



Gender, Beauty, and Plastic Surgery

Open Access Teaching Case Developed for the Tech for Humanity Pathways Minor

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Background

Surgeries are considered crucial parts of medical care. The definition of surgical procedures can vary, but in general, they are operations or medical procedures that can range from minimally invasive to invasive procedures, which require the breaking of the skin to remove, repair, or diagnose a disease in parts of the body (Council on Constitution and Bylaws, 2023; National Cancer Institute, n.d.). Surgery as a technology encompasses advancements in knowledge about the body and the development of tools and techniques to perform faster, more precise, and ultimately safer operations. While a fundamental part of medicine today, surgeries were not always considered a good or proper form of medicine.

Speed, precision, and safety are the fundamental concerns of a surgical operation, because a body can only be opened up for a finite amount of time before the opening in the skin starts running the risk of introducing foreign contaminants into the system. In other words, surgical operations must be done in a sterile environment, again because there is a risk of contamination. Surgeons must know precisely where to cut and how to conduct the operation; otherwise, they risk extending the surgery time or worse, cutting or damaging the body further. These were all common problems for early surgery, with high mortality rates and excruciatingly painful procedures (Gawande, 2012; Ellis & Abdalla, 2018).

Before the mid-19th century, surgeons did not have an adequate way to perform surgeries that did not place people under excruciating pain, nor did they know about the spread of bacteria into a wound and the risk of the wound going septic (Gawande, 2012; Ellis & Abdalla, 2018). This pain and risk of death, along with moral (often religious) beliefs about cutting into the body,

created a divide between surgery and medicine, with people considering surgery as unscientific and even barbaric.

As a technology, surgery is now considered critical and ethical. However, the intimate nature of surgery, that being the action of cutting into a person's body, and holding the fate of a patient's health and life in their hands while performing their technical skills for multiple hours, necessitates ethical considerations (Cardenas, 2020). Moreover, the act of cutting into the body is both potentially and possibly a form of harm that directly contradicts the core values in medicine, which is not to hurt or harm a patient. Still, the surgical dilemma lies in a space of harm with the expected benefit of creating more good for the patient in the long run. In other words, since the process of surgery can be dangerous, medical professionals should only take that course of action when absolutely necessary and not because the surgeon obstinately wants to perform the procedure because they, nor should they do it for any kind of *frivolous reasons*. Plastic surgery is an area that calls these considerations into question.

Plastic surgery is the field that “deals with the repair, reconstruction, or replacement of physical defects” and also involves the aesthetics of these reconstructed bodies (AMA, n.d.).¹ Plastic surgery provides critical care—for example, for those who have a severe cleft palate, either from a congenital disability or from a traumatic accident, palatoplasty (the construction or reconstruction of the tissue between the nose and mouth) allows a person to breathe, eat, and speak (Takeshita et al., 2023; Agrawal, 2009). The concern with plastic surgery is that not all of the procedures are necessary and play into a culture that cares more about people's appearance (Mousavi, 2010; Rossini, 2015). Moreover, while some claim that cosmetic plastic surgery increases their mental health, others are concerned that its availability will perpetuate unrealistic beauty and body standards, increasing low self-esteem and creating an expectation that people should correct their bodies to be appropriately aesthetic (Cohen, 2022; Castle et al., 2002; Mousavi, 2010; Rossini, 2015). This raises the question: how do people differentiate between what surgical technologies are necessary for a person to function and what kind of

¹ Plastic and cosmetic surgery are often considered one and the same, however, the two have slight nuances. Plastic surgeons are trained to consider the body's aesthetic appearance for reconstructive surgery to make it look “normal,” “good,” or as it once was, along with other skills and know-how about the body so it functions effectively (AMA, n.d.). Cosmetic surgery, in contrast, focuses more on the appearance of the body and not the restoration or repair aspect of plastic surgery (Long et al., 2020). While trained plastic surgeons may go into cosmetic surgery, not all are trained to do the procedures they attempt on people (Long et al., 2020). A study found that physicians certified by the American Board of Cosmetic Surgery were under-certified and/or not trained in the procedure(s) that they were conducting on people (Long et al., 2020).

surgeries perpetuate unrealistic body standards? To dive into this question further, we will look at gender affirmative surgeries.

Presentation of the Case

Gender affirmative care is a procedure that helps a person feel affirmed in their sex/gender, and includes different surgeries. While traditionally thought of as procedures for transgender people, we can think of gender affirmative surgeries as surgeries that make any person feel affirmed in their sex/gender identity (Schall & Moses, 2023). For example, while mammoplasties (the construction of breasts) in the gender affirmative care setting is seen as a surgery for transgender women, cisgender women will also get mammoplasty as part of the reconstruction of their breast tissues after a mastectomy for the removal of breast cancer. In both cases of mammoplasty, as a kind of plastic surgery that women would undertake to feel affirmed and aesthetically recognized in their sex/gender. Moreover, it helps maintain a positive self-image and good mental health.

