

REVIEW ARTICLE

Gamete donation—A review of ethical and legal issues

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Abstract

Sperm and oocytes are building blocks in assisted reproduction. Sperm and ovum donation permit separation of the biological act of producing a child from the psychological process of nurturing and raising the child. However, the art of obtaining and use of these gametes are fraught with ethical and legal challenges. Relevant aspects concerning anonymity, genetic screening, consanguinity, informed consent and risk disclosure, compensation for donors, and child welfare are discussed. Though the issue of anonymity remains controversial, the importance of the welfare of the offspring has come to the fore as a result of the debate. Calls for more rigorous genetic testing for donated gametes to avoid genetic disease transmission, though supported by the principle of beneficence, has to be balanced by its possible deleterious effects on the donors and their relatives especially if findings reveal a serious genetic risk that has no medical treatment as yet. Reimbursement for direct and indirect costs, as well as fair compensation for time lost, inconveniences and risks suffered during treatment is recommended for oocyte donors. The risk of consanguinity remains a problem across the world even though the different guidelines limiting the number of pregnancies by a single gamete may be helpful, if enforceable. It is important that egg donors be clearly made to understand in simple language during the informed consent process of the yet unknown health risks involved so that the consent can be truly voluntary. This will protect donors from the backlash of the doctrine of “Volenti Non Fit Injuria”. It is also suggested that specific legislation with regards to gamete donation, parenthood, and ART should be passed in countries where these are absent, to avoid controversies that may arise due to current gaps in the law. (*Afr J Reprod Health* 2022; 26[3]: 124-135).

Keywords: Sperm; oocyte; donation; compensation; genetic screening

Résumé

Les spermatozoïdes et les ovocytes sont des éléments constitutifs de la procréation assistée. Le don de sperme et d'ovules permet de séparer l'acte biologique de produire un enfant du processus psychologique de nourrir et d'élever l'enfant. Cependant, l'art d'obtenir et d'utiliser ces gamètes se heurte à des défis éthiques et juridiques. Les aspects pertinents concernant l'anonymat, le dépistage génétique, la consanguinité, le consentement éclairé et la divulgation des risques, la rémunération des donneurs et la protection de l'enfance sont discutés. Bien que la question de l'anonymat reste controversée, l'importance du bien-être de la progéniture est venue au premier plan à la suite du débat. Les appels à des tests génétiques plus rigoureux pour les gamètes donnés afin d'éviter la transmission de maladies génétiques, bien que soutenus par le principe de bienfaisance, doivent être contrebalancés par leurs éventuels effets délétères sur les donneurs et leurs proches, en particulier si les résultats révèlent un risque génétique grave qui n'a pas d'incidence médicale. traitement pour l'instant. Le remboursement des frais directs et indirects, ainsi qu'une juste compensation du temps perdu, des inconvénients et des risques subis pendant le traitement est recommandé pour les donneuses d'ovocytes. Le risque de consanguinité reste un problème à travers le monde même si les différentes directives limitant le nombre de grossesses par un seul gamète peuvent être utiles, si elles sont applicables. Il est important que les donneuses d'ovules soient clairement amenées à comprendre dans un langage simple pendant le processus de consentement éclairé les risques pour la santé encore inconnus impliqués afin que le consentement puisse être vraiment volontaire. Cela protégera les donateurs du contrecoup de la doctrine de « Volenti Non Fit Injuria ». Il est également suggéré qu'une législation spécifique concernant le don de gamètes, la parentalité et l'ART soit adoptée dans les pays où ceux-ci sont absents, afin d'éviter les controverses pouvant survenir en raison des lacunes actuelles de la loi. (*Afr J Reprod Health* 2022; 26[3]: 124-135).

Mots-clés: Sperme; ovocyte; don; compensation; dépistage génétique

Introduction

Infertility treatment by means of assisted reproductive technologies (ART) and/or

introduction of up-to-date methods for reproductive function has been made possible due to advances in reproductive biology¹. Worldwide, at least 50 million men and women are unable to have a

genetically-related child², as a result of issues ranging from intending parents having a high risk of transmission of genetic disease to offspring, absent or abnormal sperm cells secondary to developmental abnormalities, reproductive organ disease, as well as the effects of environmental teratogens, chemotherapy and radiotherapy³. Added to these, is the rising trend of age-related female infertility in both developing and developed countries from increasing numbers of highly-educated urban women choosing to delay marriage and child-bearing in pursuit of educational and career goals⁴. The assisted conception is intended to satisfy a desire for a child which is much more important to the intending parents than treating the infertility⁵. Other situations are cases of same sex unions or single women, which raise special ethical concerns in some cultures⁶, more so in Africa.

