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Patient Satisfaction and Early Outcomes Following Mini-Facelift Procedures in Oral and Maxillofacial Surgery: A Modified FACE-Q Evaluation

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Abstract
The rising demand for facial aesthetic enhancements has made the mini-facelift a popular, less invasive choice compared to traditional rhytidectomy. Within oral and maxillofacial surgery (OMFS), these procedures are increasingly used to address signs of facial aging. Despite their growing popularity, there's a clear lack of comprehensive data on patientreported outcomes (PROs), especially when assessed with validated tools in this specific surgical context. This prospective cross-sectional study aimed to fill this gap by evaluating patient satisfaction and early complications after mini-facelifts, using a modified FACE-Q questionnaire tailored for facial aesthetic procedures. The study included 35 female patients, aged 45–55 years, who underwent mini-facelifts at the Department of OMFS, Sree Balaji Dental College and Hospital, Chennai. A key part of the methodology involved adapting the FACE-Q to include OMFS-specific considerations, such as dedicated scales for recovery time and a detailed checklist for complications, including jaw stiffness, relevant due to the anatomical proximity in OMFS. Data analysis used descriptive statistics and chi-square tests, with statistical significance set at a pvalue of less than 0.05. Results showed compelling insights into patient experiences. A significant 82% of participants reported high satisfaction with their overall appearance, confirming the aesthetic effectiveness of mini-facelifts in this setting. Additionally, 78% were content with their recovery time, suggesting a generally well-tolerated post-operative course. The positive psychological impact was evident, with 85% noting a significant improvement in social confidence. Regarding complications, the most common issues were temporary numbness (34%) and jaw stiffness (12%), both typically mild and manageable. Interestingly, a borderline statistically significant association (p=0.048) suggested that younger patients (45–50 years) reported higher satisfaction. This study strongly suggests that mini-facelifts performed in an OMFS setting are associated with high patient satisfaction and a favorable, manageable complication profile. However, the study's small sample size and single-center design are limitations. These factors highlight the critical need for subsequent larger, multi-center investigations to definitively validate these preliminary findings and comprehensively assess the long-term outcomes and sustained efficacy of these procedures.

Keywords: Mini-facelift, Oral and Maxillofacial Surgery (OMFS), Patient-Reported Outcomes (PROs), FACE-Q, Jaw Stiffness

Introduction

The contemporary landscape of aesthetic medicine has witnessed a sustained and escalating demand for The world of aesthetic medicine is constantly evolving, with a steady increase in demand for procedures that address the visible signs of facial aging. In this landscape, the mini-facelift has become a very appealing option. It stands out from traditional rhytidectomy (facelift surgery) by promising a less invasive surgical experience, significantly shorter recovery times, and subtle yet impactful aesthetic improvements (Bisaccia et al., 1998). Oral and maxillofacial surgeons (OMFS), with their specialized and deep understanding of intricate facial anatomy and their refined surgical skills, are increasingly incorporating these sophisticated procedures into their practice (Krohner, 2003).

While the technical details and immediate outcomes of mini-facelifts have been thoroughly described in the broader plastic surgery literature, there's a clear lack of comprehensive data specifically on patient-reported outcomes (PROs) when these procedures are performed in an OMFS setting. This gap in knowledge is especially important given the unique patient demographics and functional considerations often seen in this specialty (Pusic et al., 2011).

PROs are an essential part of fully evaluating surgical success, going beyond just objective clinical measurements. They carefully capture the subjective patient experience, including key aspects like overall satisfaction with the aesthetic result,

the profound impact on quality of life, and how patients perceive and manage complications (Knoernschild & Campbell, 2019). The FACE-Q questionnaire, a well-validated and widely used PRO instrument in aesthetic surgery, has proven invaluable for assessing patients' perceptions of their facial appearance and the broader impact of various facial procedures. However, the standard structure of the FACE-Q might not fully capture the nuanced and unique considerations inherent to mini-facelifts performed by OMFS specialists. Such unique considerations could include specific functional implications related to jaw mobility, distinct recovery dynamics influenced by the anatomical regions routinely managed by oral and maxillofacial surgeons, or the the psychological impact stemming from the precise nature of the aesthetic changes (Pusic et al., 2013).

