American Journal of Humanities and Social Sciences Research (AJHSSR)
e-ISSN : 2378-703X
Volume-10, Issue-01, pp-115-125
www.ajhssr.com
Research Paper Open Access

Bioethics and Assisted Reproductive Technology (ART): An Islamic Ethical Analysis of Intra-Cytoplasmic Sperm Injection (ICSI).

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ABSTRACT : This study presents an Islamic ethical assessment of Intra-Cytoplasmic Sperm Injection (ICSI), a significant form of Assisted Reproductive Technology (ART). The aim is to evaluate its acceptability within the context of Islamic law (Shari'ah) by examining its compatibility with fundamental religious principles and goals. The approach involves analysing primary Islamic source texts (Qur'an and Sunnah) and applying the framework of Maqasid al-Shari'ah (Objectives of Islamic Law), particularly focusing on the preservation of lineage (nasab), life, and procreation, in conjunction with established legal (fiqh) rulings from prominent Islamic scholarly authorities. The conclusion is that ICSI is deemed permissible in Islam (halal), provided that it meets one stringent requirement: the gametes (sperm and egg) must come solely from a legally married husband and wife during their marriage. The use of donor gametes or surrogacy is unanimously deemed prohibited (haram) as it contravenes the sanctity of lineage. Although the technology is recognized as a valid therapeutic option, ethical concerns remain regarding the treatment of surplus embryos, which should be managed with dignity and without intentional waste. Ultimately, ICSI is morally endorsed as a method for addressing infertility that aligns with the Islamic goal of promoting fertility within marriage. The principal recommendation is for healthcare practices and regulatory policies within Muslim communities to strictly follow the spousal-only gamete stipulation. Additional recommendations include limiting the number of embryos created per cycle to reduce surplus, guaranteeing informed consent that encompasses religious considerations, and fostering ongoing scholarly discussions on new sub-techniques such as genetic screening.
KEYWORDS: *Assisted Reproductive Technology (ART), Gamete Donation Prohibition, Intra-Cytoplasmic Sperm Injection (ICSI), Islamic Bioethics, Lineage (Nasab), Word Counts: 249*

I. INTRODUCTION

The swift evolution of Assisted Reproductive Technologies (ART) has raised significant ethical, legal, and religious dilemmas for societies globally. Among these advancements, Intra-Cytoplasmic Sperm Injection (ICSI) a specialized type of in vitro fertilization (IVF) where an individual sperm is injected directly into an egg serves as a crucial solution for severe male-factor infertility. While it brings hope to numerous couples facing infertility, ICSI also challenges traditional views on procreation, lineage, and the limits of medical intervention. In the Islamic context, the acceptance and regulation of such technologies extend beyond mere medical choices and are profoundly influenced by a thorough ethical and legal system rooted in the Qur'an, the *Sunnah* (the traditions of the Prophet Muhammad), and centuries of judicial reasoning. Islamic bioethics confronts these contemporary challenges through the twin lenses of *Maqasid al-Shari'ah* (the Higher Objectives of Islamic Law) and the fundamentals of *Fiqh* (Islamic jurisprudence). The fundamental goals primarily the safeguarding of faith, life, intellect, lineage (nasab), and property offer the criteria for assessing any new development. Within this framework, the ethics surrounding ICSI critically depend on the absolute safeguarding of lineage and the sanctity of the marital relationship. Consequently, the central inquiry becomes: Can a method that enables conception outside the human body be aligned with Islamic principles regulating procreation, kinship, and familial integrity? (Alahmad, & Dekkers, 2022)

This analysis aims to deliver a thorough Islamic ethical review of ICSI. It goes beyond a mere binary verdict to investigate the complex conditions under which the technology is considered permissible (*halal*) or forbidden (*haram*). The discussion is significantly influenced by the consensus (*ijma'*) of prominent international Islamic scholarly organizations, including the Islamic *Fiqh* Academy of the Organization of

Islamic Cooperation and the Muslim World League, which have engaged in extensive discussions about ART. Important topics to examine include the strict prohibition of third-party gamete donation, the ethical status and management of surplus embryos, the acceptability of additional procedures such as surgical sperm retrieval, and the implications for the marital contract. In the end, this introduction paves the way for an inquiry into how a timeless ethical framework interacts with a cutting-edge scientific method. It suggests that the Islamic perspective on ICSI does not dismiss scientific advancements but rather seeks to guide its implementation in a way that upholds social and spiritual principles, ensuring that the quest for parenthood does not undermine the essential Islamic institutions of marriage and clear, uncontested lineage. (Hedayat, & Pirzadeh, 2021)

Statement of the Problem

This study examines the main and secondary research questions to tackle the ethical and religious challenges of Intra-Cytoplasmic Sperm Injection (ICSI) from an Islamic perspective: Primary Research Question:

i. What is the clear Islamic ethical ruling (*hukm shar'i*) on whether Intra-Cytoplasmic Sperm Injection (ICSI) is allowed, and what specific conditions support or oppose its use?

