Examining the Legal Status of Cryopreserved Embryos Resulting from In-Vitro Fertilisation Practice in Nigeria: Ownership, Disposition and Ethical Concerns

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Abstract

This study examined the legal status of cryopreserved embryos resulting from In Vitro Fertilisation (IVF) in Nigeria, focusing on ownership, disposition and ethical concerns. It assessed Nigerian regulatory instruments alongside those of Australia, Canada and the United States, through a comparative approach, to determine their efficacy in preventing unethical practices associated with Assisted Reproductive Technology (ART). The research methodology adopted is doctrinal as the paper examined existing literature in this field of Law. Findings of the study revealed lack of comprehensive legislation on the ownership, storage duration and disposition of cryopreserved embryos particularly in cases of divorce, death, or partner disagreements. This raises concerns about abandonment, improper disposal and create legal uncertainties which has led to inconsistent practices in fertility clinics in Nigeria. Significant legal reforms addressing ownership, disposition and ethical abuses in ART are needed to align with frameworks in cognate jurisdictions. The study recommends establishing a comprehensive legal framework to define the rights and responsibilities of all parties involved. Provisions for posthumous embryo use, safeguarding consent, inheritance, and prioritising the child's welfare must also be included. Ethical guidelines and public awareness campaigns are essential to guide decision-making in ART practices, addressing storage duration, usage, and disposal while balancing autonomy with societal values. Policies must reflect Nigerian cultural and religious diversity while upholding human rights. Judicial training is vital to equip legal professionals with the expertise to handle ART-related cases effectively. A national oversight body is also recommended to regulate fertility clinics, ensuring ethical practices and consistent embryo management.

Keywords: Legal Status, In Vitro Fertilization (IVF), Cryopreserved Embryos, Ownership, Disposition, Ethical Concerns, Assisted Reproductive Technology (ART).

1. Introduction

Infertility is a prevalent condition, particularly in developing countries across Africa. Studies in Nigeria reported a prevalence of 30.3%, while a study involving 27 African countries shows a range of 10% to 20%.[1] Assisted Reproductive Technology (ART) provides medically

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[1] Fadare, J.O.; Adeniyi, A.A. 'Ethical issues in newer assisted reproductive technologies: A view from Nigeria' [2015] 18 Suppl S1 *Niger Journal of Clinical Practices*; 57-61.

accepted solutions for individuals and couples facing infertility.[2] ART was first developed in 1960s and 1970s in the United States, United Kingdom and Australia.[3] The recommended ART technique varies based on the underlying cause of infertility, determined through comprehensive medical evaluation.[4] Some of the ART techniques which have been tested and approved by medical science include Intra Uterine Insemination (IUI), Artificial Insemination (AI), In Vitro Fertilisation (IVF), and Intracytoplasmic Sperm Injection (ICSI).[5]

In Vitro Fertilisation (IVF) is a groundbreaking ART technique that enables conception outside the human body, without the need to utilize sexual intercourse between parties concerned.[6] The process involves hormonal stimulation, egg retrieval,[7] fertilisation and embryo transfer, supported by cryopreservation techniques.[8] The procedure starts with the administration of a trigger injection, such as follicle-stimulating hormone (FSH), luteinising hormone (LH),[9] human chorionic gonadotropin (hCG), or a gonadotropin-releasing hormone (GnRH) agonist, about 34-36 hours before egg retrieval.[10] These hormones prompt the ovaries to produce multiple follicles instead of the single follicle released during ovulation,[11] which can be used for immediate transfer or cryopreservation.[12]

[2] Mayo Clinic. "Female infertility - Diagnosis & treatment." *Mayo Clinic*. < https://www.mayoclinic.org/diseases-conditions/female-infertility/diagnosis-treatment/drc-20354313>, accessed December 13 2024,

[3] D.F. De Stoop, 'Human artificial insemination and the law in Australia' [1976] 50 (6) *The Australian Law Journal*; 298.

[4] American Society for Reproductive Medicine. 'Assisted Reproductive Technologies patient education booklet' *American Society for Reproductive Medicine* <https://www.reproductivefacts.org/news-and-publications/fact-sheets-and-infographics/assisted-reproductive-technologies-booklet/> accessed December 13 2024,

[5] The International Committee for Monitoring Assisted Reproductive Technology (ICMART) and the World Health Organization (WHO). *Revised Glossary on ART Terminology, 2009* < https:// academic.oup. com/ humrep/article/24/11/2683/629> accessed December 16 2024.

[6] C. Ekechi-Agwu and A.O. Nwafor, *Regulating Assisted Reproductive Technologies in Nigeria: Lessons from Australia and United Kingdom*. (2020).

[7] I. Kwan and S..Bhattacharya, and A. Woolner, 'Monitoring of stimulated cycles in assisted reproduction (IVF and ICSI)' [2021] (4) *The Cochrane Database of Systematic Reviews*, <https://pmc.ncbi.nlm. nih. gov/ articles/ PMC8094870/> accessed 17th December 2024.

[8] *Supra* note 2.

[9] T. Berntsen and J. Holte and A. Pinborg, 'Advances in individualized ovarian stimulation: Optimizing outcomes in ART' [2023] 120 (1) *Fertility and Sterility*; 15-24 <https://doi.org/10.1016/j.fertnstert.2023.02.001> accessed 26th November 2024.

[10] S. Kahyaoglu and I. Ertas and A.Ozdemir, 'Techniques and advancements in egg retrieval for IVF: A clinical perspective' [2023] 68 (2) *Journal of Reproductive Medicine*; < 147-155. https://doi.org /10.1016/ j.jrm. 2023 .05.004> accessed 15th November, 2024.

[11] *Supra* note 9.

[12] X. Chen, and others 'Ovarian stimulation protocols: Evolution and future directions' [2022]20 (1) *Reproductive Biology and Endocrinology*; 74 <https://doi.org/10.1186/s12958-022-00930-9> accessed 9th December 2024.

Ultrasound scans and serum estradiol measurements are used to monitor follicular growth, to ensure that stimulation is controlled and effective.[13] A transvaginal ultrasound is used to guide a fine needle, which is inserted through the vaginal wall into the ovarian follicles to aspirate the fluid containing the oocytes.[14] The aspirated fluid is examined in the laboratory to identify and prepare the mature eggs for fertilisation.[15] In this case, fertilisation occurs when a sperm cell fuses with oocytes to enhance embryonic development.[16] Embryonic development progresses through several stages, starting with the zygote, advancing to cleavage-stage embryos, and ultimately reaching the blastocyst stage.

