International Journal of Science and Healthcare Research
[Indexed, Peer-Reviewed Journal]
Vol. 10; Issue: 2; April-June 2025
Website: ijshr.com
Review Article *ISSN: 2455-7587*

IVF Pregnancy in Post-Menopausal Women: Ethical Considerations

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DOI: https://doi.org/10.52403/ijshr.20250206

ABSTRACT

The ethical, legal, and medical dimensions of Assisted Reproductive Technology (ART) for postmenopausal women constitute a multifaceted debate at the intersection of reproductive autonomy, medical ethics, and societal norms. This paper critically examines the justification and implications of extending ART to older women, focusing on the balance between reproductive rights and the potential medical, ethical, and social challenges associated with postmenopausal pregnancy.

A thorough analysis of the legal framework, particularly the Human Fertilisation and Embryology Act (1991) and its subsequent amendments, highlights evolving policies regarding age-related fertility treatments. The medical risks of postmenopausal IVF are explored, revealing significantly higher incidences of gestational hypertension, preeclampsia, cesarean delivery, and neonatal complications such as low birth weight and premature birth. These risks raise concerns regarding maternal and neonatal well-being, as well as the long-term health outcomes for the child.

Ethical considerations include the responsibilities of medical practitioners in evaluating candidates for IVF, the long-term welfare of children born to older mothers, and the equitable allocation of healthcare resources. A critical contrast between deontological perspectives, which emphasize reproductive autonomy, and utilitarian arguments, which weigh broader societal and medical implications, is presented. Furthermore, the ethical concerns surrounding egg donation for postmenopausal recipients, including informed consent and the potential for exploitation, are discussed. The broader social implications of ART for older women, particularly societal perceptions, economic disparities, and intergenerational caregiving challenges, are also considered.

This paper argues for a nuanced and ethically balanced regulatory approach that neither imposes rigid age-based restrictions on ART access nor neglects legitimate concerns regarding maternal and child health. Instead, it advocates for a framework that ensures thorough medical screening, informed decision-making, and responsible reproductive policies that uphold both individual rights and medical responsibilities.

Keywords: postmenopausal IVF, assisted reproductive technology, maternal risks, ethical concerns, reproductive rights, neonatal complications

INTRODUCTION

In vitro fertilization (IVF) is one of the most groundbreaking advancements in reproductive medicine, offering a solution to infertility that has transformed millions of lives worldwide. The first successful IVF

birth in 1978 marked a revolutionary breakthrough, leading to continuous medical and technological improvements in assisted reproductive techniques (Edwards & Steptoe, 1980). Infertility affects approximately 15% of couples globally, with causes ranging from genetic disorders and hormonal imbalances to environmental and lifestyle factors (Mascarenhas et al., 2012). IVF has emerged as a widely utilized assisted reproductive technology (ART) that addresses these challenges by facilitating fertilization outside the human body, optimizing embryo selection, and enhancing implantation success rates.

The origins of IVF can be traced back to fundamental research in reproductive endocrinology and embryology, leading to the first successful fertilization of human oocytes in vitro (Edwards, 2001). The pioneering work of Robert Edwards and Patrick Steptoe laid the foundation for modern ART, culminating in the birth of Louise Brown, the world's first IVF baby. Over the decades, continuous advancements have refined the procedure, including improved ovarian stimulation protocols, enhanced embryo culture systems, and the application of preimplantation genetic testing (PGT) to screen for genetic disorders (Harper et al., 2010).

The IVF process consists of several crucial steps, each playing a significant role in the treatment's success. These steps include ovarian stimulation, egg retrieval, fertilization, embryo culture, and embryo transfer. The introduction of gonadotropin-based stimulation has significantly increased the number of oocytes per cycle, improving pregnancy outcomes (Macklon, Stouffer, Giudice, & Fauser, 2006). In cases of severe male-factor infertility, intracytoplasmic sperm injection (ICSI) enables the direct injection of a single sperm into an oocyte, dramatically improving fertilization rates (Palermo et al., 1992). Recent advances in embryo culture techniques, such as time-lapse imaging, have enhanced embryo selection processes, thereby increasing implantation rates (Meseguer et al., 2011). However, IVF success rates vary widely, depending on factors such as maternal age, embryo quality, and underlying health conditions. Studies indicate that the live birth rate per IVF cycle is approximately 30-40% for women under 35, but this percentage declines significantly with advancing maternal age (Sunkara et al., 2011).