Secondary Research Questions:

ii. How does the Islamic goal of preserving lineage (*hifz al-nasab*) act as an ethical limit in managing ICSI, particularly regarding the source of gametes?

iii. To what degree does the principle of "blocking the means to evil" (*sadd al-dhara'i'*) require the ban on third-party gamete donation and surrogacy in ICSI procedures?

iv. How does modern Islamic scholars and juristic bodies deal with the ethical issues surrounding excess embryos created during ICSI, and what legal principles shape their views on cryopreservation, donation, and research?

v. In what ways does traditional juristic methods (*usul al-fiqh*), especially analogical reasoning (*qiyas*) and the consideration of public interest (*maslahah*), help in forming rulings for a new biomedical technology like ICSI?

vi. What are the areas of agreement (*ijma'*) and disagreement (*ikhtilaf*) among major Islamic legal schools and international *fatwa* councils regarding related issues of ICSI, such as pre-implantation genetic testing (PGT) and posthumous reproduction?

vii. How does the Islamic ethical framework for ICSI, which focuses on the spousal genetic unit, compare with secular Western bioethical principles that stress individual choice in reproductive decisions? (Krawietz, & Yazigi, (Eds.), 2020)

II. METHODOLOGY OF THE STUDY

This research uses a qualitative, doctrinal, and analytical approach grounded in Islamic studies and applied ethics. It carefully examines the permissibility and guidelines of ICSI from an Islamic viewpoint by combining textual analysis, legal reasoning, and comparative case studies. The process moves from collecting data to analyzing it and then to developing normative guidelines. This research has a normative-ethical design. It aims to establish the Islamic position on ICSI based on well-defined religious principles. It takes a descriptive-analytical route to:

a. Describe the technical steps involved in ICSI and its main ethical issues.
b. Analyze these issues through the specific lenses of Islamic theology and law.
c. Synthesize a clear Islamic ethical stance and practical framework.

The study depends on a documentary analysis of three main types of sources. It identifies relevant verses about creation, lineage, marriage, and the sanctity of life using classical (*tafsir*) and thematic exegetical works, such as al-*Tafsir al-Mawdud*.. The verses include Q16:72 (lineage),

وَاللَّهُ جَعَلَ لَكُمْ مِنْ أَنْفُسِكُمْ أَزْوَاجًا وَجَعَلَ لَكُمْ مِنْ أَزْوَاجِكُمْ بَنِينَ وَحَفَدَةً وَرَزَقَكُمْ مِنَ الطَّيِّبَاتِ أَفَبِالْبَاطِلِ يُؤْمِنُونَ وَبِنِعْمَةِ اللَّهِ هُمْ يَكْفُرُونَ(72)

And Allah has made for you mates (companions) of your nature, and made for you, out of them, sons and daughters and grandchildren, and for you sustenance of the best: will they then believe In vain things, and be for Allah.s favours?-

Q17:32 (discussed about ban on unlawful relations),

وَلَا تَقْرَبُوا الزِّنَا إِنَّهُ كَانَ فَاحِشَةً وَسَاءَ سَبِيلًا(32)

Nor come nigh to adultery: for it is a shameful (deed) and an evil, opening the road (to other evils).

and Q23:12-14 (examines the stages of embryonic development).

وَلَقَدْ خَلَقْنَا الْإِنْسَانَ مِنْ سُلَالَةٍ مِنْ طِينٍ(12)
ثُمَّ جَعَلْنَاهُ نُطْفَةً فِي قَرَارٍ مَكِينٍ(13)
ثُمَّ خَلَقْنَا النُّطْفَةَ عَلَقَةً فَخَلَقْنَا الْعَلَقَةَ مُضْغَةً فَخَلَقْنَا الْمُضْغَةَ عِظَامًا فَكَسَوْنَا الْعِظَامَ لَحْمًا ثُمَّ أَنْشَأْنَاهُ خَلْقًا آخَرَ فَتَبَارَكَ اللَّهُ أَحْسَنُ الْخَالِقِينَ(14)

12. Man we did create from a quintessence (of clay); 13. Then we placed Him As (A drop of) sperm In a place of rest, firmly fixed;14. Then we made the sperm into a clot of congealed blood; then of that clot we made a (foetus) lump; then we made out of that lump bones and clothed the bones with flesh; then we developed out of it another creature. So Blessed be Allah, the best to create!

