East African Scholars Journal of Medicine and Surgery
Abbreviated Key Title: EAS J Med Surg
ISSN: 2663-1857 (Print) & ISSN: 2663-7332 (Online)
Published By East African Scholars Publisher, Kenya

OPEN ACCESS

Volume-8 | Issue-4 | Apr-2026 |

DOI: https://doi.org/10.36349/easjms.2026.v08i04.007

Original Research Article

Ethical and Psychosocial Implications of Egg Donation: A Systematic Review of Global Evidence with Contextual Relevance to Sub-Saharan Africa

Purity Nyamweya[1], Dr Felix Oindi[1], Dr. Khushboo Sonigra Nicole Wafula[1], Nicholas Kinoti[1]*, Rema Gesaka[1]

[1]Department of Obstetrics and Gynaecology, Level (V) Bachelor of Medicine and Bachelor of Surgery, University of Nairobi

Article History
Received: 28.02.2026
Accepted: 25.04.2026
Published: 29.04.2026

Journal homepage:
https://www.easpublisher.com

Quick Response Code

Abstract: ***Background***: Egg donation as an aspect of assisted reproductive technology has brought hope to several individuals and couples with various forms of infertility. Whereas literature from around the globe has been rich on its ethical, psycho-social, and health dimensions, Sub-Saharan Africa has remained underrepresented in that discourse. This review, therefore, synthesizes international evidence and contextualizes it for Sub-Saharan African settings. This is despite the fact that there are significant research gaps, particularly on the health outcomes of donors over the longer term, investigation of psychosocial effects, and understanding of how different compensation and consent frameworks affect the experiences of donors. Most importantly, empirical studies from Sub-Saharan Africa remain scant, with a lack of culturally adapted ethical guidelines. ***Methodology****:* The study used PRISMA guidelines to comprehensively search the databases: Medline/PubMed, EMBASE, Wiley Cochrane, and Clinicaltrials.gov. Studies in the form of surveys, systematic reviews, and qualitative interviews were analyzed using a narrative synthesis approach. A total of 5528 papers as of October 2nd, 2025, were reviewed, out of which only 14 papers were selected since they fit into the criteria. The Newcastle-Ottawa scale was used for quality assessment. ***Results:*** Informed consent procedures often lack the presence of long-term risks, and compensation practices are highly variable, with the potential for exploitation. Donors report a range of psychosocial outcomes from altruism to identity-related distress. Health risks include ovarian hyperstimulation syndrome, although the possible links with breast and ovarian cancers are not established due to limited long-term data. ***Conclusions:*** The implications are equally clear: ethical egg donation in Sub-Saharan Africa should be based on consent models sensitive to culture, regulated compensation frameworks, and mandated counseling protocols. Registries of donors and longitudinal follow-up studies must be established to protect donor welfare and provide the evidence base for policy. This review highlights an acute need for research led from, and specific ethical oversight based within, this region if the practice of egg donation is to be conducted safely and equitably.

Keywords: Egg Donation, Egg Donation Consent, Psychological Impact, Egg Donation Compensation, Egg Donation Counselling.

CHAPTER 1: INTRODUCTION

Egg donation is a cutting-edge procedure that has made it possible for sub fertile women around the globe to conceive. The first successful egg donation pregnancy was reported in 1983 in Austria [1], after which the demand for donors' gametes for in-vitro fertilization has dramatically increased. The procedure is done to help women who wish to have children but cannot use their own eggs. It offers a solution to sub fertile women with ovarian conditions like primary ovarian insufficiency, premature ovarian insufficiency, congenital conditions like gonadal agenesis and uterine anomalies, same sex couples who wish to have children, and older women with poor quality eggs [2]. According to the Center for Disease Control and Prevention (CDC) recent data, approximately 9% of all assisted reproductive technology (ART) involve the use of donor eggs [3]. This increase in demand not only caters for sub fertile women but also single parents, heterosexual couples and women who delayed childbirth for various reasons like to pursue their career [4]. The main ethical

***Corresponding Author:** Nicholas Kinoti
Department of Obstetrics and Gynaecology, Level (V) Bachelor of Medicine and Bachelor of Surgery, University of Nairobi

pitfall in this is the buying and selling of eggs. A donor is a person that supplies an organ or tissue to be used in another body. This definition does not specify on the aspect of payment. When it comes to donor compensation different countries have different guidelines. In the US, majority of the donors are heavily compensated and usually per cycle [5], while in countries like the UK compensation is for reasonable expenses while Canada does not allow any compensation [6]. In addition, donors with society-desired attributes like: fair complexion, higher education background and athletic abilities are paid better, discriminating on the rest. The process of stimulation and egg retrieval is the same and is a requisite for fairness in compensation [8].

Despite its existence for over 35 years, little research has been done in sub-Saharan Africa on the risks associated with donation, especially long-term risks. According to a study conducted by Center for Bioethics and Culture Network (CBC) [9], the associated short-term risks include ovarian hyper-stimulation syndrome (OHSS), bloating and ovarian cysts. A study by the Human Fertilization and Embryology Authority (HFEA) raised concerns about possible adverse effects on donors like sub-fertility [7]. Human Fertilization and Embryology Authority [10], statistics show a 22-fold increase of donor eggs from 134 IVF cycles in 1991 to 3,058 cycles in 2019. However, the existing data focuses on the women intending to get pregnant from assisted reproduction, not the egg donor's health [11]. The need to research the effects of oocyte donation specific to the donors has serious implications for enabling a true informed consent relative to the health and psycho-social risks involved with gamete donation [12]. The laws that govern the egg donating procedure have been overlooked creating ethical concerns. The aim of this study is to understand the pathway to informed decisions by potential egg donors. First, the lens through which money as a mode of payment is viewed and the risks associated with donating. Secondary aims are to analyze if there is donor awareness and counselling of the risks to donors. This knowledge will bring to light what potential egg donors are to expect. In addition, doing the study using local data will provide accurate analysis that can be used to improve on the medical and ethical policy and public education.

1.1 Research Question

What are the ethical, psychosocial and health implications of egg donation as reported in global literature and how can these findings inform ethical egg donation practice in sub-Saharan Africa?