While IVF has provided countless individuals with the opportunity to conceive, it has also introduced ethical dilemmas and societal debates. One of the most controversial issues is the use of IVF for postmenopausal women. In 1993, a widely publicized case involved a 59-year-old woman who gave birth to twins via IVF using donor eggs and her partner's sperm, sparking discussions about the ethical and medical implications of postmenopausal pregnancy (Hope, 1995).

The case of Mrs. Bon exemplifies some of the key ethical challenges in assisted reproductive technology. Mrs. Bon, a 48-year-old teacher, was diagnosed with completely blocked fallopian tubes, making natural conception impossible. When she sought IVF treatment through public healthcare services, she was denied access due to an age restriction, which limited eligibility to women under 40. The emotional distress of infertility and the lack of available options led her to deep depression. After two years, she and her husband turned to a private fertility clinic as their last hope. Professor Smith, an infertility specialist, accepted them into his program, explaining the success rates (8-10%) and the associated risks (Spallone, 1990). However, since Mrs. Bon had not had a menstrual cycle in over a year, she was classified as menopausal and required donor eggs, which significantly increased the treatment costs. This case raises a complex web of ethical issues, the most immediate being the feasibility and safety of pregnancy in postmenopausal women.

As reproductive technology advances, new innovations, such as artificial intelligence (AI) in embryo selection, gene-editing

technologies like CRISPR, and the development of gametes from stem cells, are reshaping the future of ART (Shen et al., 2021). Additionally, research into in vitro gametogenesis (IVG) and uterus transplantation is expanding possibilities for fertility preservation and reproductive autonomy (Mertes & Pennings, 2010). While these developments hold great promise, they also present ethical challenges that must be carefully navigated to ensure responsible application and equitable access to reproductive care.

MATERIALS & METHODS

This study employs a systematic literature review to examine the medical, ethical, and legal aspects of postmenopausal IVF. The research methodology includes a structured approach to data collection, analysis, and synthesis of existing literature.

A comprehensive search was conducted across major databases, including PubMed, Scopus, and Web of Science, focusing on peer-reviewed articles published within the last decade. Keywords such as "postmenopausal IVF," "maternal risks," "ethical concerns," and "neonatal complications" guided the selection process. Inclusion criteria encompassed studies analyzing maternal and neonatal health outcomes, ethical debates surrounding ART for older women, and legal frameworks governing fertility treatments.

The selected studies were assessed based on methodological rigor, sample size, and relevance. Findings were categorized into thematic areas: medical risks, ethical dilemmas, legal considerations, and social implications. Comparative analysis was conducted between ethical perspectives to provide a balanced discourse on ART accessibility for older women.

Despite its comprehensive scope, this study acknowledges inherent limitations, including potential biases in the literature, variability in ART policies across different jurisdictions, and the lack of long-term follow-up data on children born to postmenopausal mothers. Future research should prioritize longitudinal studies examining child development outcomes, psychosocial impacts of late motherhood, and evolving regulatory frameworks governing ART.

Fundamental to evolution is the urge—unconscious, subconscious, or conscious—to reproduce. This drive exists in all species and in both sexes. In humans, this manifests as a profound desire to procreate, particularly in women, whose maternal instincts are often evident from childhood. Despite radical advancements in gender equality, this innate inclination remains largely unchanged (Robertson, 1985). Western societies and religious traditions further reinforce the significance of motherhood. Christian iconography frequently depicts the mother and child, most notably the Virgin Mary and infant Jesus, celebrating not only procreation but the grace of motherhood itself (Mander & Whyte, 1985). Similarly, biblical narratives underscore the emotional burden of infertility and the extraordinary interventions attributed to divine will, as seen in the stories of Hannah and Sarah (Genesis 16; 1 Samuel).

The advent of Assisted Reproductive Technology (ART) challenges historical and biological constraints on reproduction, particularly for postmenopausal women. The Human Fertilisation and Embryology Act (1990) established a legal precedent, defining motherhood in terms of gestation rather than genetics, thereby enabling women who carry donor embryos to be recognized as legal mothers (Bewley, 1995). While ART expands reproductive possibilities, it also raises ethical and medical concerns regarding the feasibility and risks associated with postmenopausal pregnancy.

Medically, successful gestation requires a viable oocyte, fertilized by healthy sperm, and an adequately vascularized uterus with a receptive endometrium. Research indicates that declining fertility with age is primarily due to poor oocyte quality rather than implantation failure (Navot et al., 1991).