It compiles and analyses authentic hadiths from major collections like Bukhari and Muslim that discuss seeking cures, the significance of marriage and parenthood, and the prohibition of confusing lineage for their legal and ethical implications. References from schools of law Hanafi, Maliki, Shafi'i, and Hanbali cover issues relating to paternity, marriage, medical treatment, and the "child of the bed" (*walad al-firash*). The data also includes resolutions, position papers, and *fatwas* from recognized Islamic legal bodies worldwide. This comprises:

a. Islamic Fiqh Academy (Jeddah, OIC)
b. Islamic Fiqh Academy (Makkah, Muslim World League)
c. Al-Azhar's Fatwa Committee (Egypt)
d. National Fatwa Councils of Malaysia, Indonesia, Iran, and the Gulf states.

The research incorporates works by contemporary Islamic bioethicists and jurists, such as Abdulaziz Sachedina, Hassan Chamsi-Pasha, and Gamal Serour, who specialize in medicine and *fiqh*. It also consults medical textbooks and peer-reviewed articles to accurately detail the ICSI procedure, its uses, success rates, and standard practices in embryology, such as embryo creation, cryopreservation, and PGT. This ensures that the Islamic analysis is based on a correct understanding of the technology. The collected data is analyzed through a three-part analytical framework: Thematic Analysis of Scholarly Consensus (*Ijma'*) recognized the followings:

a. Identify the settled, non-controversial principles found in major fatwas.
b. Compare fatwa texts to extract common rulings, such as the unanimous prohibition of using third-party gametes and strong agreement on the permissibility of spousal ART.
c. Assess the ethical aspects of ICSI based on the *Maqasid al-Shari'ah*.
d. Evaluate each part of ICSI source of gametes, embryo status, etc. for its effect on five essential needs. This involves questioning whether the practice protects or harms lineage (*nasab*), life (*nafs*), and so on.
e. Understand the legal tools scholars use to derive their rulings.
f. Break down the fatwas and scholarly opinions to identify specific juristic tools, such as *qiyas*, *maslahah*, and *sadd al-dhara'i'*, that scholars use to compare ICSI to established rulings and address its new aspects.

Conceptual Framework

This analysis builds on a layered Islamic framework that moves from basic theological principles to applied legal reasoning. It offers a way to evaluate Intra-Cytoplasmic Sperm Injection (ICSI) within the Islamic ethical view. The framework relies heavily on Islam's main textual sources, which hold ultimate authority:

i. The Qur'an outlines the principles on creation, lineage, and the sanctity of life. For example, it states, "And He has made you lineages through your children..." [16:72]. While it does not cover specific technologies, it establishes unchangeable values.
ii. The Sunnah includes the teachings, actions, and approvals of Prophet Muhammad (PBUH). Hadiths that encourage seeking cures, like "Seek treatment, O servants of Allah," give a general mandate for medicine. Other narrations highlight the importance of lawful marriage and clear lineage. (Shabana, 2020)

The *Maqasid* (objectives) create the purpose for all ethical and legal reasoning. They explain the "why" behind the rulings. For ICSI, three objectives emerge were as follows:

i. Preservation of Lineage (*Hifz al-Nasab*) acts as the primary lens for examining ICSI. Any practice that confuses or obscures clear, verifiable biological lineage between a child and its married parents is seen as a major harm (*mafsadah*).
ii. Preservation of Life (*Hifz al-Nafs*) supports the use of medicine to promote life and alleviate infertility, viewing procreation as an essential good.
iii. Preservation of Progeny (*Hifz al-Nasl*) relates closely to lineage and life. This objective reinforces the social and religious importance of continuing the family within marriage.

From the *Maqasid* emerge specific ethical filters for assessing ICSI:

i. Medical interventions are acceptable and encouraged to treat illness. Infertility is viewed as a form of disease, validating the pursuit of treatment like ICSI.
ii. A strong principle states that no third party, such as a donor or surrogate, may interfere with the reproductive unity of married couples. This supports the preservation of nasab.
iii. The human embryo, from conception, holds a degree of sanctity and potential personhood. This requires respectful handling, prohibits reckless creation or destruction, and sets ethical guidelines for excess embryos.
iv. The marital contract (*'aqd al-nikah*) serves as the only valid framework for any reproductive act. Assisted reproductive technology (ART) must operate within this bond, not replace or bypass it. (Kadivar, & Ghaly, (Eds.), 2019)
v. Scholars compare ICSI to acceptable medical interventions, such as treating a blocked fallopian tube as similar to addressing a low sperm count. More critically, they liken donor gametes to adultery (*zina*) based on the outcome of confusing lineage, even if the physical act differs.
vi. The benefit (*maslahah*) of alleviating infertility and supporting families is balanced against possible harms (*mafasid*) like societal confusion over kinship. The analysis shows that ICSI within marriage offers significant benefits while avoiding greater harms.
vii. This principle helps to prevent practices that may seem technically neutral but could lead to undesirable results. Practices like embryo donation or commercial surrogacy are rejected because they can lead to the breakdown of lineage.
viii. The collective rulings of respected contemporary Islamic scholarly organizations, such as the Islamic *Fiqh* Academy, provide crucial guidance and practical closure on the issue of permissibility. (Bouzenita, 2023)

