

# Infertility and Assisted Reproduction in the Muslim Middle East: Social, Religious, and Resource Considerations

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## Abstract

This paper discusses the social, religious, and resource considerations around infertility and the provision of assisted reproductive technologies in the Muslim Middle East. Demonstrating the social need for IVF by millions of involuntarily childless Muslim men and women, as well as the religious permissibility of the technique according to Islam, we provide the positive examples of Turkey and Egypt regarding how resource concerns may be tackled and access to ARTs broadened. We end the paper by making a call for ARTs and infertility treatments to be incorporated into comprehensive reproductive care regimes, and for reproductive rights to encompass the facilitation as well as the control of fertility.

**Key words:** Assisted reproduction, IVF, Islam, Muslim Middle East, Turkey, Egypt.

## Introduction

For involuntarily childless couples around the globe, “reproductive health” means achieving a much-desired pregnancy, thereby overcoming the stigmatization and heartbreak of childlessness. At the dawn of the 21<sup>st</sup> century, the globalization of assisted reproductive technologies (ARTs) has meant that achieving this dream with the help of medical intervention is increasingly a global reality for men and women in many parts of the world. Indeed, perhaps nowhere is this globalization process more apparent than in the more than 20 nations of the Muslim Middle East, where pronatalist social norms and strong child-desire have contributed to a flourishing in vitro fertilization (IVF) industry. For example, Egypt hosts over 50 IVF clinics, Turkey over 100, and the tiny country of Lebanon has one of the highest per capita concentrations in the world. However, even here, ART provision remains variable and heterogeneous, mediated through numerous “arenas of constraint” (Inhorn, 2003a, 2003b). Despite the

deliberate efforts of some nations to increase access to ARTs, social, religious, and resource considerations create variability and inequality across the Middle Eastern region.

This article outlines some of the key social, religious, and resource considerations regarding infertility and ARTs in the Muslim Middle East. Social considerations demonstrate the gendered and human suffering of involuntarily childless men and women, showing that IVF and related technologies are desperately needed by many infertile couples in the Muslim Middle East, particularly because neither childlessness nor alternative routes to parenting (including adoption) are acceptable. Religious considerations illustrate the paramount importance of practicing reproductive medicine according to Islamic law in this part of the world, where third-party reproductive assistance is largely banned. However, while there has been a strong and enduring consensus among the Sunni Muslim authorities regarding the nature of these parameters, Shia Muslim clerics have provided a variety of opinions, leading

Iran and Lebanon to become the only two countries within the Muslim Middle East to practice third-party reproductive assistance. Resource considerations, with specific examples from Egypt and Turkey, demonstrate that while ARTs must of course compete with other pressing priorities, if approached with creativity and sensitivity, their provision can become part of broader reproductive health and reproductive rights frameworks. We end the paper by making a call for ARTs and infertility treatments to be incorporated into comprehensive reproductive care regimes, and for reproductive rights to encompass the facilitation as well as the control of fertility.

### Social Considerations

Strong pronatalist norms across much of the Muslim Middle East, as well as in many developing countries, mean that children are highly desired and parenthood is culturally mandatory. As a result, infertility may be an especially pernicious form of “reproductive disruption” (Inhorn, 2007). Infertile couples face not only emotional difficulties due to their inability to conceive, but also severe difficulties in achieving their social security, social power, and social perpetuity desires (Inhorn, 1996). Infertility leads to profound social suffering, particularly on the part of women (Inhorn and van Balen, 2003). Women’s lack of pregnancy is both physically and socially visible, especially in high-fertility societies where women are typically blamed for reproductive failures, even in cases of male infertility. Involuntarily childless women may face various forms of community ridicule and social ostracism: they may be taunted about their barrenness and lack of femininity; they may be turned away from life-cycle rituals involving other women and their children; and they may be accused of casting the evil eye on other women’s children through their uncontrollable envy (Inhorn, 1994, 1996).

Although the gender burden of infertility is particularly pronounced for women, men, too, suffer from their infertility and attempt to overcome it (Inhorn, 2012). Male infertility remains deeply hidden in most societies around the world, because it is among the most stigmatizing of all male health conditions (Inhorn, 2004, 2012). Such stigmatization is clearly related to issues of sexuality. Male infertility is popularly, although usually mistakenly, conflated with impotency, as both disrupt a man’s ability to impregnate a woman and to prove one’s virility, paternity, and manhood. Although little is known about the experience of male infertility worldwide, recent research from the Middle East shows that contrary to popular expectation, male infertility is more common than female infertility and, like female inferti-

lity, may have profound effects on personhood, marriage, and family relations, particularly since Middle Eastern Muslim men are expected to father offspring (Inhorn, 2012). Furthermore, men in these societies may be subjected to ineffective, even iatrogenic medications and genital surgeries in an attempt to overcome their infertility (Inhorn, 2004, 2012). However, the promise of fatherhood is a strong incentive for involuntary childless men to pursue ARTs.