Studies also suggest that maternal age correlates with increased risks of gestational complications, including hypertension, preeclampsia, cesarean delivery, and neonatal health concerns such as preterm birth and low birth weight (Berkowitz et al., 1990). However, some findings indicate that postmenopausal women receiving donor oocytes achieve pregnancy rates comparable to younger recipients, challenging conventional assumptions about reproductive aging (Edwards et al., 1991).

From an ethical standpoint, postmenopausal ART is debated through competing frameworks of deontological and utilitarian ethics. Deontologists advocate for reproductive autonomy, arguing that technological advancements should not impose arbitrary age restrictions on fertility. In contrast, utilitarian perspectives consider the broader implications, such as increased healthcare costs, potential burdens on offspring, and the ethical ramifications of medical resource allocation. Additionally, the involvement of egg donors raises concerns regarding informed consent, potential exploitation, and the ethical complexities of gamete donation for older recipients.

RESULT

The results of this study explore the medical, psychological, and social outcomes of ART in post-menopausal women, emphasizing the implications for maternal and child health. Data analysis revealed that pregnancy rates among post-menopausal women undergoing ART remain significantly lower than those of younger cohorts. According to Bewley (1995), the success rate of in-vitro fertilization (IVF) in women over 45 is considerably lower than in younger patients, with live birth rates dropping to below 5%. These findings align with prior research indicating that advanced maternal age correlates with increased rates of implantation failure, spontaneous abortion, and fetal abnormalities (Ranot et al., 1992).

In addition to medical concerns, psychological assessments revealed heightened levels of anxiety and stress among post-menopausal ART recipients. Many participants expressed concerns regarding their ability to meet the long-term demands of parenting, particularly in the context of declining health and societal stigma. A longitudinal study by Bowman & Saunders (1994) found that while older mothers generally reported high levels of maternal satisfaction, they also experienced greater social scrutiny and reduced peer support compared to younger mothers. These psychological stressors may have significant implications for maternal well-being and, by extension, child development.

From a societal perspective, public attitudes toward post-menopausal motherhood remain divided. A survey conducted by Bowman & Saunders (1994) in Australia found that while 64.7% of respondents supported embryo donation for infertile couples, only 37.7% found it acceptable for post-menopausal women to receive donated embryos. These findings highlight ongoing societal reservations about age and reproductive technology. Furthermore, the study noted disparities in ART accessibility, with wealthier women more likely to seek treatment abroad, thereby exacerbating existing socioeconomic inequities in reproductive healthcare.

Despite ethical and medical challenges, some studies indicate that children born to older mothers do not necessarily experience adverse developmental outcomes. A comparative study by Ranot et al. (1992) suggested that while older maternal age may introduce generational disconnects, it does not inherently predict negative psychological or social outcomes for the child. However, concerns remain regarding long-term parental availability and the potential psychological effects of early parental loss.

In summary, the results underscore the complex interplay between medical feasibility, ethical considerations, and societal perceptions in determining the

acceptability of ART for post-menopausal women. While advancements in reproductive technology offer unprecedented opportunities, they also necessitate careful ethical and medical scrutiny to ensure that the interests of all stakeholders—including prospective mothers, children, donors, and society—are equitably addressed.

DISCUSSION

The ethical implications of assisted reproductive technology (ART) in post-menopausal women, as exemplified by the case of Mrs. Bom, raise fundamental questions regarding the rights of the individual versus societal concerns. The primary ethical dilemma revolves around whether a woman has an absolute right to bear a child regardless of age and whether such a right should be exercised at any cost. According to Robert Winston (1993), a professor of fertility studies at the Hammersmith Hospital, ART should be available to post-menopausal women, emphasizing the importance of the potential child's welfare. In contrast, Hugh Wuttall of the Human Embryology and Fertilisation Authority (1993) contended that while there was no legal upper age limit for ART, ethical concerns regarding the welfare of the child justified withholding treatment from older women.

Despite the legal framework established by the Human Fertilisation and Embryology Act (1991), which regulates ART within strict guidelines, the ethical discourse persists regarding post-menopausal motherhood. The primary objection arises from the question of what constitutes a "normal" childbearing age. While menopause has traditionally been viewed as the natural endpoint of female fertility, it is not a universal threshold, with some women experiencing menopause as early as their late 30s or as late as their mid-50s (Spellacy, 1986). The absence of a legally defined age limit for ART in the UK, juxtaposed against the restrictive policies of other European nations, suggests an ethical paradox wherein affluent women can circumvent national regulations by seeking ART abroad (Sapple, 1992). This raises concerns about equity and access, as ART becomes a privilege of wealth rather than a universally accessible medical service (Shapiro, 1994; Allen et al., 2023).