When we apply this framework to ICSI, it leads to a specific and conditional ruling:

i. ICSI is categorized as *Mubah* (permissible) medical treatment.
ii. This permissibility turns into *Haram* (prohibited) if it involves any third-party gamete (sperm or egg) or womb.
iii. It could be considered *Makruh* (discouraged) or potentially *Haram* if it includes unethical practices like non-therapeutic sex selection or unnecessary embryo waste.
iv. It remains *Mubah* only under certain strict conditions that align with the *Maqasid*: using spousal gametes only, within a valid marriage, with respect for embryos, and with the intent to treat a diagnosed case of infertility. (Chamsi-Pasha, & Albar, 2023)

III. THEORETICAL FRAMEWORK

This research is based on a solid theoretical framework that brings together Islamic Moral Theology, Jurisprudential Methodology, and Principles of Biomedical Ethics to create an Islamic evaluation of ICSI. The framework does not just apply fixed rules; it involves a dynamic process of *ijtihad* (juridical reasoning) to connect a new biomedical technology with the main goals of Islamic law.

i. The framework is centered on a God-focused ethical foundation. Here, moral authority comes from divine revelation (Qur'an) and prophetic examples (Sunnah). This differs from secular, utilitarian bioethics, which prioritise personal choice and outcomes. The permissibility of an action depends on its alignment with divine command and its role in fulfilling human stewardship (*khilafah*) on earth.
ii. ICSI is assessed based on the Islamic view of natural human behavior, which includes procreation within a stable, heterosexual marriage. The technology's role is evaluated either as restoring a disrupted *fiṭrah* (infertility viewed as a disease) or as distorting it by introducing third-party gametes, which disrupts the natural order of kinship.
iii. Humans are morally and legally responsible for their actions. This creates an ethical obligation for physicians, scholars, and potential parents to seek knowledge, understand religious rulings, and choose paths that fulfill their duties to God, to each other, and to the future child (Ghaly, 2022).

This is the foundation for deriving specific rulings. The analysis of ICSI uses several *uṣūlī* tools:

i. It evaluates relevant Qur'anic verses and hadiths not for direct mentions of ICSI but to establish guiding principles (e.g., "And do not come near to unlawful sexual intercourse" [17:32] as a basis for banning donor gametes).
ii. This is the primary method for addressing new situations. ICSI is compared (*qiyās al-awlawiyyah*) to accepted medical treatments for infertility e.g., treating a blocked fallopian tube since both are interventions aimed at achieving the natural marital purpose of procreation. The use of donor gametes is likened to adultery (*zinā*) or incestuous lineage mixing (*ikhtilāṭ al-ansāb*) because of its effects (confused parenthood), even if the actions differ, leading to its prohibition based on preventing harm.

iii. This involves identifying the true benefits and harms of ICSI that are not explicitly discussed in primary texts.
   a. Preserving a marriage, reducing psychological distress, and allowing a couple to have children are legitimate goals.
   b. The principle of "blocking the means to evil" is critically used to ban practices that could harm lineage, even when intermediate steps seem neutral. For instance, commercializing gametes or relaxed embryo policies are prohibited as they can lead to greater societal harm.

iv. The near-universal consensus among modern Islamic legal councils on the conditions for ART serves as a strong, stabilizing guiding force within the framework, addressing significant issues and directing the community. This creates an overarching evaluative system that gives structure and meaning to the legal deductions. ICSI is evaluated based on its effects on the five essential needs (ḍarūriyyāt):

i. Preservation of Religion (*Ḥifẓ al-Dīn*) assesses if ICSI affects the religious obligations of the child (e.g., clear lineage impacts inheritance laws, custody, and whom one can marry).
ii. Preservation of Life (*Ḥifẓ al-Nafs*) supports ICSI as a life-saving treatment and also governs the ethical status of the embryo.
iii. Preservation of Intellect (*Ḥifẓ al-ʿAql*) requires informed consent and an understanding of the procedure's religious and medical implications.
iv. Preservation of Lineage (*Ḥifẓ al-Nasab*), this is the central focus of the analysis. It serves as the main criterion for banning third-party involvement and strictly controlling embryo ownership to safeguard kinship identity.
v. Preservation of Property (Ḥifẓ al-Māl), regulates the financial aspects ICSI must not involve selling human gametes or embryos which is prohibited, although payment for medical services is allowed.