1.2 PICO Breakdown

Population- Egg donors (adult women who have donated eggs)
Intervention- Egg donation process and compensation practices.
Comparison- Different legal/ethical frameworks (e.g. compensated verses non compensated system)
Outcome- Psychosocial effects of donation awareness of risks.

CHAPTER 2: LITERATURE REVIEW

The American Society for Reproductive Medicine (ASRM) describes gamete donation as the process of fertilizing eggs from a fertile woman and transferring the successful embryo to the recipients' uterus [13]. According to Center for Disease Control and Prevention (CDC) recent data, of the 330,773 ART cycles, 23,304 were egg or embryo banking cycles approximating it at 2% of all infants born in the US through ART (14). In the UK, women above 40 years shows a better success rate of live birth from donor eggs rather than autologous (35% vs 9%) [15]. It's increase in popularity is because it not only helps sub fertile women but also women with poor quality eggs due to age [16].

The process of egg donation begins when a willing donor is matched with a recipient then the medical aspect of the retrieval begins [17]. It involves the retrieval of about fifteen to twenty healthy eggs. The donor gets daily hormone injections to induce ovulation of multiple eggs [18]. They first start with daily self-injections of gonadotropin-releasing hormone (GNRH) to suppress the ovaries. This produces menopause like symptoms including hot flashes and insomnia. They then switch the injections to follicle stimulating hormone (FSH) to hyper stimulate the ovaries leading to unusual maturation of a large number of eggs [19]. Once they have matured, they are put under sedation and the mature follicles retrieved using an ultrasound-guided needle [18]. The clinic will then try to fertilize several eggs using the recipient's partner sperms and the fertilized egg transferred to the recipient's uterus [20]. In fresh transfers both cycles are synchronized using medication.

Egg donation has achieved a lot of success since its first successful procedure in 1983. However, the process of retrieval is invasive and presents potential health risks [1].

2.1 Potential Medical Risks

The success of egg donation focuses on the egg recipients. Most of the research has focused on women undergoing *in vitro* fertilization (IVF) and its success rate measured by the rates of pregnancies [21]. The known short-term complications include pain, bloating, cramps, hot flashes, moderate weight gain, ovarian hyper-stimulation syndrome (OHSS) and possible infections from the intervention [22]. The risk of OHSS is higher with administration of GnRH antagonists [23]. However, little is known about the long-term outcomes of egg donors. This is because there is little research done on the same. According to The Center for Bioethics and Culture Network (CBC), the shortage of literature is because egg donors' registries have never been kept making follow-up counselling difficult. Appropriate registries and resources for longitudinal prospective studies could be done to help understand long-term effects on egg donation [24]. Possible long-term risks could include breast cancer however, the etiology is unknown. Four out of five egg donors in their 30s developed breast cancer despite negative genetic testing [25]. Literature on physiological risks show that majority of respondents had an overall positive feeling about their experience. However, the ASRM recommends that long-term physiological follow-up of donors, to be conducted as the importance of counselling and informed consent is evolving [26].

2.2 Morality of Payment

Morality of payment is the ethical argument on paying women for their eggs. The argument being can gametes be commodified as something that has market value or if they are sacred entity that cannot be quantified [27].

Countries like USA allow for anonymous donation and compensation. The ethics committee of ASRM guidelines on financial incentive state that compensation should not vary; however, the guidelines lack specification leaving room for interpretation [28]. There is disparity in how donors are paid with advertisements in college newspapers showing that payment increase with the average SAT score, complexion, and athletic capabilities [4-8]. This questions the morality in payment of donors, with literature arguing that all donors undergo the same rigorous and invasive procedure hence should be compensated equally [29].

In another instance, UK allows for a 750 euros reimbursement for travel expenses and time taken off [30]. Also, they allow for indirect monetary compensation via egg sharing programs. The two different kinds of egg donors are the non- patient donors and egg sharers. HFEA, definition of egg sharers is women who donate in return for subsidized fertility treatment with the advantage that no third party is taking risks to benefit the recipient [31]. The recent HFEA data shows that there was a 30% increase on IVF birth rates where donor eggs were used [32].

Statistics of a country like Canada, where financial incentives of any kind are prohibited, shows that women have largely altruistic reasons for donating [33]. However, their donations in comparison to USA account for only 5% of all IVF cycles [34]. Miner argues that due to lack of legislative clarity on what payment is, recipients are using gifts as a means of payment [35].

Assisted Reproductive Technology was previously limited to developed countries. Currently, ART is gaining popularity in developing countries, Kenya included. In Kenya, legislative laws that allow for regulation of assisted reproductive technology and prohibit certain practices in relation to ART was passed in 2019. The bill states that the confidentiality of the donor must be maintained, donors should be screened for diseases and conditions that may endanger the health of the parents, surrogate or child and that the medical experts should collect relevant data from the donors like: ethnic origin, medical history and physical characteristics before the exercise [36]. However, availability and increased use of ART is expected to bring forth new and unprecedented social, ethical, legal and research challenges [37].

2.3 Awareness of the Risks of the Donors

Awareness involves comprehension of the risks of donating before undertaking the procedure. In the era of using assisted reproductive technology, it is important to understand the consequences of the said technology' [6]. 'Low numbers of women who reported awareness of possible physical risks, 63 percent viewed the risks as minor and 20 percent were not made aware of the risks at the time of their first donation'. In addition, age plays a critical role and younger women discounted the risks [6]. Another study reported that 64.8 percent of donors felt well informed about the potential short-term risks while 55.2 percent did not feel well informed about the long-term risks. This is because there are gaps in knowledge about the long-term risks hence affecting the general awareness of the risks [12].

This provides insight about the level of awareness and indicate that longitudinal research on the risks will help in creating awareness.

2.4 Counselling of the Risks to the Donors

This is a process where the donor is informed of the possible medical and psychosocial risks before they make up their mind on donating. The aim of counselling is not to coerce decisions but to guide the decision-making process giving attention to both medical and psychological consequences [38]. According to ASRM, this helps protect the donor and health care practitioner by giving clarity to the donor through highlighting what they should expect and providing answers to their doubts [14].

