REVIEW

Beyond reproductive rights: Advocating for access to assisted reproductive technologies (ARTs) for socially infertile individuals using the right to benefit from scientific progress – lessons for African countries

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Scientific and technological innovations have increasingly enabled humans to overcome biological limitations. Assisted reproductive technologies (ARTs), for instance, offer persons facing medical or social barriers to parenthood the opportunity to realise their dream of building a family. However, in many African Anglophone countries, persons who are socially infertile—gay and single persons—are legally excluded from accessing ARTs to build their families. Relying on reproductive rights to argue against these inhibitive legal provisions may offer some hope, but reproductive rights are often narrowly interpreted to apply only to natural reproduction, excluding ARTs. This paper addresses this gap by exploring the possibility of relying on the right to benefit from scientific progress as a basis for challenging the inhibitive legal provisions. The right to benefit from scientific progress seems promising, as it is widely recognised in international human rights instruments and clearly encompasses ARTs as a scientific advancement. The right could therefore be essential in expanding access to ARTs for socially infertile persons in Africa.

Keywords. access to ARTs, right to science, social infertility, reproductive technologies.

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This paper contributes to the exploration of the potential application of the right to benefit from scientific progress in the context of access to assisted reproductive technologies (ARTs) for socially infertile couples. In particular, it addresses the intersection between the human right to benefit from scientific progress and reproductive health innovations such as ARTs. In doing so, it begins with a brief background on reproductive health advancements. The second section defines infertility in both medical and social contexts, highlighting the importance of recognising social infertility and its implications. The third section connects the first and second sections, showing how the right to benefit from scientific progress can apply to social infertility. This perspective has been explored in contexts such as the human right to science and health-related data processing,[1] the right to scientific progress to advance public health[2,3] and the right to participate in science[4]. Through this approach, the paper aims to contribute to the body of knowledge on the relationship between the right to benefit from scientific progress and fundamental human rights, including the right to reproductive health. Furthermore, the paper offers a paradigm shift from the traditional reproductive health framework to one that emphasises the right to benefit from scientific progress. It addresses the need to move beyond a heteronormative view of ARTs—typically limited to heterosexual couples—to an inclusive approach that considers socially infertile individuals and couples.

Background on innovations in medical sciences

Humanity has long aspired to enhance biological processes,[5] a pursuit driven by scientific and technological innovations that help overcome natural limitations. Until recently, humanity had minimal control over reproduction, but with the advent of the contraceptive pill in 1951, medical science has continuously expanded options for deciding if, when and how to have children.[6] One of these fruits of science is ARTs. ARTs have made it possible for infertile couples to realise what some regard as one of life's most important experiences—procreation.[7] This magnification of free choice exemplifies the benefits of scientific progress. Apart from assisted reproduction being utilised to treat infertility, ARTs also have other beneficial medical applications.[8]

Same-sex couples and single women can use this treatment to have biological children. HIV+ seroconcordant[9] and HIV serodiscordant[10] couples can also utilise this treatment to prevent vertical disease transmissions of HIV/AIDS or other genetic diseases to their children and horizontal transmissions to their partners through medical technologies such as sperm washing.[11] ARTs can also be used for pre-implantation genetic diagnosis and embryo research,[12] which is subject to the 14-day rule in most jurisdictions.[13] However, despite the affirmation by international human rights instruments that the fruits of science should be shared equally, certain groups of persons continue to be deprived of the ability to enjoy the fruits of science.

In this paper, I focus on one particular group: the socially infertile. I analyse the right of socially infertile individuals—gay and single persons—to reproduce in light of the right to benefit from scientific progress.

Medical v. social infertility: What's in a name?

The concept of infertility is often narrowly defined within the medical realm, focusing primarily on physiological factors that prevent the achievement of pregnancy.[14] However, this limited perspective fails to recognise the complex social and cultural dimensions that can contribute to or exacerbate infertility.[15-17] This section highlights the need for a more inclusive understanding of infertility that acknowledges the social barriers faced by marginalised groups and ensures their right to access scientific advancements in reproductive healthcare. Notably, infertility lacks a universal definition.[18] However, the World Health Organization (WHO) offers a widely accepted clinical definition, commonly used as an authoritative reference in describing infertility: 'Infertility is a disease of the male or female reproductive system defined by the failure to achieve a pregnancy after 12 months or more of regular unprotected sexual intercourse'. [19]