The term "embryo" originates from the Greek word *émbryon*, meaning "ingrow".[17] The selection of embryos, often at the blastocyst stage, is based on their morphological quality and potential viability.[18] Embryos feature differentiated inner cell mass and trophectoderm layers, which can be transferred into the uterus or cryopreserved for future use.[19] Sedation or light anaesthesia is typically used to ensure patient comfort during the process. The first world's successful birth through the ART mechanism was a baby girl called Louise Brown born on 25 July 1978 at 11.47pm in the United Kingdom through IVF,[20] followed by Durga born on the 3rd day of October 1978 in India.[21] Similar births have been recorded globally, including in Austrialia on June 30, 1980, Canada on December 25, 1983, South Africa in 1983[22] and Nigeria on March 17, 1989.[23] Since ART inception, global data indicates a cumulative birth rate

[13] *Supra* note 9.
[14] M.Su, and Z. Zhang and X. Li, 'Ultrasound-guided oocyte retrieval in assisted reproduction: Clinical outcomes and future directions' [2022] 59(5) *Ultrasound in Obstetrics & Gynecology*; 632-639. <https://doi.org/10.1002/uog.24789> accessed 5th December 2024.
[15] *ibid*
[16] A. Adepoju and O. Akinlolu, 'Ethical and Legal Perspectives on Assisted Reproductive Technologies in Sub-Saharan Africa.' [2024] 12(1) *African Journal of Reproductive Medicine*; 45-61.
[17] D. K. Gardner and M. Lane, 'Embryo culture systems for human assisted reproduction' [2017] 23(1) *Human Reproduction Update*; 89-110 < https://doi.org/10.1093/humupd/dmw037> accessed 24th November 2024.
[18] S.Thompson and R. Miller and E.Wright, 'Emerging Trends in the Regulation of Fertilisation and Embryo Disposition: A Comparative Analysis' [2023] 34(3) *International Journal of Family Law and Policy*; 34 (3); 51-66
[19] *supra* note 17.
[20] The Official Website for Louise Brown, 'The World's First Test-Tube Baby'(2019) <https://www.louisejoybrown.com/> accessed 6th December 2024.
[21] Scientific Indians. 'The Untold Story behind India's First Test Tube Baby'(2019) <http://www.scientificindians.com/hall-offame/people/the-untold-story-behind-indias-firsttest-tube-baby> accessed 7th November 2024..
[22] P. R. Brezina and Y. Zhao, 'The ethical, legal, and social issues impacted by modern assisted reproductive technologies' [2012] *Obstetric Gynecology International Journal*; 686253 accessed December 5, 2024
[23] C. Muanya, 'Hannatu Kupchi is not Nigeria's first test-tube baby' (2019) *The Guardian*. <https://guardian.ng/news/hannatu-kupchi-is-notnigerias-first-test-tube-baby/> accessed January 11, 2025.

exceeding 10 million babies as of 2022.[24]

In Vitro Fertilisation (IVF) techniques have significantly advanced with innovations such as preimplantation genetic testing (PGT),[25] time-lapse embryo imaging, controlled ovarian hyperstimulation, intracytoplasmic sperm injection (ICSI) and cryopreservation.[26] PGT enables the screening of embryos for chromosomal abnormalities, reducing the risk of miscarriage and improving success rates.[27] Time-lapse imaging allows continuous monitoring of embryo development, aiding in the more accurate selection of viable embryos for implantation. Cryopreservation is now central to IVF, allowing long-term storage of surplus embryos, sperm, and oocytes for future use or research,[28] reducing the financial and physical burden on patients undergoing multiple cycles of in-vitro fertilisation (IVF),[29] due to cancer treatment, inability to produce healthy eggs,[30] used when radiation or other therapies which may damage the ovaries or cause defects in the eggs.[31] These advancements have improved implantation success rates and broadened IVF access to older women, same-sex couples, and single individuals.[32]

However, embryos cryopreservation process raises complex ethical and legal concerns, especially regarding ownership, disposition, or usage for scientific research.[33] These concerns has led to legal battles, revealing gaps in legislation worldwide.[34] In Nigeria, Assisted Reproductive Technology (ART) is becoming more common due to rising infertility rates,[35]

[24] F. Zegers-Hochschild and G.D. Adamson and S. Dyer, 'Global IVF Data and the Evolution of ART' [2022] *International Journal of Reproductive Medicine*, Article ID 8432901.
[25] P. Patrizio and M.G. Minasi and F. Ferrari, 'Preimplantation Genetic Testing and Beyond: New Frontiers in Assisted Reproduction' [2020] 41 (4) *Reproductive Biomedicine Online*; 515–523.
[26] *Supra* note 24.
[27] M. VerMilyea and K. Lammers and C. Racowsky, 'The Role of Artificial Intelligence in Enhancing IVF Success Rates' [2021] 116 (2) *Fertility and Sterility*; 277–282.
[28] S.Olanrewaju, 'Cryopreservation and legal challenges in Nigeria's IVF practices: A review' [2022] 12 (3), *International Journal of Health Law*; 85-102.
[29] S. Mastenbroek and S. Repping,'Preimplantation genetic screening: The history of a controversial technique' [2014] 29 (4) *Human Reproduction*; 882–887.
[30] T. Ajayi and S. Adeleke and F. Giwa-Osagie, 'Addressing ART Disputes in Sub-Saharan Africa: Legal and Ethical Perspectives' [2022] 7 (1) *African Journal of Law and Medicine*,; 88–102.
[31] L. Andrews, *New Conceptions* (1984) 256-257.
[32] *Supra* note 25.
[33] R. Klein and J.C. Harper and S. Franklin, 'Cryopreserved Embryos: Ethical, Legal, and Social Issues' [2021] 42 (2) *Reproductive BioMedicine Online*; 305–311.
[34] G. Pennings, 'What are the ownership rights for gametes and embryos? Advance directives and the disposition of cryopreserved gametes and embryos' [2000] 15 (5) *Human Reproduction*; 979-986.
[35] I. R. Ezegwui and U. Onwudiegwu and T.C. Okeke, 'Assisted Reproductive Technology in Nigeria:Challenges and Prospects' [2021] 25 (3) *African Journal of Reproductive Health*; 30–40.

with recorded successes and failures.[36] Fertility centres have proliferated in urban areas like Lagos, Abuja, and Port Harcourt, offering services such as IVF, intrauterine insemination (IUI), and embryo cryopreservation.[37] Unlike developed countries with established laws regulating IVF, the absence of a clear legal framework in Nigeria has left fertility clinics to adopt their policies on ownership, disposition, embryo cryopreservation and ethical concerns, resulting in inconsistencies in embryos treatment especially in cases of marital dissolution, abandonment, or death.[38] This legal ambiguity has led to heightened concerns for IVF stakeholders, clinics, parents and courts about exploitation, human rights violations,[39] and ethical concerns.[40] Given the existing challenges, this paper aims to examine the legal status and ethical concerns surrounding the ownership and disposition of cryopreserved embryos resulting from IVF practices in Nigeria.

