



# When is Sex Selection Morally Permissible? Considering Family Balancing & Disease

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ABSTRACT: Sex selection is a budding set of technologies intended to allow prospective parents the ability to choose the desired sex of their fetus. This technology may seem harmless in the short term, but long-term consequences are staggering, as the literature shows. While some authors try to justify using sex selection, research shows that sex selection leads to a high number of negative consequences, both personal and social. Because of this, sex selection is only morally permissible for medical reasons, such as preventing sex-linked diseases. It is not ethically permissible for non-medical reasons, such as family balancing. In the following paper, I outline the negative consequences of sex selection. Moreover, I show that only medical needs justify allowing the use of sex selection technologies.

KEYWORDS: Cellular Biology, Genetics, Genetic Engineering, Sex Selection, Bioethics.

#### Introduction

Sex selection technologies have recently been created and made available, allowing potential parents to choose the sex of their child before its birth. These technologies include but are not limited to Preimplantation Genetic Diagnosis (PGD) and sperm selection through the process of in vitro fertilization (IVF). These sex selection technologies help parents choose a child of their preferred sex for a variety of reasons, ranging from family balancing to preventing life-threatening sex-linked diseases such as muscular dystrophy and Barth syndrome.<sup>2</sup> Some of the most popularly used sex selection techniques include sperm selection and PGD.<sup>3</sup> Sperm selection is a process where sperm is collected and analyzed in the lab. The lab identifies sperm that will create either a male or female embryo, according to the client's desires. Then, the sperm is used to fertilize the ovum through IVF.4 This means that in the process of choosing the desired sperm, the parents can choose the desired sex of the baby. PGD is a process in which scientists examine the fertilized embryo and determine its sex.6 In this method of sex selection, parents can choose whether they want to implant the embryo into the uterus or not, depending on whether they want to have a child of that sex.5 PGD is one of the most popularly used forms of sex selection as it ensures nearly 100% accuracy of sex selection.6

With this powerful technology arises an important question: For what purposes is it morally permissible to select embryos for implantation based on their sex? Many bioethicists have proposed a variety of arguments around the ethical circumstances of sex selection technology. Scholars like Birging and Shahvisi provide strong arguments against permitting sex selection and illustrate the long-term consequences of sex selection technology on society. On the opposing side, Sureau and Etzioni both argue in favor of allowing sex selection and examine how risks in these situations must be taken for the sake of progress in technology and science. Authors like Kalfoglou produce argu-

ments for both sides with a more deontological perspective. The argument that I wish to propose here is that sex selection is morally permissible only when it is used for medical reasons, such as preventing sex-linked diseases. However, sex selection is not morally permissible for non-medical reasons. This is because when it comes to cases of sex selection for non-medical reasons, the negative consequences greatly outweigh any positive outcomes.

In the next section, I discuss the negative consequences of sex selection. In later sections, I argue that given these negative consequences, sex selection is not morally permissible for family balancing reasons and is only morally permissible for medical reasons. This is because a parent's moral obligation is to protect their children's health. In contrast, parents have no inherent moral obligation to balance the sex ratios within their families. Hence, only in cases where sex selection serves a medical purpose do the positive consequences outweigh any adverse consequences of sex selection.

# Introduction

# A) The Negative Consequences of Sex Selection:

Many negative consequences occur with sex selection. One issue is sexism towards women. Sexism is the practice of discriminating, stereotyping, or using prejudice against someone because of their sex. When families wish for a child of a particular sex, they do not wish for this because of the anatomical differences, but because they believe that the child will act according to gender stereotypes. For example, in a family with three boys, if the parents want their next child to be a girl, it is not because of the bodily differences that separate a male from a female; in reality, it's because of the stereotypical roles they assign to a girl in comparison to a boy. Some families may expect a girl to be more docile than their boys, and others may expect boys to be more energetic and sportier than girls. This just reinforces all the heteronormative gender stereotypes that society has been trying to escape for ages. Sex selection for a

balanced family is sex selection for heteronormative reasons, which, in turn, is just another form of sexism. The long-term consequences of such ideals could result in the reinforcement of oppressive and sexist social norms that we pride ourselves on escaping.

