

Virtual Mentor

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Clinical case

Sex selection for nonmedical reasons

Commentary by Louise P. King, MD, JD

Dr. Harris has been helping couples have children with the use of assisted reproductive technology (ART) for over 20 years. A reproductive endocrinologist, he got involved in the practice when it was new and extremely controversial and has had a rewarding career helping infertile couples. ART includes in vitro fertilization-embryo transfer, gamete intrafallopian transfer, zygote intrafallopian transfer, tubal embryo transfer, and frozen embryo transfer. These procedures help couples when less complex and less expensive methods of treatment have failed. Recently, Dr. Harris has been disturbed by trends at fertility clinics, including the one at which he works, to provide reproductive services based on patient demands and ability to pay rather than on medical need.

Recently, for example, Mr. and Mrs. Taylor, a couple in their late 20s, came to see Dr. Harris. Neither husband nor wife had any suspected fertility problems but they had decided they wanted only one child, and both really wanted a girl. Initially interested in preimplantation genetic diagnosis (PGD) followed by selective implantation (of female embryos), the Taylors had read a newspaper article about sperm sorting and sought more information about this technique. Although sperm sorting was not available at the clinic, Dr. Harris was conflicted—not only regarding how to counsel this couple, but about whether or not he could in good conscience continue to provide ART to couples for reasons he viewed as nonmedical.

Commentary

Beginning with the birth of Louise Brown in 1978, each novel technical advance proposed by the diverse field of reproductive endocrinology and infertility (REI) has met with vigorous debate. The debate surrounding both sperm sorting techniques and sex selection for nonmedical reasons via PGD touches on many of the same arguments raised in 1978.

In response to long-standing arguments that physicians attempt to “play God” when they interfere with reproduction and are slowly advancing towards a program of eugenics, proponents of ART have consistently pointed to society’s strong presumption in favor of reproductive choice. This presumption is exhibited in the United States in part by the decisions in *Griswold v. Connecticut* and *Roe v. Wade* [1, 2] as well as the prohibition against sterilization programs, even those seeking to avoid perpetuation of inheritable disease or fetal drug exposure [3]. Thus, prenatal screening with the possible option of early termination is offered to couples who

wish to know if their child has a disorder, sickle cell disease for example. But a policy preventing two carriers of sickle cell trait from reproducing is unimaginable. Nor are pregnant mothers required by law to stop drinking alcohol; instead they are subjected to ubiquitous and possibly ineffective educational messages on public bathroom stalls. The real message here is that reproductive decisions and choices are by and large in the hands of the parents-to-be.

Proponents of prenatal or pregestational sex selection resort to this presumption in favor of reproductive freedom and argue that it extends to all available technology if a couple would not otherwise reproduce without the benefit of that technology. Thus, a couple has the right to be assisted in conception of a child of a particular gender if they would not reproduce unless they could realize their preference [4]. Proponents of this view note that, absent proof of objective harm to others, this fundamental freedom should not be abridged.

Opponents of sex selection argue that there *is* risk of harm. The American College of Obstetricians and Gynecologists (ACOG) [5], the American Society of Reproductive Medicine (ASRM) [6], the International Federation of Gynecology and Obstetrics (FIGO) [7], and the United Kingdom's Human Fertilisation and Embryology Authority *Code of Practice* (HFEA) [8] all oppose meeting requests for sex selection for nonmedical reasons, in large part because they believe such requests may ultimately support sexist practice and reinforce devaluation of women. They point to India where between 1982 and 1987 the number of clinics for sex determination in Bombay alone increased from 10 to 248; in 1998, 7,997 of 8,000 elective abortions were female abortuses [9]. ACOG, ASRM and FIGO support offering patients sex selection techniques only to avoid transmission of sex-linked disorders, for example, Duchenne muscular dystrophy.

Those who favor sex selection for nonmedical purposes correctly point to differences between Western and Eastern culture. In India, a daughter's dowry can bankrupt a family. No such burden exists in Western culture. In fact, the vast majority of couples surveyed who would seek ART for sex selection would do so to ensure a "balanced family" with a child of each sex. Notably, Israel permits sex selection for couples who have had four children of one sex and wish the next child to be of the other sex [10]. Implicit in this policy is the argument that such a desire is not inherently sexist but merely recognizes that raising a girl is different from raising a boy. Opponents counter that this position reinforces sexual stereotypes and that parents will have unreasonable expectations of sex-selected children who may not conform to sexual "norms," thus negatively impacting the welfare of their children [11].

Other objections to sex selection deserve consideration too, such as the potential inequality of access to sex-selection technology, the likely disruption in the ratio of male to female births, and the ethical danger of condoning so-called designer babies. The first is a weak argument in the United States, where we have long accepted that access to nonessential medical care is far from available to everyone. The second

consequence is highly unlikely because fewer than 20 percent of couples surveyed wished to take part in sex selection [10], and, as noted by the first argument, many of them would lack the funds to take advantage of the technology. Finally, advocates of ART in general and sex selection in particular have long rejected the slippery slope argument, noting that freedoms should not be abridged when no harm exists simply for fear of future unproven harm. They argue that, if genetic selection for designer traits becomes a reality in the future, legislation against harmful practices can be considered at that time.

Dr. Harris is right to pause when confronted with the Taylors' request. As illustrated above, the issues are complex and spark great debate. HFEA's recent decision to ban all forms of preconception sex selection for nonmedical purposes in Britain met with vigorous objection and complex discussion in the literature [12, 13]. Dr. Harris, however, raises a new objection rarely discussed in the current literature, namely, whether a physician should participate in medical services on demand, thereby converting his or her practice into a purely commercial enterprise.