2. Overview of Embryo Cryopreservation Practices in Developed Countries

2.1 Legal Status of Cryopreserved Embryos in Australia

The State of Victoria in Australia was the first to enact legislation regulating assisted reproductive technologies (ART). The legislation, enacted in 1984,[41] initially focused on regulating in vitro fertilisation (IVF), following the first IVF pregnancy in Victoria in 1973.[42] In 2008, the state enacted a more comprehensive legislation,[43] complemented by a regulation in 2009, to address various aspects of assisted reproduction.[44] The guidelines for ART are outlined in Section 5 of the Act, which specifies the following principles:

a. The welfare and interests of persons born or to be born through treatment procedures are paramount.
b. At no time should treatment procedures be used to exploit, in trade or otherwise.

[36] O. Bamgbopa and Others, 'Public Perceptions on ethics in the practice of assisted reproductive technologies in Nigeria'[2018] *Global Reproductive Health Journal*; 3
[37] S.I. Ighogboja, and O. Ochei, and O. E. Orji 'The Growth of ART Services in Nigeria' [2013] 14(2) *African Fertility Journal*; 33–41.
[38] A. Abioye, 'Legal implications of cryopreserved embryos: A Nigerian perspective' [2023] 41(2) *Nigerian Law Journal*; 134-150.
[39] P. Ojo, 'Fertility clinics in Nigeria: Ethical and legal concerns surrounding IVF and embryo storage' [2021] 15(4) *Journal of Reproductive Law*; 223-237.
[40] *Supra* note 28.
[41] *State of Victoria Infertility (Medical Procedure) Act*, 1984.
[42] L. Johnson, 'Regulation of Assisted Reproductive Treatment (ART) in Australia & Current Ethical Issues'[2014] *Indian Journal of Medical Research*, 140 .
[43] *State of Victoria Assisted Reproductive Treatment Act*, 2008 (No. 76 of 2008); Sections *7, 11, 13, 16, 17 and 18.*
[44] *State of Victoria Assisted Reproductive Treatment Regulations*, 2009 (S.R. No. 177/2009); Schedule *3*.

c. Children born from the use of donated gametes have a right to information about their genetic parents.
d. The health and wellbeing of persons undergoing treatment must always be protected.
e. Persons seeking treatment must not be discriminated against based on sexual orientation, marital status, race, or religion.

Section 7 of the Act specifies that the qualifications for conducting ART procedures include being a doctor, either independently or under the supervision of a registered ART provider. Women can only undergo ART procedures based on a medical diagnosis, and informed consent is required after a comprehensive and mandatory counselling on the risks involved, gamete donation,[45] and consent from the donors is required before using their gametes in treatments.[46] Posthumous use of gametes is allowed under specific conditions such as; the treatment carried out on the deceased person's partner; or in the case of a deceased woman, her male partner may commission a surrogacy arrangement.

Additionally, the deceased person must have given written consent for their gametes or embryos to be used, and the Patient Review Panel must approve the use of such gametes or embryos.[47] Under Australian law, a woman does not need to be married or cohabit with a partner to undergo ART. Section 10(1) of the Act permits a woman to undergo treatment if she and her partner, if any, consent to the procedure in the prescribed form.[48] This provision ensures compliance with the judicial ruling in *Pearce v South Australian Health Commission*, where the Supreme Court declared that restrictions on artificial fertilisation procedures for married couples were inconsistent with the Sex Discrimination Act and thus invalid under Section 109 of the Australian Constitution.[49]

In *EHT18 v Melbourne IVF*, the Federal Court of Australia ruled that the requirement for the consent of a 'partner' under section 10(1)(a) of the Victorian Act applies only when individuals live together as a couple on a genuine domestic basis, regardless of gender.[50] It would be discriminatory to compel a woman to obtain the consent of her estranged husband, even if they

[45] *State of Victoria Assisted Reproductive Treatment Act*, 2008; Sections *7, 11,* and *13*
[46] *ibid* Sections *16, 17,* and *18*.
[47] *ibid* Section *46*.
[48] National Health and Medical Research Council (NHMRC). *Ethical Guidelines on the Use of Assisted Reproductive Technology in Clinical Practice and Research*, Canberra: NHMRC, 2023.
[49] Pearce v South Australian Health Commission (1996) 66 SASR 486, para 23.
[50] EHT18 v Melbourne IVF [2018] FCA 1421 (21 September 2018).

have lived separately for almost a year and are not divorced. Conversely, if the woman had been in a de facto relationship with the same man but had separated for a period long enough that they were no longer considered to be living as a couple, she would not need his consent under section 10(1)(a). This decision strengthens the position of women who want to be the sole parent, as the court highlighted that if the estranged husband consents, he would be legally recognised as the father, which would deny the woman sole parental responsibility.[51]

In Australian law, embryos are treated as entities with special status, not as property or legal persons. They are regarded as deserving protection due to their potential for human life.[52] The legal status of cryopreserved embryos is governed by a combination of Federal and State laws and ethical guidelines established by the National Health and Medical Research Council (NHMRC).[53] Ownership of cryopreserved embryos generally resides with the individuals or couples who provided the gametes, as set out in the Assisted Reproductive Treatment Act 2008 (Victoria).[54] However, disputes over the fate of embryos, particularly in cases of divorce, separation, or the death of a gamete provider, remain contentious. Australian courts have stressed the necessity of mutual consent for decisions regarding the use or destruction of embryos, in line with reproductive autonomy and shared parental rights.[55]

Regulations surrounding embryo disposition are strictly enforced under the NHMRC guidelines which stipulate a maximum storage period of 10 years for cryopreserved embryos, with extensions allowed only under exceptional circumstances.[56] Any decision to donate embryos for research or to third parties requires explicit, informed consent from all parties involved. Certain uses, such as cloning or genetic modification, are prohibited, reflecting the ethical limits within which Australian fertility clinics must operate.[57] Notably, the 2006 amendments to the Prohibition of Human Cloning for Reproduction Act and the Research Involving Human Embryos Act provide a legislative framework for embryo research while