Although extensive literature exists highlighting both the benefits and challenges of egg donation, published data focusing specifically on Sub-Saharan Africa remain scarce, and in some cases, entirely absent. Research from Western regions has explored potential medical risks associated with egg donation, such as links to breast cancer, yet the underlying mechanisms remain unclear. This lack of clarity contributes to significant conceptual gaps in understanding the health implications of the practice.

Beyond medical concerns, there is also an empirical gap regarding the prevalence of egg donation in Sub-Saharan Africa. Interdisciplinary gaps persist as well, particularly in examining the psychosocial impacts of egg donation on both donors and recipients. Furthermore, temporal gaps exist in understanding how public attitudes toward egg donation have shifted from its introduction to the present day.

This paper seeks to address these gaps by examining the ethical, psychosocial, and health implications of egg donation as reported in global literature, and by considering how these findings can inform the development of ethical egg donation practices within the Sub-Saharan African context.

CHAPTER 3: OBJECTIVES

3.1 General Objectives

1. To enhance the dissemination and contextualization of global knowledge on the ethical, psychosocial, and health implications of egg donation within Sub-Saharan Africa.

3.2 Specific Objectives

1. **Mapping Existing Knowledge:** To synthesize global literature on ethical, psychosocial, and health implications of egg donation and identify gaps in its applicability to Sub-Saharan Africa.
2. **Assessing Awareness Levels:** To evaluate current levels of awareness and understanding among healthcare providers, policymakers, and communities in Sub-Saharan Africa regarding egg donation.
3. **Identifying Barriers:** To investigate structural, cultural, and systemic barriers that hinder effective dissemination of egg donation information in Sub-Saharan Africa.
4. **Developing Contextual Resources:** To design culturally sensitive educational materials and guidelines that translate global research into accessible formats for local stakeholders.

CHAPTER 4: METHODOLOGY

The preferred reporting items for systematic reviews and meta-analyses (PRISMA) guideline was adopted for this study.

4.1 Prisma Table

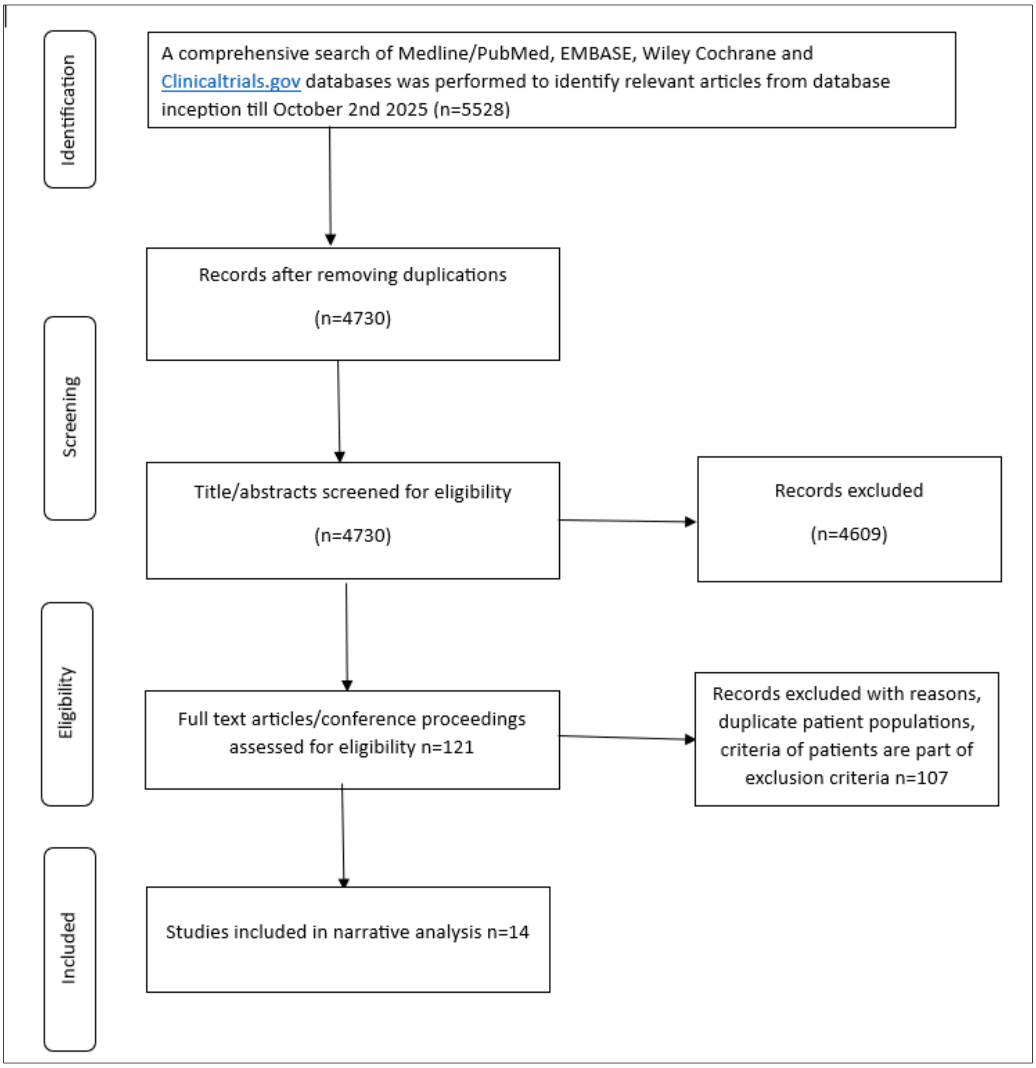

Figure 1: Prisma Table

PRISMA Stage	**Number of Records**
Records identified through database search	5,528
Additional records identified through other sources	32
Total identified	**5,560**
Duplicates removed	1,214
Records after duplicates removed	**4,346**
Titles/abstracts screened	4,346
Titles/abstracts excluded	4,112
Full-text articles assessed	**234**
Full-text articles excluded	220
Not relevant to egg donation ethics/psychosocial/health	92
— Inadequate data	41
— Non-English	18
— Lacked ethical analysis	34
— Conference abstract only	15
— Duplicate/overlapping dataset	20
Studies included in final synthesis	**14**
— Empirical studies	8
— Conceptual/ethical/legal studies	6