An Islamic theoretical framework engages with and reinterprets dominant secular bioethical principles:

i. It fully embraces these principles but defines them through the *Maqāṣid*. True beneficence includes spiritual and social well-being preserving lineage, not just biological success. Non-maleficence extends to avoiding social harm to the child and family structure.
ii. It is understood as Relational Autonomy within a Moral Community. While individual choices are respected, they are limited by divine law and community responsibilities. A couple's "right" to a child does not override the ban on donor gametes.
iii. The framework highlights fairness in access to healthcare and in issuing *fatwas*. It also includes a unique aspect: justice for the unborn child by ensuring its right to a clear and undisputed lineage.

The theoretical framework acts as an ethical algorithm. For ICSI to be considered *ḥalāl* (permitted), it must pass through each stage in the following order:

i. Does it respect God's creative process and the *fiṭrah*? Yes, as an assisted therapy within marriage.
ii. Does it maintain, and not harm, the five essential needs, especially lineage? Yes, only if it excludes third parties.
iii. Is there a valid *qiyās* to an accepted ruling, and does it provide a recognized *maṣlaḥah*? Yes, as a medical treatment that ensures the benefit of having children
iv. Does it fulfill beneficence and justice as Islam defines them? Yes, by treating infertility while preserving family and social integrity.

IV. LITERATURE REVIEW

This review compiles existing academic work examining the Islamic ethical perspective on Assisted Reproductive Technology (ART), particularly focusing on Intra-Cytoplasmic Sperm Injection (ICSI). It is organized thematically, mapping the development of the discussion from general ART principles to specific ICSI-related rulings and current controversies. The literature indicates that Islamic perspectives on ART are guided by a unique theocentric ethical model, which stands in contrast to Western autonomy-based approaches (Sachedina, 2009). Initial fundamental studies, like those conducted by the Islamic Organization for Medical Sciences (IOMS) in the 1980s, began applying traditional juristic principles (*usul al-fiqh*) to emerging biomedical technologies. The pivotal 1986 ruling from the Islamic Fiqh Academy (IFA) in Jeddah (Resolution No. 1) is consistently referenced as foundational, establishing the essential principle: ART is only permissible for married couples using their own gametes during the duration of the marriage contract (Albar, 1996). This decision effectively banned third-party donations (sperm, egg, or womb), a position that was reaffirmed by the Muslim World League's Fiqh Academy in 1990 (Ebrahim, 2008). Scholars such as Hassan Chamsi-Pasha and Ali Albar have thoroughly explained how this ruling arises from the primary goal of preserving lineage (*hifz al-nasab)*, averting the moral complications associated with unclear kinship, and maintaining family integrity (Chamsi-Pasha & Albar, 2013).

The literature consistently illustrates infertility as a condition that warrants treatment, referring to prophetic encouragement to seek cures, thereby positioning ART as a legitimate form of therapy (*tadawi*) (Rispler-Chaim, 1993). As a method within IVF, ICSI adopts the general conditions for the permissibility of ART. Nevertheless, the literature emphasizes its distinctive technical characteristics. Gamal Serour, a prominent Egyptian fertility expert and ethicist, has elaborated on how the direct manipulation of gametes in ICSI to address severe male infertility faced rigorous juristic examination (Serour, 2008). The prevailing view, as noted by The International Islamic Center for Population Studies and Research (IICPSR) at Al-Azhar, is that ICSI is allowable since it supports the natural marital act of procreation rather than substituting it (IICPSR, 2000). A critical stipulation is that the sperm, even when surgically retrieved through procedures like TESE or Micro-TESE, must come from the husband, ensuring the spousal genetic connection (Inhorn, 2003). The literature thoroughly discusses several ethical dilemmas related to ICSI/IVF technology:

i. This represents a significant area of academic disagreement. Conservative scholars (e.g., Sheikh Yusuf al-Qaradawi) highlight the sanctity of the embryo from the moment of fertilization, arguing against creating excess embryos and allowing cryopreservation solely for transfer to the same wife in a future cycle (Al-Qaradawi, 2001). More practical rulings, such as those from Iran's Supreme Leader and certain Malaysian *fatwas*, permit embryo freezing and research on surplus embryos under strict regulations, emphasizing the potential benefits (*maslahah*) of scientific progress (Aramesh, 2009). The principle of the lesser evil is frequently invoked to rationalize selective embryo reduction in high-order pregnancy scenarios.

ii. The literature indicates wide acceptance of PGT for identifying serious, life-threatening genetic disorders, viewed as an expansion of the medical treatment objective (Bouzenita, 2016). Nonetheless, non-therapeutic sex selection is predominantly prohibited, with exceptions noted particularly among some Shi'a scholars notably in Iran and Lebanon who allow it for family balancing under certain circumstances, highlighting a notable divergence between Sunni and Shi'a scholarly perspectives (Clarke, 2009).

iii. The literature strongly agrees against posthumous reproduction. Scholars contend that the marriage contract is terminated by death, thus rendering implantation impermissible (IFA Jeddah, Resolution 67/3, 2003). Similarly, transfer post-divorce is generally forbidden, as the marital link is no longer valid (Al-Azhar Fatwa, 1999).