Gamete donation may be the only solution acceptable to the individuals/couples concerned. However, the art of obtaining and use of these gametes are fraught with ethical and legal challenges. Debates on these issues continue among scientists and stakeholders across the globe. Relevant aspects concerning anonymity, genetic screening, consanguinity, informed consent and risk disclosure, compensation for donors, and child welfare are discussed.

Methods

Information contained in this review was obtained through an extensive literature search in electronic data bases, including PubMed, Medline, and Web of Science, using the keywords: sperm, oocyte, gamete donation, anonymity, consanguinity, genetic screening, reimbursement, compensation, informed consent, risk disclosure, assisted reproductive technology and ethics of donation, singly or in combination. Criteria for selection were peer-reviewed published articles (cross-sectional, qualitative, narrative, simple and systematic reviews) written in English language that discussed about ethical and legal issues in gamete donation. Articles that were not focused on the above aspects were excluded.

Ethical and legal issues

Anonymity

A key but long unresolved question in sperm donation is whether the offspring should be

informed of their biological or genetic parent and, if so, how much and when the information about donors should be revealed. Parents, donors, and offspring may have different interests and views on anonymous versus non-anonymous sperm donation⁷.

Anonymous donation

Those in favour of anonymity express concerns that telling the child of his or her birth via gamete donation will subject the child to social or psychological disorders, which can be especially unsettling if the child wants to find out more information about the donor but cannot⁸. In addition, anonymous donation allows parents to maintain the issue of infertility as a private matter, which may be vital to them for a variety of reasons, such as risk of rejection from the child or disapproval from relatives, especially those from cultures less accepting of gamete donation⁹. With respect to the participants' views on identity disclosure in a study in Southeast Nigeria, more than 80% indicated that parents should not disclose the mode of conception to donor conceived children¹⁰. In Nigeria, where there is no national sperm donation policy, when parents have children through Artificial Insemination by Donor (AID), they prefer to keep this procedure secret from other related parties, including their AID child. It is important to understand that Africans have different beliefs on family values compared with the Western society. This position may reflect male infertility being viewed as a taboo, and thus leading to stigmatization that the male is not a real man. Much of the evidence on harm caused by not knowing one's parent is drawn from literature on adoption and there are questions as to its accuracy. What genetic relation mean may differ for children conceived by gamete donation and those adopted¹¹. This is because in gamete donation especially with traditional or genetic surrogacy where the pregnant mother is the egg donor, mandatory disclosure may be without proper grounds basing its assumption on conclusions from research on adopted children¹². In this case, the father becomes a legal or social parent but may prefer to keep the gamete donation private. Nevertheless, we now have an increasing prevalence of gestational surrogates, where the embryo transplanted is formed from gametes of

commissioning parents or even from totally different donors.

Non-anonymous donation

Traditionally, in the early years of ART, donors were anonymous to protect their privacy and confidentiality. However, in recent years, there has been concerns about the rights of privacy and autonomy of the parents versus the right of the child to know his or her origins¹³. There has been a strong tendency in favor of non-anonymous sperm donation emerging in Europe and Australia. Several countries have enacted laws or are taking into consideration permitting AID children to gain access to information about their genetic fathers¹⁴. In 2005, UK legislation was changed requiring any donor of sperm used in AID or in-vitro fertilization (IVF) to agree to the disclosure of their identity to any offspring reaching the age of 18 years¹⁵. Australia, New-Zealand, and Holland are examples of countries that have passed laws allowing only non-anonymous gamete donation¹⁶. Arguments focus on article seven of the United Nations Convention on the Rights of the Child¹⁷(1989) which grants the right to know one's parents. In the debate about donor anonymity, this has been expressed as the child's right to know their gamete donors¹⁸.

Non-disclosure by the child's parents implies using the child as a means to their own end of having a normal family, which can never be right¹⁹. It is a violation of the autonomy of a child born from gamete donation not to be given the information on her/his origin. Disclosure is important to create an atmosphere of honest communication removing the strain of living a lie which will cause more damage should the truth become known²⁰. With the increasing use of genetics in medical diagnosis, there may be accidental revelation because many children of gamete donation may discover through genetic testing that they have genetic risks which will not be possible were their parents genetically related to them²¹.

