproductive-rights-inindia/#:~:text=Law%20has%20led%20the%20Supreme,as%20the%20right> (Last Accessed on 25th April, 2024)

³ The Society for Constitutional Law Discussion <https://www.tsclcd.com/reproductive-rights-under-theindian-constitution> (Last Accessed on 25th April, 2024)

⁴ The Society for Constitutional Law Discussion <https://www.tsclcd.com/reproductive-rights-under-theindian-constitution> (Last Accessed on 25th April, 2024)

Reproductive rights in all of its manifestations are recognized as essential human rights by both international and regional human rights frameworks. Nevertheless, the extent of this privilege has not been explicitly stated in any of these texts. There are two schools of thought about the extent of reproductive rights. Under the first perspective, academics take a limited stance and contend that the right to reproductive choice is the only aspect of reproductive rights. The 1979 Convention on the Elimination of All Forms of Discrimination Against Women serves as the basis for this argument. Every couple has the right to procreate, including the freedom to choose the number and spacing of their children as well as access to sexual health and information, according to Article 16(1)(e) of the Convention. This perspective highlights that the fundamental rights are as follows: the freedom to choose, freely and responsibly; the right to family planning methods and services; the right to number and spacing of children; the right to establish a family; and the right to access information and education about family planning.

The second viewpoint asserts that human rights encompass reproductive rights. This opinion is supported by a number of international and national human rights treaties. Scholars who endorse this perspective identify twelve human rights as the fundamental components of reproductive rights. These include the freedom to marry and give informed consent; the right to privacy; the right to health; the right to security; the right to work; the right to be free from workplace sexual harassment; the right to maternity; the right to make reproductive choices; the right to prevent sexual violence; the right to start a family; and the right to profit from scientific advancements⁶

International Conference on Population and Development (ICPD) which took place in Cairo elevated women's rights personal reproductive autonomy and collective gender equality as essential concepts governing reproductive health and population initiatives⁷ Individual liberty, which includes the freedom to life, the ability to choose one's reproductive path, and the ability to give informed consent; gender parity as a part of social distributive fairness in resource distribution. The consensus text that was agreed at the ICPD is the result of negotiations and compromises involving more than 180 States. It is called the Programme of Action. Women's empowerment and gender equality are covered in a different chapter. The concept of autonomy is outlined in Chapter VII, "Reproductive Rights and Reproductive Health," and it is also crucial.

"a state of complete physical, mental and social well-being ... in all matters related to the reproductive system", which "implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so."

The International Covenant of Economic, Social, and Cultural Rights (1964) recognizes a number of rights, including the right to the best possible level of bodily and mental health. Rights to privacy, security of person, life, and liberty are among the essential freedoms protected by the International Covenant on Civil and Political Rights (1964).

RIGHTS TO REPRODUCTION UNDER INDIAN LAWS

Despite the fact that the Indian Constitution does not specifically include reproductive rights as basic rights, the country is party to a number of international human rights treaties, such as the Convention on the Rights of Persons with Disabilities, the UDHR, the ICCPR, the ICESCR, and CEDAW. Certain aspects of reproductive rights, including privacy, consent to marriage, equality in marriage, access to family planning information and services, starting a family, and choosing the number and spacing of children, are specifically guaranteed by these treaties. As per the ruling in the Vishaka v. State of Rajasthan (AIR 1997 SC 3011) decision, citizens of India may assert their rights by utilizing international law to rectify legislative deficiencies.

Reproductive rights have been recognized by the Indian judiciary through a number of rulings under Article 21 of the Indian Constitution. Most significantly, the judiciary has extended the protection of reproductive rights under Article 21 to include the right to personal liberty and the right to privacy. The Supreme Court ruled in Suchita Srivastava v. Chandigarh Administration (AIR 2010 SC 235) that Article 21's guarantee of a woman's right to live serves as the foundation for her right to procreate. It covers both the freedom to reproduce and the freedom not to.