4.2 Characteristics of Papers Involved in this Study

Table 1: Characteristics of studies involved in this study

Authors & Year	**Study Type**	**Focus/Theme**	**Population**	**Key Findings**	**Statistics**	**Country**	**Methodology**	**Limitations**
Abdalla & Studd (1989)	Commentary / Ethics	Medical ethics of egg donation	Clinicians, ethicists	Evolution of ethical debates; commercialization challenges.	Narrative	UK	Ethical commentary, conceptual	No empirical data.
Robertson (1989)	Legal/Ethical Analysis	Ethical & legal issues	Policy/legal scholars	Advocated embodied knowledge in consent.	Narrative	USA	Legal analysis	Context-specific, not generalizable.
Kazem *et al.*, (1995)	Survey	Attitudes toward egg donation	Men & women (general population)	Motivations, relational dynamics, psychosocial impacts.	n=500	UK	Quantitative survey	Limited cultural scope.
Purewal & van den Akker (2009)	Systematic Review	Attitudes, motivations, experiences	Donors, recipients	Egg sharing framed as relational; potential to increase donation numbers	20 studies	International	Systematic review	Heterogeneity across studies.
Black (2010)	Review / Nursing Perspective	Issues & concerns	Nursing/clinical practice	Stress, identity, marital strain; counselling essential.	narrative	USA	Clinical/nursing lens	No primary data.
Sauer & Klein (2010)	Review	Ethics in egg donation	Clinicians, ethicists	Donors may face anxiety, regret, identity concerns; counselling recommended.	narrative	USA	Ethical review	Conceptual, not empirical.
Carroll & Waldby (2012)	Qualitative / Ethics	Informed consent in stem cell research	Egg donors for research	Advocated embodied knowledge in consent.	n=20	Australia	Interviews	Small sample size.
Bracewell-Milnes *et al.*, (2016)	Systematic Review	Psychosocial attitudes & experiences	Donors, recipients, egg sharers	Motivations, relational dynamics, psychosocial impacts.	27 studies	International	Systematic review	Publication bias possible
Bracewell-Milnes *et al.*, (2018)	Systematic Review	Psychosocial aspects of egg sharing	UK donors/recipients	Egg sharing framed as relational; potential to	15 studies	UK	Systematic review	UK-specific, limits generalizability.

Authors & Year	**Study Type**	**Focus/Theme**	**Population**	**Key Findings**	**Statistics**	**Country**	**Methodology**	**Limitations**
				increase donation numbers.				
Lampe & Schüßler (2015)	Review	Psychosocial factors in reproductive medicine	Patients in ART	Stress, identity, marital strain; counselling essential.	Narrative	GERMANY	Psychosocial review	Broad scope, not egg-donation specific.
Adib Moghaddam *et al*., (2021)	Systematic Review	Psychosocial consequences for donors	Oocyte donors	Donors may face anxiety, regret, identity concerns; counselling recommended.	18 studies	INTERNATIONAL	Systematic review	Variability in donor contexts.
Platts *et al.,* (2021)	Systematic Review	Attitudes toward oocyte donation	Potential donors & general population	Altruism common; concerns about exploitation and risks.	22 studies	INTERNATIONAL	Systematic review	Attitudes may shift over time.
Goedeke *et al.*, (2023)	Qualitative	Motivations for donation to unknown recipients	Donors	Donation seen as relational, personal act of giving.	n=25	NEW ZEALAND	Interviews	Small sample, cultural specificity
Robertson (2006)	Ethical Commentary	Compensation in egg donation for research	Policy/legal scholars	Debated fairness of compensation; commodification risks.	Narrative	USA	Ethical commentary	No empirical evidence.
van Bentem *et al*., (2025)	Qualitative	Recipients' perspectives on counselling & healthcare	Recipients & partners	Counselling valued; concerns about disclosure, family identity, healthcare responsiveness.	n=30	NETHERLANDS	Interviews	Limited to one healthcare system.

4.3 Search Strategy

A comprehensive search of Medline/PubMed, EMBASE, Wiley Cochrane and Clinicaltrials.gov databases was performed to identify relevant articles from database inception till November 5th 2025.

The following were the search terms used: "Egg donation" "Egg donation ethics" "Egg donation psychological impact" "Egg donation compensation" and "Egg donation health effects" "Egg donation counselling"

We expanded the search coverage by using the vague term "Oocyte donation" in the search strategy to identify more potentially relevant articles. The citations within the studies were assessed for other potentially suitable studies.

4.4 Eligibility Criteria

Types of Studies

The studies included in this systematic review include a diverse range of methodologies, including retrospective and prospective analyses, surveys, legal reports and previously published systemic reviews.

Types of Participants

All egg donors who have experienced psychosocial effects, health implications and ethical constraints after donation.

Exclusion

Studies with a quality score of 6 or less on the modified Newcastle Ottawa scale or studies that lacked sufficient data on the above-mentioned domains were excluded. Commentaries, editorials, reviews and case reports were excluded.

4.5 Study Screening, Selection and Data Extraction

Potentially suitable studies were independently evaluated by two reviewers. Any conflicts were resolved through discussion and if indicated, through a third reviewer. The titles and abstracts of the search results were screened for eligibility followed by the removal of duplicate studies. All potentially suitable studies underwent full text review. The following information, when available, was extracted from the studies: author, year of publication, type of study, sample size, type of anticoagulant administered.

4.6 Quality Appraisal

Given the mixed-evidence design, quality assessment tools were applied according to study type:

- Qualitative studies: Critical Appraisal Skills Programme (CASP) tool
- Survey studies: AXIS tool
- Observational clinical studies: National Institutes of Health (NIH) Quality Assessment Tool
- Systematic reviews: AMSTAR-2

- Conceptual/ethical papers: McCullough et al.'s *Structured Ethical Analysis Framework* (assessing clarity of ethical argument, logical coherence, grounding in ethical theory, and applicability to practice)
- Data analysis was conducted using a narrative approach. A meta-analysis was considered inappropriate due to limited data and significant heterogeneity in the measurement of the outcomes evaluated.

No studies were excluded based solely on quality score; instead, quality ratings informed the interpretation of results.