This study was designed specifically to fill this knowledge gap. Its main goal was to systematically evaluate both patient satisfaction and the incidence of early complications following mini-facelift procedures conducted within a dedicated OMFS department. A cornerstone of our approach involved strategically adapting the standard FACE-Q questionnaire. This modification was meticulously done to integrate OMFS-specific domains. This ensures a more thorough and relevant assessment of patient experiences that truly reflects the scope and complexities of mini-facelifts in this specialized surgical context. By rigorously focusing on PROs, this research aims to provide invaluable, data-driven insights into the overall effectiveness and the level of patient acceptance of mini-facelifts when skillfully performed by oral and maxillofacial surgeons. Ultimately, the findings from this investigation are set to significantly contribute to the existing body of evidence-based clinical practice and facilitate more informed and empathetic patient counseling regarding mini-facelift procedures in the future.

Materials and Methods

Study Design and Setting

This investigation was designed as a prospective cross-sectional survey. The entire study was carefully conducted within the Department of Oral and Maxillofacial Surgery at Sree Balaji Dental College and Hospital, located in Chennai, India. Before any data collection began, comprehensive ethical approval for the study protocol was obtained from the Ethical clearance committee of Sree Balaji Dental College and Hospital, ensuring strict adherence to all ethical guidelines and patient protection protocols.

Participants

The study's participants were defined by strict inclusion criteria. We focused exclusively on female patients aged between 45 and 55 years. To be eligible, patients must have undergone a mini-facelift procedure in our department at least three months before their participation. This allowed for sufficient early recovery. The surgical techniques used for these minifacelifts varied and included both the short-scar technique and the SMAS-plication technique, reflecting current practices. To ensure that we isolated the specific effects of only the mini-facelift, strict exclusion criteria wesreere applied. Patients who had undergone any other major facial surgical procedures, such as orthognathic surgery, were systematically excluded from participation.

The initial sample size was determined using robust statistical principles, inspired by methods described by Sinno et al. (2015). This calculation assumed an anticipated patient satisfaction rate of 80%, a standard significance level (α) of 0.05, and a desired statistical power ($1-\beta$) of 0.8. We also prudently accounted for a 20% attrition rate to maintain statistical integrity. However, due to practical constraints and the inherent complexities of patient recruitment in a clinical setting, the final sample size was pragmatically adjusted to 35 patients. While necessary for feasibility, this adjustment was recognized as a limitation that required careful consideration during data interpretation.

Modified FACE-Q Questionnaire

A cornerstone of our data collection was the use of a modified version of the FACE-Q questionnaire. This adaptation wasn't random; it was strategically designed to be highly relevant to the unique anatomical and functional considerations of mini-facelift procedures performed in an OMFS context. The modifications systematically integrated several critical areas:

A specific recovery time satisfaction scale was crucial to accurately capture patients' perceptions of their post-operative recuperation period, which is particularly relevant in OMFS.

A comprehensive complications checklist was meticulously incorporated. This went beyond general surgical issues to specifically include jaw stiffness, recognizing its potential occurrence given the close anatomical relationship of the surgical field to the temporomandibular joint.

While these OMFS-specific enhancements were central, the questionnaire wisely kept core domains from the original FACE-Q, such as patients' satisfaction with overall appearance, their reported levels of social confidence, and their broader psychological well-being. This ensured a holistic assessment of the procedure's impact on quality of life. To further enrich the data with nuanced qualitative insights, an open-ended feedback section was thoughtfully included, allowing patients to express their subjective experiences and perceptions that might not be captured by structured scales.

Data Collection

The data collection process was carried out with careful consideration for participant comfort and data integrity. Surveys were administered in two main ways: either in-person during scheduled routine follow-up appointments at the department or via structured telephone interviews. Crucially, the entire data collection process was designed to uphold anonymity. This measure was specifically implemented to reduce potential response bias and actively encourage candid and uninhibited feedback from all participating patients. This commitment to anonymity aimed to ensure that patient responses genuinely reflected their experiences without undue influence or apprehension.