Although parents have their own right to autonomy, it is a fundamental tenet of Western Family Law that the best interest of the child should almost always be paramount²², which follows from article 3 (1) of the CRC¹⁷ stating that "in all actions

concerning children, whether undertaken by public or private social welfare institutions, courts of law, administrative authorities or legislative bodies, the best interests of the child shall be a primary consideration". No formal policy by countries with legal requirement of child disclosure has so far been established, which leaves the information at the discretion of the parents. Therefore, there is no guarantee that all children would receive that information. In the UK, Warnock (1987)²³ had recommended a policy of recording "by donation" on the birth certificate of donor gamete children, but this was rejected. Some disadvantageous issues raised by non-anonymity are drastic reduction of donors, with the risk of scuttling the whole assisted reproduction program²¹, and the type of donors that may be attracted. These donors tend to be older and married, raising concerns about possible sperm quality problems and higher risk of congenital abnormalities, and perhaps may be those who want to be overly involved in the child's life²⁴. However, legally, donors have no parental rights or right to contact a child conceived by means of assisted reproduction²⁵, unless the child chooses to contact them.

The Double track model²⁶ has been proposed by some to protect the rights of gamete donors who may want to remain anonymous. Donors and recipients can make informed choices according to their preference. It is however also proposed that regardless of the position of the donor on anonymity, in all cases, the donor should be traceable when there is genetic problem in the offspring.

A known donor differs from an identifiable donor in that the known donor is known to the recipient during conception or treatment, but the identifiable donor's identity is released to the offspring when they reach maturity. While known donation, by family such as siblings and parents may seem to be less problematic, it does raise ethical problems of status of the child within the family²⁷. Donation by friends may later result in tension between families when relationships change for the worse. Can the child claim inheritance rights from the sperm donor or the right to be provided for from the oocyte donor in a case where the birth parents are no more? Programs that choose to participate in intrafamilial arrangements should be prepared to spend additional time counseling participants and

ensuring that they have made free, informed decisions²⁸. In resolving disputes relating to ART and parenthood, courts in developing countries rely on laws and statutes drafted before any of the new procreative techniques developed, which can be problematic for the litigants and the judicial system. In unforeseen circumstances, courts are likely to decide whether and how to interpret and apply laws that are fit for the purpose²⁹.

Consanguinity: Limiting number of donor offspring

Issues of limiting the offspring with the same genetic makeup arise due to the risks of unintended incestuous relationships. Considerations include the size of the country's population, density, and mobility of population. In the US, a single sperm donor is limited to 25 births, 10 families in the UK, and 5 recipient families in Western Australia irrespective of whether the families are resident in Western Australia or not³⁰. The International Federation of Gynecology and Obstetrics (FIGO) recommends that the number of donations from any single donor should be limited to avoid the future danger of consanguinity and/or incest³¹. This limit is, in part, to minimize the risk of genetic disease arising from the inadvertent marriage of half siblings in later life, and genetic relationship between families of people that are donor-conceived³².

Sperm donation as presently practiced carries a high risk of increasing incestuous relationship where a single donation can be divided up and sold to numerous recipients³³. Sperm donors can donate in multiple clinics especially in the absence of cross-clinic information sharing regulations³⁴. This risk is one of the reasons expressed by supporters for non-anonymous gamete donation as this will eliminate this problem. Since in a single family, several children could be conceived with gametes of the same donor, it is the number of recipient families with such children which should be limited in gamete donation⁷. Consanguinity increases the risk of genetic abnormality in the future child. The closer the degree of relatedness, the higher that risk. The risk in the general population to have a child with a congenital anomaly is 3%. Reproduction between first cousins or third-degree relatives increases the

risk by an additional 2–3%, which further rises to greater than 10% above the population background if the parents of these cousins are relatives themselves³⁵. In developing countries, without any regulation, the risk of consanguinity remains a looming complication. Internationally, it is recommended that no more than 200 offspring and maximum of 10 families per sperm donor is acceptable³⁶.