The Indian Supreme Court has upheld the right to reproductive choice, which includes the right to sterilization, as part of the right to privacy in recent rulings such as Devika Biswas v. Union of India ((2016) 10 SCC 726) and B.K. Parthasarthy v. State of Andhra Pradesh (AIR 1973 SC 2701). Justice K.S. Puttaswamy (Retd) v. Union of India (2017(10) SCC 1), a seminal decision, underscored the importance of privacy in safeguarding intimate relationships, family life, reproduction, and personal autonomy. All of these decisions raise the standing of reproductive rights in India to that of fundamental rights, entwined with privacy and individual freedom.⁵⁶⁷

The fact that many international accords and constitutions recognize women's reproductive rights is a step in the right direction towards acknowledging women's autonomy over these choices. A number of these rights are

⁵ Aneesh V. Pillai, Anatoliy Kostruba. WOMEN'S REPRODUCTIVE RIGHTS AND THEIR SCOPE UNDER INTERNATIONAL LEGAL FRAMEWORKS. Entrepreneurship, Economy and Law, 2021,

⁶, pp.18-28. f10.32849/2663-5313/2021.8.03ff. f1hal-03397078 <https://hal.science/hal-n>

⁷ /document(Last Accessed on 26th April, 2024)



enshrined in the Indian Constitution as Fundamental Rights, laying duties on the government. These rights include the right to life (Article 21) and the rights to equality and nondiscrimination (Articles 14 and 15). Article 21 has been interpreted by courts to include the rights to privacy, dignity, health, and freedom from torture and other cruel treatment. This more comprehensive approach reflects a dedication to gender equality and individual rights by highlighting the significance of preserving women's autonomy in reproductive concerns.⁸ Membership in international conventions such as the

Convention on the Rights of the Child (CRC), the International Covenant on Civil and Political Rights (ICCPR), the International Covenant on Economic, Social, and Cultural Rights (ICESCR), and the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) serves as further evidence of India's commitment to reproductive rights. The state is required to honor its treaty commitments by Article 51(c) of the Indian Constitution. This emphasizes India's responsibility to respect and adhere to the values included in these agreements, such as the acknowledgement and defense of reproductive rights and the provision of a framework for the advancement of gender equality and personal freedom.⁹

Notable rulings in Indian courts in recent years have acknowledged women's reproductive rights as essential to the inalienable rights safeguarded under the fundamental right to life. Two guiding concepts underpin the worldwide development of law on the reproductive rights framework. First and foremost, it **highlights the right to reproductive healthcare**, which guarantees access to the resources and knowledge required for reproductive health. Second, it affirms **people's autonomy** in making decisions about their own bodies and reproductive options by highlighting the right to reproductive self-determination. These fundamental ideas serve as the cornerstone of internationally developing legal frameworks, advancing gender parity and defending people's rights to their own health and autonomy.¹¹ The woman's autonomy in making reproductive decisions either alone or in conjunction with her partner is emphasized under this concept of reproductive rights. It draws attention to how important it is for the law to be able to protect women's reproductive autonomy as a basic right. Indian Supreme Court affirmed that, as stipulated in Article 21 of the Constitution, the rights to life, personal liberty, and health and dignity include the right to reproductive freedom.¹²

ACCESS TO ARTIFICIAL HUMAN REPRODUCTIVE TECHNOLOGIES

In vitro fertilization, surrogacy, and artificial insemination, egg freezing are examples of assisted reproductive technologies (ARTs) international human rights texts don't expressly mention about the access to ART but it might be considered a fundamental component of reproductive rights. Restricting access, according to academics, undermines procreative agency. It also touches on other rights, like the right to privacy, to marry, to have a family, and to profit from technological breakthroughs. India has non-binding recommendations that recognize access to ART even in the absence of formal law. This position is upheld by court decisions, which acknowledge Access to ART which is essential to achieving reproductive rights and