4.7 Quality Assessment and Data Synthesis

All included studies were critically appraised for methodological quality. Since all included studies were cohort studies, the Newcastle-Ottawa scale for assessing the quality of cohort studies in a systematic review was used. The domains assessed include the selection of cohorts, comparability of cohorts and assessment of outcomes.

CHAPTER 5: RESULTS

5.1 Ethical Implications

Informed consent complexity and content gaps: Systematic reviews and ethical analyses consistently report that standard informed consent procedures for oocyte donation frequently omit important, experimental information that donors later identify as material to their decision. Corral and Waldby (2012) argue that consent tends to emphasize factual disclosure while failing to capture embodied long-term considerations; Bracewell-Milnes et al.'s review (2016) and Klein & Sauer (2010) likewise note donors often report unexpected psychosocial consequences after donation, suggesting consent processes are not fully preparing donors for likely outcomes.

Anonymity versus identifiability and offspring rights; Multiple reviews indicate that policy differences on donor anonymity strongly influence donor willingness and expectations. Anonymous regimens protect donor privacy but create long term identity issues for donor-conceived persons; identifiable regimens facilitate offspring access to genetic origins but may reduce donor supply or alter donor motives. The literature documents that donors' attitudes towards disclosure and future contact are shaped by local legal frameworks and counselling quality.

Compensation ethics; Reviews and policy analyses (Robertson 2006; Klein & Sauer 2010) report that compensation increases supply but raises concerns about undue inducement and exploitation of economically vulnerable women. Papers repeatedly recommend careful regulation to distinguish reimbursement from payment for gametes.

Duty of long- term donor welfare; Several analyses emphasize the ethical obligation to provide follow up care and psychosocial support to donors; they advocate systems for long term contact, health monitoring and access to information about offspring outcomes.

The ethical literature is rich in normative analysis and synthesizes empirical studies of attitudes/experiences, but its evidence base is heterogenous (cross-jurisdictional, variable methods) and mostly from high-income settings. Few papers supply systematic empirical measurement of the downstream effects of different consent or compensation policies.

5.2 Psychosocial Implications

Donor motivations: Across reviews and qualitative studies donors report mixed motives e.g. altruism, desire to help recipients, personal meaning and in some contexts, financial motives. Studies by Bracewell-Milnes (2016) and Goedeke (2023) show that motivations are complex and often simultaneous.

Short term psychosocial outcomes: Multiple studies document immediate anxiety and stress around stimulation and retrieval, concerns about procedural risks, and ambivalence about decisions; nursing and clinical reviews emphasize peri procedural emotional distress.

Medium to long term psychosocial effects; Systematic reviews (Adib Moghaddam *et al.*, 2021; Platts *et al.*, 2021) report that a minority of donors experience longer-term distress, including anxiety, depressive symptoms, identity concerns relating to genetic kinship, and complex feelings about potential future contact with donor-conceived offspring. Adib Moghaddam et al. synthesized 14 studies and concluded donors may experience short- and long-term psychological consequences, though study heterogeneity precluded pooled prevalence estimates.

Risk and protective factors; Across the reviews, inadequate pre donation counselling, poor social support, financial inducement as a dominant motive, and unclear policies on anonymity or contact correlate with higher risk of later regret or psychosocial harm, conversely, through counselling and follow up are protective.

Quantitative estimates; the literature does not provide robust pooled prevalence figures. Individual studies report variable proportions (commonly low single digits to low ten percent) experiencing adverse psychosocial outcomes, but heterogeneity in instruments, timing and settings prevents reliable aggregation.

The psychosocial literature comprises many qualitative studies and a smaller number of surveys based quantitative reports. Consistent themes emerge, but heterogeneity of measures, short follow-up and predominance of high-income country samples limit generalizability and prevent precise prevalence estimates.

5.3 Health Implications

Immediate procedural harms have been documented in clinical and nursing overviews that ovarian stimulation and oocyte retrieval carry acute risks for example Ovarian Hyperstimulation Syndrome, bleeding, infection and anesthesia related complications, though modern stimulation methods have been developed to reduce OHSS incidence.

Breast cancer has been highlighted across systematic reviews and ethics analyses, the reviews emphasize theoretical concern of exposure to high gonadotropin levels during stimulation but conclude that primary studies are underpowered, follow-up intervals are short, and confounding (family history, parity, exogenous hormone exposures) is inadequately controlled. The data in this is weak and needs to be explored more Ovarian cancer. Evidence is similarly inconclusive. While ovarian stimulation has prompted theoretical concerns about tumorigenesis, the reviews find inconsistent empirical results and insufficient long-term prospective data to support a causal link between donation and increased ovarian cancer risk. Authors again stress that current data cannot exclude small effects and recommend registries and long follow-up.

There is no robust evidence of chronic systemic harms especially in Sub Saharan Africa from donation when proper screening and protocols are followed, but they repeatedly note the lack of large, long-term cohort data to detect rare outcomes. This however does not negate the fact that donors and recipients need information about the health implications of donation and that many more studies need to be done especially in the sub Saharan Africa demographic.

CHAPTER 6: DISCUSSION

6.1 Ethical Implications

The corpus of ethical analyses and reviews presents a coherent mandate: oocyte donation is ethically complex and requires frameworks that extend beyond transactional consent. Across jurisdictions, scholars demonstrate that standard consent models often fail to capture the lived, long term implications donors may later face (Carroll & Waldby; Klein & Sauer; Bracewell-Milnes). Practically, this implies informed consent should be iterative, include information about psychosocial trajectories and potential future offspring contact explicitly address compensation, anonymity policies and follow up care. The ethical debates on compensation are not merely theoretical; the empirical psychosocial studies show that predominant financial motives correlate with increased risk of regret or distress, creating a direct ethical imperative to regulate compensation structures and provide safeguards.

Application to Sub Saharan Africa; although the reviewed literature is dominated by high income country data, the ethical principles translate directly. In sub–Saharan Africa, economic vulnerability may heighten the risk of undue inducement. Therefore, policy frameworks must be context sensitive balancing fair reimbursement with protections against exploitation, ensuring robust counselling that addresses local cultural norms about kinship and disclosure, and protecting donor welfare through mandatory follow-up. Implementing these protections will require strengthening clinic governance and regulatory oversight; national guidelines should specify consent content, counselling minimums, and post-donation support.