The problem, however, is that gender affirmative care is not recognized equally between cisgender people and transgender people. Oftentimes, in the case of cisgender people, these procedures are seen as necessary because the kind of plastic surgery a cisgender person would undergo is reconstructive (Schall & Moses, 2023). When a cisgender person needs a kind of plastic surgery to affirm their sex/gender, it is a reconstruction of a physical aspect of their body that they were born with. A cisgender woman is born with her breasts; therefore, if she gets a mammoplasty, it is a replacement of an inherent part of her body. In contrast, a transgender woman is not born with breasts; therefore, it is a constructive surgery and not an inherent part of her body. Yet, for both cisgender and transgender women, having the embodiment that fits their identity makes them happier and healthier individuals (Schall & Moses, 2023).

Another example is testicular implants. A cisgender man may get an implant with loss of a testicle, perhaps from trauma, and he is recognized in his need for that implant because he would feel depressed and maybe 'less-than' in his manhood by not having both of his testicles (Schall & Moses, 2023). For a transgender man, this feeling may be reciprocal in the fact that, without a pair of testicles himself, he may feel like he is missing out or less affirmed in his identity and embodiment (Schall & Moses, 2023). Again, for both cisgender and transgender

men, if they want testicular implants, it will help to make them feel more affirmed in their gender.

An additional example is that people often think of mastectomies as a procedure for cisgender women to remove cancerous breast tissue (Schall & Moses, 2023). Transgender men and cisgender men may need mastectomies as well. A cisgender man may need a mastectomy either due to a case of breast cancer or because they have gynecomastia (breast enlargement) due to a hormonal imbalance (Cuccolo et al., 2019). For both transgender and cisgender men, the need for mastectomies positively impacts their mental well-being and feeling like their body aligns with their conception of themselves (Cuccolo et al., 2019).

Thinking further about the case of mastectomies, an argument often leveraged against transgender people is that a surgery like mastectomy², orchiectomy, and other surgeries to remove sex organs or secondary sex characteristics is unnecessary when conducted on transgender people (Aronson, 2023). The reasoning is that when these procedures are conducted on cisgender people, they are done because the tissue or body part is damaged or unhealthy. Therefore, while the surgeon will be damaging the body by removing these unhealthy tissues, they will have a greater good or better health outcome from removing these tissues (Aronson, 2023). In contrast, the removal of tissue from the transgender body is just seen as damaging an otherwise “whole body” because the tissue itself is not damaged, unhealthy, or afflicted with disease.³

However, as seen with other gender affirmative care for cisgender people, these gender affirmative surgeries bring a great deal of improvement in mental health and physical well-being (Passos, 2020). A multitude of studies have shown that letting transgender people have access to these technologies significantly increases their mental and physical well-being. Depression decreases, suicidal ideation decreases, positive body image increases, positive social connections increase, and last but not least, the ease and comfort of navigating the world increases.

² Breasts, while they do contain the mammary glands which are necessary for breastfeeding, are considered secondary sex characteristics. They are not considered one of the sex organs because breasts are not involved in the reproductive process (Javed & Lteif, 2013).

³ A transgender person may still have cancer or some other condition to warrant the surgical removal of a sex organ or secondary sex characteristic regardless of their gender identity and need to transition (Cuccolo et al., 2019).

Gender affirmative surgeries are often considered purely a cosmetic or aesthetic procedure. They are often compared to or equated with cosmetic surgery, or optional surgeries for people seeking to make their bodies more “aesthetically pleasing” (Schall & Moses, 2023). However, the studies conducted on mental health outcomes of affirmative surgeries vs. the studies done about cosmetic surgery outcomes reveal two different landscapes. For people who receive gender affirmative surgeries, there is an apparent positive increase in mental health outcomes, such as decreased depression and suicidal ideation, according to rigorous studies (Passos, 2020). In contrast, cosmetic surgery studies at best remain unclear about the overall mental health outcomes, but at worst show that they create negative outcomes for those who had unrealistic expectations of outcomes or had body dysmorphia (Castle et al., 2002).⁴ Additionally, increased likelihood to pursue cosmetic surgery correlated with increased use of social media, abuse as a child, and other mental health conditions (Faezi & Amiri, 2025).

Processing Questions

1. What is surgery, and how is it a technology?
2. What are the critical considerations for conducting a surgery?
3. What invention in the mid-19th century elevated the practice of surgery in medicine?
4. Why was medicine seen as morally reprehensible?
5. Why do surgeons need to have specific ethical considerations while conducting a procedure?
6. What contradictions exist for surgery as a medical practice?
7. What is plastic surgery? What is an example of plastic surgery? What is the problem with plastic surgery?
8. What is the difference between plastic surgery and cosmetic surgery?
9. What is gender affirmative surgery? Who is associated with gender affirmative surgeries? Who can have gender affirmative surgery?
10. What is an example of gender affirmative surgery?
11. How are gender affirmative surgeries reconstructive for cisgender people and reconstructive for transgender people?
12. What is the importance of gender affirmative surgeries for people in general?
13. What is one of the arguments used against transgender people to get gender affirmative surgery?

