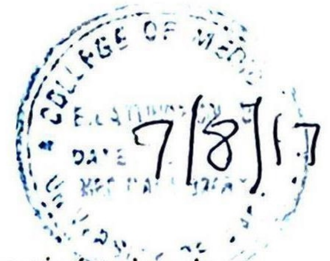
# Ethical dilemmas in assisted reproduction; Perspectives from a developing country



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**Abstract**
*Background:* Ethical dilemmas continue to unfold as a result of the expanding roles of assisted reproduction. Understanding the basic ethical principles of Autonomy, Justice, Beneficence and Non-maleficence as key components of practice when providing advanced fertility management cannot be over emphasized.
Ethics simply refers to the moral principles that govern a person or groups behavior. It is also defined as a code of moral principles derived from a system of values and beliefs that help define the correctness of our actions.
Critical opinions have been expressed in the area of commodification of human tissue. There are also growing concerns about cross border reproductive care and its implication on reproductive health.Since ethical dilemmas may not be resolved at once, continuous appraisal of the current situation with the aim of developing locally relevant ethical frames works is desirable.
Examining these ethical concerns which confront our daily practices is not only pertinent but expedient as there has been a gradual expansion of assisted conception services in Nigeria.

**Keywords-** *Ethics, dilemma, assisted reproduction*

**Résumé**
*Contexte:* Les dilemmes éthiques continuent de se dérouler en raison des rôles croissants de la reproduction assistée. La compréhension des principes éthiques de base de l'autonomie, de la justice, de la bénéfique et de la non- maléfice en tant que composantes clés de la pratique lors de la gestion avancée de la fertilité ne peut pas être sur appuyée.
L'éthique se réfère simplement aux principes moraux qui régissent un comportement de personne ou de groupe. Il est également défini comme un code de principes moraux dérivé d'un système de valeurs et de croyances qui aident à définir l'exactitude de nos actions.
Des opinions critiques ont été exprimées dans le domaine de la marchandisation des tissus humains. Il existe également des inquiétudes croissantes concernant les soins de reproduction transfrontaliers et ses implications sur la santé reproductive. Comme les dilemmes éthiques peuvent ne pas être résolus à la fois, une évaluation continue de la situation actuelle dans le but de contribuer au développement de l'encadrement éthique approprié sur le plan local est souhaitable.
L'examen de ces préoccupations éthiques qui font face à nos pratiques quotidiennes n'est pas seulement pertinent mais opportun; car il y a eu une expansion progressive des services de conception assistée au Nigéria.

**Mots-clés:** *Ethique, dilemme, aide à la reproduction*

**Overview**
Several ethical dilemmas have arisen from the practice of assisted reproduction and over the years have led to questioning the rationale to provide or refuse treatment, conduct research or participate in such. Critical concerns have been expressed in the areas of gamete sale and purchase which often connote commodification of human parts. The fact that the human embryo could be observed outside the body, generated intense curiosity as was observed with the conception and birth of Louis Brown in July, 1978.

"Ethics" is derived from the Greek word "Ethos" and refers to the moral principles that govern a person or groups behavior. It is also defined as a code of moral principles derived from a system of values and beliefs that help define the correctness of our actions. It is about right or wrong and the reasons we give for our choices and actions.

The key principles involved in ethics are Respect for persons (autonomy), Beneficence, Non-maleficence and Justice. Respect for person ensures confidentiality of treatment while Beneficence seeks to maximize good. Non-maleficence is an ethical duty to do no harm. Justice on the other hand refers to fairness and equitable distribution of benefits and risks.

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Regulatory frame work for assisted conception is currently in its infancy in Nigeria and the practice of assisted conception has been more facilitative than regulatory since a high premium is placed on childbearing. Virtually all forms of assisted reproduction are available in Nigeria[1] namely artificial insemination by husband (AIH,) donor insemination (DI), In-vitro fertilization (IVF),intra-cytoplasmic Sperm Injection (ICSI), embryo freezing and donation, Surrogate motherhood amongst others.

Examining the ethical dilemmas in the practice of assisted reproduction in a developing country like Nigeria may be a window of opportunity to explore factors affecting the uptake of assisted conception and possibly proffer home grown approaches to provide innovative services that are ethically and morally acceptable. Considerations like these culminated in the presentation of this paper at the monthly Oyo state continuous medical education programme on the 29th of March, 2016.

