Beyond the Nose: How Cosmetic Surgery Affects Body Image and Mental Health

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Julia Denys
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On my honor as a University Student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments

Advisor
Caitlin D. Wylie, Department of Engineering and Society

Introduction

Research has shown a strong link between cosmetic surgery patients and psychiatric conditions, with one peer reviewed study by Benjamin Jang and Dhaval R. Bhavsar indicating that 72.4% of plastic surgery patients had an underlying psychiatric disorder (Jang & Bhavsar, 2019). Cosmetic procedures, particularly rhinoplasty, are often pursued to enhance physical appearance, but their effects extend beyond aesthetics, influencing both body image and mental health in significant ways. Societal beauty standards and social comparison play a crucial role in shaping an individual's self-perception, sometimes leading to dissatisfaction, post-surgery regret, or even addiction. These psychological complexities highlight the importance of assessing a patient's mental health and motivations before undergoing surgery.

This paper applies a commodity chain analysis to rhinoplasty, a method developed by Gary Gereffi, an American sociologist, that examines the lifecycle of a product, including production, distribution, and consumption. Traditionally, commodity chain analysis analyzes a physical product. The production would include the process to convert raw materials into finished goods, distribution would include the movement of goods through channels, and consumption would include the final use of the product by users (Gereffi, 1999). This paper will utilize this theory to analyze cosmetic surgeries by examining the preoperative stage as the production, the intraoperative stage as the distribution, and the postoperative stage as the consumption, showing that this theory does not only apply to physical products. By tracing the journey of cosmetic procedures from the motivations behind them to their long-term psychological outcomes, this approach provides insight into how preoperative psychological assessments, emerging surgical technologies, and improved screening processes can ensure that patients have realistic expectations and are suitable candidates for surgery.

The analysis will be guided by this overarching question: how do cosmetic surgeries, such as rhinoplasty, affect patients' mental health and body image? I will first explore the production of rhinoplasty, examining the psychological and societal factors that drive individuals to seek surgery. Next, I will discuss the distribution of these procedures, focusing on preoperative screening, patient-surgeon communication, and the risks associated with misaligned expectations. Finally, I will analyze the consumption phase, evaluating the long-term mental health and social outcomes of rhinoplasty patients, including both benefits and potential negative consequences such as stigma or post-surgical regret.

Production of Cosmetic Surgeries

The first step in commodity chain analysis involves examining production, which encompasses the creation of a product (Gereffi, 1999). In the context of cosmetic surgery, particularly rhinoplasty, "production" refers not only to the physical procedure but also to the underlying motivations that lead patients to seek surgery. These motivations typically fall into three categories: functional, cosmetic, and psychological. Among these, psychological factors, such as mental health conditions and body image concerns, are often central, yet remain underexplored. Understanding a patient's preoperative psychological state is crucial for assessing their motivations for surgery and ensuring their expectations are realistic. I argue that such evaluations play a key role in the development of more effective screening methods. These methods, in turn, can improve both patient outcomes and satisfaction.

Despite the growing recognition of psychological influences, research on the motivations behind rhinoplasty requests remains limited. A recent peer-reviewed study by Dr. Goran Omer, a specialist in Otorhinolaryngology, involved interviews with 234 rhinoplasty patients. While 43%

of patients reported seeking surgery for cosmetic reasons, satisfaction rates varied: 59% were satisfied with functional results, 63.2% with cosmetic outcomes, and 70.9% with psychological improvements (Omer et al., 2024). These findings suggest that rhinoplasty has broader impacts than commonly assumed and should not be viewed as a purely aesthetic intervention. They also underscore the importance of evaluating patients' motivations, including psychological drivers, when determining their candidacy for surgery.

Building on this, a study conducted in Kansas reviewed 1,000 adult plastic surgery candidates between 2011 and 2016. It found that 441 patients had a diagnosed psychiatric disorder, most commonly depression or anxiety (Jang & Bhavsar, 2019). This high prevalence underscores the need to incorporate mental health evaluations into the preoperative process. In procedures like rhinoplasty, where psychological motivations may outweigh physical need, assessing mental health is not only advisable, it is essential for ethical and clinical decision-making.