13

Human dignity, individual liberty, and the right to life are all embodied in Article 21 of the Indian Constitution, which is frequently seen as the cornerstone of fundamental rights. Its meaning has expanded over time to cover a wide range of rights, such as those concerning bodily integrity and reproductive autonomy. Article 21 of the Constitution provides the legal and constitutional foundation for discussions around reproductive rights, including those pertaining to egg freezing, abortion, contraception, and assisted reproductive technology. As defined in the larger discourse, reproductive rights refer to people's freedom to make decisions about their reproductive life on their own, free from outside pressure, discrimination, or intervention. These rights are essential to achieving body autonomy, gender equality, and people's general well-being. Within this context, Article 21 protects people's right to make reproductive decisions by acting as a barrier against governmental interference in questions of private choice and physical integrity. Egg freezing might be seen as an expansion of the personal autonomy and reproductive rights guaranteed by Article 21 of the Indian Constitution. It offers women the power to take charge of their own bodies and make decisions about their reproductive destinies based on their unique circumstances and goals.

Right to Life: It is possible to view egg freezing as a way for women to exercise their right to life by taking control of their reproductive future and health. Women are able to manage their lives according to their own tastes and circumstances since it preserves their fertility and reproductive alternatives. **Personal Liberty:** The notion of personal liberty, which includes the freedom to make decisions regarding one's own body and reproductive options, is also covered by Article 21. With egg freezing, women may make educated decisions about their fertility on their own, free from excessive influence from the government or other parties.

⁸ The Society for Constitutional Law Discussion <https://www.tsclcd.com/reproductive-rights-underthe-indian-constitution> (Last Accessed on 26th April, 2024)

⁹ <https://www.tsclcd.com/reproductive-rights-under-the-indian-constitution> The Society for Constitutional Law Discussion <https://www.tsclcd.com/reproductive-rights-under-the-indianconstitution> (Last Accessed on 26th April, 2024)

Though the right to privacy and reproductive autonomy are guaranteed by Article 21, it's important to remember that the government may impose restrictions and regulations on the exercise of these rights in order to protect public health, morality, and other people's rights. **Reproductive Autonomy:** The following important factors determine whether egg freezing is permissible under Article 21:

Reproductive Autonomy: The freedom to make decisions regarding one's own body and reproductive life is guaranteed under Article 21. By giving them the choice to maintain their fertility and choose when to have children, egg freezing allows women to exercise this autonomy. **Body Integrity:** A woman's body integrity may be impacted by the medical treatments involved in egg freezing. Article 21 protects people's physical integrity from unjustified interference and guarantees that medical procedures are carried out with informed consent and deference to the dignity of the patient. **Right to Health:** The right to health is protected by Article 21 and includes the availability of reproductive healthcare services. In particular, for women whose health threatens their fertility, egg freezing may be seen as a way to obtain reproductive treatment. **Gender Equality:** Article 21 highlights the idea of gender equality by outlawing discrimination based on a person's sex. Gender equality is impacted by egg freezing because it gives women access to reproductive alternatives that were previously unattainable or restricted. The National Accreditation Board for Hospitals & Healthcare Providers (NABH) and the Indian Council of Medical Research (ICMR) have released standards that govern the practice of egg freezing in India. These recommendations seek to protect the rights and interests of women undergoing assisted reproductive technologies, including egg freezing, while also guaranteeing the efficacy, safety, and moral behavior of such treatments. EGG FREEZING

Oocyte cryopreservation, another name for egg freezing, is the process of removing eggs from a woman's ovaries and freezing them so that they can be used later on when she is ready for conception and pregnancy. After the freezing procedure is finished, the frozen eggs can last up to ten years in good condition.¹⁰ According to its etymology, "embryo" comes from the Greek word "émbryon," which meaning "ingrow." An embryo is defined as a creature in the early stages of development, from conception until the end of the eighth week, according to Stedman's Medical Dictionary. Embryo freezing is still not very common in India. But when 42-year-old former Miss World Diana Hayden gave birth to her first child a frozen egg she brought hope to women who were hoping to put off having children.¹¹