Scope of genetic screening for gamete donors

To avoid transfer of infection or genetic disease, it is important that rigorous screening and medical evaluation of donors and recipients take place. FIGO recommends that donors of genetic material should be healthy persons of normal reproductive age who are free from sexually transmitted diseases and hereditary disorders³⁰. It is generally accepted that the donor's familial history for genetic diseases must be recorded by a physician. Karyotype should be performed. A geneticist should be involved in the assessment and use of the gametes of donors with genetic risk factors³⁷. However, donors with major hereditary diseases must be rejected. Donors should not only be healthy, but preferably young because paternal and maternal age are risk factors for oocytes and spermatozoa³⁸.

There has been calls for more rigorous screening for donated gametes to further improve the avoidance of any genetic disease transmission, which is supported by the principle of beneficence. However, while broadening the scope of screening may increase the chance of recipients having healthy children, possible negative effects include severe reduction in available donors, either by excluding candidates with minimal risks or preventing some from coming forward due to fear of their genetic test results. Donor shortage might have the further adverse effect of encouraging people to go ahead with risky donation by unscreened sperm donors found via the internet, or to travel to centers in countries where the quality of care may not be assured³⁷. Expanded screening may lead to higher costs that can put the service out of reach for some³⁹. Expanded screening may also give recipients of donor gametes a false assurance of having healthy children. If there is no evidence that more rigorous donor screening is needed to avoid serious reproductive risks, or adding tests

being motivated by commercial reasons, the limiting effect upon access to donors creates a problem of justice.

For the donor and his or her close relatives, expanded genetic screening may reveal risks, knowledge of which may be beneficial (if the findings allows for prevention, treatment or other meaningful courses of action), but that may also turn out to be psychosocially harmful, especially if findings reveal a serious genetic risk that has no medical treatment as yet⁴⁰. There may also be social consequences of stigmatization and discrimination⁴¹. Issues of false positive results⁴² and its deleterious effects on the donors should be considered in the proportionality of expanded testing. There is need for donors to be treated as persons whose interests are also at stake rather than reducing them to the gamete they contribute.

Based on the respect for donor's autonomy, there must be adequate and understandable information on all screening and testing procedures, including the implications the results have for the donor and his or her relatives⁴³. It must be borne in mind however, that even if there is a possibility of selecting donors who are completely free from any genetic abnormality from a completely analyzed genome scan, de novo mutations may still occur in the recipients³⁷. The driving force for increased genetic testing should be clinical utility rather than commercial gain. Clear professional standards should be determined by the field based on scientific evidence and a proper assessment of pros and cons, involving the interests of all stakeholders including the donor, rather than by the mere imperatives of technology and commerce.

Compensation /payment of gamete donors

There has been debate as to whether human gamete donation should be compensated based on the demand and supply market. In principle, it is advocated that there be no payment for the donation of biological material⁴⁴. Donors are encouraged to be altruistic, as a show of solidarity, for the good of their fellow human being and society. Gamete donation involves risks and discomfort and so while they are not being paid, they ought to receive compensation for their time, inconvenience, and risk⁴⁵. This should not be excessive, thereby leading to inordinate profit, deterring generous unpaid

donors, enticing those who would not have donated, nor too little such that it leads to withholding of information relevant to safety of donation, or exploitative as a result of donor poverty and ignorance⁴⁶. The American Society for Reproductive Medicine (ASRM) in its guideline for ART practitioners capped the compensation at not more than \$5000⁴⁷. Critics counter that low donor compensation decreases supply, because fewer women are then interested in donating, which then increases prices for the service that physicians provide. They argue that ethical goals can be better achieved through enhanced informed consent, hiring egg donor advocates, and better counseling and screening. Yet, if compensation caps are removed, questions emerge concerning what the oocyte market would then look like-- enticement, exploitation, and oocyte commodification, with ever increasing risk of eugenics⁴⁸. Putting market value to what we associate with our personhood to most people demeans human dignity⁴⁹. One can argue though, that failure to pay egg donors is disrespectful and devalues the significance of their physical contribution and the potential impact on their health⁴⁷. Not enough data is available about the long-term effects of ovarian stimulation and oocyte retrieval in healthy fertile women despite the many years of egg donation in fertility treatment⁵⁰. It is important that long-term monitoring of the health of donors be instituted since anonymous donation do not prevent their details being accessed in the clinics where the donations were made. Bearing in mind the risks and discomfort these women go through during and after the donation procedures, it is a matter of justice that they be paid well for their services, compensating them for more than direct financial losses and immediate non-financial losses.

Some countries practice a system where rather than monetary compensation, which is considered unethical, an exchange of services within the context of the infertility treatment is preferred⁵¹. Those who donate their gametes pay less for treatment⁵².