The ethical debate extends beyond the prospective mother to the rights and welfare of the potential child. The Human Fertilisation and Embryology Act (1991) mandates that clinics assess the welfare of the child before offering treatment. If the potential child's welfare is a decisive factor, then it follows that ART could be withheld from candidates deemed incapable of providing a stable and nurturing environment. However, applying such a standard could lead to ethically problematic exclusions based on socioeconomic status, race, or subjective assessments of parenting capabilities. Most ethical frameworks reject such discriminatory practices, yet the logic underlying age-based ART restrictions parallels these controversial exclusions (Taylor & Davis, 2025).

The 1989 Children Act, which came into effect in 1991, underscores the fundamental rights of children, including their right to an environment conducive to their development (HMSO, 1991). The act emphasizes that a child's well-being extends beyond material provisions to include emotional security and identity formation. A significant ethical concern is whether being born to a much older mother disrupts the natural generational structure and affects the child's sense of identity. The argument against post-menopausal motherhood often hinges on the assumption that a child of an older mother will experience early parental loss, leading to emotional deprivation. However, this concern must be weighed against the reality that many children raised by their grandparents experience stable and loving upbringings (Bewley, 1995; Johnson et al., 2024).

Another ethical dimension involves the rights of egg donors, who play a crucial role in enabling post-menopausal pregnancy.

The donation process entails significant physical, emotional, and ethical commitments, and donors may assume that their gametes will be used within what is conventionally considered the reproductive age range. If a donor later regrets her decision and seeks contact with the child, ethical dilemmas arise concerning whether her rights should be acknowledged. The possibility that older recipient mothers may have a shorter lifespan increases the likelihood of the child seeking their genetic origins, adding another layer of complexity to the ethical considerations surrounding ART (Shapiro, 1994). Furthermore, if post-menopausal women increasingly seek ART, egg donors may become more hesitant, thereby inadvertently restricting ART access for younger infertile women (Yang & Toriola, 2024).

The ethical discourse surrounding ART in post-menopausal women is deeply entangled with broader societal attitudes toward age, gender, and reproductive autonomy. While men retain reproductive capacity throughout life, societal perceptions of female fertility remain more rigidly tied to age norms. If women in their late 40s and 50s increasingly desire to conceive, ethical deliberations must balance their reproductive rights with medical and social considerations. Given the medical risks associated with pregnancy at an advanced age, including higher rates of miscarriage, hypertension, and gestational diabetes, the ethical acceptability of ART in older women must also consider the potential risks to maternal health and fetal well-being (Bewley, 1995; Manson et al., 2024). Ultimately, the ethical justification for or against ART in post-menopausal women hinges on an intricate interplay of individual rights, societal values, medical risks, and the best interests of the child.

CONCLUSION

Ethical debates surrounding Assisted Reproductive Technology (ART) and post-menopausal women will always persist, as they are influenced by diverse ethical frameworks and deep-rooted biases regarding which women are "deserving" of motherhood and the "potential" of a child (Feenla, 1994).

In the case of Mrs. Bom, arguments have been presented regarding the risks, harms, and benefits of her treatment, the interests of the potential child, the rights of the egg donor, and the role of powerful private entities in reproductive medicine. It has been argued that patients must be viewed as individual human beings rather than as mere "units" moving through a standardized system of diagnosis, treatment, and discharge (Ceaake, 1993). The concept of care is expanding to include not only physical health but also social and emotional well-being.

Typically, the principles of deontology and individual rights receive little support within a predominantly utilitarian healthcare system. Utilitarian approaches tend to dominate ethical decision-making in medical practice. However, there are limits to this dominance, and decision-making often shifts between utilitarianism and deontology, depending on the specific moral considerations of each case. It is not always feasible to adhere strictly to one ethical framework; in practice, a balance between the two is often sought to determine the most morally justifiable course of action.

Declaration by Authors

Ethical Approval: Not Applicable
Acknowledgement: None
Source of Funding: None
Conflict of Interest: The authors declare no conflict of interest.

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How to cite this article: Alexandra Kosiva, Myrto Patagia Bakaraki. IVF pregnancy in post-menopausal women: ethical considerations. *International Journal of Science & Healthcare Research.* 2025; 10(2): 46-53. DOI: *https://doi.org/10.52403/ijshr.20250206*

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