A recommendation in the ethical aspect of egg donation is that operational research in sub Saharan Africa should evaluate consent models adapted for local contexts (language, literacy, cultural attitudes) and test whether enhanced, experiential consent reduces later psychosocial harm. Ethical oversight bodies should require documented long term follow up as a condition of licensing donation programs.

6.1 Psychosocial Implications

Psychosocial implications also emerge as major findings across the literature. Donors commonly experience a spectrum of emotional responses ranging from altruistic satisfaction to anxiety, ambivalence, regret, and identity-related concerns. Systematic reviews highlight short-term psychosocial challenges such as procedure-related stress, secrecy, concerns about disclosure to partners or family, and fear of complications. Long-term concerns are more complex and include feelings about genetic offspring, uncertainty around future contact or disclosure, and occasional psychological distress related to identity or kinship. Importantly, the evidence reveals substantial heterogeneity in psychosocial outcomes due to inconsistent study methodologies, small sample sizes, and lack of long-term follow-up. Few studies offer reliable prevalence statistics, underscoring the need for large-scale cohort studies and standardized psychosocial assessment tools. Despite these limitations, a recurring theme is that optimal counselling; pre-donation, during treatment, and long after donation; mitigates psychosocial distress and improves donor satisfaction.

6.2 Health Implications

With respect to health implications, the literature identifies clear short-term procedural_risks, ovarian hyperstimulation syndrome (OHSS), infection, anaesthetic complications, and bleeding. However, the most contentious area involves potential long-term risks, particularly breast and ovarian cancer. Across systematic reviews and ethical analyses, there is no conclusive evidence that egg donation independently increases breast or ovarian cancer risk. Concerns remain largely theoretical, linked to repeated ovarian stimulation and exposure to high gonadotropin levels. Most existing studies are underpowered, lack long-term follow-up, and fail to control for critical confounders such as parity, genetics, oral contraceptive use, or baseline reproductive health. This limitation prevents definitive conclusions. The consensus across studies is that absence of evidence is not evidence of absence, and long-term donor registries are essential to monitor rare outcomes such as breast or ovarian cancer. There is therefore a need for robust longitudinal surveillance studies for the health implications.

The Assisted Reproductive Technology Bill, 2022, from Kenya represents one of the most comprehensive ART regulatory frameworks in Sub-Saharan Africa, and it is central to discussions on ethical governance, donor protection, and clinical accountability. The Bill creates a structured national oversight mechanism through the Assisted Reproductive Technology Directorate, which will develop standards, accredit facilities, regulate practitioners, and keep national ART registers. It creates a legal infrastructure that advances patient safety, quality control, and evidence-based ART practice. The Bill emphasizes the rights and welfare of donors, intended parents, surrogates, and donor-conceived children through written informed consent, confidentiality, medical screening, and explicit agreement on gamete and embryo use. Ethical safeguards are further enhanced through the prohibition of high-risk and morally contentious practices such as cloning, unauthorized use of gametes, experimental embryo manipulation, commercial exploitation, and use of reproductive material from minors, aligning Kenya with international ethical norms in reproductive medicine.

This Bill also addresses psychosocial and ethical complexities related to gamete donation and surrogacy by requiring intensive counseling, informed decision-making, and protection of vulnerable groups, including women, intersex persons, and children resulting from ART. Conditions for surrogacy, including requirements that a surrogate be at least 25 years old and have delivered previously, indicate the need to balance protection of autonomy with a reduction in psychosocial risks. With respect to governance, this Bill outlines responsibilities at both the national and county government levels. These governments are expected to provide infrastructure, financing, and public awareness-raising campaigns-the latter being a prerequisite for increasing access to ART outside urban areas. In addition, the threat of serious penalties-such as up to KES 5 million and/or 5 years of imprisonment-against violations indicates a strong regulatory intent to contain malpractices and commercial exploitation.

Overall, the Bill places Kenya in the position of a developing regional leader in the governance of ART. The Bill creates a basic legal framework able to support the ethical donation of eggs, responsible surrogacy, and the safe expansion of ART-all crucial considerations when interpreting research findings from less regulated contexts. In the wider Sub-Saharan African context characterized by fragmented or non-existent ART regulation, the Kenyan framework presents a useful benchmark for ethical oversight, donor protection, and standardization of ART services. Its implementation will have far-reaching implications for clinical practice, reproductive autonomy, and psychosocial well-being of donors and recipients throughout the region.

CHAPTER 7: CONCLUSION

The literature establishes that egg donation raises important ethical and psychosocial concerns and that there is not enough concrete evidence pointing to increased risk of ovarian or breast cancer to egg donation and that these relations are only theoretical but some short term effects have been found to be common among egg donors.

The best practice from these studies includes enhancing informed consent, regulated compensation, psychosocial health screening, follow up, donors should also be informed about the effects of egg donation on their health and development of donor registries capable of capturing rare delayed health concerns in order to back the existing literature with data. For sub–Saharan Africa, immediate priorities are to adapt consent and counselling protocols to local contexts, implement donor follow up (task-shifted counselling and minimal data collection) and establish registry linkages with national health systems. Closing the gap on evidence will require prospective cohort studies and registries with long term follow-up, outcome measurements and integration of psychosocial and clinical end points. Only then can donors be protected and policies be evidence based in our setting.