**Gamete donation**

In Africa, infertility is estimated to be as high as 45% of the population [2,3] and indeed an infertility belt has been described in Africa. About 10% of the population in all countries are infertile and women often delay marriage and childbirth in pursuit of education and careers [4]. This invariably contributes to the rising incidence of female infertility. The situation is similar in Nigeria, now that emphasis has been placed on education of the girl child. Advanced female age results in decreased fecundity thereby lowering probability of conception per cycle.

Controversies have trailed the use of donor gametes especially donor oocytes. Critical concerns relate to the sale and purchase of oocytes [4]. Current practices vary according to the countries involved. Countries in the European Union ban transactions relating to oocyte donation and only support altruistic donation [5]. Compensation is however paid for transportation, inconvenience and time [5]. The United States on the other hand, permits compensation for oocyte donors; however, this remains largely unregulated and may pose ethical concerns [6,7].

Gamete donation in Nigeria is driven essentially by commerce and it's comparable to the situation in the United States. Gamete donors whether sperm or oocyte, receive compensation for participating in the reproductive process. Altruistic donors may however be found amongst family donors. The need for compensation in low income countries cannot be overemphasized, however, it must be guarded from exploitation. Providing a regulatory framework and ensuring strict compliance by fertility clinic and recruiting agencies would ensure justice and equity for all parties involved. Fertility clinics in the United States are largely self-regulated using guidelines published by the American Society for Reproductive Medicine (ASRM) in addressing issues relating to communication, recruitment and benefits to oocyte donors [8]. It suggested the prudent use of oocyte donors; not exceeding 6 attempts in their entire life time. It further emphasized the age considered suitable for oocyte donation, suggesting donors must be at least 21 years with emotional maturity to make the decision. In Nigeria, IVF clinics are also self-regulated and in some instances unregulated as regards the practice of gamete donations. Various clinics adopt either the Human Fertilization and Embryology Authority (HFEA) or ASRM guidelines. Current efforts to unify and streamline protocols and guidelines have been proposed by the Association for Fertility and Reproductive Health (AFRH). The annual scientific meeting of the Association for Fertility and Reproductive Health, 2016, held in Port-Harcourt, Nigeria, focused on standardization and quality control in assisted reproduction. The need to adopt global best practices alongside quality control was emphasized [9].

Compensation for oocyte donors in Nigeria is determined by negotiations between the donor/ agency and the fertility clinic. However, compensation should not vary according to the planned use of the oocytes retrieved, the donor's personal characteristics or ethnicity; otherwise may lead to the term described as "oocyte paradox". Attempting to fix the fee for donor compensations has been challenged and labeled as commodification and price fixing and ASRM in 2016 had to settle a lawsuit instituted by Lindsey Kamakahi [10,11].

**Access to care**

*A very critical issue in assisted reproduction centres on availability and affordability of fertility treatment.* The current situation in Nigeria which makes fertility care available to only those who can afford it is indeed worrisome. The principle of justice focuses on the equitable distribution of benefits and risks, and for an egalitarian society, justice seems to be the key driving principle. The argument that over population is the predominant problem of developing countries, as such public health issues override other non- communicable issues is superfluous. This view is further enhanced by the classification of assisted conception as a luxury high end procedure comparable with cosmetic procedures [12]. It

therefore becomes unfair to provide solutions to biological problems only to those who can afford them.

Fertility clinics which provide assisted reproduction services were initially located in the commercial cities of Nigeria, such as Lagos, Abuja and Port-Harcourt. However in addressing the wide gap between the need for assisted reproduction services and the availability of such facilities, other centres located at less commercial cities such as Benin, Asaba, Kaduna, Ibadan, Osogbo amongst others have been established. The main limiting factor to accessing such care is the cost of the procedure currently averaging about 2000-2700 US dollars per cycle [1]. This is further compounded by the limited insurance coverage for most procedures related to fertility treatment. Denying the poor the solution to their infertility needs contradicts the principle of justice and fairness.

Another topical ethical question is "Who has the right to reproduce?" Generally, it is assumed that a married heterosexual couple in a stable relationship merits consideration for assisted reproduction. This relationship is thought to provide the most conducive environment for Child rearing. However, considerations may be given to single parents since it has been argued that legal marriage offers no guarantee of a suitable environment to raise children [12]. Others have also argued that methods employed in assisted reproduction may actually challenge the meaning of" Family", thus affecting the perception of children in such situations. In developed countries there is a propensity to treat unmarried heterosexual couples, homosexual couples and single women. In Nigeria, a country with low divorce rates, most couples presenting for assisted conception are heterosexual and legally married.