By storing unfertilized eggs for later use, a process known as mature oocyte cryopreservation, egg freezing helps women maintain their fertility. It is possible to fertilize thawed eggs in vitro with sperm and then implant them into the uterus. In IVF facilities, excess embryos are frequently cryopreserved. The first known pregnancy in India using frozen-thawed oocytes happened in 2009. A donor oocyte program was implemented for a 29-year-old woman who had aberrant karyotype and problems from her pregnancy. Using frozen-thawed sperm and oocytes, embryos were created, leading to the cesarean delivery of a healthy male infant at 35–36 weeks gestation, followed by a typical postpartum period.¹²

BENEFITS OF EGG FREEZING FOR WOMEN EMPOWERMENT

Women's fertility is something of an unfair reality imposed by nature. Due to the fact that the eggs they are born with are created during their stay in the mother's womb, their reproductive window is naturally restricted. In contrast to males, women only rely on this limited supply of eggs after giving birth; they do not generate fresh eggs. One egg from this reserve reaches maturity with every menstrual cycle, perhaps for fertilization. But as women become older, their egg reserve gradually decreases until menopause. As a result, getting pregnant is harder and harder around the age of 35 or 40.^{13,14}

Most people agree that a woman should conceive before the age of 35. Postponed pregnancies are a common result of modern conditions, including delayed marriages and job demands. Balancing aspirations for a family and a profession might lead to problems with fertility, which will raise the rate of infertility. A woman's egg reserve may eventually run out, in which case donor egg IVF therapy could be her only chance to conceive. However, egg freezing offers a remedy to age-related loss in fertility, so at least some relief from this problem.^{15,16}

Women are empowered by egg freezing because it gives them choice in how they reproduce. By using this technique, women may wait to become mothers until they're ready and then defrost their frozen eggs when they decide to become parents. Women may schedule parenting to fit their schedules by fertilizing these eggs with

¹⁰ <https://www.cloudninefertility.com/blog/egg-freezing-procedure-in-india> (Last Accessed on 26th April, 2024)

¹¹ Dr. Sufiya Ahmed, *Embryo Freezing and Donation: Ethical-Legal Issues*, ILI Law Review Summer Issue 2018 <https://ili.ac.in/pdf/dsa.pdf> (Last Accessed on 1st May, 2024)

¹² <https://ili.ac.in/pdf/dsa.pdf> Dr. Sufiya Ahmed, *Embryo Freezing and Donation: Ethical-Legal Issues*, ILI Law Review Summer Issue 2018 <https://ili.ac.in/pdf/dsa.pdf> (Last Accessed on 1st May, 2024)

¹³ <https://www.artfertilityclinics.com/in/en/art-blog/egg-freezing-lifeline-fertility> (Last Accessed on 1st May,

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¹⁵ <https://www.artfertilityclinics.com/in/en/art-blog/egg-freezing-lifeline-fertility> (Last Accessed on 1st May,

¹⁶)



their partner's sperm and putting the resultant embryos into the uterus. Usually, only one or two embryos are implanted at a time; the others are saved for later use, allowing for several chances to conceive.¹⁷¹⁸

PROCEDURE FOR FREEZING EGGS IN INDIA

Women in the twenty-first century want to be more than just mothers. How frequently do friends and relatives tell married women in India about their "ticking body clock"? There are innumerable examples. However, not everyone wants a child before they are in their late 30s or early 40s. Fortunately, ladies are no longer hindered by this worry because to developments in medical technology. Egg freezing is the most recent advancement in assisted reproductive technology, after in vitro fertilization.¹⁹

The method used for egg freezing is comparable to IVF. In order to increase the number of eggs a woman produces each month, hormone injections are administered to her. After a quick operation, eggs are removed from the ovaries and stored so they may be used in the lab later. For 10 years, these frozen eggs can still be fertilized.²⁰ By storing unfertilized eggs for later use, a process known as mature oocyte cryopreservation, egg freezing helps women maintain their fertility. It is possible to fertilize thawed eggs in vitro with sperm and then implant them into the uterus. Extra embryos are frequently cryopreserved in IVF facilities. Scattered embryos can be replaced at a time using sophisticated cryopreservation technologies, and any extra embryos can be kept for later use. 2009 saw the first known pregnancy in India using frozen-thawed oocytes. After undergoing a donor oocyte program, a 29-year-old woman with a history of obstetric problems and an atypical karyotype gave birth to a healthy male baby via cesarean section at 35 to 36 weeks of gestation, receiving standard postnatal care.