This prompted further inquiry into what, beyond psychiatric disorders, psychological assessments should measure. According to the Australasian Society of Aesthetic Plastic Surgeons, psychological screening tools can clarify a patient's motivations and expectations, while also identifying disorders such as body dysmorphic disorder (BDD). BDD warrants particular attention, as it may drive individuals to pursue surgery despite being unlikely to experience psychological benefit postoperatively (Melloadmin, 2023). This highlights the importance of screening rhinoplasty applicants not only for general psychiatric conditions but specifically for BDD, to better understand a patient's psychological motivations for the procedure.

Recent studies have made progress in developing and evaluating such tools. One case study by clinical psychologist Oveis Mehriar utilized the Symptom Checklist-90-Revised (SCL-90-R), a tool for measuring psychological symptoms. The study compared two groups of 136 adults: a control group and an experimental group of rhinoplasty applicants. The experimental group scored significantly higher on measures of interaction sensitivity ($P = 0.017$) and anxiety ($P = 0.009$), indicating heightened psychological distress among those seeking rhinoplasty (Mehriar et al., 2017). In another study, Mohsen Naraghi and Mohammad Atari developed the Expectations of Aesthetic Rhinoplasty Scale (EARS) to evaluate patient expectations prior to surgery. Their findings revealed that patients with BDD had significantly higher expectations than those without the disorder (Naraghi & Atari, 2022). Similarly, Hashemi et al. (2017) used the Body Image Concern Inventory to compare 60 rhinoplasty patients with 62 patients undergoing therapeutic surgeries. Their research found significantly higher levels of body image concerns and BDD among the rhinoplasty group. Collectively, these studies demonstrate the value of psychological screening tools in identifying the underlying reasons a patient may be seeking cosmetic surgery (Hashemi et al., 2017). Tools such as the SCL-90-R, EARS, and the Body Image Concern Inventory offer insight into patients' mental health status, expectations, and body image concerns. Their use allows clinicians to ensure that patients' motivations align with realistic outcomes, ultimately improving surgical success and postoperative satisfaction. Moreover, these assessments enhance physician–patient communication and support ethical considerations in elective cosmetic surgery.

Overall, the psychological factors influencing a patient's desire for rhinoplasty are crucial in determining not only the suitability of the procedure but also the potential success of the surgery. Research indicates that psychological issues, including anxiety, depression, and BDD,

are prevalent among rhinoplasty candidates, emphasizing the need for comprehensive preoperative psychological assessments. Tools like the Expectations of Aesthetic Rhinoplasty Scale (EARS) and the Symptom Checklist-90-Revised (SCL-90-R) provide valuable insight into the psychological motivations and expectations of patients, ensuring they are aligned with realistic outcomes. As the field of cosmetic surgery continues to evolve, it is imperative that psychological assessments remain a central component of the preoperative process, helping to promote better outcomes for both the physical and mental health of rhinoplasty patients.

Distribution of Cosmetic Surgeries

The second part of commodity chain analysis focuses on the distribution and use of a product (Gereffi, 1999). In the case of cosmetic surgery, particularly rhinoplasty, this aspect involves determining which candidates are suitable for surgery. I argue that a candidate is suitable once they fully understand the procedure and recovery process, but more importantly, when both the surgeon and patient align in their expectations. This alignment ensures that a patient's mental health and body image are prioritized throughout the distribution process of rhinoplasty.

To understand the procedure, a patient must be aware of the possible complications. Some complications have high occurrence rates, for example, breathing issues are a common complication of reduction rhinoplasty, with approximately 70% of patients undergoing revision procedures reporting such problems (Rettinger, 2008). Other complications are less common and tend to depend more on individual patient risk factors. Overall, Gerhard Rettinger, a professor and doctor in the Department of Otolaryngology cites that rhinoplasties are considered higher-risk surgeries due to the many potential complications and risks. Specifically, during

rhinoplasty, there is a 5%-15% chance of postoperative deformity occurring, which could require revision surgery (Rettinger, 2008). As shown in the production section of commodity chain analysis, candidates for rhinoplasty typically have a lower body image before surgery. Therefore, a complication, particularly a cosmetic one like a postoperative deformity, could significantly exacerbate their mental health challenges. Rettinger notes that many complications, like the ones explained, arise when there is a misalignment between the physician's and the patient's expectations (Rettinger, 2008). This further emphasizes the need for open communication between the doctor and the patient about the procedure, as it also addresses and assesses the patient's potential mental state both preoperatively and postoperatively, while establishing awareness of potential complications.