**Multifetal Pregnancy Reduction (MFPR)**

The ethical concerns raised are linked to that associated with abortion. Multifetal pregnancy reduction used to increase the chances of survival of higher order pregnancy is psychologically and morally demanding. The explicit intension of MFPR is not to terminate pregnancy but to increase the survival chances of the remaining fetuses. This service is rarely offered in Nigeria, since the society places a high premium on childbirth and higher order pregnancies are often desired especially amongst the infertile. However, prevention of multiple pregnancies should be preferred to MFPR. This can be achieved by ensuring few embryos are transferred in assisted reproduction. MFPR is generally acceptable if the physician has acted according to laid down regulations and tried to minimize the risk of multiple pregnancy [13]. The benefits for the remaining embryos of reducing a higher order multiple pregnancy far outweighs the disadvantage or risk of future miscarriage. The benefit of reduction of twin gestation to a singleton fetus is debatable. However may be carried out in cases of maternal disease, poor obstetric outcome and compelling social and psychological reasons [13].

**Older women and in-vitro fertilization (IVF)**

The major concern about treating older women is the issue of donor oocytes [14]. All forms of treatments for infertility become less efficacious with advancing maternal age and indeed age seems to be the rate limiting step in conception. In women over the age of 40 years, the take home baby rate is about 1-3% [14]. Results obtained from oocyte donation have been very good and the process poses minimal risks to the mother and baby.

An important ethical concern with the older women is parentage. Is it justifiable to treat women over the age of 50 years? Is it right for a woman to seek fertility treatment when she knows that she would not be able to cope with being a mother? Are the interests of the potential child better served by older mothers? These are issues that need to be resolved before considering older women for fertility treatment. A very careful distillation of information regarding potential risks and benefits to all parties must be considered.

It is often not acceptable to withhold treatments on the grounds of the interest of the potential child not being served.

**Cross border reproductive care (CBRC)**

This is a growing phenomenon involving patients crossing borders from countries of residence to other countries with the goal of receiving specific reproductive treatments not available or allowed in their country. It represents the convergence of commerce, medicine and travel. It is often referred to as reproductive tourism or exile. Drivers of CBRC include prohibition of treatment in originating country, unavailable expertise, long waiting list and exorbitant cost of treatment.

The main ethical concern here is the commodification of human parts. It encourages the sale and purchase of gametes across borders and may be subject to exploitation and transmission of genetic disorders. There is a strong moral condemnation against putting parts or products of the human body on sale [15]; only a gift is morally permissible.

## HIV infection and assisted reproduction

Progress in the management of HIV has resulted in a paradigm shift in the management of infertility amongst those infected with the virus. The ethical concerns relate to the welfare of the child with regards to mother-to-child transmission of the disease and the risk of seroconversion of an uninfected spouse. Advances in medical care with accompanying increased life expectancy and reduction in vertical transmission rates using highly active anti-retroviral therapy (HAART) have led to increasing desire for procreativity among HIVpositive individuals[16].The use of HAART to suppress the viral load and obstetric modifications in labour have contributed immensely to the very low transmission to the child, which is currently less than two percent [16].

Sperm washing during assisted reproduction has significantly reduced the risk of infection transmission. It may therefore be a subject of discrimination to deny HIV positive couples who are well motivated and on HAART, the opportunity of seeking assisted reproduction. However considerations must be given to co-morbidities, intercurrent illnesses and social vices such as addiction in determining their eligibility for treatment [17].

## Conclusion

Ethics frames the law within which the law is obeyed. Doing good is the ultimate goal of sound ethical principles. Diverse challenges continue to unfold with the advancement in assisted reproduction. Whilst it is difficult to exhaust all ethical dilemmas, the need to take a critical view of current challenges is not only imperative but it provides a platform for a sound discuss on areas of conflicting interests.

As the uptake of assisted reproduction increases in Nigeria, occasioned by the expanding facilities providing such treatment, there is a compelling need to examine ethical concerns on assisted conception with special attention given to the influence of environmental factors in conforming to global best practices. It is our hope that creating such platforms to consider the varied ethical concerns, especially from developing countries, would help confront the numerous ethical challenges facing our everyday practice of assisted conception.

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