It involves activating five to ten eggs, which are then usually released over the course of many menstrual cycles. Hormonal injections initiate the development of eggs, and the monitoring period lasts for 9–10 days, starting on day 2 of the menstrual cycle. After that, an outpatient transvaginal ultrasound-guided needle puncture is used to collect eggs while the patient is sedated. The eggs that are gathered are immediately frozen for later use.²¹

INDIAN REGULATION CLAUSES REGARDING EMBRYO FREEZING.

The ART Guidelines in India include clauses regarding embryo freezing. Cryopreservation facilities are essential in ART clinics for a variety of disorders, as stated in Section 1.6.8. With the right cryoprotectants, embryos may be successfully cryopreserved at any stage. Ultra-rapid technologies are little researched, however programmable slow freezers help to alleviate the risk of ice crystal development. Straws and ampoules must be properly labeled in order to be identified. For the purpose of cryopreservation and future embryo usage, patients must be fully informed and provide their consent. Serum supplementation in freezing and thawing solutions requires caution to prevent virus transmission.²²²³²⁴

Antral follicle count and AMH readings will determine how to customize stimulation regimen. On the first or second day of menstrual cycle, self-administered injections are used to induce ovulation. To modify the dose, visit to clinic every day from day 6 to day 9 or 12 is required. A trigger injection is administered when follicles reach their ideal size, and 34 to 36 hours later, eggs are removed under light anesthesia. To guarantee accuracy and safety, retrieved eggs are frozen at -196°C and are labeled strictly.²⁵

India offers egg freezing at a lower cost than the majority of other nations. In

India, the price range is around 150000-170000 INR. This price includes all of the IVF protocol's costs, including the medications and injections used to stimulate the ovaries as well as the costs associated with retrieving the eggs and storing them afterwards.

REASON FOR EGG FREEZING INDIAN PERSPECTIVE

There are several reasons why women could decide to freeze their eggs. Some people want to put off having children in order to keep the possibility of having biological children in the future. Egg freezing is a common choice for women undergoing cancer therapies that may affect their ability to conceive. Eggs may also be kept until needed in IVF procedures if the male spouse is unable to deliver sperm on the day of retrieval. When it's time, fertilized eggs are thawed. Freezing eggs provides flexibility and comfort in a range of reproductive

¹⁷ <https://www.artfertilityclinics.com/in/en/art-blog/egg-freezing-lifeline-fertility> (Last Accessed on 26th April,

¹⁸)

¹⁹ <https://www.cloudninefertility.com/blog/egg-freezing-procedure-in-india> (Last Accessed on 26th April, 2024)

²⁰ <https://www.cloudninefertility.com/blog/egg-freezing-procedure-in-india> (Last Accessed on 26th April, 2024)

²¹ <https://www.artfertilityclinics.com/in/en/art-blog/egg-freezing-lifeline-fertility> (Last Accessed on 20th April, 2024)

²² Aneesh V. Pillai, Anatoliy Kostruba. WOMEN'S REPRODUCTIVE RIGHTS AND THEIR SCOPE UNDER INTERNATIONAL LEGAL FRAMEWORKS. Entrepreneurship, Economy and Law, 2021,

²³ , pp.18-28. ff10.32849/2663-5313/2021.8.03ff. f1hal-03397078 <https://hal.science/hal-n>

²⁴ /document (Last Accessed on 27th April, 2024)

²⁵ <https://fertilree.com/blogs/egg-freezing-process-india/#procedureindia> (Last Accessed on 27th April, 2024)



situations.²⁶ Urban people are the ones that choose to freeze their eggs due to various reasons. India's "self-reliant, self-assured women in their mid-to late-30s, though they also arrived in their 40s" Most have experienced relationship failure in the past and have frequently been harmed in these. The women will remark things like, "It may be late, but at least this gives me hope to be a mother," knowing that their biological clock is running out. The first step can cost anywhere between ₹1.5 lakh and ₹3 lakh in India. The storage facility will also cost you between ₹10,000 and ₹75,000 annually. Even while this is only accessible to a select few, it is changing the way that society views families.

