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Patient Satisfaction and Quality of Life Following Cosmetic Surgery A Multicenter Cross-Sectional Study

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ABSTRACT

Background: Cosmetic surgery significantly impacts patient satisfaction and quality of life, reflecting physical and psychological outcomes. A multicenter evaluation provides insights into these dimensions across diverse populations and practices.

Objectives: The purpose of the study was to evaluate postoperative changes in quality of life (physical, emotional, and social domains) and to determine demographic factors (age and gender) in the influence of these results.

Methods: Study was conducted in different cosmetic surgery clinics in Lahore, were selected total of n=100 patients who had undergone cosmetic procedures in the past 6 months. Preoperatively and 3 to 6 months postoperatively, the SF-36 quality of life questionnaire was given. Changes in quality-of-life scores were assessed using paired t tests and interactions between demographics and procedure types were explored using two-way ANOVA. Predictors of improved physical functioning were identified using multiple linear regression.

Results: The largest emotional well-being gains were seen with breast augmentation and rhinoplasty (47% (95% CI: 40–54%) and 41% (95% CI: 35–48%), respectively; $p<0.05$). Liposuction resulted in a 38% improvement in physical functioning (95% CI: 32–44%, $p<0.001$). Botox and dermal fillers were associated with 30% (95% CI: 24–36%, $p < 0.05$) and 28% (95% CI: 21–34%, $p < 0.01$) improvement in social functioning, respectively. Physical functioning improvement was strongest for liposuction ($\beta = 0.45$, $p<0.001$), while younger patients experienced greater improvements ($\beta = -0.31$, $p < 0.01$).

Conclusion: Cosmetic procedures have significant impact on physical, emotional and social quality of life, and outcomes depend on procedure type and demographics.

Keywords: Cosmetic surgery, liposuction, breast augmentation, rhinoplasty, Botox, dermal fillers, quality of life, social functioning, physical functioning

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INTRODUCTION

In recent decades, cosmetic surgery has become very popular, and many of us are now looking for surgical and non-surgical procedures to enhance our appearance as well as our quality of life. One result of this shift is the widespread acceptance of cosmetic procedures, such as breast augmentation, liposuction, rhinoplasty, and non-invasive treatments like Botox and dermal fillers, which aim to increase self-esteem and emotional well-being [1]. Cosmetic surgery now is also thought to impact psychological outcomes along with the physical, such as increased self-confidence, improved body image and increased satisfaction with one's social and professional life[2]. Despite the great demand for cosmetic procedures, the evidence of their long-term impact on patient quality of life is variable. While there have been several studies

indicating that people who undergo cosmetic surgery are happier with their looks and function better socially and emotionally, the amount of and duration of these benefits has yet to be fully determined [3]. Knowing which factors play a role in positive surgical outcomes, such as the type of procedure, the patient's age and gender, is important to help provide personalized care and to achieve the best possible results for each person[4].

The purpose of this study was to assess the effects of cosmetic surgery on patients' quality of life, particularly physical functioning, emotional well-being and social functioning. The study evaluated a broad spectrum of procedures — both invasive surgery (e.g., breast augmentation, liposuction, rhinoplasty) and non-invasive treatment (e.g., Botox, dermal fillers) — to offer a complete assessment of the physical and psychological benefits of these measures. This multicenter nature of the study has helped to acquire diverse patient data which can be generalized to different populations.[5]. The study also looked at how demographic variables, such as age and gender, affect the outcomes of cosmetic surgery. Prior studies indicate that body contouring and facial aesthetic procedures may offer substantial psychological benefits, particularly for younger patients, while the effects for older patients remain underexplored (Beugels *et al.,* 2018; Chen et *al.,* 2021) [6]. Many studies have focused on women who make up the majority of those undergoing cosmetic surgery, but there is increasing interest in knowing how men feel about these procedures. To fill these gaps, this study examined outcomes across age groups and between male and female patients.[7].