Informed consent from gamete donors

The informed consent process emphasizes the respect for autonomy of the stakeholders in the interaction based on adequate information. There is concern that some oocyte donors have not been

adequately informed about the goals, the procedure and/or the risks. The standard and content of the information given remain an issue of debate. Information about the risks and discomforts of ovarian stimulation, monitoring and egg-retrieval must be given to donors⁵³.

Arguments abound regarding loss of rights by IVF gamete donors about use of their gametes for embryo research. However, gamete donors may be unwilling for their gametes to be used for nothing other than that for which they donated them, and as owners of their genetic material, they reserve the right to state what it should be used for. There is paucity of information on potential use of donated gametes for research in most IVF consent forms⁵⁴. Many people oppose embryo research because of the special significance that reproductive material have for them. It is easier to obtain detailed informed consent from egg donors since there are many periods of interaction with them during which the consent process is explored unlike sperm donors. This may be because most ART clinics obtain donor sperms from sperm banks with no direct contact with the donors. Questions on consent for use of sperms for stem cell derivation could however be added to sperm donor forms in sperm banks despite the strict confidentiality provisions⁵⁵. As a matter of respect for gamete donors, their wishes regarding stem cell derivation should be determined and respected⁵⁶. Specific consent for stem cell research from both embryo and gamete donors is recommended by the American Society for Reproductive Medicine⁵⁷.

Donors did not always know how strenuous donation would be, or how much time it would take. They often had only the vaguest idea about who would pay their expenses, should there be medical complications stemming from donation. Incomplete risk disclosure and deception when complications arise are a greater source of exploitation and an area of greater moral concern than offering payment⁵³.

Questions often arise as to the quality of consent involved in the gamete donation especially with egg donation process. For donors who receive payment for their participation, high financial incentives may provide pressure or coercion which hampers ability to make clear, informed decisions. These are young women who most times need the financial remuneration to fulfil other necessary

needs. Also, with the highly technical nature of ARTs, donors may be incapable of fully understanding all the potential risks and treatment options without substantial background in biology and medicine. Clearly, potential exists for coercion and uninformed consent with regards to egg and perhaps less so in sperm donation. In addition, adequate disclosures on issues of sperm collection by masturbation, cryopreservation and/or destruction of excess gametes are areas of ethical concern⁵⁸. Donors may not fully grasp their meaning even if disclosed. Young university students are encouraged by internet sources and respectable electronic and print media to donate their eggs in the cause of assisted reproduction for monetary compensation⁵⁹. The ability of these students to make true informed consent is negatively influenced by their lack of financial independence. While long term health of the ovum donors is of concern, an important aspect is also the possibility of a growth in the trade of ova targeting third world women in dire need of financial resources to pay for higher education⁶⁰. Whether for research or reproductive purposes, donors must give free and voluntary consent. To enable them to decide, they should be provided with all the relevant information both regarding the procedure in a way that it can be best understood, and the expected benefits their donations will lead to. Potential donors should be given time to think through their decision⁶¹.

Issues of donor welfare

Justice, beneficence, and non-maleficence

Because of the current shortage of qualified egg donors, infertility treatments are subject to distributive injustice. Ethical conflicts arise as women of higher economic status are more likely to receive treatment. With a shortage of egg donors, doctors may be unable to provide optimal treatment to their infertile patients, making donor recruitment necessary. A conflict of interest emerges then, in the doctor's need to serve her patients by encouraging donation by young women bearing in mind her responsibility to protect the health of these donors who have to bear the medical risks they ordinarily should not. The principles of beneficence and non-maleficence⁶² demands that egg donation procedures are performed for the purpose of

improving the health of the patient and preventing harm. However, there is an inherent aspect of maleficence in respect to donors, who undergo the risks of an invasive surgical procedure without clinical benefit. Doctors and legislative bodies must decide whether placing a young, fertile donor at risk of harm is justifiable for the benefit of an older, infertile patient.

This concept of avoidance of harm is especially problematic because the side effects of ovulation enhancing drugs on donors are not completely known⁶³. The use of these drugs began recently, and longitudinal studies about their effects in later life have yet to be performed, although the American Society for Reproductive Medicine recognizes the need for further study. Of concern is the increasing frequency of clinical reports linking ovarian stimulation regimes with breast cancer⁶⁴. Other complications that may arise include hyper-stimulated ovaries, trauma to the ovaries, lacerations, infection, and infertility.