When it comes to reproduction, women age more quickly than males. This is known as age-related reproductive decline. Women are becoming more conscious of the fact that they have between one and two million eggs when they are born. By the menopause, they have decreased to around 1,000 as people age. "Indian women experience menopause five years sooner than their Caucasian counterparts, with an average age of 46.2 years."

The ovarian reserve measured by the AMH blood test is essential for diagnosing infertility. Elevated values indicate a typical reserve, whereas reduced levels signify a reduced reserve that affects fertility. Decisions about IVF and egg freezing are made based on the results. However, due to assay inconsistencies and changing standards, interpretation may differ, underscoring the importance of consulting with reproductive specialists. The number of eggs in the ovary determines the likelihood of conception, but the quality of the eggs also influences the effectiveness of IVF or spontaneous conception. As a result, AMH testing facilitates planning reproductive options and evaluating fertility status.²⁷

Pre-ovulatory follicles can grow from antral follicles, which house immature eggs and react to follicle-stimulating hormone. Usually, just one ovulates every cycle after maturing. These follicles have a hollow, called the antrum, where fluid collects. Their diameter is 1-2 mm on ultrasonography. Antral Follicle Count (AFC), which is best done with transvaginal ultrasonography early in the menstrual cycle, assesses ovarian reserve. A normal AFC, which typically ranges from 5 to 10 follicles per ovary (2 to 10 mm), denotes a sound ovarian reserve. The non-invasive, painless AFC examination supports the evaluation of fertility and informs treatment choices.^{28,29}

Different ovarian reserve levels are indicated by changes in the Antral Follicle Count (AFC): low (less than 5 follicles), high (more than 10–12), or polycystic ovaries (above 12–13, greater than 2 mm). The AFC evaluation helps women plan for pregnancy by directing choices such as storing eggs or delaying conception. AFC influences the success of IVF by forecasting the ovarian response to stimulation in assisted reproduction. More recovered oocytes are correlated with higher AFC, which improves treatment results. As a result, AFC is a useful tool for managing fertility as it provides information about treatment prognosis and reproductive potential.³⁰

RISKS THAT COME WITH EGG FREEZING

Similar to other forms of assisted reproductive technology (ART), egg freezing has a unique set of dangers. Women may get a false feeling of hope from it. Egg freezing does not always guarantee conception, despite the fact that most women see it as a safety precaution. Frozen eggs are susceptible to damage during the cryofreezing procedure. Women in these situations will have to choose between IVF or alternative means of conception. While extremely unusual, contamination during cryofreezing of frozen eggs is a possibility. Rarely, mishaps that occur during the egg retrieval procedure might cause blood vessel ruptures or intestinal injury.³¹

When a significant proportion of immature oocytes are recovered during ovum pick-up, the technique known as "oocyte cryopreservation" has proven effective. The oocyte can be frozen, allowed to develop in vitro, and then utilized for oocyte donation or other related treatments on the donor or other potential recipients.

Nevertheless, the success rates with cryopreserved oocytes in terms of fertilization, pregnancy, and live births are not particularly promising. In the event that the woman decides to have a second transfer and becomes pregnant after receiving a fresh embryo transfer, the extra frozen embryos are kept for a maximum of five years. When determining the length of time the embryos should be cryopreserved, the woman's age is taken into account. For instance, the length of embryo cryopreservation is shortened to two years if the mother is older than 35. Even in the event that the couple decides against making another move, they are never destroyed.