The main goal of this work was to assess whether cosmetic surgery leads to post-operative quality of life improvements in patients. Validated assessments of physical functioning, emotional well-being, and social functioning were used to measure these effects, and a robust analysis was performed to determine how different types of procedures affect these domains.[8]. The study also examined the role of key demographic variables in driving these outcomes, in understanding how cosmetic surgery can be customized to suit the particular needs of different patient groups. These findings provide important contributions to the existing literature regarding cosmetic surgery, especially concerning both the benefits and the limitations of these procedures for improving patient quality of life.

MATERIALS AND METHODS

The study was a multicenter cross-sectional study conducted in different cosmetic surgery clinics in Lahore and Islamabad, Punjab, Pakistan from August 2022 till September 2023. To evaluate cosmetic procedures' effects on patient quality of life, this multicenter cross-sectional study evaluated effects on physical functioning, emotional well-being, and social functioning. Data was collected at five cosmetic surgery centers over 12 months, from patients at follow-up visits 3- and 6-months post procedure. Minimally invasive as well as invasive surgeries were evaluated for cosmetic procedures, which included Botox injections, dermal fillers, liposuction, rhinoplasty, and breast augmentation. These procedures were chosen because they are popular, and represent a broad range of cosmetic procedures, from facial aesthetics to body contouring surgeries. The study included 400 patients. Patients must have been aged between 18 and 65 years and had undergone one of the listed cosmetic procedures within 6 months before inclusion. Only patients who had completed their postoperative follow-up visits between 3 and 6 months after surgery were eligible. Patients were excluded if they had undergone reconstructive surgery for a medical reason, such as the result of trauma or cancer, as these would affect results beyond the cosmetic focus of this study. Patients with significant postoperative complications, such as infections or adverse reactions, that might complicate the quality-of-life assessment were also excluded. Eligible patients at participating centers were purposively sampled and all participants gave informed consent prior to inclusion in the study. Follow-up visits occurred during which patients completed standardized questionnaire under the supervision of trained clinical staff. Primary outcome measures of quality of life were assessed using the Short Form Health Survey (SF-36). The Physical Functioning Scale was used to measure physical functioning (ability to walk, climb stairs, and perform moderate physical tasks). The Mental Health component of the SF-36 was used to assess emotional well-being, which includes anxiety, depression, and general emotional status. The Social Functioning Scale was used to measure social functioning: how much physical health or emotional problems interfere with usual social activities such as being with friends or participating in groups. Before the procedure preoperative baseline scores were collected and the same measures were repeated at the 3 to 6 months postoperative follow up visit for comparison of pre and post-surgery quality of life outcomes. A total of 100 patients was chosen to detect a minimum effect size of 0.4 with 80% power and a 5% significance level, ensuring adequate statistical power for subgroup analyses. Descriptive statistics were used to summarize the demographic characteristics of the sample, with age, gender and type of procedure. Both preoperative and postoperative scores on the SF-36 quality of life domains were mean and standard deviation values. Changes in physical functioning, emotional well-being, and social functioning were compared preoperatively and postoperatively for each of the five cosmetic procedures using paired t-tests. A two-way analysis of variance (ANOVA) was done to study the interaction between demographic variables and procedure type. The ANOVA was used to determine whether age and gender affected observed changes in emotional well-being and social function in these different procedures. Additionally, a

multiple linear regression model was utilized to determine which predictors of improvement in physical functioning. In the model, the independent variables were patient age, gender, and type of procedure and the dependent variable was the change of the physical functioning score from preoperative to postoperative assessment.