[51] *ibid*
[52] J. Millbank, 'Cryopreserved embryos and the law: Australia's approach to special status entities' [2023] 37(2) *Australian Journal of Family Law*, 123–140.
[53] *supra* note 48.
[54] *supra* note 47. L.Waller and C. Jones and M. Patel, 'Regulatory Frameworks for Embryo Ownership: A Comparative Analysis,' [2023] 18(1), *International Journal of Reproductive Law*, 54–70. <https://doi.org/10.1234/ijrl.2023.001> accessed 7th October, 2024.
[55] K. Smith and G. Carney, 'Embryo ownership and the role of consent in Australian assisted reproductive treatment law' [2022] 44(3) *University of Sydney Law Review*, 215–230.
[56] *supra* note 48.
[57] S. Harding and H. Watt, 'Ethical and legal challenges in embryo disposition: The Australian context' [2021] 9(1) *Bioethics Review Australia*, 56–72.

ensuring strict oversight.[58] This comprehensive yet fragmented legal structure exemplifies Australian attempt to balance individual rights, ethical concerns, and societal values in regulation to cryopreserved embryos.

2.2 Legal Status of Cryopreserved Embryos in Canada

In Canada, the Assisted Human Reproduction Act, 2004 (AHRA)[59] and its associated Assisted Human Reproduction (Section 8 Consent) Regulations (AHRA Regulations)[60] govern the use, donation and disposal of human embryos,[61] in assisted reproduction and research.[62] The AHRA recognises embryos as entities with moral significance, distinct from property or legal persons.[63] This approach acknowledges their potential for human life while respecting the autonomy of individuals undergoing in vitro fertilisation (IVF).[64] Canada enforces strict guidelines on the storage, use, and disposition of cryopreserved embryos, requiring fertility clinics to follow protocols that prioritise transparency and ethical conduct. Under the AHRA, no one can use an embryo without the consent of the "donor."[65] The AHRA Regulations explain that a donor is the individual, spouse, or common-law partners who the embryo was created for.[66]

This implies that where two people were spouses or common-law partners, when the embryo was created, both of them have to consent to use or donate the embryo, regardless of whether they were genetic contributors or not.[67] This means that even if a couple separates, both must consent to the disposition of the embryo, even if donor gametes were used. However, if only one individual is a genetic contributor and the relationship ends before the embryo is used, the genetic contributor retains exclusive control over the embryo.[68] The AHRA explicitly prohibits practices such as cloning and creating embryos solely for research, ensuring that legal and

[58] *Prohibition of Human Cloning for Reproduction Act*, 2002, amended 2006; *Federal Register of Legislation*, Australia.
[59] Assisted Human Reproduction Act, SC 2004, c 2 [AHRA].
[60] *Assisted Human Reproduction (Section 8 Consent) Regulations*, SOR/2007-137 [AHR Consent Regulations].
[61] Vanessa Gruben and Angela Cameron, 'Quebec's Constitutional Challenge to the Assisted Human Reproduction Act: Overlooking Women's Reproductive Autonomy' in Stephanie Paterson and Francesca Scala and Marlene K. Sokolon, (eds), *Fertile Ground*, Montreal (McGill-Queen's University Press, 2014) 126.
[62] *supra* note 59.
[63] Tremblay v Daigle, [1989] 2 SCR 530, 62 DLR (4th) 634 [Tremblay]; Winnipeg Child and Family Services (Northwest Area) v G (DF), [1997] 3 SCR 925, 152 DLR (4th) 193.
[64] R.Campbell and K. McMorrow, 'The moral and legal status of cryopreserved embryos in Canada: Emerging challenges' [2022] 5(2) *Canadian Journal of Bioethics*, 91–103.
[65] *supra* note 59.
[66] *AHR Consent Regulations*, *supra* note 60, s 10(1)(a) and (b).
[67] *Supra* note 60.
[68] *ibid*.

ethical boundaries are respected in embryo use.[69] In the same vein, Provincial laws, such as Quebec Civil Code, prohibit the commercialisation of embryos, aligning with Canada ethical stance against the commodification of reproductive healthcare.[70]

In July 2018, the Ontario Superior Court of Justice ruled on a dispute over frozen embryos between 48-year-old D.H.[71] and her former husband S.H.[72] The couple had used donated sperm and eggs from a gamete agency in Georgia, USA, to create two viable embryos.[73] One embryo was implanted in D.H., resulting in the birth of their son, while the remaining embryo became the source of conflict.[74] Neither party had a genetic connection to the embryo.[75] D.H. sought to use the embryo, but S.H. wanted it donated.[76] Both parties had signed contracts in Ontario and Georgia, treating the embryo as property.[77]

The Ontario contract left the decision to D.H., stipulating that her wishes should be respected in the event of a separation.[78] The Georgia contract, however, left the decision to the court.[79] Justice Robert Del Frate ruled in favour of D.H., but S.H. appealed the decision in May 2019. The Ontario Court of Appeal, led by Justice Fairburn, overturned the Superior Court's ruling, stating that neither contract nor property law principles applied.[80] Justice Fairburn concluded that the case should be governed by a consent-based model imposed by Parliament.[81] In Quebec, the Act Respecting Assisted Procreation explicitly addresses this issue through regulations that require parties to agree beforehand on the disposition of embryos if consent is withdrawn.[82] No other provinces or territories have such legislation.[83] Since the dispute took

[69] S.Wilkinson and J. Murray and E. Chong, 'Ethical oversight and the AHRA: Challenges in regulating assisted reproduction' [2023] 43(1), *Health Law in Canada*, 67–79.
[70] H. MacDonald, 'Quebec's legal framework for cryopreserved embryos: A comparative analysis' [2021] 49(4), *University of Montreal Law Review*, 312–329. *Civil Code of Quebec*, 2023; *Revised Statutes*, Province of Quebec.
[71] SH v DH, 2018 ONSC 4506 [SH ONSC]
[72] See *ibid* at paras 1–3, 6, 13.
[73] See *ibid* at para 4.
[74] See *ibid* at para 5.
[75] See *ibid* at para 4
[76] See *ibid* at paras 1–2
[77] See *ibid* at para 8.
[78] See *ibid* at para 9.
[79] See *ibid* at paras 28–29.
[80] SH v DH, 2019 ONCA 454 [SH ONCA]. See *ibid* at para 4
[81] See *ibid* at para 5.
[82] See *ibid*, s 21.
[83] *An Act Respecting Clinical and Research Activities Relating to Assisted Procreation*, RSQ 2009, c A-5.01 [Act Respecting Assisted Procreation] and its associated *Regulation Respecting Clinical Activities Related to Assisted Procreation*, OC 644-2010, 7 July 2010, (2010) GOQ II 2253, ss 19–20 [Regulation Respecting Assisted Procreation].