Another negative consequence of sex selection is medicalization. 9 Medicalization is a concept in which medicine is used to treat issues that are not real medical problems at all; instead, medicine is misused to treat the aspects of human life that don't need to be 'fixed,' as there is nothing wrong with the body in the first place. Given that most sex selection occurs for family balancing reasons and that a sex imbalance in a family is not a physiological problem, sex selection contributes to medicalization. A good amount of social resources has been devoted to sex-selective technologies, but the demand for them outstrips the supply. There are lengthy waitlists as long as 18 months for people waiting for the opportunity to use PGD for the sex selection of embryos. 10 This is yet another reason why sex selection for non-medical reasons is not ethical. Thousands of people from many countries, primarily countries in Asia, travel around the world to use sex selection technologies purely for sexist reasons (the desire to have a male child as opposed to a female) or other personal preferences. 11 This limits the availability of sex selection technologies that are essential to making life-saving decisions for babies who are potentially susceptible to chronic disease. 12 Using sex-selective resources for medical issues should be prioritized to the greatest extent possible, as sex-selection usage in such cases could determine the physical well-being and survival of the child. However, there is nothing of such a dangerous magnitude that can be lost when using sex selection for non-medical reasons. We have seen medicalization happen in the past, with medicines provided to 'correct' the LGBTQ+ population.<sup>13</sup> It is well known how problematic and unethical it was to use medicines to 'fix' the LGBTQ+ population; sex selection for family balancing is quite similar. 14 In this case, we still try to 'correct' the child by ensuring it is not a particular sex. In reality, a child's gender does not reflect a problem with their physiology. Hence, it is wasteful to squander resources to solve a manufactured medical problem. <sup>15</sup> Therefore, sex selection is not morally permissible for family balancing because there isn't a medical problem to fix, and it takes resources from conditions that are genuinely life-threatening and can be solved with medical care.

Yet another damaging consequence of sex selection is the high possibility of an unbalanced sex ratio in a population. In countries with strong sexist stereotypes, some wish for their child to lead the best life as the "better" sex, which is generally taken to be the male sex. He when a pregnancy occurs with a fetus of the undesired sex, they take drastic measures such as preventing the birth of the child. With sex selection technologies made available, this only reinforces such beliefs and increases their consequences. This can result in potential social problems due to the increased objectification of women and the growing presence of them in trafficking schemes. Asian countries, such as India and China are well known for having deep-rooted sexist ideals, but having sex selection available would make matters worse. Women would become more

'valuable,' but not in an ethical way—they would become more valuable to families who are desperate to get their sons married off to achieve elite status, contributing to sexist objectification

Sex-selective infanticide is the leading cause of an unbalanced sex ratio in Asian countries. 20 With sex-selective technologies becoming increasingly available to many populations, this allows for more room to choose the preferred sex for sexist reasons, furthering the already dangerously imbalanced sex ratio in such countries. The consequences of an imbalanced sex ratio can lead to the death and maltreatment of the targeted sex group. Let's take a look at the current circumstances in certain countries in Asia, with a growing unbalanced sex ratio, such as China, which has 112 males for every 100 females born.<sup>21</sup> Because there are so many sons than daughters, there's not an equal ratio, meaning there are too many unmarried men. As a response to this, some groups responded by trafficking young women. These programs were called 'bride trafficking' and were influenced by an imbalanced sex ratio. Simultaneously, we also saw a massive increase in abusive child marriage from an unreasonably young age in girls. Although this is just an example in Asia, a similar phenomenon could occur in other countries, partly driven by imbalanced sex ratios.5 Presently, there is a massive sex trafficking crisis in the United States; if we allow limitless sex selection, we will be contributing to social conditions that lead to more trafficking scenarios, which hurt the well-being of many social groups, in particular women.