Risk factors are another important consideration that should be fully understood by the patient. Current risk factors that increase the likelihood of complications include older patient age, obesity, diabetes, and bleeding disorders. Additionally, medications that increase bleeding, like aspirin and other non-steroidal anti-inflammatory drugs (NSAIDs), as well as supplements like vitamin E, fish oil, and ginkgo biloba, can increase the odds of complications. Smoking and vaping are also significant risk factors, as they constrict blood vessels, impair blood flow and healing, and can result in tissue death (Rettinger, 2008). One way to improve patient-physician communication is by including a psychological assessment as part of the analysis and communication of risk factors prior to surgery, as mental health and body image should also be considered risk factors in cosmetic surgery. Cosmetic procedures can be an emotionally charged journey, and it is important for candidates to be in the best possible psychological state before surgery to achieve optimal outcomes. Ensuring that a patient's mental health is stable and well-managed before surgery is crucial (Melloadmin, 2023). In my view, this revised screening

process, which accounts for both physical and mental health risk factors, ensures that patients understand the procedure and have a clear view of the recovery process, ultimately supporting better mental health and body image outcomes.

One specific risk factor that must be screened for during the distribution of cosmetic surgeries is post-surgery regret. Postoperative regret can lead to patients blaming different parties involved in the surgery and enduring economic and psychological hardships, including issues with mental health and body image. Therefore, a new metric for postoperative regret should be implemented, evaluated, and measured by surgeons. A peer reviewed case study by author Hannah Jones utilized randomized control trials, meta-analysis, and systematic reviews to research postoperative regret in plastic surgery patients. Results found that preoperative patient education, patient understanding of the operation, use of decisional tools, and awareness of postoperative complications were the main influences in postoperative regret (Jones et al., 2023). By assessing a patient's postoperative regret and the factors that influence it before surgery, these negative outcomes can be minimized through effective preoperative counseling. This allows for collective decision-making between patient and physician and ensures the outcome aligns with the patient's expectations.

Another critical risk factor to include in preoperative screening for cosmetic surgery is addiction to the procedure. This addiction is marked by the compulsive belief that surgery can resolve underlying body image or mental health issues. As highlighted in a peer-reviewed literature review by Jang and Bhavsar (2019), individuals seeking cosmetic surgery already exhibit higher rates of psychiatric disorders, which may contribute to or be exacerbated by addictive behaviors related to surgery. Cosmetic procedures can worsen these compulsive symptoms, especially when psychological issues are left unaddressed. This highlights the

importance of screening for addiction during the preoperative process. Comprehensive psychological evaluations can assess a patient's mental and emotional readiness, thereby improving postoperative satisfaction and reducing the risk of unnecessary repeat surgeries. Furthermore, open communication between patient and physician can align expectations and promote both mental and physical well-being, decreasing the likelihood of developing or continuing addictive behaviors.

Currently, some technologies are being developed to help physicians ensure that patients fully understand the procedure they are about to undergo. One peer-reviewed study evaluates a new 3D technology designed to help patients visualize and communicate their expectations for rhinoplasty to their physicians. This technology aims to enhance satisfaction for both patients and surgeons. Researchers analyzed 12 different case studies involving a total of 595 patients to assess satisfaction levels among both groups. Results indicated that when this tool was used preoperatively, surgeons reported higher satisfaction due to improved precision and postoperative outcomes. Patients also expressed greater satisfaction, as they could better understand the procedure and convey their desired postoperative results. However, the study found that the technology was expensive, and there were no significant differences in reoperation rates, surgical time, or postoperative nasal function (Werathammo et al., 2024). This raises questions about the belief in technocracy, whether more technology always leads to better outcomes. In this case, the absence of improvements in nasal function, often a primary reason for the procedure, calls into question whether this new technology is truly advantageous. This research highlights both the potential benefits and limitations of new technology in rhinoplasty, particularly regarding satisfaction and cost-efficiency. As research and development continue in the field of rhinoplasty, I argue that these types of technology would greatly assist not only patient-physician

communication during the distribution process of cosmetic procedures but also improve patient understanding, positively affecting their mental health and body image outcomes.