Statistical Analysis

The rigorous statistical analysis of the collected data began by identifying the primary outcome measure: the overall patient satisfaction rate. This was precisely quantified as the percentage of patients who reported a satisfaction score of ≥4/5 on the 5-point Likert scale specifically related to their overall appearance. Secondary outcome measures included the systematic tabulation of the frequency of all reported complications, providing a clear epidemiological profile of postoperative sequelae. Additionally, a comparative analysis was performed on satisfaction scores between two distinct age groups: 45–50 years and 51–55 years, to explore any age-related differences in perceived outcomes. For summarizing demographic and outcome data, descriptive statistics were used, including the calculation of means with standard deviations and percentages. To formally compare satisfaction rates between the two age groups, a chi-square test was specifically utilized. Statistical significance for all hypothesis tests was strictly pre-defined as a p-value of less than 0.05. All intricate statistical computations and analyses were meticulously performed using the robust capabilities of IBM SPSS Statistics software, Version 26.

Results

Demographics

This study successfully included 35 female participants, all of whom had undergone a mini-facelift procedure at our institution. The average age of this group was 50.2 years, with a standard deviation of ±3.1 years, indicating a relatively narrow age range within the middle-aged demographic. The average follow-up period for these patients, from their surgery date to data collection, was consistently 4.5 months, ranging from 3 to 6 months. This consistent follow-up ensured that the assessment of outcomes reflected the early post-operative phase.

Satisfaction Outcomes

The evaluation of patient satisfaction showed very encouraging results across several key areas, highlighting the positive impact of the mini-facelift procedures performed in this OMFS setting:

A substantial majority of participants, specifically 82%, reported high satisfaction with their overall appearance after the mini-facelift. This was quantitatively reflected by a mean satisfaction score of 4.3 (±0.7) on the 5-point Likert scale, suggesting that the aesthetic goals of the procedure were largely met from the patient's perspective.

Regarding the post-operative period, 78% of the participants expressed high satisfaction with their recovery time. The mean score for recovery time satisfaction was 4.1 (±0.8), indicating that the recuperation process was generally perceived as manageable and acceptable by the vast majority of patients. This finding is particularly relevant for mini-facelifts, which are often promoted on the premise of quicker and easier recovery.

Furthermore, beyond just physical appearance and recovery, the mini-facelift procedures had a profound positive influence on patients' broader quality of life. A remarkable 85% of participants reported a noticeable improvement in their social confidence following the procedure. This highlights the significant psychological and social benefits that come from successful facial aesthetic interventions, extending far beyond the purely cosmetic changes.

Complications

The incidence of post-operative complications observed in this group was generally low. Importantly, the reported complications were consistently mild and transient, reaffirming a favorable safety profile for these procedures:

The most frequently reported complication was temporary numbness, which affected 34% of the participants. This is a common and often temporary neurological side effect associated with facial surgical procedures, typically resolving as nerve regeneration occurs over time.

Of particular relevance to the OMFS setting, jaw stiffness was reported by 12% of the patients. While a minority, its occurrence warrants specific attention, as it may be linked to the surgical approach and manipulation of tissues near the temporomandibular joint or masticatory muscles during the mini-facelift.

Swelling was a reported issue for 28% of the patients. This is a normal and expected part of the acute inflammatory phase following any surgical intervention and typically resolves within the early post-operative period.

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Crucially, the study observed no instances of infection or significant asymmetry among any of the participating patients, indicating careful surgical technique and effective post-operative care within the department.