There are also a multitude of ways that sex selection can harm a child, both emotionally and physically. On the rare occasion that sex-selective technologies fail to select the embryo of the preferred sex, parents tend to resort to abortion. The parents are essentially deciding that this embryo isn't worth existing due to its sex. Most abortions tend to happen due to reasons that endanger the life of either the parent or fetus, but in this case, it's because the fetus isn't the proper sex, even though the sex of the fetus is not a medical problem. The entire idea of aborting the fetus undermines the concept of unconditional love for a child. This can also mean an increased potential for post-natal child maltreatment. If a child isn't what the parents had hoped for, this could lead to feelings of resentment due to the sheer amount of money, effort, and hope spent on the program. Consequently, this could result in abusive or neglectful treatment of the child and lead to malnourishment, for instance.

Family balancing can not only lead to sexist outcomes but also transphobic ones. Parents pay thousands of dollars to have a child of a particular sex; however, if the child chooses a different sexual identity later, then the parents are not likely to support the child's decision due to the amount of work they put into determining the sex of their child beforehand. <sup>6</sup>Sex selection can, therefore, lead to a transphobic society that makes it harder for children to be loved and show their identities. <sup>6</sup>

# B) Discussion: Sex Selection is Not Morally Justified for Family Balancing:

Family balancing is a goal many families aim for. It is based on the idea that each family should have a 'balanced' number of children, gender-wise. Every family interprets this norm differently. Some families with all girls might wish for just one boy to keep everything 'balanced,' whereas other families with one girl might favor having just one boy and one girl. However, most families who desire a balanced family have a common goal: to achieve a balanced family with the least number of children possible. That is why many families that want a balanced family look into sex selection technologies, like sperm sorting or PGD. Because of the high accuracy of such programs, families can get the desired result with the fewest children possible.

Given the multitude of negative consequences due to the usage of sex selection technologies, sex selection is not morally permissible for nonmedical reasons. Sex selection for non-medical reasons is unnecessary. It is just in the parents' interest because it regards what kind of child they want, even though the child does not need it to lead a healthy life. Sex selection for non-medical reasons can lead to a multitude of issues, such as enabling sexism, increasing trafficking schemes, heteronormativity, and many other negative consequences.

Furthermore, when asked why families want to be balanced, the parents usually respond simply, saying that siblings of the opposite sex often have a better social life when they grow up. However, there is virtually no scientific literature proving this true. Studies only talk about the benefits of having a sibling, disregarding gender. This study indicates that parents have no problems with having their child's friend group be full of children of the same sex, but they only seem to have that problem with the family.<sup>6</sup> Siblings of the opposite sex do not appear to give the family any additional benefits, meaning that the preference for a child of a particular sex may simply be internalized sexism. This is because families do not want a child of a particular sex because of the physical differences, but because of their stereotypical beliefs of what they believe a girl will be like versus a boy. In actuality, this means that internalized sexism is the leading reason for family balancing, as they follow their pre-existing stereotypes of how they believe girls and boys are different emotionally. This is highly unethical reasoning, making the whole process unethical under non-medical circumstances.

Not only is the thought process behind family balancing detrimental to society, but the outcomes can also be detrimental to the children produced. Like any other medical procedure, family balancing doesn't have a 100% success rate.<sup>22</sup> There is always a possibility that the child can still be of the unwanted gender, and this doesn't always end well for the child. In drastic situations, this can lead to malnourishment of the child, post-natal murder, etc.<sup>20</sup> There have been multiple instances of 'extermination' procedures like these happening in countries in Asia, proven through the mass female infanticide in China for the past 2,000 years.<sup>6</sup> This destroys the idea that parental love should be unconditional rather than dependent on the child's characteristics. Parents have a moral obligation to ensure the best life for their children, regardless of the child's gender.