Analysis of regression found which factors had the most impact on physical recovery after cosmetic procedures. All statistical analysis was done using SPSS version 25.0 and considered statistically significant if it had a p-value less than 0.05. Where there was a significant ANOVA, post-hoc tests were applied using Tukey's Honest Significant Difference (HSD) test to identify the specific group differences. The study was conducted by ethical guidelines and patient confidentiality was maintained, as ethical approval for the study was obtained from the Institutional Review Boards (IRBs) approval ref no. ERC/2022/48A. An informed consent was obtained from all patients before data collection and patients were informed of their right to withdraw at any time without affecting ongoing care. The study was carried out by the principles of the Declaration of Helsinki, and the confidentiality of patients was strictly maintained throughout the study process.

RESULTS

The study included 100 patients, predominantly female (80%, n=80) with 20% male participants (n=20). The age distribution revealed that 30% (n=30) were aged between 18 and 29 years, 45% (n=45) between 30 and 39 years, 17.5% (n=18) between 40 and 49 years, and 7.5% (n=7) were aged 50 years or older. Among the procedures performed, Botox injections were the most common, accounting for 30% (n=30) of cases, followed by breast augmentation at 25% (n=25), dermal fillers at 20% (n=20), liposuction at 15% (n=15), and rhinoplasty at 10% (n=10). This distribution highlights the demographic and procedural trends observed in the study population as shown in table-1.

Table-2 shows Physical functioning improved the most in patients who underwent liposuction. Prior to surgery, the baseline physical functioning scores averaged 59.5, which improved to 82.0 post-surgery or 38% improvement ($p<0.01$). In contrast, breast augmentation patients had a smaller, but significant, 15% improvement in physical functioning, from 58.8 preops to 67.5 postops, ($p<0.01$). The findings indicate that body contouring operations such as liposuction have a greater effect on physical mobility and functioning than breast augmentation.

In terms of emotional well-being, breast augmentation and rhinoplasty were most effective. The emotional well-being of patients having breast augmentation improved by 47 percent, with their scores rising from 58.8 to 86.3 ($p<0.01$). Patients who underwent rhinoplasty had a 41% ($p<0.01$) improvement in scores from 60.0 to 84.5 preoperatively. These improvements were particularly notable among younger patients, as patients under the age of 29 experienced a particularly strong psychological effect of facial and body enhancement procedures as shown in table-3.

Table-1: Demographic and Procedural Characteristics of Study Participants

Variable	n (%)
Age (years)	
- 18–29	30 (30%)
- 30–39	45 (45%)
- 40–49	18 (17.5%)
- 50+	7 (7.5%)
Gender	
- Female	80 (80%)
- Male	20 (20%)
Procedures	
- Botox	30 (30%)
- Dermal Fillers	20 (20%)
- Liposuction	15 (15%)
- Rhinoplasty	10 (10%)
- Breast Augmentation	25 (25%)

Table 2: Pre & Post-Surgery Scores with Percentage Improvement for Liposuction and Breast Augmentation

Procedure	Mean Pre-Surgery Score	Mean Post-Surgery Score	% Improvement	p-value
Liposuction	59.5	82.0	38%	< 0.01
Breast Augmentation	58.8	67.5	15%	< 0.01

Table-3: Pre- and Post-Surgery Outcomes with Percentage Improvement for Breast Augmentation and Rhinoplasty

Procedure	Mean Pre-Surgery Score	Mean Post-Surgery Score	% Improvement	p-value
Breast Augmentation	58.8	86.3	47%	< 0.01
Rhinoplasty	60.0	84.5	41%	< 0.01

Table-4: Pre & Post-Surgery Outcomes with Percentage Improvement for Botox and Dermal Fillers

Procedure	Mean Pre-Surgery Score	Mean Post-Surgery Score	% Improvement	p-value
Botox	62.3	78.1	30%	< 0.001
Dermal Fillers	64.2	79.0	28%	< 0.01

Table-5: Multivariate Regression Analysis of Factors Influencing Outcomes for Liposuction

Variable	β	Standard Error	p-value
Liposuction (procedure)	0.45	0.08	< 0.001
Age	-0.31	0.05	< 0.01
Gender (Female = 1, Male = 0)	0.10	0.07	0.09