Recent research, by more than a dozen social science scholars working across the Middle Eastern region (Inhorn and Tremayne, 2012), shows that infertile Muslim couples – including *both* men and women – are increasingly willing to pursue assisted reproductive technologies in pursuit of parenthood, often within the context of long-term loving marriages. In part because of the cultural and religious valorization of marriage and parenting, Islamic authorities have condoned assisted reproduction as a “marriage savior” and the solution to the human suffering brought about by childlessness. The Islamic permissibility of ARTs is counterbalanced by the Islamic prohibition on adoption: namely, child adoption is prohibited in the Islamic scriptures and thus is not legally available in the vast majority of Muslim societies. Because adoption is not a viable path to “social” parenthood for most Muslim couples (Inhorn, 2006a), men and women in the Middle East often vigorously pursue “biological” parenthood, which requires them, in many cases, to pursue ARTs to the best of their abilities. Indeed, as shown in recent anthropological work by numerous Middle East scholars (Inhorn, 2012; Inhorn and Tremayne, 2012), Middle Eastern men and women from a variety of social classes and backgrounds are attempting to access ARTs in their 21<sup>st</sup>-century quests for conception.

### Religious considerations

Unlike in many other parts of the world, in the Muslim Middle East, ARTs are practiced according to religious guidelines. Not only are Islamic religious authorities keen to establish the parameters within which assisted reproduction is and is not acceptable, but many infertile couples are also extremely concerned about making their “test-tube babies” in the correct and religiously endorsed fashion.

Sunni Islam is the dominant form of Islam throughout the world, with its followers accounting for nearly 90 per cent of the world’s Muslims. The Sunni Islamic position on assisted reproduction was outlined in a seminal *fatwa* (an authoritative religious proclamation issued by an esteemed religious scholar) by the Grand Sheikh of Egypt’s famed Al Azhar University on 23 March 1980. This initial *fatwa* – issued only two years after the birth of

Louise Brown – has proved to be truly enduring. Its main tenets have been upheld by subsequent *fatwas* and have achieved widespread acceptance throughout the Sunni Muslim world (Inhorn, 2006b, 2012). The main points of the Sunni Islamic position on ARTs are as follows (Serour, 2002, 2008; Inhorn, 2012):

(1) Artificial insemination with the husband's semen is allowed, and the resulting child is the legal offspring of the couple.

(2) In vitro fertilization of an egg from the wife with the sperm of her husband, followed by the transfer of the fertilized embryo(s) back to the uterus of the wife is allowed, provided that the procedure is indicated for a medical reason and is carried out by an expert IVF physician.

(3) An excess number of fertilized embryos can be frozen through cryopreservation. The frozen embryos are the property of the couple alone and may be transferred to the same wife in a future frozen cycle, but only during the duration of the marriage contract.

(4) Sperm or gonads may be cryopreserved before exposure to radiotherapy or chemotherapy and used later in life by the same individual who has survived cancer treatment.

(5) Pregnancy in post-menopausal women is allowed using a woman's own cryopreserved embryos, oocytes, or, in the future, ovaries.

(6) Multifetal pregnancy reduction (a.k.a. selective reduction) is allowed if the prospect of carrying twins or a high-order multiple pregnancy (HOMP, i.e., triplets or more) to viability is very small. It is also allowed if the health or life of the mother is in jeopardy. As a form of selective abortion, the intention is to preserve the life of the remaining fetuses and minimize complications for the woman.

(7) PGD is allowed and even encouraged, where feasible, as a diagnostic option to avoid clinical pregnancy terminations among couples at high risk of genetic disorders in their offspring. PGD may also be used in cases of "family balancing," when couples have children of only one sex.

(8) Embryo research, for the advancement of scientific knowledge and the benefit of humanity, is allowed for fourteen days post-fertilization on surplus embryos that are donated for research with the informed consent of the couple. These research embryos should not be returned to the woman's uterus.

(9) In the future, gene therapy may be approved, not to promote genetic advantage or privilege in offspring, but rather to remediate genetically or otherwise physically inherited genetic diseases and pathological conditions.

(10) In the future, uterine transplantation will be allowable as a remedy for women who are lacking a

competent uterus. The transplanted uterus may be obtained from a postmenopausal donor or a woman of childbearing age who has completed her family. Uterine transplantation has been performed in the Middle East (i.e., Saudi Arabia and Turkey), but to date, a viable pregnancy in a transplanted uterus has yet to occur.