After then, these embryos are donated to infertile couples in need. Alternatively, stem cell research may employ these embryos. The donor partners must provide their informed written permission. In certain cases, the ownership of the frozen embryo in the event that one or both couples pass away might give rise to legal disputes. It is also unclear how the freezing procedure would affect the quality of the embryo if it were to be carried to term.³²

²⁶ <https://www.cloudninefertility.com/blog/egg-freezing-procedure-in-india> (Last Accessed on 27th April, 2024)

²⁷ <https://rmanetwork.com/blog/anti-mullerian-hormone-amh-testing-of-ovarian-reserve/> (Last Accessed on 28th April, 2024)

²⁸ <https://www.invitra.com/en/what-is-an-antral-follicle-count-and-what-is-it-for/> (Last Accessed on 1st May, 2024)

²⁹ <https://www.invitra.com/en/what-is-an-antral-follicle-count-and-what-is-it-for/> (Last Accessed on 1st May, 2024)

³⁰ <https://www.cloudninefertility.com/blog/egg-freezing-procedure-in-india> (Last Accessed on 28th April, 2024)

³¹ <https://ili.ac.in/pdf/dsa.pdf> Dr. Sufiya Ahmed, *Embryo Freezing and Donation: Ethical-Legal Issues*, ILI Law Review Summer Issue 2018

³² <https://ili.ac.in/pdf/dsa.pdf> (Last Accessed on 1st May, 2024)



Success in egg freezing depends on a number of factors: Age, with the ideal freezing point being below 35; medical problems that affect quality, such as diabetes and endometriosis; Selecting the appropriate injections and stimulation regimens is essential for the best outcomes; Inadequate freezing methods can jeopardize storage and safety; Expert embryologists are essential to the success of the procedure. A reliable clinic that follows IVF laboratory guidelines is your best bet for long-term preservation and safety. A thorough grasp of related medical issues facilitates the navigation of any obstacles and enhances the effectiveness of the egg freezing procedure. Therefore, carefully weighing these variables increases the chance of effective egg freezing.³³

ART GUIDELINESS FOR EMBRYO FREEZING.

Section 1.6.8. of ART Guidelines provides that Egg freezing, often referred to as oocyte cryopreservation, is a growingly common treatment in India, particularly among women who want to maintain their fertility for social or medical reasons. The Indian Constitution's Article 21, which protects the right to life and personal liberty, is frequently brought up in conversations on reproductive rights, especially the freedom to have operations like egg freezing. The Indian Council of Medical Research (ICMR) has published standards that largely govern egg freezing in India. To protect patients' safety and wellbeing, these recommendations offer procedural and ethical criteria for the use of assisted reproductive technologies (ART), including egg freezing. These recommendations are meant only as a guide for medical practitioners and organizations doing ART operations; they are not legally enforceable.

Some of key aspects of egg freezing regulation in India based on ICMR guidelines: **Eligibility Criteria:** The ICMR guidelines specify eligibility criteria for individuals seeking egg freezing, which typically include considerations such as age, reproductive health, and medical history. While there may be variations among clinics, eligibility criteria are generally designed to prioritize the well-being of patients and the likelihood of successful outcomes. **Informed Consent:** Informed consent is a fundamental requirement for all ART procedures, including egg freezing. Patients must be provided with comprehensive information about the procedure, its potential risks and benefits, alternatives, and implications for future fertility. Consent forms must be signed voluntarily by patients after understanding the relevant information. **Medical and Ethical Considerations:** Egg freezing procedures must adhere to medical and ethical principles outlined in the ICMR guidelines. Healthcare providers are expected to uphold the highest standards of medical practice and ethical conduct, ensuring patient safety, confidentiality, and dignity throughout the process. **Storage and Record-keeping:** Eggs frozen for future use are typically stored in specialized facilities known as cryobanks. These facilities must comply with prescribed standards for storage and record-keeping, including protocols for sample identification, tracking, and quality control. Detailed records of each patient's treatment cycle, including consent forms and medical reports, must be maintained for documentation and traceability purposes. **Limitations and Restrictions:** While egg freezing is generally permitted for medical and social reasons, there may be certain limitations or restrictions imposed by individual clinics or regulatory authorities. For example, some clinics may have age restrictions or may prioritize patients with specific medical indications for fertility preservation. **Regulatory Oversight:** While the ICMR provides guidelines for ART procedures, regulatory oversight and enforcement may vary across states and regions in India. Some states may have additional regulations or requirements governing the practice of ART, including egg freezing. Regulatory authorities such as state health departments or medical councils may play a role in monitoring and ensuring compliance with relevant guidelines and regulations.