The Precautionary Principle, a concept of medical ethics, allows decision and policy makers to take care that the principle of non-maleficence is ensured in the use of new innovations. This enables the protection of the health of gamete donor volunteers from yet unknown risks associated with the procedure⁶⁵. Especially for this procedure, with no clear benefit to the donor and many potential risks, serious ethical questions may be raised. The importance of a truly informed consent cannot be overemphasized as it will protect them from the backlash of the doctrine of “Volenti Non Fit Injuria” which means that ‘where the sufferer is willing, no injury is done’⁶⁶. The gamete donors are unable to claim damages for short-and long-term complications that may arise from these procedures unless they can prove that they either never had knowledge nor consented to the risks of the procedures, or that though they had knowledge of the risks, they never consented. This is one of the situations where mere knowledge of risks involved should not imply consent.

Welfare of the child/ Eligibility of recipients for donor gametes

Ethical issues may arise from recipients’ motivation for use of donated gametes for reproduction. It is generally accepted that gamete donation is

indicated when there is no possibility of pregnancy without this technique, other treatments have failed or have very little chance of success, or has risk of transmission of serious genetic disease and preimplantation genetic diagnosis is not feasible or unacceptable. However, based on reproductive rights which form part of the fundamental human rights, there are debates on the rights of single women, same-sex couples, and postmenopausal women to request for ART by gamete donation. Various societies reflect their positions on these issues based on their culture and worldview. Ethical issues on the welfare of the offspring however remain an important aspect vis-a-vis postmenopausal women who may not live long enough to parent the child⁶⁷, single women who deny the offspring of second parent, or same sex couples who deny the child of the traditional male-female parenthood. Ovum donation, in the case of peri- or postmenopausal women aim to reverse the natural aging process rather than treat ‘medical’ infertility in younger women of childbearing age. Is there an appropriate age to be a parent? Should there be an age limit for post-menopausal women⁶⁸? Parentage of children born of gamete donation has been widely a litigated issue. While majority of cases agree that a married couple who utilizes donor insemination both have legal rights to the child, when lesbian, unwed or transsexual couples utilize donor gametes, the result is more complicated. What legal rights or obligation does the non-genetic parent have towards the child? What concerns does this raise for the family structure in these ‘new’ families⁶⁹? What then determines the basis for parental rights? As a matter of public policy, could the widespread use of third-party donor gametes help perpetuate the notion sometimes common in society that biological parenthood does not necessarily entail responsibilities to children? Addressing these issues are important to ensure the welfare of children made through these technologies.

Conclusion

While controversies continue with issues of anonymity, there is a greater awareness of the interest and welfare of the offspring as an outcome of the debate¹⁶. Although adequate informed consent together with appropriate counseling is a

precondition for genetic testing of donors, this should not be turned into an excuse for exposing donors to genetic tests, the possible consequences of which maybe disproportionately harmful to them or their close relatives. Provided we do not yet fully understand the complex genetics involved in genome scanning⁷⁰, we should not impose this kind of testing upon donors³⁷. Oocyte donors should receive reimbursement for all direct and indirect costs of the procedure and should receive a fair compensation for the time lost and inconvenience as well as risks suffered during the treatment⁷¹. The risk of consanguinity remains a problem across the world even though the different guidelines limiting the number of pregnancies by a single gamete may be helpful, if enforceable. Donors should be provided with all the relevant information both regarding the procedure (risks, time, discomfort, etc.) and expected benefits to which they contribute, such that their consent will be totally free⁷². In-vitro Fertilization (IVF) clinics are ethically obligated to disclose to potential egg donors in a more transparent manner that the long-term risks are currently unknown because they have not been studied. It is important to follow up these women to determine any long-term health risks⁶⁴. Society must continue to be vigilant in monitoring the ethical and moral approaches of recruitment of gamete donors to avoid exploitation of vulnerable populations⁷³.

Recommendations

It is important that egg donors be clearly made to understand in simple language during the informed consent process of the inherent, yet unknown health risks involved so that the consent can be truly voluntary. It is also suggested that specific legislation with regards to gamete donation, parenthood, and ART should be passed in countries where these are absent, to avoid controversies that may arise due to current gaps in the law. This legislation should address some of the issues raised above and should as much as possible, balance the interests of all the parties in the interest of justice.

Conflict of interest

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