All of the Sunni majority countries in the Muslim Middle East practice ARTs according to these parameters, even secular Turkey (Gürtin, 2012). However, there has been a divergence of opinion among Shia Muslim clergy. Namely, although many Shia authorities support the majority Sunni view, some prominent Shia clerics have disagreed on the matter of third-party assisted reproduction. In 1999, the Supreme Leader of the Islamic Republic of Iran, Ayatollah Ali Hussein al-Khamene'i, the successor to Iran's Ayatollah Khomeini, issued a fatwa effectively permitting donor technologies to be used. As a result, all forms of ART – including sperm donation, egg donation, embryo donation, and gestational surrogacy – are now practiced in Shia-dominant Iran (Inhorn and Tremayne, 2012). In addition, Shia-dominant Lebanon has followed suit (Clarke, 2009; Inhorn, 2012), making it the only other Muslim-majority country, to provide third-party reproductive assistance to married infertile couples (Inhorn and Tremayne, 2012).

Given this situation, both Iran and Lebanon have become recipients of "reproductive tourists" from neighboring Sunni-majority countries, who quietly slip across international borders in pursuit of donor technologies (Inhorn, 2011). For those Muslim couples who do pursue third-party assisted reproduction, egg donation is deemed much more acceptable than sperm donation, and both are widely regarded as "last resorts" when all else fails (Inhorn et al., 2010). Such third-party reproductive assistance is usually conducted under conditions of extreme secrecy, for this practice is widely refused by the great majority of Sunni Muslim men and women, as well as some Shia Muslims. Across the Sunni Muslim world, stretching from Morocco to Malaysia, third-party reproductive assistance is effectively banned, making this prohibition widely relevant for infertile Muslim couples from many countries.

### Resource considerations

Having said this, it is very important to point out that most other forms of assisted reproduction *are* allowed within both Sunni and Shia Islam. As a result, a burgeoning ART industry is unfolding across the Muslim Middle East. However, here, as throughout the world, the availability of infertility services is a

complex product of public and private health policies and economic, political, and social forces that determine the allocation of personnel, equipment, and facilities (Nachtigall, 2006). As a result of rapid globalization, ART services are gradually reaching larger populations even in the resource-poor nations of the region (e.g., Egypt, Morocco, Yemen). Despite this, however, if there is a reproductive “right” to ART – under a rights-based approach to family planning – then this right has yet to be achieved by millions of infertile couples throughout the Middle East (Inhorn, 2009). The average cost of an ART cycle in the Middle East ranges from the low of about \$US 1,000 (e.g. Iran and Egypt) to the high of about \$US 6,000 (e.g. the UAE), with many countries in between (e.g., \$2,000-\$5,000 in Lebanon). These represent prohibitively high costs for large sectors of the population, whose access to ARTs can only be mediated through government, NGO, or philanthropic provisions. Although ARTs often face strong competition for scarce healthcare resources, Turkey and Egypt provide two important examples where efforts have been made to broaden access to infertility services for the economically disadvantaged, as we have discovered in our ethnographic research in these different contexts.

**Turkey:** Turkey’s first IVF baby was born in 1989 but it was not until the new millennium that the ARTs experienced a rapid expansion throughout the country. Funding for two cycles of IVF treatment, redeemable through state and social insurance institutions as of 2005, accelerated both the demand and encouraged the growth of the industry. The number of IVF centers increased by 50 percent between 2005 and 2007, from 66 to 91, and the number of annual treatment cycles doubled. The total IVF expenditure in 2007 was reported to be in excess of 300 million dollars, which according to national newspapers (e.g. *Hürriyet*, 31.01.2008) ranked Turkey as “The World’s 7<sup>th</sup> Biggest IVF Market” (behind Israel, France, Spain, England, US, and Germany). Currently, there are over 110 clinics throughout Turkey, and while many are concentrated in urban areas, clinics are increasingly opening across the nation, signaling both an increase in access and a decrease in social taboos towards infertility and its treatment (Gürtin, 2012). Moreover, Turkey has a very active patient support organization for infertility, which has been influential in the development of the fertility sector. ÇIDER - the name an acronym of the Turkish words “I Want a Child Solidarity Association” – is an organization whose character cannot be readily inferred from its counterparts in the US or in the UK. Its activities are a mix of patient advocacy, awareness-raising, and community build-

ing (putting involuntarily childless people in contact with another), alongside medical marketing and the harnessing of consumer power. It was founded in 2000 by Sibel Tuzcu – as simply a website with some information on infertility and fertility treatments – but has since, through extremely hard working and committed leadership, become an important player within the Turkish IVF industry, with over 40,000 members. As well as holding information provision and public awareness meetings all over the country, ÇIDER also canvasses the opinions of its members, lobbies regulators, and liaises with clinics to secure preferential fees for its membership. Combining a consumer activism model with civil society engagement, ÇIDER has given voice to many infertile Turkish men and women, and has effectively advocated for their interests and rights at the clinical, regulatory, and social levels. However, despite these positive factors, it must also be noted that Turkey recently regulated “reproductive tourism”, by taking a step to prohibit its citizens from seeking ARTs with third-party reproductive assistance, even in other jurisdictions (Gürtin, 2010, 2011).