The shortfall of this definition is its focus on physiological infertility, stemming from a medical condition such as low sperm count or blocked fallopian tubes that hinder conception.[16] In contrast, social infertility arises when an individual is unable to reproduce because of factors associated with their partner or relationship status.[16] The pertinent issue in the recognition of social infertility is whether social infertility should be incorporated into the current definition of infertility or recognised as a distinct category. Rank[15] advocates that we should treat social infertility differently, acknowledging it as a unique condition for the purpose of ART access. However, Lo and Campo-Engelstein[16] argue against categorising social infertility separately, as this might perpetuate the stigma against the socially infertile. They propose an expansion of the current definition to be more inclusive: 'a condition of an individual with intent of parenthood but unable to produce conception due to social or physiological limitations within a period of twelve months'.[16]

The above discussion surrounding the treatment of social infertility v. physiological infertility raises critical concerns about discrimination and marginalisation in reproductive healthcare. I argue that treating social infertility as a separate category may inadvertently reinforce existing stigmas. By establishing a distinction between physiological and social infertility, there is a risk of creating a hierarchy of infertility types where physiological infertility is viewed as more legitimate or deserving of treatment. This can lead to further marginalisation of socially infertile individuals such as single women and same-sex couples, who may already face societal judgment and exclusion. The stigma surrounding infertility is deeply rooted in cultural and social norms that prioritise traditional family structures and childbearing, leading to negative labelling and social isolation for those who do not conform to these expectations. In the same breath, it is important to note that the arguments made in this paper are limited to the African context, where national health insurance systems are absent, albeit South Africa (SA) has signed the National Health Bill into law. This limitation highlights the need to consider the implications of medical v. social infertility in the context of national health insurance systems, which may adopt different approaches to ART coverage and access.

Examining the access to ARTs argument: Inclusive or exclusive?

Advocates for access to ARTs often base their arguments on the heavy burden infertility places on individuals, citing the social deaths and agony that arise from infertility, including violence, disinheritance, marital instability and other forms of social suffering.[20] However, this argument is limited in that it frames the suffering of infertility primarily from a physiological, heteronormative perspective, in line with the widely accepted WHO definition of infertility. Furthermore, there is extensive literature exploring the anguish of childlessness in heterosexual relationships and a dearth of literature exploring the anguish of same-sex couples without children.[21,22] This is unfortunate, although ARTs were designed to alleviate infertility experienced by heterosexual couples, they have also opened the door for same-sex couples, single men and women, transgender couples and individuals to build families.

The core point of contention in the discourse on ARTs has shifted from whether their use is justifiable to who should have access to them and on what grounds. In light of this, socially infertile couples have been given the short end of the stick in the use and applications of these technologies. A study by Mthembu,[23] which examined legislation and health policies in 18 Anglophone countries, found that while ARTs are becoming widely available, socially infertile couples such as gay people and single women and men still face barriers when accessing ARTs. For example, in Africa, countries such as Morocco[24] and Algeria[25] have limited the use of ARTs to married heterosexual couples who cannot conceive naturally.[25,26] In Nigeria, section 5(2) of the Same–sex Marriage (Prohibition) Act of 2013 criminalises any public show of a same-sex amorous relationship.[27] Similarly, same-sex relations are illegal in Zimbabwe. Only recently did Botswana decriminalise same sex relations in the case of Letsweletse Motshidieman v Attorney General [2019] (MAHGB-000591-16),[28] which was upheld by the Botswana Court of Appeal. While these examples do not directly legislate against socially infertile couples' access to ARTs, they illustrate a social and legal environment that ultimately hinders access to ART access for these groups. Similarly, the Kenyan Reproductive Health Bill 2019 includes conflicting provisions: Article 8 defines a partner as a person of the opposite sex, while section 9 grants everyone the right to access assisted reproduction.[29] Although analysing this contradiction in the text of the bill and the legislative intent falls outside the ambit of this paper, it is relevant to examine section 162 of the Kenya Penal Code, which forbids and punish relations of same sex couples.[30] The Kenya legislators had another go at regulating ARTs through the recent Assisted Reproductive Technology Bill, 2022.[31]

From the onset, the bill defines commissioning parents as 'means a man and woman whether a couple or parties to a marriage who enter into a surrogacy arrangement seeking assistance in procreation through the help of a surrogate mother or donor'.[31]

It further defines couple as 'means a male and female who are in an association notwithstanding whether such association may be recognized as a marriage under any law in Kenya'.[31]

Furthermore, section 16 provides that 'A person qualifies to undertake assisted reproductive technology, where it is certified

by a medical doctor that the person requires assisted reproductive technology on medical or health grounds'.[31]