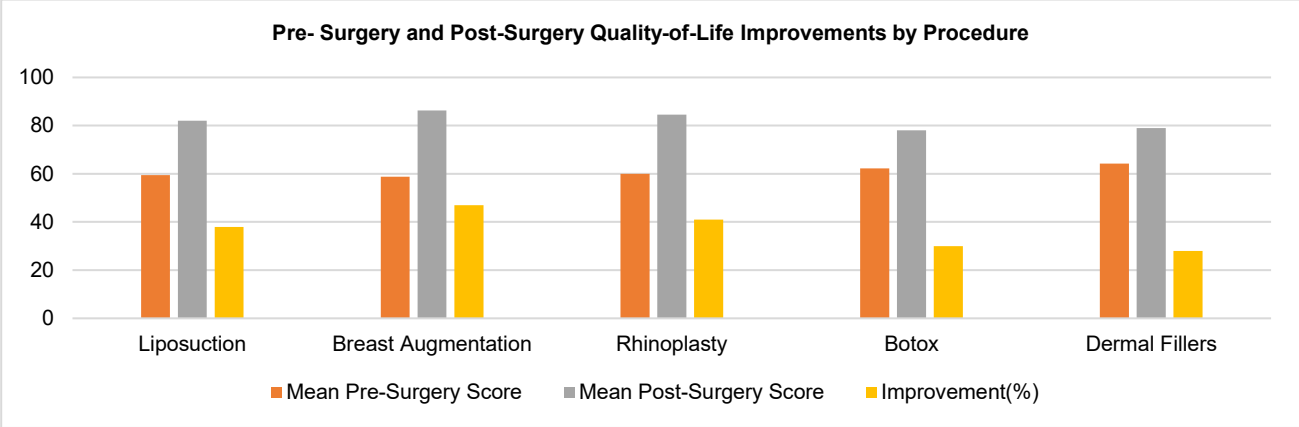

Figure-1: Pre- and Post-Surgery Quality-of-Life Improvements by Procedure

Patients who underwent Botox and dermal fillers showed significant improvement for social functioning. Scores increased from 62.3 pre-surgery to 78.1 post-surgery in a 30% rise in social functioning for Botox patients ($p<0.01$). Similar results were seen in dermal filler patients with scores improving from 64.2 to 79.0 (28% improvement, $p<0.01$). Facial rejuvenation through these minimally invasive procedures appear to significantly improve patients' confidence in social and professional settings, as revealed by their post operative social functioning scores as shown in table-4.

In order to understand better the factors influencing improvements in physical functioning, a multiple linear regression model was run in which age, gender, and procedure type were the predictors. Physical functioning was improved after liposuction ($\beta = 0.45$, $p<0.01$). Age was also a significant factor, as younger patients experienced more improvement in physical functioning than did older patients ($\beta = -0.31$, $p<0.01$). However, gender was not a significant predictor of improvement in physical functioning ($p = 0.09$), suggesting that the effects of these procedures on physical functioning were similar in male and female patients, as shown in table-5

The fig-1 shows the percent increase in quality-of-life domains (physical, emotional and social functioning) for specific cosmetic procedures. Breast augmentation and rhinoplasty both significantly enhanced emotional well-being, while liposuction had the highest gains in physical functioning. Improvement in social functioning was shown by minimally invasive treatments such as Botox and dermal fillers.

An interaction of age group and procedure type was assessed using a two-way ANOVA on improvements in emotional well-being and social functioning. The analysis indicated that emotional well-being was significantly different ($F = 5.67$, $p<0.01$) depending on age and procedure type. Those younger age patients (18–29) who underwent breast augmentation and rhinoplasty had the largest improvements in emotional well-being compared to older age groups, suggesting that there is an increased psychological benefit to these procedures in younger individuals. A post hoc Tukey's Honest Significant Difference (HSD) test also indicated that patients who had breast augmentation and rhinoplasty also had significantly more improvement in emotional well-being than Botox patients ($p < 0.01$).