Statistical Findings

To explore potential age-related differences in patient satisfaction, a chi-square test was meticulously conducted. This compared satisfaction scores between the younger age group (45–50 years) and the older age group (51–55 years). The analysis revealed a borderline statistically significant association ($p=0.048$) between younger age and higher overall satisfaction scores. While this finding formally allowed for the rejection of the null hypothesis at the predefined $p<0.05$ significance level, its "borderline" nature suggests that this relationship, though present in this cohort, requires further careful and extensive investigation. This subtle yet intriguing finding implies that younger patients might derive marginally greater satisfaction from mini-facelift procedures, potentially due to factors such as superior skin elasticity, more robust healing capabilities, or different pre-operative expectations. However, larger, more statistically powerful studies would be necessary to unequivocally confirm and elaborate upon this observation.

Table 1. Patient Satisfaction and Early Complications Following Mini-Facelift Procedures in Oral and Maxillofacial Surgery

OUTCOME MEASURE	VALUE (MEAN ± SD OR %)	DETAILS / OBSERVATIONS
Satisfaction Outcomes		
Overall Appearance Satisfaction	82% (mean: 4.3±0.7)	Percentage of participants reporting high satisfaction (score ≥4/5) with overall appearance.
Recovery Time Satisfaction	78% (mean: 4.1±0.8)	Percentage of participants expressing high satisfaction with their recovery time.
Improvement in Social Confidence	85%	Percentage of participants reporting a positive improvement in social confidence.
Complications		
Temporary Numbness	34%	Incidence of patients reporting temporary numbness.
Jaw Stiffness	12%	Incidence of patients reporting mild jaw stiffness.
Swelling	28%	Incidence of patients reporting swelling.
Infection	0%	No cases of infection observed.
Significant Asymmetry	0%	No cases of significant asymmetry observed.
Statistical Findings		
Age-Related Satisfaction	p=0.048	Borderline statistically significant association between younger age (45–50 years) and higher satisfaction scores.

Table 1. *Percentages for patient satisfaction with aesthetic results, recovery, and social impact, alongside the incidence of common early complications. A borderline statistical significance was found for higher satisfaction in younger patients. SD: Standard Deviation.*

Discussion

This study offers significant preliminary evidence, providing compelling insights into patient satisfaction and the profile of early outcomes following mini-facelift procedures carefully performed within an oral and maxillofacial surgery (OMFS) setting. The overall findings strongly underscore the efficacy and patient acceptance of these aesthetic interventions when delivered by OMFS specialists.

The consistently observed high satisfaction rates—particularly with overall appearance (82%), recovery time (78%), and a notable improvement in social confidence (85%)—stand as a testament to the positive impact of mini-facelifts. These figures not only align with generally favorable outcomes reported for facelift procedures across the broader aesthetic surgery landscape but, more importantly, provide crucial validation specifically for the application and successful execution of mini-facelifts within the distinct context of OMFS (Campo et al., 1998; Castro-Govea et al., 2013; Onizuka et al., 1995). This reinforces the idea that OMFS professionals, with their nuanced understanding of facial anatomy and

surgical precision, are well-equipped to deliver aesthetically pleasing results that resonate positively with patients (Ifeacho et al., 2005).

Regarding the complication profile, the study indicates a generally low incidence of significant adverse events, with reported complications being mild and temporary. The occurrence of temporary numbness (34%) is a well-recognized, often temporary, consequence of facial surgical procedures, typically resolving as nerve regeneration progresses. However, the observation of jaw stiffness in 12% of patients represents a particularly relevant finding within the OMFS specialty. This specific complication likely relates directly to the intricacies of the surgical technique employed, especially the SMAS-plication technique, which involves precise manipulation and tightening of the superficial musculoaponeurotic system. Given the intimate anatomical relationship of the SMAS to the musculature and structures surrounding the temporomandibular joint, this finding highlights a critical area for future investigation (Zaslavskiy et al., 2017; Anastassov et al., 2000; Mitz & Peyronie, 1976). Further research is warranted to meticulously explore the potential correlation between specific surgical maneuvers, the extent of SMAS manipulation, and the incidence and severity of post-operative jaw stiffness. This would aim to refine techniques that minimize this particular concern (Trussler et al., 2011).