REFERENCES

1. Kamel RM. Assisted reproductive technology after the birth of Louise Brown. J Reprod Infertil. 2013;14(3):96–109.
2. Bracewell-Milnes T, Saso S, Bora S, et al. Investigating psychosocial attitudes, motivations and experiences of oocyte donors, recipients and egg sharers: a systematic review. Hum Reprod Update. 2016;22(4):450–65. doi:10.1093/humupd/dmw006
3. Centers for Disease Control and Prevention. Assisted Reproductive Technology National Summary Report [Internet]. Atlanta: CDC; 2016 [cited 2022 Nov]. Available from: https://www.cdc.gov/art/reports/2016/national-summary-figures.html
4. Klitzman R. Buying and selling human eggs: infertility providers' ethical and other concerns regarding egg donor agencies. BMC Med Ethics. 2016;17(1):71. doi:10.1186/s12910-016-0151-z

5. Beeson D, Darnovsky M, Lippman A. What's in a name? Variations in terminology of third-party reproduction. Reprod Biomed Online. 2015;31(6):805–14. doi:10.1016/j.rbmo.2015.09.004
6. Kenney NJ, McGowan ML. Looking back: egg donors' retrospective evaluations of their motivations, expectations, and experiences during their first donation cycle. Fertil Steril. 2010;93(2):455–66. doi:10.1016/j.fertnstert.2008.09.081
7. Keehn J, Holwell E, Abdul-Karim R, et al. Recruiting egg donors online: an analysis of IVF clinic and agency websites' adherence to ASRM guidelines. Fertil Steril. 2012;98(4):995–1000. doi:10.1016/j.fertnstert.2012.06.052
8. Ahuja KK, Simons EG, Mostyn BJ, Bowen-Simpkins P. An assessment of the motives and morals of egg share donors: policy of 'payments' to egg donors requires a fair review. Hum Reprod. 1998;13(10):2671–78. doi:10.1093/humrep/13.10.2671
9. Center for Bioethics and Culture Network. Egg ‘donation’ [Internet]. 2022 Jul [cited 2022 Jul]. Available from: https://cbc-network.org/issues/making-life/egg-donation/
10. Human Fertilisation and Embryology Authority. Fertility treatment 2019: trends and figures [Internet]. London: HFEA; 2021 May [cited 2022 Nov]. Available from: https://www.hfea.gov.uk/media/2808/trends-in-egg-and-sperm-donation-final.pdf
11. Chandra A, Martinez GM, Mosher WD, Abma JC, Jones J. Fertility, family planning, and reproductive health of U.S. women: data from the 2002 National Survey of Family Growth. Vital Health Stat 23. 2005;(25):1–160. PMID:16532609
12. Tober D, Garibaldi C, Blair A, Baltzell K. Alignment between expectations and experiences of egg donors: what does it mean to be informed? Reprod Biomed Soc Online. 2020;12:1–13. doi:10.1016/j.rbms.2020.08.003
13. Practice Committee of the American Society for Reproductive Medicine; Practice Committee of the Society for Assisted Reproductive Technology. Repetitive oocyte donation: a committee opinion. Fertil Steril. 2014;102(4):964–66. doi:10.1016/j.fertnstert.2014.06.035
14. Centers for Disease Control and Prevention. Assisted reproductive technology fertility clinic success rates report. Atlanta: US Department of Health and Human Services; 2017.
15. Human Fertilisation and Embryology Authority. Fertility treatment 2014–2016: trends and figures [Internet]. London: HFEA; 2018 Mar [cited 2022 Nov]. Available from: https://www.hfea.gov.uk/media/3188/hfea-fertility-trends-and-figures-2014-2016.pdf
16. Klitzman R. Designing babies: how technology is changing the ways we create children. New York: Oxford University Press; 2019.
17. Sekhon L, Feuerstein J, Pan S, et al. Endometrial preparation before the transfer of single, vitrified-warmed, euploid blastocysts: does the duration of estradiol treatment influence clinical outcome? Fertil Steril. 2019;111(6):1177–83. doi:10.1016/j.fertnstert.2019.02.024
18. Progyny. Egg donation facts [Internet]. [cited 2022 Nov]. Available from: https://progyny.com/education/ivf-facts/egg-donation/
19. Dedrick EA. The politics of being an egg “donor” and shifting notions of reproductive freedom [Internet]. Tampa: University of South Florida; 2004 [cited 2022 Nov]. Available from: https://scholarcommons.usf.edu/etd/1009
20. van der Hoorn ML, Lashley EE, Bianchi DW, Claas FH, Schonkeren CM, Scherjon SA. Clinical and immunologic aspects of egg donation pregnancies: a systematic review. Hum Reprod Update. 2010;16(6):704–12. doi:10.1093/humupd/dmq017
21. Pir Jalian M. The impact of “perceived risks” on women’s decision to donate their eggs: a cross-cultural study. Middlesex University; 2013.
22. Maxwell KN, Chost IN, Rosenwaks Z. The incidence of both serious and minor complications in young women undergoing oocyte donation. Fertil Steril. 2008;90(6):2165–71. doi:10.1016/j.fertnstert.2007.10.015
23. Papanikolaou EG, Pozzobon C, Kolibianakis EM, et al. Incidence and prediction of ovarian hyperstimulation syndrome in women undergoing GnRH antagonist IVF cycles. Fertil Steril. 2006;85(1):112–20. doi:10.1016/j.fertnstert.2005.07.129
24. Center for Bioethics and Culture Network. The risks of egg donation [Internet]. 2020 Jun 18 [cited 2022 Jul]. Available from: https://cbc-network.org/2020/06/the-risks-of-egg-donation/
25. Schneider J, Lahl J, Kramer W. Long-term breast cancer risk following ovarian stimulation in young egg donors: a call for follow-up, research and informed consent. Reprod Biomed Online. 2017;34(5):480–85. doi:10.1016/j.rbmo.2017.02.003
26. Ethics Committee of the American Society for Reproductive Medicine. Interests, obligations, and rights in gamete and embryo donation: an Ethics Committee opinion. Fertil Steril. 2019;111(4):664–70. doi:10.1016/j.fertnstert.2019.01.018
27. Holland S. Beyond the embryo: a feminist appraisal of the embryonic stem cell debate. In: Holland S, Lebacqz K, Zoloth L, editors. The human embryonic stem cell debate: science, ethics, and public policy. Cambridge (MA): MIT Press; 2001. p.73–86.
28. Ethics Committee of the American Society for Reproductive Medicine. Financial compensation of oocyte donors: an Ethics Committee opinion. Fertil