DISCUSSION

The results of this study indicate improvements in both physical functioning and emotional well-being after cosmetic procedures that are sensitive to the type of procedure and demographic characteristics of patients[9]. Our results match previous literature that cosmetic surgery can improve the physical and psychological aspects of a patient's life but also show which procedures have a greater effect on which of these. The biggest change in physical functioning was liposuction, in which patients reported a 38 percent increase in their ability to perform daily activities after the surgery. The reduction in excess fat probably relieved physical discomfort and increased mobility, and this might be another reason. Consistent with previous studies, this study shows that liposuction does

produce both physical and aesthetic benefits[10]. The results from this further support this, as liposuction is the strongest predictor of improved physical functioning, according to the multiple linear regression model. Interestingly, age was also a significant predictor, with younger patients seeing more physical improvement, perhaps because they recovered quicker and in better health to begin with. However, physical functioning outcomes were not affected by gender, indicating that men and women benefit equally from these procedures[11]. Among younger patients, breast augmentation and rhinoplasty were most closely linked to improved emotional well-being. It shows that body image and facial aesthetics procedures have a greater psychological benefit for younger people, especially those aged between 18 and 29. The fact that breast augmentation increased emotional well-being by 47% is probably due to the fact that it improved self-esteem and body image satisfaction [12]. Rhinoplasty patients, especially younger ones, also saw a 41 percent improvement in emotional well-being, as facial appearance has a big impact on self-perception and social confidence. Taken together, these findings emphasize the role of psychological factors in cosmetic surgery, in particular in procedures that directly change visible features, such as the face and body contour [13].Botox and dermal fillers were associated with 30 percent and 28 percent improvement in social functioning, respectively. The results of these minimally invasive procedures are that they offer significant gains in confidence with social interactions. These improvements probably have something to do with the immediate, visible effects of Botox and dermal fillers, which reduce signs of aging and improve facial features. This matches prior research indicating that patients who receive non-invasive cosmetic procedures are often more socially and professionally engaged post treatment[14, 15]. The age x procedure type interaction was significant in emotional well-being according to the two-way ANOVA analysis. The largest improvements were seen in younger patients who underwent breast augmentation and rhinoplasty suggesting that age and type of procedure jointly affect the psychological outcomes of cosmetic surgery. The psychological benefits of cosmetic procedures may be particularly pronounced in this group because they are younger, with this finding perhaps a reflection of how much more social pressure there is on younger people to deal with body image[16, 17]. This post hoc Tukey's HSD test also supported this, showing that patients undergoing breast augmentation and rhinoplasty did have significantly higher emotional well-being improvements compared to patients that had Botox, which suggests that more invasive procedures that result in the visible physical change have a more psychological impact [18, 19]. Limitations of the study include its cross-sectional design, which does not allow assessment of the long-term outcome of cosmetic surgery on physical and psychological well-being. Longitudinal follow-up is needed to determine the sustainability of these improvements over time. Furthermore, the sample was quite diverse in terms of procedure types and patient demographics, but the majority of the patients were from urban centers, and the generalizability of the results to other populations may be limited. Future research should also focus on a larger geographic sample to examine how cultural and regional factors may affect patient outcomes[20, 21, 22]. In fact, the findings also suggest where future research could focus, specifically on the psychological effects of cosmetic surgery. There is recent literature suggesting that younger patients gain significant emotional benefit from procedures such as breast augmentation and rhinoplasty, and it would be interesting to explore whether emotional benefits occur over time and whether older patients have different psychological trajectories post-surgery[23]. Further research could also be conducted on the influence of preoperative counseling and psychological support on post-surgery outcomes, specifically for patients who are undergoing more invasive procedures[22].