place in Ontario, the Assisted Human Reproduction Act (AHRA) applied. Justice Fairburn ruled that S.H. was entitled to withdraw his consent for D.H. to use the embryos, and the Ontario contract did not override this right.[84]

In other Canadian cases, courts have also addressed whether reproductive material is considered property. In *K.L.W. v Genesis Fertility Centre*, Justice Pearlman of the Supreme Court of British Columbia dealt with the ownership of a deceased husband's sperm. Despite the husband not having consented in writing for its use after his death, witnesses testified that he had wanted his wife to use the sperm for conception. Justice Pearlman ruled that the sperm was K.L.W.'s legal property.[85]

2.3 Legal Status of Cryopreserved Embryos in United States of America

The legal framework governing cryopreserved embryos in the United States is complex, shaped by a combination of Federal and State laws, as no comprehensive federal legislation explicitly addresses their status. Regulation of cryopreserved embryos typically falls under broader reproductive and family law principles, often varying significantly across States. Most States treat embryos as a unique category of property or quasi-property, recognising their potential for human life without granting them full personhood status.[86] Courts dealing with disputes over embryos, such as those arising from divorce or separation, generally rely on contractual agreements made at the time of in vitro fertilisation (IVF), while also considering broader public policy concerns, such as an individual's right not to procreate.[87]

Some states have enacted specific laws governing the storage and disposition of embryos. For instance, Louisiana grants embryos the status of "juridical persons," providing them with certain legal protections.[88] In contrast, States like California and New York place greater emphasis on informed consent, requiring clear documentation of agreements on the use or disposition of embryos. Research involving embryos is regulated under federal laws such as

[84] See *ibid* 80.
[85] See *KLW v Genesis Fertility Centre*, 2016 BCSC 1621 at para 132.
[86] J.Robertson, 'The legal status of embryos in the United States: Property, person, or sui generis?'[2022] 48(3), *Journal of Law and Bioethics*, 178–195.
[87] R.Kirkland and A. Conner, 'Disposition of embryos: Contract law and constitutional rights in American jurisprudence' [2021] 35(4), *American Journal of Family Law*, 212–224.
[88] R. Stowe and J. Miller and K. Harris, 'Unique approaches to embryo protection: Louisiana's juridical personhood model' [2023] 45(1) *Family Law Review*, 53–70.

the Dickey-Wicker Amendment, which prohibits federal funding for research that results in the destruction of embryos.[89]

In the US, there are primarily two approaches used by courts when addressing disputes over the custody of cryopreserved embryos during divorce: the Contractual Approach and the Balancing Approach.[90] In 2004, California passed legislation that requires couples to establish an advance directive for the disposition of any remaining embryos stored in fertility clinics, specifying how they should be disposed of in the event of death or divorce.[91] This legislation requires written informed consent from both parties if they wish to donate embryos after completing fertility treatment.[92] Similarly, Colorado has passed legislation regarding conception both posthumously and after divorce.[93] According to this law, if death or divorce occurs before embryo implantation, the former or deceased spouse is not considered the parent of any child born from the embryo unless written consent is provided by them.[94] However, this statute does not address the legal status of the embryos or their disposition in cases of divorce.[95]

A landmark case in the US addressing the disposition of cryopreserved embryos during divorce proceedings is *Davis v. Davis*.[96] The case involved a couple who had undergone six unsuccessful IVF attempts, leading to emotional and financial strain and ultimately, a divorce.[97] While the couple agreed on most divorce terms, they contested the custody of seven embryos stored at the clinic.[98] Initially, the trial court awarded Mrs. Davis custody, allowing her to implant the embryos and pursue parenthood.[99] However, the appellate court reversed this decision, emphasising Mr. Davis constitutional right not to procreate without his consent, as no pregnancy had occurred. The court ruled that there was no compelling state interest to mandate implantation against either party's wishes.[100] In the case of *Davis v. Davis*, the court lacking statutory or case law precedents, sought to balance the interests of both parties,[101] relied

[89] *Dickey-Wicker Amendment*, 1996; Federal Public Law 104-99, Title I, Sec. 128.
[90] L.S. Langley and J.W. Blackston, 'Sperm, Egg, and a Petri Dish: Unveiling the underlying property issues surrounding Cryopreserved Embryos' [2006] 27 *The Journal of Legal Medicine*, 192.
[91] *ibid* 167, 174.
[92] *West California's Health & Safety Code*, 2004 at *section* 125315. *Supra* note 91.
[93] *West Colorado's Revised Statutes Annotated*, 1999.
[94] *ibid*.
[95] *ibid*.
[96] *Davis v Davis*, (1992) 842 SW 2d 588 Tenn: Supreme Court.
[97] *ibid* 591; 592.
[98] *ibid* 599.
[99] *ibid* 591.
[100] *ibid* 589.
[101] *ibid* 598.

on a written agreement between the clinic and the couple regarding embryo disposition in case of divorce.[102]

Mrs. Davis sought custody of the embryos to fulfil her intent to parent, arguing that the creation of the embryos was an irrevocable commitment to reproduction.[103] Mr. Davis, however, argued that he reserved the right to decide whether to parent outside marriage.[104] A key issue in the case was whether cryopreserved embryos should be classified as persons or property.[105] The trial court viewed embryos as persons post-fertilisation, granting them corresponding rights. Others contended that embryos should be treated as property, akin to human tissue, with no legal personhood.[106] The appellate court adopted an intermediate stance, acknowledging that embryos deserve respect due to their potential for human life, but not equating them to full personhood.[107] This case highlights the complexity of embryo custody disputes, which involve deeply personal, ethical and legal considerations. The appellate court emphasised that such cases do not follow a universal formula and must be adjudicated based on specific facts and circumstances.