A distinct body of literature contrasts the juridical perspectives of Sunni and Shi'a (specifically Twelver *Jafari*) traditions. Although both sects disallow third-party donations, Shi'a legal theory, informed by contemporary *marja'iyya* (religious authority), has formulated more intricate guidelines. For example, Grand Ayatollah Ali al-Sistani's *fatwas* allow for third-party egg donations through temporary marriage (*mut'ah*) contracts with the donor, a solution that Sunni scholars reject as it still breaches lineage concerns (Clarke, 2009). This comparative study illustrates how similar theological foundations can result in divergent legal interpretations when faced with advanced technologies. In addition to legal texts, social science investigations conducted by scholars such as Marcia Inhorn have enriched the discussion by examining the real-life experiences of Muslim patients using ART. Her research in the Middle East highlights how couples assimilate religious rulings, frequently demonstrating strong resistance to donor technologies, and how they navigate the tension between medical demands and religious values (Inhorn, 2006, 2012). Critical analyses also investigate the socio-economic factors at play, raising questions about equitable access to costly, privately funded ART services in Muslim-majority nations and the emergence of a potential "reproductive market" (Tremayne, 2006).

Analysis and Discussion of the Study:

This analysis synthesizes the insights gained from the theoretical framework, methodology, and literature review to offer a critical examination of the Islamic ethical position on ICSI. It moves beyond merely reiterating rulings to delve into the foundational reasoning, tensions, and wider implications. The most conclusive result of this analysis is the absolute and unequivocal prohibition of third-party gamete donation in any ICSI procedure. This represents not a subsidiary issue but the principal ethical criterion. The rationale, derived from a robust integration of *Maqasid* and *Qiyas*, is persuasive:

i. Lineage (*nasab*) is a crucial necessity (*daruriyyah*). A society that suffers from confused lineage risks a collapse in fundamental Islamic laws relating to inheritance, marital prohibitions (*mahram*), custody, and identity. ICSI which incorporates donor gametes inflicts an intrinsic, irreversible harm (*mafsadah*) upon this social and religious framework.

ii. Donor conception is compared (*qiyas*) to adultery (*zina*) due to its introduction of an external genetic lineage into a family, even though the physical act may differ. The principle of *sadd al-dhara'i* (blocking the means) is utilized to ban any practice that could normalize or lead to this outcome, including commercial surrogacy and gamete markets. This establishes a distinct ethical boundary that fundamentally sets apart the Islamic ART landscape from its Western equivalent.

While Western bioethics may justify donation based on principles of autonomy and beneficence, Islamic ethics places the individual's desires secondary to communal and theological demands for kinship integrity.

The acceptability of spousal ICSI serves as a nuanced illustration of how Islamic jurisprudence adapts to technological advancements. The analysis highlights how scholars have addressed the apprehension regarding "interfering with nature."

i. Infertility is treated as a disturbance of the natural (*fitri*) ability to procreate within marriage. Consequently, ICSI is portrayed not as a substitute for the marital act, but as a medical intervention aimed at eliminating an obstacle, thereby enabling the natural outcome of marriage (children) to manifest. The marital act itself remains intact; its procreative potential is merely supported.

ii. By restricting gametes to the couple, the procedure upholds, rather than undermines, the exclusivity of the marital relationship. It becomes a shared therapeutic process for the couple, preserving the biogenetic unity of the family. This stands in contrast to procedures that could psychologically or biologically fragment parenthood.

The ethical treatment of surplus embryos represents the most considerable internal conflict within the Islamic discourse. The analysis uncovers a range of opinions influenced by varying weights of key principles:

i. Some scholars emphasize the Qur'anic depiction of embryonic development and the inviolability (*hurmah*) of potential life, advocating for the creation of only the number of embryos intended for immediate transfer. This is the most cautious (*ihtiyat*) perspective, aiming to evade the moral quandary of surplus.

ii. Other scholars, focusing on the *maslahah* (benefit) of successful treatment for the couple, allow for the creation and cryopreservation of multiple embryos. This perspective frequently relies on the legal concept that an embryo prior to ensoulment commonly thought to occur at 120 days does not possess the same sanctity as a person, although it still merits respect.

iii. In instances where multiple embryos implant, selective reduction may be accepted as a tragic necessity to save the mother's life and the remaining fetuses. This utilitarian calculus within a deontological framework highlights the pragmatic adaptability of *fiqh* in response to clinical realities. This lack of a unanimous agreement on embryo disposition signifies a domain where continued *ijtihad* is essential, especially as techniques such as embryo biopsy for PGT become increasingly commonplace.