As discussed earlier, socially infertile couples do not seek ARTs for medical reasons but social reasons. Interpreting the bills' text in its ordinary sense suggests that socially infertile couples would not be able to access ARTs if this Bill is enacted in its current form. However, this interpretation is subject to different interpretations as section 21 of the Assisted Reproductive Technology Bill provides: 'Every person has the right to access the highest standard and quality of attainable and cost-effective assisted technology reproductive technology services'.[32]

Notably, Article 45(2) of the Kenyan Constitution defines marriage as a union between persons of the opposite sex.[32] However, section 22 of the Assisted Reproductive Technology Bill provides for access to ARTs for intersex persons, which is a commendable step toward inclusivity.

The issues ventilated above are not endemic to Africa. For instance, Middle East and European countries such as Bahrain and Malaysia restrict ART access to heterosexual couples,[26,27] and France only recently extended access to ARTs to single women and lesbians.[27] Mthembu's study also found that most African Anglophone countries lack specific legislation governing ARTs, leaving decisions about access for socially infertile individuals to fertility specialists, who act as *de facto* moral pioneers.[23] Another study by Hunt et al.,[33] on healthcare access for LGBTQ individuals and sex workers in Zimbabwe, concluded that the barriers to healthcare were exacerbated by socio-political and legal contexts. The study also reported that access is often dependent on adherence to socially accepted sexual norms.

A human rights approach to the benefits of scientific progress: An international and regional perspective

The Universal Declaration of Human Rights (UDHR)[34] and the International Covenant on Economic, Social and Cultural Rights (ICESCR)[35] guarantees the right to benefit from science and its application, generally referred to as the 'right to science'.[36] Boggio[37] observes that this right includes both the right to benefit from science and the right to freedom of scientific research. Building on this, Romano[38] identifies four components: 'enjoyment of the benefits of scientific progress, the freedom of science, the protection from adverse effects of science, and the duty to foster scientific and technological progress'. The right to scientific research received attention with the emergence of ARTs in embryo research.[39,40] From the component of the right to benefit from scientific progress, it is undisputed that procreation by ARTs constitutes a major milestone in medical science, and the relevance of this right is becoming more apparent and is clearly seen in its ever-widening scope of application.[1-4]

At a regional level, the African Union provided context and meaning for the right to science at the 6th World Congress for Freedom of Scientific Research that saw academics, policy makers and scientists gathered under one roof to breathe meaning and context to the right to benefit from scientific progress from an African perspective.[41] African countries such as Kenya,[42] Lesotho,[43] Morocco,[44] SA[45] and Zimbabwe[46] have, to some extent, incorporated this right into their domestic constitutions. This is important as it is the first step in advocating for access to ARTs for socially infertile couples using the right to benefit from scientific progress. Furthermore, the African Charter on Human and Peoples Rights (ACHPR) provides a robust framework for the protection of human rights including the right to equality, health and family life.[47] For instance, Article 2 of the ACHPR guarantees the right to equality and prohibits discrimination based on sex, race, language or any other status.[47] Furthermore, article 11 protects the right to privacy, which can be interpreted to include the right to make personal decisions regarding reproduction without interference.[47] As alluded to earlier, socially infertile couples and individuals have the same intent to form families as medically infertile counterparts; therefore, article 18 emphasises the importance of family and the rights of individuals to form a family.[47]

Despite these affirmations of regional and international instruments, the lack of comprehensive legislation giving explicit access to ARTs for socially infertile individuals and couples in many African countries reflects a significant gap in the legal framework. This not only leaves individuals vulnerable to discrimination but also perpetuates existing societal biases against non-traditional family structures. These articles read and interpreted through the spirit and purpose of the African Human Rights charter, protect the freedom of socially infertile individuals and couples to form families.

Conclusion

African states should adopt an inclusive, human rights-based approach to ensuring access to scientific progress for both social and medical infertility. Embracing this inclusivity requires recognising medical sciences such as ARTs as inherently linked to fundamental human rights, particularly reproductive health and the right to healthcare. In doing so, this right must not be viewed in isolation but holistically alongside these rights, as they mutually reinforce one another. This paper found that the right to science can be used as a powerful tool to advance the recognition of reproductive autonomy for couples who are socially infertile, as it intersects with the right to reproductive health. The paper concludes by arguing that individuals who are socially infertile have a legitimate interest in procreation and should not be denied this opportunity without just cause. Most importantly, the states should create a conducive legislative and policy environment to enable the flourishing of human rights, including the reproductive rights of socially infertile couples and individuals.

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