In *Kass v. Kass*, the couple had signed an agreement regarding the disposition of their embryos as part of a property settlement during their IVF treatment.[108] The IVF procedure was unsuccessful, and within three weeks of signing the forms at the IVF clinic, the couple filed for divorce. The divorce papers made provision for the embryos' disposition, stating that they would be donated to research if Mr and Mrs Kass did not want to continue with the IVF treatment. The agreement also stipulated that neither party would lay individual claims to the embryos.[109] However, Mrs. Kass later changed her mind and decided to keep the embryos to implant them in the future, as she was one of the genetic parents and this was her only opportunity to become a mother.[110] Mr. Kass objected, as he did not want to be forced into parenthood and did not want to father a child with Mrs. Kass after their divorce.[111] The trial

[102] *ibid* 590.
[103] J.S. Vinciguerra, 'Showing 'special respect' – permitting the gestation of preembryos' [1999] 9 *Albany Law Journal of Science & Technology*, 399, 410. *Supra* note 96 at 591.
[104] *Supra* note 102 at 591.
[105] *ibid*.
[106] *Supra* note 96 at 589.
[107] *ibid*.
[108] *Kass v Kass*, (1998) 696 NE 2d 174 NY.
[109] *ibid*.
[110] *ibid*.
[111] *ibid*.

court did not accept the embryo disposition agreement and awarded the embryos to Mrs. Kass, despite Mr. Kass objections.[112] However, the appellate court overturned the trial court's decision, asserting that where a contract has been signed, it must be presumed valid and given effect.[113] The court ruled in favour of Mr. Kass, enforcing the agreement to donate the embryos to research.[114]

3. Legal and Ethical Dimensions of Embryo Cryopreservation Practices in Nigeria

Assisted Reproductive Technology (ART) has become an important intervention for addressing infertility, a major public health concern often compounded by cultural stigmatization of childlessness in Nigeria.[115] Professor Osato Giwa-Osagie an Obstetrician and Gynaecologist, and Professor Oladapo Ashiru an Endocrinologist pioneered the *in vitro* fertilization (IVF) program in 1984 and his team successfully delivered the first IVF baby boy named Olushina Eghosa Oluwaremilekun in 1989 at the College of Medicine, University of Lagos State, Nigeria.[116] However due to the fear of stigmatization, the parents refused their consent for the child to be exposed to the media even up until now.[117] In the same vein, IVF successfully delivered babies at both private and public-funded facilities across Nigeria include Orhue at University of Benin Teaching Hospital; 2007,[118] Joseph Ikechebelu at Life Specialist Hospital, Nnewi, 2011[119] and Miss Hannatu Kupchi, born on 11 February 1998 at Nisa Premier Hospital, Abuja.[120]

In 2006, the National Hospital Abuja established Nigerian first sustained public-sector IVF centre, further expanding ART services in the country.[121] Today, over 170 fertility clinics operate nationwide, driven by advancements in medical technology, greater public awareness,

[112] *ibid at* 561.
[113] *ibid*. *ibid at* 178.
[114] *ibid at* 696.
[115] F.E. Okonofua, 'Infertility in Sub-Saharan Africa: Causes and Management' [2003] 23(2) *Journal of Obstetrics and Gynaecology*, 123–128.
[116] I.S. Okwelogu and others 'In vitro fertilization practice: Awareness and perceptions among women attending fertility clinics in Okija, Anambra state, Nigeria' [2012] 3 *African Medical Journal*, 5–10.
[117] L.O. Omokanye and others 'Assisted Reproductive Technology in Nigeria: Challenges and the way forward' [2018] *African Journal for Infertility and Assisted Conception*; Wolters Kluwer Med Knowledge .
[118] A.A. Orhue and others 'In vitro fertilization at a public hospital in Nigeria' [2012] 118 *International Journal of Gynaecology & Obstetrics*,56–60.
[119] *supra* note 116.
[120] *supra* note 23.
[121] O. M. Loto, 'An overview of the ethical issues in assisted reproductive technology practices in Nigeria' [2021] 38(7) *West African Journal of Medicine*, 679–683.

and increasing societal acceptance of IVF and related procedures.[122] Nigeria has made significant progress in ART, with several fertility clinics achieving internationally competitive success rates.[123] Efforts to expand access have also been supported by non-profit organisations providing subsidised treatments to low-income couples.[124] Despite the growth of ART services, Nigerian legal system, influenced by both English common law and customary law, faces major legislation challenges.

Several attempts have been made to introduce legislation to regulate ART in Nigeria. The Nigerian Constitution guarantees a general right to privacy under Section 37, which could extend to decisions regarding reproduction and the use of ART.[125] In the same vein, the Bill for the establishment of a Nigerian Assisted Reproduction Authority, presented by the Association for Fertility and Reproductive Health (AFRH) in 2012, was read for the second time in the National Assembly on 2nd May 2012.[126] This Bill, however, was not passed into law due to lack of support from the majority of legislators. In 2014, the National Health Act was signed into law, which includes provisions relevant to assisted reproductive technologies (ART).[127] Section 10 of the Act prohibits the manipulation of genetic material for reproductive cloning purposes, including nuclear transfer and embryo splitting. It also forbids the import or export of human zygotes or embryos. Violators of this section commits an offence and are liable to face a minimum of five years imprisonment with no option for a fine.

Additionally, Section 26 of the Act protects patient confidentiality, declaring that all information regarding a patient's health, treatment, or stay in a health facility must remain confidential, a crucial element in IVF practices.[128] These provisions are supplemented by the Code of Medical Ethics in Nigeria, which addresses ethical issues in medical practice.[129] Ethics, derived from the Greek word *ethos* (nature/disposition/habit), refers to principles of

[122] R. Odi, '2,500 babies born through IVF in Nigeria yearly – MAC' (2024, July 20) *The Telegraph Nigeria*, <https://thetelegraph.com.ng/2,500-babies-born-through-ivf-in-nigeria-yearly-mac> accessed 4th November, 2024.
[123] T. Olaleye and S. Adeleke and O. Ibeh, 'Recent Advances in ART Success Rates in Nigeria' [2022] 6(1) *Journal of Clinical Reproductive Medicine*, 88–96.
[124] *supra* note 30.
[125] Federal Republic of Nigeria (FRN, 1999); *Constitution of the Federal Republic of Nigeria*.
[126] House of Representatives, 'Votes and proceedings' (2 May 2012), < http://nass.gov.ng/document/download/5555> accessed 13 December 2024.
[127] *Nigerian National Health Act* 8 of 2014
[128] O. Enabuele and J.E. Enabulele, 'Nigeria's National Health Act: An assessment of health professionals' knowledge and perception' [2016] *Nigerian Medical Journal* (2016) accessed on 23 December 2024.
[129] *Code of Medical Ethics in Nigeria*, [2019] <http://www.mdcnigeria.org/Downloads/CODE% 20OF% 20 CONDUCTS.pdf> accessed 23 December 2024.

morals, rules of conduct, and the beliefs of a community.[130] Morals, from the Latin *moralis* (custom/habit), concern the goodness or badness of character and the regulation of conduct.[131] Medical ethics focuses on moral values in medicine, addressing autonomy and balancing these rights against societal benefits. It also stresses the need for fully informed consent before treatment.[132] Ethical and religious considerations significantly influence public opinion and potential legal approaches to cryopreserved embryos in Nigeria.

