

Long-Term Psychosocial Outcomes of Plastic Surgery: A Longitudinal Study on Mental Health, Body Image, and Quality of Life

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Abstract. Plastic surgery has become increasingly common, but its long-term psychosocial effects remain under-explored. This study investigates the impact of cosmetic and reconstructive surgery on self-esteem, body image, and quality of life over a three-year period. Using the Rosenberg Self-Esteem Scale (RSES), Body Image Scale (BIS), and SF-36 Health Survey, the study assessed 300 patients at 6 months, 1 year, and 3 years post-surgery. Results indicate that reconstructive patients experienced more sustained improvements in self-esteem and quality of life, while cosmetic patients reported initial benefits that tended to diminish over time. Qualitative interviews revealed that reconstructive patients benefited from both functional and aesthetic improvements, whereas some cosmetic patients faced dissatisfaction due to unrealistic expectations. These findings highlight the importance of preoperative psychological screening and postoperative support, particularly for cosmetic patients. The study contributes to the understanding of long-term psychosocial outcomes and provides practical recommendations for healthcare professionals.

Keywords. Plastic surgery, psychosocial effects, self-esteem, body image, quality of life, reconstructive surgery, cosmetic surgery, longitudinal study

1. Introduction

Plastic surgery has become increasingly prevalent, with both cosmetic and reconstructive procedures offering benefits that extend beyond physical appearance. Previous research has shown that individuals undergoing plastic surgery often experience short-term improvements in self-esteem, body image, and overall well-being [1, 2]. However, the long-term psychosocial effects, particularly beyond the first year, remain underexplored [3, 4].

Cosmetic procedures, aimed at enhancing physical appearance, may provide immediate satisfaction, yet their effects can be influenced by social expectations and personal perceptions [3]. In contrast, reconstructive surgery, which restores physical function and appearance following trauma or congenital anomalies, often leads to more sustained psychological benefits [5]. This study aims to address the gap in long-term research by assessing the impact of both cosmetic and reconstructive surgery on self-esteem, body image, and quality of life over a three-year period.

The primary objectives of this study are to:

- Assess the long-term psychosocial outcomes of plastic surgery.
- Compare the psychological effects of cosmetic and reconstructive procedures.
- Identify factors associated with long-term satisfaction and emotional well-being.

2. Research Methods

2.1 Study design

This longitudinal observational study was conducted with 300 patients (150 cosmetic and 150 reconstructive) assessed at three intervals: 6 months, 1 year, and 3 years post-surgery. Quantitative data were collected using validated psychological scales, and qualitative insights were obtained through structured interviews [1, 3, 4].

2.2 Participants

- inclusion criteria: first-time plastic surgery patients aged 18 to 60, with no severe psychiatric disorders.
- Exclusion criteria: patients undergoing revision surgeries or using psychotropic medications.
- Recruitment: participants were recruited from collaborating hospitals and clinics during preoperative consultations [5].

2.3 Data Collection

- Rosenberg Self-Esteem Scale (RSES): measures global self-esteem on a 4-point Liberty scale [1]
- Body Image Scale (BIS): assesses body image satisfaction on a 4-point scale [3]
- SF-36 Health Survey: evaluates quality of life across eight domains [4]
- Structured Interviews: conducted at 1 year and 3 years to explore patients' emotional experiences and perceptions [5]

2.4 Statistical Analysis

Quantitative data were analyzed using repeated-measures ANOVA to assess changes over time, and independent t-tests to compare groups. Qualitative data were analyzed using thematic coding to identify common themes [2, 4].

3. Results and Discussion

3.1 Results

Self-Esteem (RSES):

- Both groups reported increased self-esteem at 6 months, with reconstructive patients maintaining higher scores at 1 and 3 years [1, 5].
- Cosmetic patients experienced an initial boost, but scores declined slightly over time, suggesting a possible influence of external validation [3].

Self-esteem significantly improved at six months post-surgery in both groups. However, while reconstructive patients maintained higher levels over time, cosmetic patients experienced a slight decline in satisfaction by three years (Fig. 1).

Body Image (BIS):

- Both groups reported improved body

image, though reconstructive patients experienced more sustained benefits [5].

- Cosmetic patients' scores peaked at 1 year, followed by a gradual decline, possibly due to evolving self-perception and societal pressures [3].

Both Groups showed increased body image satisfaction at six months post-surgery. The highest satisfaction was observed in cosmetic patients at one year, but their scores slightly declined by three years, whereas reconstructive patients demonstrated more stable long-term improvements (Fig. 2).

Quality of Life (SF-36):

- Both groups experienced significant improvements in overall quality of life, with reconstructive patients maintaining higher scores across all domains [4].
- Cosmetic patients reported improvements in emotional well-being and social functioning, although these effects were less pronounced over time [3]

Quality of life scores improved significantly in both groups, but reconstructive patients experienced more sustained benefits over time. Cosmetic patients saw improvements in emotional well-being but reported a plateau after one year (Fig. 3).

Qualitative Insights:

- Reconstructive patients reported greater emotional resilience and social confidence, emphasizing the functional benefits of surgery [5].
- Some cosmetic patients expressed dissatisfaction due to unmet expectations, highlighting the importance of preoperative counseling [3].