No standard definition of the goals of medicine exists. A report of the Hastings Center advances the following list of goals: (1) the prevention of disease and injury and the promotion and maintenance of health; (2) the relief of pain and suffering caused by maladies; (3) the care and cure of those with a malady, and the care of those who cannot be cured; (4) avoidance of premature death and the pursuit of a peaceful death [14]. Franklin Miller and Howard Brody would add to this definition four core "internal duties" essential to the professional integrity of physicians, the second of which requires that one "avoid disproportionate risks of harm that are not balanced by the prospect of compensating medical benefits" [15]. They argue that enhancement technologies, of which sex selection could be considered an example, challenge this second internal duty in that medical risks can be identified yet no medical benefit is present. Similarly, although psychosocial benefit to families that desire sex selection is evident, it is not immediately clear that these benefits can be construed as "medical," even when that term is defined broadly.

Risks from sperm sorting are theoretical at this point because no controlled outcome trials have been conducted; however, potential risks should not be trivialized. Of note, the Microsort technique uses fluorescent dyes bound to sperm DNA. Because X-bearing sperm contain 2.8 percent more DNA than Y-bearing sperm, they take up more dye thus distinguishing XX chromosomes from XY chromosomes. Moreover, most sperm sorting techniques require that the sperm be frozen for transfer from fertility clinic to laboratory and back again. It is not yet clear what effect these techniques might have on embryonic development and, specifically, whether the addition of fluorescent dye to DNA increases the risk of chromosomal abnormalities.

The risks from PGD include the well-defined risks to the mother associated with invasive procedures needed to harvest and implant eggs. Thus, according to Miller and Brody's framework, it might be difficult to justify sex selection whether by

sperm sorting or PGD since no “legitimate medical goal” is served and the risks are potentially great.

Miller and Brody note that some argue for applying a consumer and service provider framework when it comes to medical enhancements. This argument, however, is precisely what has given Dr. Harris pause:

The whole point of looking at medical practice in terms of professional integrity is based on an argument that medical ethics can never be reduced to the ethics of marketplace encounters. To claim that physicians are professionals is to claim that they can never become mere “consumer service providers” while still maintaining their integrity [16].

These statements are most likely anathema to cosmetic plastic surgeons, but they provide strong support for Dr. Harris’s gut reaction to the Taylors’ request.

In sum, if Dr. Harris believes he should refuse the Taylors’ request, there is much to support his decision. Although the Taylors wish to have a female child, their decision could still be considered sexist in that they presumably value having a male child less than having a female. Consequently, Dr. Harris could subscribe to the position espoused by ACOG and ASRM. As a reproductive endocrinology and infertility specialist, however, Dr. Harris has probably predicated much of his practice on a presumption that women and their partners should be assisted in exercising their fundamental reproductive liberty. Thus, it might be difficult for Dr. Harris to accept the ACOG and ASRM positions as justification for limiting this freedom. If Dr. Harris is not comfortable providing gender selection services on demand for nonmedical reasons, however, it is his professional right to reasonably refuse—as a violation of his integrity as a physician. Moreover, Dr. Harris, and indeed any physician who encounters a patient interested in sex selection, should counsel that patient about the absence of controlled trials to evaluate the safety of these techniques or of long-term studies to determine the psychosocial effect of sex selection on children and their families.

References

1. *Griswold v Connecticut*, 381 US 479 (1965).
2. *Roe v Wade*, 410 US 113 (1973).
3. Knoppers BM, Bordet S, Isasi RM. Preimplantation genetic diagnosis: an overview of socio-ethical and legal considerations. *Annu Rev Genomics Hum Genet.* 2006;7:201-221.
4. Robertson JA. Preconception gender selection. *Am J Bioeth.* 2001;1(1):2-9.
5. ACOG Committee on Ethics: Sex selection. Committee opinion no. 360. American College of Obstetricians and Gynecologists. *Obstet Gynecol.* 2007;109(2 pt 1):475–478.
6. Ethics Committee of the American Society of Reproductive Medicine. Sex selection and preimplantation diagnosis. *Fertil Steril.* 1999;72(4):595-598.

7. FIGO Committee for the Ethical Aspects of Human Reproduction and Women's Health. Ethical guidelines on sex selection for non-medical purposes. *Intl J Gynaecol Obstet.* 2006;92:329-330.
8. United Kingdom's Human Fertilisation and Embryology Authority. *Code of Practice.* <http://www.hfea.gov.uk/en/371.html>. Accessed May 2, 2007.
9. Dahl E. Procreative liberty: the case for preconception sex selection. *Reprod BioMed Online.* 2003;7(4):380-384.
10. Siegel-Itzkovitch J. Israel allows sex selection of embryos for non-medical reasons. *BMJ.* 2005;330:1228.
11. Dresser R. Cosmetic reproductive services and professional integrity. *Am J Bioeth.* 2001;1(1):11-12.
12. McDougall R. Acting parentally: an argument against sex selection. *J Med Ethics.* 2005;31:601-605.
13. Savulescu J, Dahl E. Sex selection and preimplantation diagnosis. A response to the Ethics Committee of the American Society of Reproductive Medicine. *Hum Reprod.* 2000;15(9):1879-1880.
14. Callahan D. The goals of medicine: setting new priorities. *Hastings Cent Rep.* 1996;25(6):S1-S26.
15. Miller FG, Brody H. The internal morality of medicine: an evolutionary perspective. *J Med Philos.* 2001;26(6):581-599.
16. Miller FG, Brody H. Enhancement technologies and professional integrity. *Am J Bioeth.* 2005;5(3):15-16.

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