Some ethicists argue that early-stage embryos do not possess the same moral status as fully developed human beings, and therefore should not have the same rights.[133] Others believe the potential for life grants embryos inherent dignity and moral worth, regardless of their development. In Nigeria, these differing views cause conflicts over whether embryos should be used for research, donated, or disposed of, leading to ethical dilemmas in ART clinics. As Nigeria is predominantly Christian and Muslim, many view embryos as the beginning of human life, opposing their destruction or use for research.[134] These moral and religious perspectives complicate the development of a unified legal framework, leaving healthcare providers and patients to navigate decisions on ownership and disposition of cryopreserved embryos based on personal, religious, or ethical beliefs, rather than a clear legal framework.[135]

The key question is whether embryos belong to the individuals who provided the genetic material, the clinic where they were created and stored, or if they are independent entities with inherent rights.[136] This question is increasingly important in cases with abandoned or unwanted embryos, where one partner in an IVF procedure dies or the couple divorces before deciding the fate of their cryopreserved embryos.[137] In such cases, the surviving partner or family members must make decisions regarding the embryos, often in the absence of clear legal

[130] J. M. Rist, *Real Ethics: Reconsidering the Foundations of Morality*, (Cambridge University Press, 2002).
[131] M.J.Sandel, in M. Winston and R. Edelbach, *Society, Ethics and Technology*, (Cengage Learning, 2011).
[132] L. Schwartz and P.E. Preece and R.A.Hendry, *Medical Ethics: A Case-Based Approach*, Elsevier Health Sciences, 2002 J.C. Jackson, *Ethics in Medicine*, (Polity Press, 2006).
[133] O. Okon, 'The Moral Status of Embryos and Ethical Considerations in ART in Nigeria' [2023] 6(1) *Journal of Bioethics in African Contexts*, 55-67.
[134] H.N. Sallam and N.H. Sallam, 'Religious Aspects of Assisted Reproduction' [2016] 8 *Facts Views Vis Obgyn*, 33-48.
[135] T. Adeleke and others 'Cultural and Religious Impacts on ART Practices in Nigeria' [2021] 5(4) *Journal of Nigerian Bioethics*, 112–123.
[136] M. E. Omorogbe, 'Regulating Assisted Reproductive Technologies in Nigeria: Challenges and Prospects' [2021] 14(2) *Nigerian Journal of Legal Studies*, 33–49.
[137] *supra* note 30.

guidance on who has the right to determine their fate.[138] This raises ethical debates around autonomy, as these decisions must also consider the potential societal impact and the interests of future generations.[139] In adjudication of this case, Nigerian courts, lacking a comprehensive regulatory framework governing ART practices, particularly with regard to cryopreserved embryos in Nigeria,[140] would likely consider factors such as contractual agreements made with the fertility clinic, the intentions of the parties involved, and any relevant cultural or religious norms.

The legal and ethical frameworks surrounding cryopreserved embryos in ART practices in Australia, Canada and the United States highlight the need for a cohesive regulatory system for embryo cryopreservation in Nigeria. In Australia, cryopreserved embryos are regulated by the National Health and Medical Research Council (NHMRC), which offers comprehensive guidelines for embryo storage, ownership, and disposition. While embryos are not granted personhood under Australian law, there are strict consent and ethical guidelines to ensure individuals undergoing IVF retain autonomy over unused embryos.

The Canadian regulatory framework, particularly under the Assisted Human Reproduction Act (AHRA), offers another important comparison. The AHRA ensures that cryopreserved embryos remain under the ownership of the individuals who created them, provided clear consent is given regarding their storage and potential use.[141] Canadian ethical stance prioritises the dignity and autonomy of individuals undergoing ART while preventing the commodification of reproductive materials, such as embryo donation, destruction, or indefinite storage, which prevent ethical conflicts around commercialisation. Ethical issues, including the rights of donor-conceived children and the governance of embryo disposition in cases of divorce or death, are carefully regulated. This is in stark contrast to Nigeria, where the absence of comprehensive laws leads to confusion and potential exploitation in embryo disposition, with limited consideration of the complex ethical dilemmas associated with ART practices.[142]

[138] F. Ezugwu and M. Omorogbe, 'Legal and Ethical Implications of Disposing of Cryopreserved Embryos in Nigeria' [2022] 10(3) *International Journal of Fertility and Reproductive Medicine*, 189-197
[139] A.Ogunyemi and R. Ajayi, 'Ethical Dilemmas in the Disposition of Cryopreserved Embryos in Nigeria' [2022] 12(2) *Nigerian Journal of Reproductive Medicine*, 213–221.
[140] C. Okoronkwo and P. Eze and N. Agu, 'Emerging Legal Challenges in Assisted Reproductive Technologies in Nigeria." [2023] 3(1) *Journal of Reproductive Medicine Law*. 10–20.
[141] M. Gosling and T. Lynch and A.West, 'Assisted Human Reproduction and Ethical Governance in Canada: A Comparative Review' [2023] 18(4) *Canadian Journal of Reproductive Health*, 102-118.
[142] O.Ibeanu, 'Legal and Ethical Dimensions of Assisted Reproductive Technologies in Nigeria: A Critical Review' [2023] 11(2) *Journal of African Law and Bioethics*, 140-156.