Taken together, these physical and psychological risks reinforce that rhinoplasty is a high-risk cosmetic surgery with potential complications, such as deformities and breathing issues, which can significantly impact a patient's mental health and body image. Misalignment between patient and surgeon expectations often exacerbates these challenges, making it essential for patients to understand the risks, including factors like age, obesity, smoking, and medications. Mental health should also be considered a key risk factor, and preoperative psychological assessments can help ensure patients are stable before surgery. Post-surgery regret and addiction to cosmetic surgery are additional concerns that need to be addressed through informed decision-making. Technological advancements, like 3D imaging, aim to improve communication between patients and surgeons, but their cost and limitations raise questions about their overall effectiveness. In my opinion, clear communication, risk assessment, and psychological screening are crucial for achieving positive outcomes in rhinoplasty.

Consumption of Cosmetic Surgeries

The third and final part of commodity chain analysis focuses on the consumption of a product, which, in the context of this paper, refers to patients who have undergone plastic surgery (Gereffi, 1999). A more thorough investigation into the postoperative physical and psychological effects of cosmetic surgery, particularly on mental health and body image across different demographics and cultural contexts, can uncover underexplored outcomes. This deeper understanding will help enhance patient care and guide medical professionals in providing more effective, personalized treatment.

The psychological impact of rhinoplasty cannot be fully understood without considering how factors such as cultural context, national healthcare systems, and patient demographics, particularly age, influence postoperative outcomes. A paper written by Mostafa Hashemi in 2019 examined the physiological outcomes of rhinoplasties, specifically focusing on quality of life, anxiety, depression, and self-esteem. The case study included a group of 41 Iranian patients who underwent rhinoplasty between 2017 and 2018. Three assessments were administered to the patients both pre-surgery and six months post-surgery: the World Health Organization Quality of Life (WHOQOL-26), the Hospital Anxiety and Depression Scale (HADS), and the Eysenck Self-Esteem Questionnaire. After comparing preoperative and postoperative assessments, the results showed significant improvements in quality of life, particularly in the areas of "physical ($P = 0.011$), psychological ($P = 0.002$), relationships ($P = 0.019$), environment ($P = 0.032$), and general health ($P = 0.005$)." Additionally, both "depression ($P = 0.010$)" and "self-esteem ($P = 0.004$)" showed significant improvement. However, anxiety improved only slightly by 6.8%, which was not statistically significant ($P = 0.334$) (M. Hashemi et al., 2020). Looking at just the statistics, this source indicates that patients in Iran receiving rhinoplasty experienced positive effects on their mental health post-surgery, but this does not convey the whole story. For example, given that this case study took place in Iran, it prompts consideration of how healthcare variations across different nations might impact rhinoplasty patients' mental health. Additionally, it raises the question of how and why age impacts a patient's psychological outcome. This study found that the only factor that influenced the results was age, with individuals younger than 30 reporting statistically higher scores in the relationships section of quality of life ($P = 0.040$) (M. Hashemi et al., 2020). One conclusion from this piece of evidence could be that society's

perceptions of people change after they receive plastic surgery; therefore, their relationships with both partners and acquaintances may change.

One source published in 2021 by Sarah Bonell supports this idea and analyzes how women seeking plastic surgery are perceived in society. The study involved a group (54% men, with a mean age of 36) who evaluated the attractiveness of women based on photographs, while also considering whether the women were seeking plastic surgery. Attractiveness was further categorized into perceived warmth, competence, morality, and humanness. Researchers utilized a mixed-effect model, which revealed a negative plastic surgery effect across all categories. This meant that society's perception of attractive women worsened when they sought cosmetic surgery (Bonell et al., 2021). This highlights the stigma created around cosmetic surgery, which is already a very personal decision. This stigma negatively affects people who undergo cosmetic surgery in various ways. Typically, a negative perception of an individual's warmth and competence can be linked to lower self-esteem and complicated relationships, respectively. Also, negative perceptions about one's morality and humanness tend to impact the fulfillment of one's psychological needs. This highlights the detrimental effects of societal perceptions on women who seek plastic surgery. Another notable finding from this paper was that women perceived as unattractive did not elicit further unattractiveness regardless of their desire for plastic surgery, indicating that there is some empathy towards "unattractive" women seeking surgery. This is not the only research indicating that societal perceptions of women who receive plastic surgery can be degrading. This paper builds upon the ideas discussed by Erscoi regarding how AI contributes to the dehumanization of women. Similarly, the perception of plastic surgery has shifted, becoming stigmatized and viewed as anti-feminist, further perpetuating the dehumanization of women (Erscoi et al., 2023). Overall, this study demonstrates that women wanting plastic

surgery may experience negative psychosocial outcomes, emphasizing the changes in social perception and relationships a patient can experience post-surgery.