CONCLUSION

Finally, cosmetic surgery also leads to better physical functioning, emotional well-being, and social functioning, with variation in the type of procedure and age of the patient. By far the most significant improvement in physical functioning resulted from liposuction, while breast augmentation and rhinoplasty had the most profound effect on emotional well-being, especially in younger people. Even though Botox and dermal fillers are minimally invasive, they still offer huge improvements in social functioning. These findings highlight the importance of considering both physical and psychological factors when evaluating the outcomes of cosmetic surgery. Future research should focus on long-term follow-up and the inclusion of diverse populations to further understand the full scope of these benefits.

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Authors Contribution:

ZN: Conceptualized the study and supervised data collection.

HA: Conducted literature review and assisted in data analysis.

SFH: Designed methodology and analyzed data.

SM: Coordinated multicentre data collection.

DK: Assisted in statistical analysis and drafting.

MRM: Edited the manuscript and managed references.

ST: Provided critical review and final approval of the manuscript.

All authors approved the final version of the manuscript.

REFERENCES

1. Duraes EFR, Schwarz GS, de Sousa JB, Duraes LC, Morisada M, Baker T, et al. Factors influencing the aesthetic outcome and quality of life after breast reconstruction: A cross-sectional study. *Ann Plast Surg*. 2020;84(5):494-506. doi:10.1097/SAP.0000000000002157
2. Skraastad BK, Knudsen C, Jackson C, Utheim TP, Pripp AH, Tønseth KA. Quality of life and cosmetic outcome after delayed breast reconstruction using DIEP flap: 10-year follow-up. *J Plast Surg Hand Surg*. 2019;53(2):119-24. doi:10.1080/2000656X.2018.1562459
3. Aguiar IC, Veiga DF, Marques TF, Novo NF, Sabino Neto M, Ferreira LM. Patient-reported outcomes using BREAST-Q after implant-based breast reconstruction: A controlled study. *Breast*. 2017;31:22-5. doi:10.1016/j.breast.2016.10.008
4. Siqueira HFF, Teixeira JLA, Lessa Filho RS, Hora EC, Brasileiro FF, Borges KS, et al. Patient satisfaction and quality of life in breast reconstruction: Immediate, delayed, and non-reconstruction comparison. *BMC Res Notes*. 2020;13(1):223. doi:10.1186/s13104-020-05058-6
5. Augustinho LBZ, Sabino Neto M, Veiga DF, Abla LEF, Juliano Y, Ferreira LM. Patient satisfaction after musculocutaneous flap breast reconstruction: Latissimus dorsi vs rectus abdominis. *Sao Paulo Med J*. 2018;136(1):25-31. doi:10.1590/1516-3180.2017.0081270917
6. van de Grift TC, Elaut E, Cerwenka SC, Cohen-Kettenis PT, Kreukels BPC. Surgical satisfaction and quality of life after gender-affirming surgery. *J Sex Marital Ther*. 2018;44(2):138-48. doi:10.1080/0092623X.2017.1326190
7. Tan SK, Leung WK, Tang ATH, Zwahlen RA. Satisfaction with facial appearance and psychosocial wellness following orthognathic surgery using FACE-Q. *J Craniomaxillofac Surg*. 2020;48(12):1106-11. doi:10.1016/j.jcms.2020.09.012
8. Saarinen IH, Koivisto JM, Kaipia A, Haavisto E. Perceived quality of surgical care and correlation with postoperative complications: A cross-sectional study. *BMJ Open*. 2020;10(11):e037708. doi:10.1136/bmjopen-2020-037708