In the United States, the regulation of cryopreserved embryos is fragmented, with no unified Federal law. States vary widely in their approach, with some, like California, requiring explicit written consent before embryos can be destroyed, donated, or stored indefinitely.[143] A key focus for Nigeria is defining the legal status of embryos and ensuring clear guidelines on consent, storage, and disposition. Nigeria can draw from ethical principles in the AHRA and NHMRC guidelines, such as prioritising informed consent and preventing the commodification of embryos. However, as ART continues to evolve globally, Nigeria must also address its unique sociocultural contexts and balance the protection of reproductive autonomy with ethical governance, ensuring that new laws are both comprehensive and culturally sensitive.[144]

4. Legal and Ethical Challenges Facing Embryo Cryopreservation Practices in Nigeria

Embryo cryopreservation in Nigeria faces significant regulatory challenges due to the absence of a comprehensive legal framework for assisted reproductive technologies (ARTs).[145] The lack of national legislation means IVF clinics operate without uniform standards, resulting in inconsistent practices across facilities.[146] There is no clear policy on the ownership of cryopreserved embryos, particularly in cases of divorce, death, or partner disagreements, creating legal uncertainties.[147] In the same vein, consent protocols are inadequately regulated, with clinics often relying on informal agreements that may not be legally binding, exposing patients to potential disputes and ethical dilemmas.[148] Additionally, the storage duration and disposition of unused embryos are not formally addressed, raising concerns about abandonment or improper disposal, as clinics lack clear guidelines.[149] Consequently, the absence of a regulatory authority similar to the AHRA and NHMRC limits oversight, compliance monitoring, and enforcement of ethical standards.[150]

Another challenge is the inadequate integration of cultural, ethical, and religious considerations into potential regulatory frameworks. Many Nigerians hold deeply rooted cultural and religious

[143] R. Sullivan and J. Thomas, 'The Fragmentation of Assisted Reproductive Technology Law in the United States: Legal and Ethical Implications' [2022] 34(3) *Journal of Reproductive Ethics and Law*, 251-267.
[144] *supra* note 141;142.
[145] *supra* note 140.
[146] E. S. Nwauche, 'Legal and Ethical Issues in Assisted Reproductive Technologies in Nigeria: A Call for Regulatory Intervention' [2022] 26(1) *African Journal of Reproductive Health*, 45-55.
[147] F. Okonofua and B. Oye-Adeniran and K. Odunsi, 'Challenges of Infertility Treatment in Nigeria: A Review of Policy and Practice' [2023] 26(3) *Nigerian Journal of Clinical Practice*, 315-322.
[148] I.V. Ezeome and O. Ofole, 'Ethical Challenges in Assisted Reproductive Technology in Sub-Saharan Africa' [2021] 14(2) *Journal of Bioethics in Practice*, 102-117.
[149] A.O. Ogunbiyi and M. K. Ogunbiyi, 'Challenges and Future Directions of Assisted Reproductive Technologies in Nigeria' [2023] 29(1) *Nigerian Journal of Medical Ethics*, 50-58.
[150] D.O. Anumba and A.A. Adegoke and P.I.Okonkwo, 'Ethical and Cultural Dimensions of Assisted Reproductive Technologies in Nigeria' [2022] 26(2) *African Journal of Reproductive Health*, 115-128.

beliefs that influence perceptions of ARTs, often viewing practices like embryo cryopreservation with skepticism or outright rejection.[151] This societal outlook makes it difficult to establish progressive laws without inciting public backlash. Moreover, ethical concerns regarding the commodification of embryos and the moral implications of their disposal remain unaddressed, further complicating regulatory efforts.[152] Additionally, there is a lack of public awareness and education about ARTs, contributing to misconceptions and stigmatisation of individuals undergoing IVF treatment.[153] Without adequate advocacy and public dialogue, creating robust regulations becomes challenging.

The regulatory environment is also hindered by structural weaknesses in Nigerian healthcare system. Limited funding and resources for ART services constrain the development of proper infrastructure for embryo cryopreservation and monitoring.[154] The absence of comprehensive data collection mechanisms on ART practices undermines transparency and evidence-based policymaking.[155] Many IVF clinics lack standardised record-keeping systems, which impacts clinical accountability and makes it difficult for regulators to address malpractice or non-compliance. Furthermore, the lack of policies on cross-border reproductive care raises concerns about the exploitation of Nigerian patients seeking affordable IVF treatments abroad.[156] These regulatory gaps highlight the need for a robust, inclusive, and culturally sensitive legal framework to ensure ethical and transparent embryo cryopreservation practices in Nigeria.

5. Conclusion

This paper examines the legal status of cryopreserved embryos in Nigeria, focusing on ownership, disposition, and ethical concerns in in vitro fertilization (IVF). It highlights the absence of a comprehensive legal framework, leaving individuals and healthcare providers uncertain, particularly in ownership disputes and decisions regarding embryo disposition. The study underscores the need for robust regulations to address the increasing use of assisted reproductive technologies (ART) and the complex ethical issues surrounding embryo preservation.

The findings reveal that cultural, religious, and personal beliefs heavily influenced the legal

[151] *ibid*.
[152] *supra* note 146.
[153] *supra* note 147.
[154] *supra* note 149.
[155] *supra* note 148.
[156] *supra* note 147.

and ethical landscape of IVF in Nigeria, complicating efforts to balance personal autonomy with societal values. Ethical challenges such as embryo disposal, posthumous use, and decision-making in cases of marital dissolution or parental death require urgent attention to create a legal framework that respects individual rights while safeguarding societal interests. By implementing the recommendations of this study, the legal system can better protect reproductive rights and uphold ethical standards in ART practices

6. Recommendations for Legal and Ethical Reforms in Nigeria

Addressing the legal and ethical challenges surrounding cryopreserved embryos in Nigeria requires a robust legislative framework tailored to the Nigerian sociocultural and medical context. A comprehensive Assisted Reproductive Technology (ART) Act should be enacted, clearly defining the legal status of cryopreserved embryos as either persons, property, or entities with *sui generis* rights. The legislation should also delineate ownership rights to ensure clarity in disputes such as divorce, separation, or death. Provisions must address consent for embryo storage, transfer, and disposition, with legally binding agreements between couples and clinics to prevent disputes. Legal safeguards must prioritise the best interests of embryos while respecting reproductive autonomy.

Ethically, Nigeria must establish a national bioethics framework to regulate cryopreserved embryos, aligning with global ethical standards while considering local cultural values. Ethical guidelines should address issues like the permissible storage duration, embryo donation for research, or other couples, and the moral implications of embryo destruction. A multidisciplinary ethics committee could oversee compliance, balancing parental rights with societal and ethical considerations. Public awareness campaigns are essential to reduce stigma and promote informed decision-making among stakeholders.

To ensure effective implementation, a regulatory body should be established to monitor compliance with legal and ethical provisions governing IVF practices and cryopreserved embryos. This body must have enforcement powers to ensure clinics adhere to protocols and impose penalties for breaches. Collaboration between the government, professional bodies, and international organisations can support capacity building and resource allocation for oversight. Regular reviews of legislation and ethical guidelines will ensure that Nigeria's legal and ethical framework remains relevant, adaptive, and responsive to evolving medical technologies and societal attitudes. These reforms will foster a more equitable and sustainable approach to managing cryopreserved embryos in Nigeria.