An insight from this analysis is that the Islamic ruling is not just a list of prohibitions. It represents a positive view of ethically sanctioned parenthood. Offering a religiously acceptable way for infertile married couples:

i. It addresses the stigma around childlessness in a religious setting that values offspring highly.

ii. It provides hope and a shared medical goal within the marriage, which may help ease the marital tension caused by infertility.

iii. It sets clear limits to prevent a drift toward practices such as designer babies and commercial surrogacy, which are seen as commodifying human life and undermining human dignity.

The discussion must recognize areas where the traditional framework is being challenged:

i. While pre-implantation genetic testing (PGT) for severe disease is mostly accepted, germline editing would represent a significant shift. This raises concerns about "playing God" and permanently changing creation (*taghyir khalq* Allah). The *maqasidi* focus on preserving lineage and life calls for great caution.

ii. The high cost of intracytoplasmic sperm injection (ICSI) raises an ethical issue of fairness. A truly Islamic bioethics needs to consider how to ensure fair access to this religiously allowed treatment so it doesn't become a privilege for the wealthy.

iii. Muslim couples living in secular countries face direct conflict between lenient local laws and strict religious rules. This creates challenges for religious leaders and healthcare providers working with these communities.

Findings/Results of the Study

This study's comprehensive examination, rooted in Islamic doctrinal texts and modern legal rulings, leads to the following conclusive findings regarding the Islamic stance on Intra-Cytoplasmic Sperm Injection (ICSI). The primary and clear conclusion is that ICSI is considered Islamically acceptable (*halal*) solely under the strict condition that the gametes (sperm and egg) come exclusively from a legally married couple, and the procedure occurs while the marriage contract (*nikah*) is still valid. This is not merely a preference but an essential theological and legal requirement based on the aim of safeguarding lineage (*hifz al-nasab*). Any kind of third-party involvement such as donor sperm, donor eggs, surrogate gestation utilizing a third party's womb, or the use of gametes after death or post-divorce is strictly forbidden (haram). This prohibition is supported by a consensus (*ijma*') among all prominent Sunni and Shi'a scholarly organizations, drawing an analogy to the confusion of lineage similar to that caused by adultery (*zina*).

The analysis yields specific results for each technical and ethical component:

Component of ICSI Procedure	Islamic Ethical Finding & Condition
Source of Gametes	Permissible only if 100% spousal. Surgical sperm retrieval (TESE/Micro-TESE) from the husband is permitted as a therapeutic means.
Fate of Excess Embryos	Highly regulated. Consensus opposes deliberate creation of surplus. Cryopreservation for the same couple's future transfer is widely accepted. Deliberate destruction or donation to another couple is prohibited. Selective reduction is only allowed under strict medical necessity to save the mother/remaining fetuses (lesser of two evils principle).
Preimplantation Genetic Testing (PGT)	Permissible for severe, life-limiting genetic diseases (therapeutic purpose). Non-therapeutic sex selection is overwhelmingly prohibited**,** except in a minority Shi'a opinion for family balancing under strict conditions.
Marital Status Requirement	The marriage must be valid at the time of fertilization and transfer. Posthumous or post-divorce use of frozen embryos/gametes is prohibited in the dominant opinion, as the marital covenant has ended.
Role of Medical Personnel	Viewed as technical facilitators (***sabab***), not third-party progenitors**.** Their involvement does not violate lineage, provided strict privacy and modesty guidelines are observed.

The research clarifies how and why these decisions were made:

i. ICSI was effectively compared to acceptable medical solutions for infertility, defining it as a therapeutic procedure (*tadawi*).

ii. ii. This principle was firmly applied to ban all means leading to donor conception (such as gamete banks and commercial surrogacy contracts) to avoid the greater risk of lineage confusion.

iii. iii. The examination confirmed that the Preservation of Lineage (*Nasab*) serves as the ultimate, unyielding aim in reproductive matters, taking precedence over factors like individual autonomy or unrestricted scientific freedom.

The goal of preserving life supports the therapy while also requiring respect for the embryo. The integration of findings results in a clear Islamic ART framework:

i. Reproduction is ethically restricted to the married couple, with the laboratory functioning as an extension of their marital relationship, rather than a means to obtain external genetic material.

ii. The validity of the technology is linked to diagnosing and treating a pathological condition (infertility), rather than opting for preferred traits.

iii. The model deliberately prioritizes a couple's potential "right to a child by any means" to the superior "right of the child to a clear lineage" and the integrity of the social structure.

The study also points out areas of disagreement, highlighting a range of scholarly perspectives:

i. A dominant conservative perspective forbids destructive embryo research, while a minority pragmatic perspective, especially in Iran and certain Malaysian settings, allows research on surplus embryos under strict state regulation for significant potential benefit (*maslahah*).

ii. While allowed, there is no consensus on the maximum duration for storage, resulting in practical ambiguities in clinic policies.

iii. A nearly unanimous Sunni prohibition contrasts with a more permissive ruling within Twelver Shi'a jurisprudence (e.g., Ayatollah Sistani), based on differing legal interpretations of marital rights and the timing of sex determination.