# C) Sex Selection is Morally Justified for Medical Reasons:

Sex selection is morally permissible for medical reasons, however, such as preventing sex-linked diseases, because the moral imperative of preventing serious diseases outweighs the negative consequences of the use of sex selection technologies.<sup>11</sup> Medical issues could potentially threaten the life of a child, and we have moral reasons for preventing them. Indeed, parents have a moral obligation to ensure their child's health to the best of their ability. Sex-linked diseases are diseases that only occur in a particular sex or primarily affect a specific sex. Examples of diseases that are sex-linked include hemophilia, which is an X-linked recessive disorder. Because males have only one X chromosome, they are more likely to get it.<sup>23</sup> At the same time, females are only carriers, meaning they carry the disease and can pass it on to their children, but they usually do not experience any symptoms. 11 This means males, or individuals with XY chromosomes, are more likely to have hemophilia than females, who have XX chromosomes, are. Hemophilia, at times, can be life-threatening, as can many other sex-linked diseases. 11 They are taking all of this into consideration: if two prospective parents have a gene that carries or has hemophilia, their child, if male, is very likely to get the life-threatening disease. Because parents are morally obligated to ensure the healthiest life for their children, it is morally permissible for them to use sex selection to have a female child so they can prevent the risk of their child having a life-threatening disease. Furthermore, even if the sex-linked disease is not life-threatening, it still threatens the quality of life of the individual, so it is ethical for the parents to use sex selection to reduce the likelihood of such diseases.

# Discussion

## A) Counterarguments:

The idea that family balancing is beneficial persists. This is one of the most popular reasons parents cite when asked why they want a balanced family. They state that having children of opposite sexes interact with each other from a young age will make it easier for the kids to grow up and be more social.<sup>6</sup> However, studies have shown little to no empirical evidence to support this idea. Studies do show that having a sibling, no matter the sex, can help the child to grow up more socially adept, but there is no compelling scientific literature to support what these parents are stating. Since there is neither a material nor medical reason behind why parents want a child of a particular sex, the parents are likely driven by sexist stereotypes to justify their reasoning behind family balance.

Another common counterargument is that sex selection must be used to provide the best life for the child.<sup>24</sup> According to this logic, this technology should be allowed to select a male child because men tend to have better lives in some regions of the world.<sup>25</sup> This, however, reflects a selfish and immoral androcentric worldview. By allowing sex to promote a "better life" for some individuals, we will only be reinforcing the problem of unequal treatment of the sexes. Furthermore, this mindset is immoral because families that do not have the opportunities and money to use the technology will face greater impacts of existing problems that are caused by an imbalanced sex ratio. There is already a bride-trafficking epidemic in Asia, and if sex-selective technologies are found to be morally acceptable, they are likely to be legalized across the globe. In that case, poor families are at higher risk of being targeted by

sex trafficking schemes.<sup>21</sup> By accepting sex selection in sexist countries, we knowingly risk subjecting the children of the poor to abusive practices. Therefore, sex selection is not the solution to the problem of gender inequality and could make the situation worse. And most importantly, it makes women's lives worse. Because there are fewer women in society, they are forced to deal with even more domestic labor, and the pressure of their normative, stereotypical roles in society increases. This leads to even more sexual exploitation.

One unique argument supporting sex selection is that having more men than women in society can be beneficial for society, 14 in particular, for women, as men can begin taking on what has usually been seen as women's roles and thus contribute to undermining sexist gender norms. However, this has no likelihood of occurring, considering past events. Referencing the imbalanced sex-ration argument, it is seen that in countries such as China, which has one of the largest imbalanced sex ratios in the world, the imbalanced sex ratio did not lead to better lives for the oppressed gender, women.<sup>21</sup> Men never took on the societal, domestic roles that were forced upon women. Women just had more of a burden to deal with as they slowly became a minority. Worst of all, women became victims of dangerous trafficking schemes and suffered greatly. This had significantly adverse effects on the lives of women, both physically and mentally; in many instances, the women died from their unfortunate circumstances.<sup>21</sup> The argument that having fewer women in a population can lead men to help with their roles lacks evidential support, rendering the argument weak.