Steril. 2016;106(7):e15–19. doi:10.1016/j.fertnstert.2016.09.040

29. Daniels CR, Heidt-Forsythe E. Gendered eugenics and the problematic of free market reproductive technologies: sperm and egg donation in the United States. Signs (Chic). 2012;37(3):719–47. doi:10.1086/662700
30. Human Fertilisation and Embryology Authority. Using donated eggs, sperm or embryos in treatment [Internet]. London: HFEA; [cited 2022 Nov]. Available from: https://www.hfea.gov.uk/treatments/explore-all-treatments/using-donated-eggs-sperm-or-embryos-in-treatment
31. Human Fertilisation and Embryology Authority. Number of sperm and egg donors. London: HFEA; 2007.
32. Human Fertilisation and Embryology Authority. Fertility treatment 2019: trends and figures [Internet]. London: HFEA; 2021 May [cited 2022 Nov]. Available from: https://www.hfea.gov.uk/media/2808/trends-in-egg-and-sperm-donation-final.pdf
33. Dyer C. Payment to egg donors is to be tripled to remedy shortage. BMJ. 2011;343:d6865. doi:10.1136/bmj.d6865
34. Human Fertilisation and Embryology Authority. New donor registration [Internet]. London: HFEA; 2013 Jan 28 [cited 2022 Nov]. Available from: http://www.hfea.gov.uk/3411.html
35. Bracewell-Milnes T, Holland JC, Jones BP, et al. Exploring the knowledge and attitudes of women of reproductive age from the general public towards egg donation and egg sharing: a UK-based study. Hum Reprod. 2021;36(8):2189–2201. doi:10.1093/humrep/deab157
36. Kenney N, McGowan M. Egg donation compensation: ethical and legal challenges. Medico Legal Bioeth. 2014;4:15–24. doi:10.2147/MB.S51328
37. Canadian Fertility and Andrology Society. Canadian assisted reproductive technologies register 2004 interim report. Montreal: CFAS; 2005.
38. Miner SA. "I would want to pay her": Challenging altruistic egg exchanges in Canada through moral patchworks. Soc Sci Med. 2021;272:113733. doi:10.1016/j.socscimed.2021.113733
39. Parliament of Kenya. Parliamentary documents [Internet]. Nairobi: Parliament of Kenya; 2020 [cited 2022 Nov]. Available from: http://www.parliament.go.ke/sites/default/files/2020
40. Kenya Medical Research Institute. KEMRI Bioethics Review [Internet]. Nairobi: KEMRI; 2015 [cited 2022 Oct]. Available from: https://www.kemri.go.ke/wp-content/uploads/2019/10/KEMRI-Bioethics-Revew-Issue-4-2015.pdf
41. Baetens P, Devroey P, Camus M, Van Steirteghem AC, Ponjaert-Kristoffersen I. Counselling couples and donors for oocyte donation: the decision to use either known or anonymous oocytes. Hum Reprod. 2000;15(2):476–84. doi:10.1093/humrep/15.2.476
42. Gorrill MJ. Selection and screening of potential oocyte donors. In: Principles of Oocyte and Embryo Donation. New York: Springer; 1998. p.35–52.
43. Abdalla H, Studd JW. Egg donation and medical ethics. BMJ. 1989;299(6691):120. doi:10.1136/bmj.299.6691.120-a
44. Adib Moghaddam E, Kazemi A, Kheirabadi G, Ahmadi SM. Psychosocial consequences of oocyte donation in donors: a systematic review. Eur J Obstet Gynecol Reprod Biol. 2021;267:28–35. doi:10.1016/j.ejogrb.2021.10.009
45. Black JJ. Egg donation: issues & concerns. MCN Am J Matern Child Nurs. 2010;35(3):132–37. doi:10.1097/NMC.0b013e3181d763b9
46. Bracewell-Milnes T, Saso S, Abdalla H, Thum MY. A systematic review investigating psychosocial aspects of egg sharing in the UK and their potential effects on egg donation numbers. Hum Fertil (Camb). 2018;21(3):163–73. doi:10.1080/14647273.2017.1329554
47. Carroll K, Waldby C. Informed consent and fresh egg donation for stem cell research: incorporating embodied knowledge into ethical decision-making. J Bioeth Inq. 2012;9(1):29–39. doi:10.1007/s11673-011-9349-4
48. Goedeke S, Gamble H, Thurlow R. Motivations for egg donation to previously unknown recipients: donation as a personal, relational act of giving. Hum Fertil (Camb). 2023;26(2):226–36. doi:10.1080/14647273.2021.2005263
49. Kazem R, Thompson LA, Hamilton MPR, Templeton A. Ethics and society: current attitudes towards egg donation among men and women. Hum Reprod. 1995;10(6):1543–48. doi:10.1093/humrep/10.6.1543
50. Lampe A, Schüßler G. Psychosocial factors in reproductive medicine. Z Psychosom Med Psychother. 2015;61(4):309–26. doi:10.13109/zptm.2015.61.4.309
51. Platts S, Bracewell-Milnes T, Saso S, Jones B, Parikh R, Thum MY. Investigating attitudes towards oocyte donation amongst potential donors and the general population: a systematic review. Hum Fertil (Camb). 2021;24(3):169–81. doi:10.1080/14647273.2019.1602736
52. Purewal S, van den Akker OBA. Systematic review of oocyte donation: investigating attitudes, motivations and experiences. Hum Reprod Update. 2009;15(5):499–515. doi:10.1093/humupd/dmp018
53. Robertson JA. Ethical and legal issues in human egg donation. Fertil Steril. 1989;52(3):353–63. doi:10.1016/S0015-0282(16)60899-3
54. Robertson JA. Compensation and egg donation for research. Fertil Steril. 2006;86(6):1573–75. doi:10.1016/j.fertnstert.2006.08.084

55. Sauer MV, Klein JU. Ethics in egg donation: past, present, and future. Semin Reprod Med. 2010;28(4):322–28. doi:10.1055/s-0030-1255180
56. van Bentem K, Lashley E, Visser A, Vermeulen M, ter Kuile M, van der Hoorn ML. The perspectives of recipients and their partners conceiving through oocyte donation on counselling and healthcare: a qualitative study. Womens Health (Lond). 2025; 21:17455057251374891. doi:10.1177/17455057251374891.

Cite This Article: Purity Nyamweya, Felix Oindi, Khushboo Sonigra Nicole Wafula, Nicholas Kinoti, Rema Gesaka (2026). Ethical and Psychosocial Implications of Egg Donation: A Systematic Review of Global Evidence with Contextual Relevance to Sub-Saharan Africa. *East African Scholars J Med Surg, 8*(4), 173-184.