**Egypt:** Egypt was one of the first three Middle Eastern countries (along with Saudi Arabia and Jordan) to introduce ARTs in 1986. Since then, Egypt has developed a thriving IVF sector, with more than 50 IVF clinics serving an infertile population estimated at 15% of all married couples (among a total population of nearly 80 million) (Inhorn, 2003b, 2012; Serour, 2008). Five of these clinics are located in government hospitals and receive some state funding to offset expenses for the infertile poor. The busiest clinic is located in Al-Azhar University, Egypt’s oldest and most famous institute of religious learning, under the auspices of the Al-Azhar International Islamic Center for Population Studies and Research. The clinic was started by Prof. Gamal I. Serour, director of Al-Azhar’s Islamic Center and former president of FIGO (2006-2009). Designed to serve the needs of Egypt’s infertile poor, the clinic provides generously subsidized IVF cycles to hundreds of lower-income couples each year. This example from Egypt is instructive. Egypt is a resource-poor, developing country, which has generally been regarded as seriously overpopulated. Nonetheless, Egypt has managed to bring down its population growth rates while, at the same time, experimenting with state subsidization of infertility care, including the provision of ARTs (Serour, 2008). Why has Egypt moved in this direction? A combination of cultural and political factors may provide the answer. Culturally, Egypt is a pronatalist Muslim country, where both marriage

and parenting are religiously extolled virtues (Inhorn, 1994, 1996, 2003a; Serour, 2008). Politically, the country hosted the famous “Cairo conference” (ICPD 1994), where “prevention and appropriate treatment of infertility, where feasible” was mentioned as an issue for future action (van Balen and Gerrits, 2001). Furthermore, Egypt has produced a remarkable cadre of highly trained IVF physicians, as well as two FIGO presidents. One of these former presidents, Mahmoud Fathalla, has argued, through the prism of reproductive rights, that “family planning must also mean planning for families” (Fathalla, 2002).

## Conclusion

Unfortunately, effective infertility treatments and ARTs are generally inaccessible in the resource-poor and mostly rural nations of the developing world, leading to a grim scenario of untreated and intractable infertility across large portions of the globe. The nonexistence of IVF and other ARTs in these countries is often rationalized in terms of population control, scarcity of health care resources and infrastructure, and the heavy burden of other life-threatening diseases. While these concerns raise major questions about prioritizing infertility as a global reproductive health problem, the silence surrounding infertility in the resource-poor world may also reflect a tacit eugenic view that the infertile poor are unworthy of treatment; thus, overcoming their infertility problems, including through provision of ARTs, contradicts Western interests in global population control.

A meeting convened by the World Health Organization in 2001 recommended that infertility be considered a global health problem and called for more innovative approaches in its treatment (Vayena et al., 2002a). There is no doubt that, especially in developing countries, ARTs will always face tough competition for precious resources. However, it is time to shift attitudes from the polarized approach of being “for” or “against” ARTs to a more constructive approach of exploring new possibilities and innovative ways of making ARTs available in a manner that suits the needs and the particular situations of low-resource settings in the developing world (Vayena et al., 2009). Infertility services span a broad spectrum from prevention to treatment. While prevention of infertility may be considered by governments and public healthcare providers as a societal and resource priority (Vayena et al., 2002b), it nonetheless ignores the plight of men and women who find themselves involuntarily childless and whose lives may be seriously impacted - on an emotional, relational and economic level - as a conse-

quence. Infertility treatment should be part of an integrated reproductive care program including family planning and motherhood care (Pennings et al., 2009), and the prevention and treatment of infertility need to be seen as being on a continuum of care, rather than contrasting or opposite approaches.

Indeed, almost 20 years post-Cairo, it is time to rethink the meaning of reproductive “rights” through a framework that includes prevention and treatment of infertility through the provision of ARTs. In addition to the right to *control* fertility, reproductive rights must encompass the right to *facilitate* fertility when it is threatened. For millions of couples in developing countries, including those in the Muslim Middle East, facilitation of fertility may require them to resort to ARTs. In short, achieving full reproductive rights around the globe means achieving access to IVF and related technologies. Although the barriers to ART provision in the developing world, and in the Muslim Middle East, are continually cited in the policy literature, it is time to move beyond repeated justifications for inaction. Turkey and Egypt provide positive examples of real progress in ART service provision. Several other Middle Eastern countries, including Iran and the United Arab Emirates, to name only two, have followed suit with at least limited provision of state subsidized ARTs. As we enter the second decade of the new millennium, it is time for other developing countries to follow suit, thereby helping their infertile citizens to achieve their reproductive rights through becoming loving parents.

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