9. Beugels J, Kool M, Hoekstra LT, Heuts EM, Tuinder SMH, van der Hulst RRWJ, et al. Quality of life after immediate vs delayed autologous breast reconstruction. *Ann Plast Surg*. 2018;81(5):523-7. doi:10.1097/SAP.0000000000001618
10. Jagsi R, Li Y, Morrow M, Janz N, Alderman A, Graff J, et al. Patient-reported QOL after breast conservation vs mastectomy ± reconstruction. *Ann Surg*. 2015;261(6):1198-206. doi:10.1097/SLA.0000000000000908
11. Dalaei F, de Vries CEE, Poulsen L, Möller S, Kaur MN, Dijkhorst PJ, et al. Body contouring post-bariatric surgery improves long-term QOL: BODY-Q cohort. *Ann Surg*. 2024;279(6):1008-17. doi:10.1097/SLA.0000000000006244
12. Liu C, Zhuang Y, Momeni A, Luan J, Chung MT, Wright E, et al. QOL after microsurgical abdominal flap vs implant reconstruction: BREAST-Q analysis. *Breast Cancer Res Treat*. 2014;146(1):117-26. doi:10.1007/s10549-014-2981-z
13. Jiang Z, Zhang G, Huang J, Shen C, Cai Z, Yin X, et al. Systematic review: Body contouring after bariatric surgery. *Obes Rev*. 2021;22(5):e13201. doi:10.1111/obr.13201
14. Santanelli Di Pompeo F, Barone M, Salzillo R, Cogliandro A, Brunetti B, Ciarrocchi S, et al. Predictive factors of satisfaction after breast reconstruction. *Aesthet Plast Surg*. 2022;46(2):610-8. doi:10.1007/s00266-021-02584-x
15. Nor S, Chan KG, Rahman HA, Abdul-Mumin KH. Satisfaction after breast reconstruction in Brunei. *PLoS One*. 2023;18(8):e0289955. doi:10.1371/journal.pone.0289955
16. Lisboa FACP, Paulinelli RR, Veras LPC, Ribeiro LFJ, Oliveira LFP, Rahal RMS, et al. Aesthetic outcomes after oncoplastic vs total breast reconstruction. *Breast*. 2023;71:47-53. doi:10.1016/j.breast.2023.07.006
17. Chen YH, Liao YF, Chang CS, Lu TC, Chen KT. Satisfaction after orthodontic treatment in cleft lip/palate patients. *Clin Oral Investig*. 2021;25(9):5521-9. doi:10.1007/s00784-021-03861-4
18. Thiem DGE, Schneider D, Hammel M, Saka B, Frerich B, Al-Nawas B, et al. Long-term satisfaction and complications after orthognathic surgery. *Clin Oral Investig*. 2021;25(5):3315-27. doi:10.1007/s00784-020-03664-z
19. Domenici L, Caputo GG, Losco L, Di Taranto G, Lo Torto F, Pierazzi DM, et al. Long-term QOL after pre-pectoral implant breast reconstruction. *J Invest Surg*. 2022;35(4):841-7. doi:10.1080/08941939.2021.1923874
20. Yamamoto M, Chung KC, Sterbenz J, Shauver MJ, Tanaka H, Nakamura T, et al. International study on QOL and reasons for abandonment of upper-limb prostheses. *Plast Reconstr Surg Glob Open*. 2019;7(5):e2205. doi:10.1097/GOX.0000000000002205
21. Eftekhar T, Hajibabaei M, Veisi F, Ghanbari Z, Montazeri A. Body image and sexual satisfaction before and after gynecologic cosmetic surgery. *J Family Reprod Health*. 2021;15(4):252-7. doi:10.18502/jfrh.v15i4.7892
22. Albornoz CR, Matros E, McCarthy CM, Klassen A, Cano SJ, Alderman AK, et al. Implant reconstruction + radiation: Long-term QOL outcomes. *Ann Surg Oncol*. 2014;21(7):2159-64. doi:10.1245/s10434-014-3483-2
23. Wang Y, Bäumer D, Ozga AK, Körner G, Bäumer A. Satisfaction and oral health-related QOL 10 years after dental implants. *BMC Oral Health*. 2021;21(1):30. doi:10.1186/s12903-020-01381-3

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