The intriguing finding of a borderline statistically significant association ($p=0.048$) between younger age (45–50 years) and higher satisfaction scores warrants deeper consideration. While the precise mechanisms underlying this observation require further clarification, several plausible hypotheses can be put forth. Younger individuals typically possess superior skin elasticity, more robust tissue turgor, and potentially faster intrinsic healing capabilities. All of these factors could cumulatively contribute to more pronounced aesthetic improvements and a smoother, more gratifying recovery trajectory (Lambros, 1997; Lukash, 2017). Additionally, differing pre-operative expectations between younger and older patients might play a role, with younger individuals potentially seeking more subtle refinements that are more readily achievable and thus lead to higher satisfaction (Saraçoğlu et al., 2014). However, the "borderline" nature of this statistical significance emphasizes that while a trend was identified in this cohort, larger, more statistically powerful studies are indispensable to unequivocally confirm this age-related difference and to fully unravel the underlying physiological and psychological factors that contribute to it.

Despite the valuable insights gained, it is crucial to acknowledge several inherent limitations that contextualize the interpretation and generalizability of these findings. Firstly, the relatively small sample size of 35 participants significantly constrains the statistical power of the study and limits the broader applicability of the results. Conclusions drawn from such a circumscribed cohort may not be universally representative of the diverse patient populations undergoing minifacelifts. Secondly, the study's single-center design inherently introduces institutional-specific biases (Onizuka et al., 1995; Abboushi et al., 2012). Factors such as the surgical expertise of the participating surgeons, the specific operative protocols adhered to, and the nuances of post-operative care within Sree Balaji Dental College and Hospital may not be replicated across different OMFS practices, thereby limiting the external validity of the findings. Lastly, the short followup period, ranging from 3 to 6 months, is a significant limitation. While it effectively captures early outcomes and immediate patient satisfaction, it falls short of providing crucial insights into the long-term durability of the aesthetic results, the potential for delayed complications, or the sustained evolution of patient satisfaction over a more extended period. Mini-facelifts are often expected to provide aesthetic benefits that last for several years, and a longer observational window is essential to truly evaluate their sustained efficacy.

To advance the understanding of mini-facelift outcomes within OMFS and address the limitations identified in this preliminary investigation, future research directions are clearly delineated. Paramount among these is the urgent need for multi-center studies involving substantially larger sample sizes. Such expanded cohorts would significantly enhance the generalizability and statistical robustness of the findings, providing a more definitive and reliable picture of patient satisfaction and complication rates across diverse OMFS settings. Furthermore, extending the follow-up period to several years is crucial to meticulously assess the long-term persistence of aesthetic improvements, the potential for recurrence of signs of aging, and the enduring psychological and social impacts on patients (Sarwer et al., 2008). Finally, future investigations should meticulously explore the influence of different surgical techniques, including variations in flap dissection, SMAS manipulation, and suspension methods, on specific patient outcomes, particularly focusing on the incidence and severity of complications like jaw stiffness. This would contribute significantly to refining surgical protocols and optimizing patient care.

Conclusion

This study provides compelling preliminary evidence: mini-facelift procedures, when expertly performed within an oral and maxillofacial surgery (OMFS) setting, are consistently linked to a high degree of patient satisfaction and a notably manageable profile of early complications. The careful modification of the FACE-Q questionnaire proved to be an invaluable and highly effective tool, precisely tailored to capture patient-reported outcomes (PROs) that are uniquely relevant to the OMFS context. This included specific considerations like recovery time and the presence of jaw stiffness. While an intriguing, though borderline statistically significant, finding regarding age-related differences in satisfaction emerged, the inherent limitations posed by the study's small sample size and its single-center design prevent definitive

generalizations. Consequently, the findings of this research strongly emphasize the critical need for subsequent largerscale, multi-center, and more comprehensive studies. Such extensive investigations are essential not only to robustly validate these promising preliminary findings but also to meticulously explore the long-term efficacy, durability of results, and to more fully clarify the intricate interplay of factors that collectively influence optimal patient outcomes following mini-facelift procedures.

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