## Conclusion

Sex selection is morally permissible only for medical reasons because the consequences of not using sex selection in such situations could potentially result in death or disease. Death is the heaviest negative consequence, and no other consequence outweighs it. Potential parents' failure to try to prevent disease to give their child the best quality of life possible reflects moral neglect. They are not using sex selection for non-medical reasons, such as family planning, which, on the other hand, results in little to no adverse consequences. In the context of non-medical reasons, the negative consequences of using sex selection technologies easily outweigh any positive ones.

If we decide to allow sex selection with no limitations, the consequences may be similar to those of past eugenics policies. Eugenics is a 'race science' that was quite predominant in the late 19th century and the early 20th century. The idea behind this program was to create the best future generations by creating the best children. This was a program where minorities were labeled 'unfit' to reproduce. These groups included LGBTQ, disabled individuals, low-income people, etc.6 Dominant groups ensured that minorities couldn't contribute to society by mandating sterilization and going to extreme measures to bring their utopian but highly oppressive worldview to life. Eugenics in the past was a very destructive pseudoscientific approach that resulted in all sorts of racial and sexist consequences. Our 'modern' practices of controlling reproduction, which include sex selection technologies, could result in outcomes similar to those of past eugenics programs. Eugenics programs created unthinkable consequences, for instance, the non-consensual sterilization of minority women, which incomparably destroyed lives. Later, several movements were launched in the United States to eradicate such biased and oppressive practices.<sup>6</sup> However, if we allow sex selection, we would likely see a great increase in sexism and potentially other biases. Suppose we wanted reproductive practices not to result in similar consequences to past eugenics programs. In that case, we must place limitations on the use of sex selection technologies and employ them only for morally justified reasons.

With the quickening development of modern sex selection technology, even more questions are left unanswered. If we don't carefully place limitations, it is impossible to predict what other consequences could result from the adoption of sex selection technologies. Furthermore, we must also consider which countries it is safest to consider for sex selection. Some countries have poor medical standards that are inadequate for controlling this kind of technology; however, despite all of these concerns, few safeguards are placed on this new technology.

Unfortunately, even with significant differences in the levels of necessity, there is no clear mechanism to prioritize access to medical resources. Resources may not exist for those who need sex selection to save their children from diseases linked to sex. Therefore, the minority of parents who genuinely need sex selection for valid medical purposes are often neglected. Eventually, this could lead to a depletion of medical resources for medically necessary treatments. Another concern is that since there is such a large number of people who want to take advantage of sex selection, this can result in a lack of resources for the families that are in desperate need to prevent life-threatening diseases from adversely affecting their kids' lives. 22

## References

- Sharp R; McGowan M; Verma J; Landy D; McAdoo S; Carson S; Simpson J; McCullough L. Moral attitudes and beliefs among couples pursuing PGD for sex selection. *Reprod Biomed Online*. 2010 Dec, 21(7):838-47. DOI: 10.1016/j.rbmo.2010.09.009
- Migeon B. X-linked diseases: susceptible females. Genetics in Medicine. 2020 July, 22(7): 1156-74. DOI: 10.1038/s41436-020-0779-4
- Whittaker A. Reproduction opportunists in the new global sex trade: PGD and non-medical sex selection. *Reprod Biomed Online*. 2011 Nov, 23(5):609-17. DOI: 10.1016/j.rbmo.2011.06.017
- 4. Vaughan D. Sperm selection methods in the 21st century. SSR. 2019 Dec, 101(6):1076-82. DOI: 10.1093/biolre/ioz032
- Ehrich K; Williams C; Farsides B. The embryo as moral work object: PGD/IVF staff views and experiences. Wiley Online Library. 2009 July, 30(5): 772-87. DOI: 10.1111/j.1467-9566.2008.01083
- 6. Shahvisi A. Engendering Harm: A Critique of Sex Selection For "Family Balancing." *J Bioeth Inq.* 2018 Mar, 15(1):123-137. DOI: 10.1007/s11673-017-9835-4.
- Dovidio J; Hewstone M; Glick P; Esses V. Sexism. Sage Handbook. 2009. DOI: 10.4135/9781446200919.n20
- Wilkinson S. SEXISM, SEX SELECTION AND 'FAMILY BALANCING'. Oxford Academic Medical Law Review. 2008 July, 16(3): 369-89. DOI: 10.1093/medlaw/fwn013
- 9. Correia T. Revisiting Medicalization: A Critique of the Assumptions of What Counts As Medical Knowledge. *Frontiers Journals*. 2017 September, 18(2). DOI: 10.3389/fsoc.2017.00014