Cosmetic Patients e Reconstructive Patients

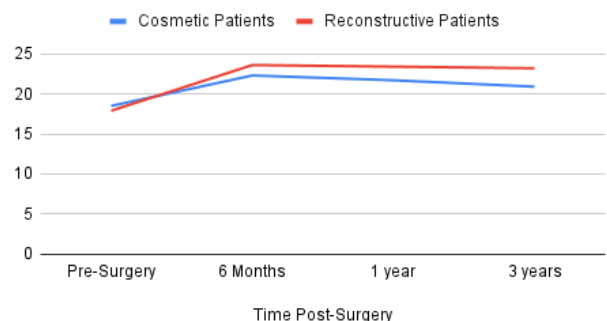


Fig. 1 – Self-Esteem Scores Over Time (Rosenberg Self-Esteem Scale).

Cosmetic Patients e Reconstructive Patients

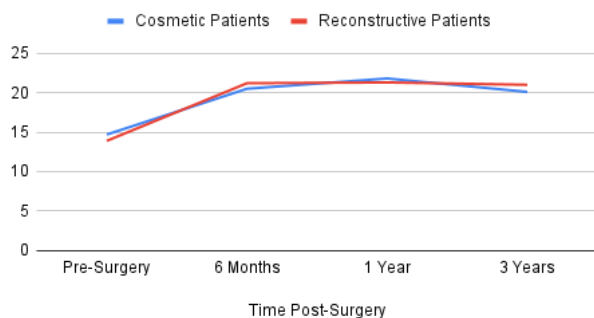


Fig. 2 - Body Image Satisfaction Over Time (Body

Cosmetic Patients e Reconstructive Patients

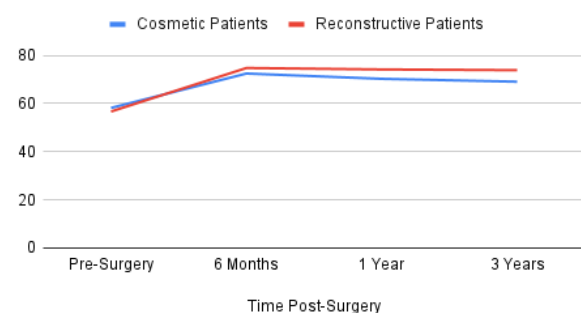


Image Scale)

Fig. 3 - Quality of Life Scores Over Time (SF-36 Health Survey)

3.2 Discussion

The findings align with previous research, confirming that reconstructive surgery offers more lasting psychological benefits due to both functional and aesthetic improvements [4, 5]. Reconstructive patients maintained higher levels of self-esteem and body image satisfaction, consistent with studies showing that restoring physical function positively impacts emotional well-being [5].

In contrast, cosmetic patients exhibited initial improvements that diminished over time, supporting research indicating that the effects of cosmetic surgery may be influenced by social and cultural factors [3]. The variability observed among cosmetic patients underscores the importance of managing preoperative expectations and addressing underlying self-esteem issues [3, 4].

The study also highlights the significance of long-term follow-up, as psychological outcomes can evolve beyond the first year. Consistent with previous findings, reconstructive patients reported sustained improvements in quality of life, whereas cosmetic patients experienced more fluctuations in emotional well-being [2, 3, 5]. These differences suggest that the psychological benefits of reconstructive surgery are more deeply rooted in functional and aesthetic restoration, while cosmetic

outcomes may be more susceptible to social comparison and changing beauty standards [3].

3.3 Limitations and Future Research

While the study provides valuable insights, several limitations should be noted:

- **Sample Size:** although the sample size was sufficient for statistical analysis, larger samples are needed to enhance generalizability [1].
- **Attrition Rates:** participant dropout, particularly at the 3-year follow-up, may have influenced the results [2].
- **Self-Reported Data:** the reliance on self-reported measures may introduce response bias, particularly in assessing sensitive topics such as body image [3].

Future research should explore the impact of social media on long-term outcomes, as well as the role of preoperative counseling in managing expectations. Additionally, studies with longer follow-up periods (e.g., 5 years or more) would provide a more comprehensive understanding of the sustained effects of plastic surgery [4, 5].

3.4 Practical Implications

The findings have important clinical implications for both plastic surgeons and mental health professionals:

- **Preoperative Counseling:** ensuring they patients have realistic expectations can improve long-term satisfaction and reduce the risk of emotional distress [3].
- **Postoperative Support:** ongoing psychological support is essential, particularly for cosmetic patients, to help them navigate emotional challenges and maintain a positive self-image [4].
- **Multidisciplinary Approach:** collaboration between plastic surgeons and mental health professionals can enhance patient outcomes by addressing both physical and psychological needs [5].

4. Conclusions

This study provides valuable insights into the long-term psychosocial outcomes of plastic surgery, highlighting the differences between cosmetic and reconstructive patients in terms of self-esteem, body image, and quality of life. The findings demonstrate that while both groups experience initial improvements after surgery, reconstructive patients show more sustained psychological benefits over time. In contrast, cosmetic patients often experience

a gradual decline in self-esteem and body image satisfaction after the one-year mark, emphasizing the importance of realistic expectations and psychological support.

One of the most significant conclusions drawn from this research is the role of preoperative counseling in shaping patient satisfaction. Patients who enter surgery with unrealistic expectations are more likely to experience postoperative dissatisfaction, especially in the cosmetic surgery group. This reinforces the need for comprehensive psychological screening before elective procedures. Surgeons and mental health professionals should collaborate to ensure that patients are mentally prepared for the potential emotional adjustments required after surgery.

Furthermore, the study underscores the importance of long-term follow-up care. While immediate postoperative results are often emphasized, this research highlights that psychological outcomes continue to evolve well beyond the first year. Implementing structured follow-up assessments at regular intervals (e.g., 6 months, 1 year, and 3 years post-surgery) could help healthcare providers detect and address psychological distress or dissatisfaction in a timely manner.

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