It's important for individuals considering egg freezing to seek guidance from qualified healthcare professionals and clinics that adhere to established standards and guidelines. Additionally, staying informed about legal and regulatory developments related to ART in India can help patients make informed decisions about their reproductive options.

CONCLUSION

Generally speaking, insurance or governmental health programs in India do not cover elective egg freezing. Nonetheless, a few businesses including TIAA Global Business Services, Flipkart, Cisco, WeWork India, Accenture India, and WeWork India offer coverage for it to their staff members. Grants or internal funds might be used to control tissue preservation expenses. As an aspect of assisted reproductive technology (ART), social egg freezing enables women to hold onto their eggs until they are ready to give birth, as opposed to medical uses such as maintaining fertility prior to cancer treatment. Reproductive science reached a turning point in 1986 when the first live birth from a frozen egg was achieved.³⁴ While respecting the values outlined in Article 21, the constitutional study of egg freezing must negotiate these difficulties and strike a balance between people's rights, the public interest, and moral obligations. Therefore, it is important to appreciate the constitutional aspects of egg

³³ <https://fertilitytree.com/blogs/egg-freezing-process-india/#procedureindia> (Last Accessed on 28th April, 2024)

³⁴ The Hindu, <https://www.thehindu.com/sci-tech/health/indian-women-30s-social-egg-freezingfertility-motherhood-likitha-bhanu-priya-selvaraj-voices/article66799494.ece> (Last Accessed on 28th April, 2024)



freezing and its consequences for women's autonomy and well-being within the backdrop of the larger conversation about reproductive rights.

Reproductive rights elevate women's status in society by providing them with the same level of autonomy and access to comprehensive reproductive health treatments and information as men. Reproductive autonomy and the availability of crucial reproductive health treatments and information are fundamental to this paradigm.³⁵

Article 51(c) of the aforementioned treaties requires India, as a party, to respect their provisions and modify them to fit its socioeconomic situation. Notwithstanding the progress that India has achieved in enshrining these rights in its laws and court rulings, many obstacles still stand in the way of women's complete realization of these rights. To overcome these challenges, current frameworks must be continuously modified to ensure that women's reproductive rights are adequately protected and that no impediments exist to their enjoyment.³⁶

Struggles over women's rights to sexual and reproductive health have been central in advancing women's human rights in general. Advocates of women's human rights have drawn attention to the ways in which women's status is fundamentally linked with the reduction of women, through social and political processes, to aspects of their physical selves. When reproductive health is understood to involve more than just the biological workings of a woman's womb, we arrive at "women centered" approaches to sexual and reproductive health. This means trusting women as autonomous beings, able to take control over their sexual and reproductive lives and to make decisions on these matters on the basis of access to adequate information. A woman's right to reproductive autonomy is often impaired because of her status in society. Enjoyment of this right depends on her right to act as an independent adult of full legal capacity to participate in civil society and to be free from discrimination in its various forms. Conversely, without the right of reproductive choice, all other human rights - civil and political, economic and social have only limited power to advance the well-being of women.

³⁵ <https://www.tsclcd.com/reproductive-rights-under-the-indian-constitution> The Society for Constitutional Law Discussion <https://www.tsclcd.com/reproductive-rights-under-the-indianconstitution> (Last Accessed on 28th April, 2024)

³⁶ <https://www.tsclcd.com/reproductive-rights-under-the-indian-constitution> The Society for Constitutional Law Discussion <https://www.tsclcd.com/reproductive-rights-under-the-indianconstitution> (Last Accessed on 28th April, 2024)