V. CONCLUSION

This research has rigorously shown that the Islamic ethical response to Intra-Cytoplasmic Sperm Injection (ICSI) is not a knee-jerk rejection of modern science, but rather a principled and coherent incorporation of technology within a higher moral framework. The analysis affirms that classical Islamic legal methodology (*usul al-fiqh*), guided by the overarching objectives of the law (*maqasid al-shari'ah*), possesses the interpretive flexibility to confront new biomedical challenges while maintaining a steadfast commitment to core theological principles. The main conclusion is that ICSI is considered Islamically permissible as a therapeutic approach for infertility, yet this acceptance is inherently and negatively contingent upon the absolute preservation of the genetic-matrimonial unit. The procedure is deemed sacred only when it serves to fulfill procreation within a lawful marriage, utilizing solely the couple's own gametes. Any departure from this

paradigm especially the introduction of a third-party donor is explicitly forbidden as it undermines the paramount goal of maintaining clear lineage (*nasab*), a fundamental aspect of Islamic family law and social order. Consequently, the Islamic ruling on ICSI establishes a unique "spousal-only" model of assisted reproduction. This framework finds a balance between unrestricted technological freedom and outright prohibition. It embraces the healing potential of science while directing it to support rather than alter traditional institutions of marriage and kinship. The ethical dilemmas concerning excess embryos illustrate a dynamic, ongoing ijtihad within the tradition, reflecting a thoughtful equilibrium between the sanctity of potential life and the practical requirements of effective medical treatment. Ultimately, this study concludes that the Islamic bioethical stance on ICSI is both limiting and empowering. It curtails practices perceived as detrimental to the social and spiritual fabric while providing infertile Muslim couples with a religiously valid, hopeful pathway to parenthood that upholds their dignity, their marital bond, and the divine wisdom in pursuing cures.

Recommendations

Based on the results and conclusions of this research, the following suggestions are made for different stakeholders:

i. Transition from general approval to provide detailed, step-by-step guidelines in various languages concerning the ethical management of embryos, PGT criteria, and criteria for clinic selection specifically for Muslim couples.

ii. Establish permanent interdisciplinary committees within prominent Islamic institutions to proactively assess emerging sub-technologies e.g., mitochondrial replacement, in vitro gametogenesis and offer timely recommendations.

iii. Foster structured discussions between Sunni and Shi'a scholars to gain a deeper understanding of differing legal interpretations on topics such as embryo research and sex selection, promoting mutual respect and clearer direction for followers.

iv. Fertility clinics, particularly in Muslim-majority areas, should implement and certify strict "spousal-only" treatment protocols, which include effective gamete and embryo tagging systems to avoid any mix-ups or unauthorized third-party involvement.

v. Provide pre-treatment counseling that incorporates certified Islamic bioethics counselors alongside medical personnel to ensure couples give fully informed consent that is consistent with their religious beliefs.

vi. Where medically appropriate, encourage Single Embryo Transfer (SET) strategies to mitigate the ethical concerns associated with excess embryos, aligning clinical practices with the precautionary (*ihtiyat*) principle in *fiqh*.

vii. Translate the religious consensus into national legislation and regulations that govern ART, explicitly prohibiting third-party gamete donation and commercial surrogacy while creating licensing and oversight mechanisms for clinics.

viii. Create policies and financial assistance programs to enhance access to ICSI for economically disadvantaged couples, addressing the ethical principle of justice ('*adl*) and preventing ART from becoming an exclusive privilege.

ix. Fund public education campaigns to inform citizens about the Islamic ethical limitations of ART, diminishing the stigma surrounding infertility while clarifying religious boundaries.

x. Future parents should consult with knowledgeable religious physicians or scholars who specialize in bioethics, rather than solely relying on general clerics, for guidance on the specific choices related to their treatment process.

xi. Prioritize fertility clinics that transparently follow "spousal-only" policies and can demonstrate high ethical and procedural standards.

xii. Connect with community-based support groups for couples undergoing Islamic-guided ART to exchange experiences and offer mutual spiritual and emotional assistance.

xiii. Research is necessary to explore the psycho-spiritual effects of undergoing ICSI under Islamic principles, the decision-making processes of couples, and the efficacy of religious counseling.

xiv. Perform structured comparative analyses between the Islamic *maqasidi* approach and other religious (e.g., Catholic, Jewish) and secular perspectives on ICSI and embryo ethics.

xv. Carry out policy evaluations comparing the application of ART laws in various Muslim-majority nations (e.g., Iran, Saudi Arabia, Malaysia, UAE) to identify effective practices for reconciling religious ethics with medical standards.

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