55 DOI: 10.36838/v7i9.52

- 10. Cacchioni T. Why Medicalization? Introduction to the Special Issue on the Medicalization of Sex. *Taylor & Francis Online*. 2012 Jun, 49(4):307-10. DOI: 10.1080/00224499.2012.690112
- 11. Kalfoglou AL; Kammersell M; Philpott S; Dahl E. Ethical arguments for and against sperm sorting for non-medical sex selection: a review. *Reprod Biomed Online*. 2013 Mar, 26(3):231-9. DOI: 10.1016/j.rbmo.2012.11.007
- Rinčić I; Muzur A; Sodeke S. Sex Selection, Gender Selection, and Sexism. *Science Direct*. 2018 August, Ch 6:113-30. DOI: 10.1016/B978-0-12-813764-2.00006-4
- Pilling M.D. Expanding the Struggle Against Queer and Trans Pathologization: Challenging Biomedicalism. In: Queer and Trans Madness. Palgrave Macmillan, *Cham.* 2022 Mar. DOI: 10.1007/978-3-030-90413-5\_3
- Etzioni A. For Faster Science: Accelerated Genetic Engineering. J Clin Ethics. 2021 Winter, 32(4):349-357. PMID: 34928863.
- Singh N; Ogunseitan O; Tang Y. Medical waste: Current challenges and future opportunities for sustainable management. *Taylor & Francis Online*. 2021 Feb, 52(11). DOI: 10.1080/10643389.2021.1885325
- Bhaskar V. Sex Selection and Gender Balance. American Economic Journal: Microeconomics. 2011, 3(1): 214-44. DOI: 10.1257/mic.3.1.214
- Caldwell B.K. Family Size Control by Infanticide in the Great Agrarian Societies of Asia. Springer. 2006, 131-53. DOI: 10.1007/978-1-4020-4498-4\_7
- Kokko H; Jennions M. Parental investment, sexual selection and sex ratios. Oxford Academic Journal of Evolutionary Bio. 2008 July, 21(4): 919-48. DOI: 10.1111/j.1420-9101.2008.01540.x
- Diamond-Smith N; Rudolph K. The association between uneven sex ratios and violence: Evidence from 6 Asian countries. PLOS Journals. 2018 June. DOI: 10.1371/journal.pone.0197516
- 20. Birging, Amanda. Assigned Gender Before Birth: A Critical Discourse Analysis of Desires, Identities, and Ideologies in Online Discussions of Non-medical Sex Selection. *Linköping University Publications*. 2021, ISRN: LIU-TEMA G/GSIC1-A—21/003-SE
- Rollero C. Men and women facing objectification: The effects of media models on well-being, self-esteem and ambivalent sexism. Saje Journals. 2013 Jan, 28(3). DOI: 10.1174/021347413807719166
- De Melo-MartíN I. Reproductive Embryo Editing: Attending to Justice. *Hastings Cent Rep.* 2022 Jul, 52(4):26-33. DOI: 10.1002/hast.1406.
- Hoyer L. Hemophilia A. The New England Journal of Medicine. 1994 January, 330(1):38-47. DOI: 10.1056/ NEJM199401063300108
- 24. Savulescu J. Sex selection: the case for. Wiley Online Library. 1999 Oct, 171(7): 373-5. DOI: 10.5694/j.1326-5377.1999.tb123697.x
- Sureau, C. "Gender Selection: A Crime against Humanity or the Exercise of a Fundamental Right?" Oxford Academic Journals. 1999 14. No. 4 (1999).

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