⁴ There was one exception to this case where women who received a breast reduction surgery actually did have better mental and physical health (Castle et al., 2002).

14. How is gender affirmative surgery different from cosmetic surgery?
15. What is the root cause for gender affirmative surgery compared to cosmetic surgery?
16. What is a problem with cosmetic surgery?
17. How have gender affirmative surgeries changed due to cosmetic surgery?
18. What impact does the push towards facial feminization and masculinization surgeries have on all men and women?
19. What is an unrealistic beauty standard?

Thematic Reflection and Discussion

Technological Determinism

How does technological change happen? This is a common question in the study of technology (Dafoe, 2015). Some believe this process is outside people's control and is a natural process of creating history; others are critical of this idea and recognize people's autonomy in adopting or conforming to different technologies (Adler, 2006). Technological determinism is the critical concept confronting this question about how technology impacts society. There are soft and hard and anti-technological determinists. Soft technological determinism is the recognition that technology does change how people behave and navigate the world. Still, it recognizes that other social forces, such as culture or ethical beliefs, can influence how and to what extent a technology is adopted and changes society. Hard technological determinists believe technology is the root driver for social change.

Once a technology is introduced, little to nothing can interfere with the changes that will come with the new tech (Adler, 2006). Anti-technological determinists believe that people, society, and social forces have the ultimate say over how a technology changes or impacts people. These different perspectives raise the question of whether a technology will impact or fundamentally change society, and whether people should adopt it (with a soft technological determinism perspective). Also, how do people acclimate to the inevitable changes that come with new technology (a hard technological determinism perspective)? How do people critically decide what technologies are adopted, how they are adopted, and what changes are permitted to be made (an anti-technological determinism perspective)?

1. What kind of perspective is present in this particular case study? What is the potential problem with this perspective?

2. What kind of perspective would make more sense, or would you adopt regarding this case study? Why?

Social Determinants of Health

Social determinants of health refer to the social forces and factors that can impact a person's health, regardless of genetic predispositions or general risks from living in the world (Braveman & Gottlieb, 2014). While there are situations outside of anyone's control, as far as people's genetic predisposition to disease or general exposure to an infectious disease, some forces and factors are a byproduct of how society is constructed (Braveman & Gottlieb, 2014). Forces include economic policies, class, environment, social norms, political policies, education, etc. Mental health conditions, for example, can be exacerbated or created by trauma, stigma, prejudice, and discrimination (Khan et al., 2017).

1. What are some of the underlying causes or social determinants of health in this case study?
2. What medical technologies are present as a solution to this problem? What is a more sustainable and lasting solution?

Ableism

Disability is the condition experienced by a person with a physical impairment, people who belong to a sensory minority, people with emotional disorders, people with cognitive challenges, those with chronic/severe illness, and others whose bodies do not conform to cultural conceptions of "normal" or "functional" which causes them to face challenges and barriers in navigating the world (Sins Invalid, n.d.). Disability is a socially constructed concept that comes from constructing a world that is intrinsically easy for some people to navigate and challenging for others (University of Washington, n.d.). Ableism is both the cause and the byproduct of a society that creates spaces which people with one kind of embodiment can easily navigate, while others with an intrinsically different embodiment struggle to do so (University of Washington, n.d.). Broadly, Ableism is discrimination against those with a disability (Dunn, 2021). However, we have to note that for a disability to exist, a typical population with the power to do so must naturalize what a "normal" or "functional" body looks and operates like, and then create a society that is tailored towards that condition. The construction of a "normal" or "functional" body and creating a society tailored to that body is inherently discriminatory. Moreover, once this idea of "normal" or "functional" body is

naturalized or normalized, it is socially easy for people to ostracize or discriminate against those who do not conform.

1. What kind of body is considered “normal” or “functional” in this case study?
2. How is ableism expressed or experienced in this case study?

Professionalism and Ethics

Professionalism is a set of values, attributes, goals, and commitments a group shares based on their profession. Ethics, the study and practice of moral decision making, is crucial to professionalism, particularly in medicine (Mahajan et al., 2016). Medical professionals significantly impact health outcomes through the care and knowledge they provide to the people and communities they serve. Due to this impact, ethically considering how their actions and decisions impact their patients is crucial to being a medical professional. In other words, a medical professional can hold someone's life in their hands; if they make decisions that are not for the benefit or betterment of their patient, there can be significant outcomes for that person and other people in the community.

While living ethically is crucial to medical professionals, the ethical decision is not always clear, and different ethical dilemmas come up often for medical professionals. While crucial, ethics itself is not often directly taught in the medical professions. This means that ethical decisions come down to an individual's values which may or may not be moral or ethical (Mahajan et al., 2016). Therefore, the connection between professionalism in medicine is crucial yet tenuous.

1. How are professionalism and ethics in medicine explored in the case study?
2. What is a conceivable medical dilemma present in this case?
3. Are all of the medical professionals in this case study presented in a way that shows their professionalism?

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