Building on the idea that psychological outcomes are shaped by personal and cultural factors, societal perceptions of beauty further complicate the impact of rhinoplasty by reinforcing external validation, which may mask or even intensify underlying mental health issues. Another paper written by Jason C. Nellis in 2018 analyzed and measured the impact of rhinoplasty surgery on social perceptions, specifically regarding attractiveness, perceived success, and overall health. To conduct this research, the authors set up a web-based survey that included images of 13 different patients before and after their surgeries. A group of 473 participants (305 female, with a mean age of 29) rated the photos based on attractiveness, perceived success, and perceived overall health. The data was formatted on a visual analog scale from 0 to 100 and analyzed using a multivariate mixed-effects regression model. Additionally, the researchers employed the Delphi method and assessed ordinal rank change to reliably characterize the effects of rhinoplasty. Results indicated that images of patients who had undergone rhinoplasty were rated significantly more attractive, more successful, and healthier. Furthermore, the ordinal rank change showed a positive shift for all three factors (Nellis et al., 2018). Overall, this case study demonstrates that individuals who receive rhinoplasty may experience social benefits due to societal beauty standards, which often associate attractiveness with wealth and health. On the surface, this paper alludes to the idea that patients who undergo plastic surgery may experience more positive societal perceptions and relationships, but it ignores the patient's own mental health and psychological status. As explained before, around 72.4% of cosmetic surgery patients will suffer from a psychiatric disorder, including plastic surgery addiction (Jang & Bhavsar, 2019). Improved societal perceptions due to a patient undergoing cosmetic surgery can

exacerbate the patient's own psychological issues, like addiction, causing them to receive plastic surgery for the wrong reasons. This paper also underscores how the propagation of beauty standards in media directly influences societal perceptions. Moreover, not everyone has the opportunity or desire to undergo rhinoplasty. The high cost of the procedure may exclude individuals from lower socioeconomic backgrounds from benefiting from it since not all cosmetic surgeries will be covered by Medicaid/Medicare. Additionally, cultural factors may influence whether certain nationalities pursue rhinoplasty, as their bodily structures are part of their identity. These elements represent important structures of power to consider when examining societal perceptions and the effects of rhinoplasty on body image and mental health, both individually and socially.

In conclusion, the psychological and social outcomes of plastic surgery, particularly rhinoplasty, are complex and multifaceted. While some studies show significant improvements in aspects like quality of life, self-esteem, and depression, others highlight the negative impacts of societal perceptions and stigma, especially for women. These perceptions can lead to a range of psychosocial challenges. Additionally, the influence of cultural, socioeconomic, and beauty standards plays a crucial role in shaping how plastic surgery patients are viewed, potentially exacerbating underlying psychological issues. It is clear that more research is needed to better understand the full scope of these effects and to improve patient care by addressing both the positive and negative outcomes of cosmetic surgeries. This understanding can help medical professionals support patients not only in their physical transformations but also in managing the psychological and social changes that accompany such procedures.

Conclusion

Rhinoplasty extends beyond aesthetic enhancement, significantly impacting mental health and body image. This paper has argued that psychological factors shape the production of rhinoplasty, misaligned expectations complicate its distribution, and post-surgical experiences influence its consumption. Given the high prevalence of psychiatric disorders among cosmetic surgery patients, thorough psychological screening and patient education are essential to ensuring positive outcomes.

Understanding these implications is crucial for improving patient care and addressing broader societal pressures surrounding beauty and self-perception. As cosmetic procedures become more accessible, mental health evaluations must be prioritized to reduce risks like post-surgical regret, addiction, and stigma. While technologies like 3D imaging offer new tools for patient-surgeon communication, their effectiveness should be critically examined.

This analysis raises further questions: How do cultural differences shape psychological outcomes? What screening tools best predict post-surgical satisfaction? How does social media influence long-term mental well-being after cosmetic surgery? Future research must explore these areas to refine ethical and psychological best practices, ensuring patients make informed, healthy decisions.

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