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Post-operative Appearance and Facial Satisfaction Outcomes among Adults with Repaired Cleft Lip and Palate in Jigawa State, Nigeria

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ABSTRACT

Surgical repair of cleft lip and palate (CLP) aims to restore facial aesthetics and symmetry; however, patient-reported postoperative outcomes regarding appearance in adulthood remain underreported in Nigeria. This study assessed the postoperative appearance of the face, lips, nose, nostrils, teeth, and jaws, as well as overall satisfaction with facial appearance among adults with repaired cleft lip and palate in Jigawa State, Nigeria. A descriptive cross-sectional design was employed among adults aged 18–29 years who had undergone cleft repair through Smile Train-supported missions in Jigawa State. Data were collected using the validated CLEFT-Q questionnaire focusing on appearance scales and the facial satisfaction domain. Descriptive statistics summarized outcomes, while inferential analysis tested associations between facial appearance and health-related quality of life (HRQoL) at $p < 0.05$. Most respondents reported significant satisfaction with their postoperative facial appearance and a reduction in stigma. High satisfaction scores (weighted mean ≥ 2.5) were recorded for the appearance of the face, cleft scar, and jaws. A statistically significant positive relationship was found between facial appearance and overall HRQoL ($p < 0.05$). However, a subset of participants expressed residual dissatisfaction with nasal symmetry and visible lip scars. Surgical repair significantly enhances aesthetic outcomes and facial satisfaction among young adults. Nevertheless, persistent concerns regarding scarring and asymmetry highlight the importance of viewing cleft treatment as a continuous, multidisciplinary care process rather than a one-time surgical event.

Keywords: Cleft Lip, Cleft Palate, Post-Operative Outcomes, Facial Appearance, Patient Satisfaction, Health-Related Quality Of Life

INTRODUCTION

Cleft lip and palate (CLP) are among the most common congenital craniofacial anomalies, affecting approximately 1 in 700 births worldwide. (Vyas *et al*, 2020) In Nigeria, the prevalence is 0.5 per 1,000 live births (Michael, 2022). These deformities significantly impair social interactions and general health. (Beluci & Genero, 2016) While surgical intervention is standard, its primary goal often extends beyond functional restoration to include the optimization of facial esthetics. For individuals with repaired CLP, facial aesthetics plays a critical role in the overall quality of life. Individuals with facial disfigurement may experience higher levels of anxiety, sadness, and social isolation even after surgery. (Dion *et al*, 2017). Despite advancements, residual scarring or nasal deformity can negatively impact a patient's perception of their appearance. (Tuner, 2018). In the developing world, post-operative health-related quality of life and patients' perceptions of results remain understudied, particularly for older children and adults aged 18 to 29 years. (Schonmeyr, *et al* 2025. There is a paucity of studies in Nigeria that have attempted to comprehensively and objectively assess facial appearance and facial satisfaction after surgery. Hence, there is a need for reliable data generation on the post-operative health-related quality of life of cleft patients in Nigeria. (Abdurrazaq *et al.*, 2023). This study diverges from existing research in two significant ways: it utilizes CLEFT-Q, a disease-specific tool designed for individuals with cleft lip and palate, unlike most studies that employ general quality of life questionnaires, and it targets adults aged 18-29 years, whereas the majority of studies focus on pediatric populations. Therefore, the aim and objective of this study are to assess the level of satisfaction with facial appearance among patients with cleft lip and palate repair in Jigawa State using the CLEFT-Q. The null hypothesis states that there is no significant relationship between satisfaction with facial appearance and health-related quality of life of patients with cleft lip and palate repair.

MATERIALS AND METHODS

Design and Study Population

A descriptive cross-sectional study design was adopted. The study involved adults aged 18–29 years with repaired cleft lip and/or palate who had undergone surgery through Smile Train-supported cleft organizations through their partners in Jigawa State, Nigeria.

Inclusion and Exclusion Criteria

Participants included individuals who had completed primary cleft repair and consented to participate. Those with syndromic clefts or severe cognitive impairment that could limit questionnaire completion were excluded.

Instrument for Data Collection

Data was collected using the CLEFT-Q questionnaire, a validated patient-reported outcome measure designed to assess functional and psychosocial outcomes in individuals with cleft conditions. For this manuscript, domains related to appearance and facial satisfaction outcomes were analyzed.

Data Analysis

Data was analyzed using descriptive statistics, including frequencies, percentages, means, and standard deviations. Relationship between facial appearance and post-operative and health-related quality of life (HRQoL) was explored using appropriate inferential statistics, with statistical significance set at $p < 0.05$.

RESULTS AND DISCUSSION

Postoperative, Appearance of Cleft Scar

Table 1 Appearance of Cleft Scar (n=321)

Item	Not at all (1)	A little bit (2)	Quite a bit (3)	Very much (4)	Mean	Remarks
How much do you like the color of your cleft lip scar?	41	62	118	100	2.86	Good
How your cleft lip scar looks when you smile?	26	67	121	107	2.96	Good
The width of your cleft lip scar?	33	61	119	108	2.94	Good
The size of your cleft lip scar?	32	65	108	116	2.96	Good
How your cleft lip scar looks in photos?	37	60	101	123	2.97	Good
The shape of your cleft lip scar?	33	59	112	117	2.98	Good
How your cleft lip scar looks in the mirror?	31	54	117	119	3.01	Good
Weighted Mean					2.95	Good

NB: Decision= (1+2+3+4)/4=10/4=2.5. Decision < 2.5 => Poor, Decision = 2.5 => Moderate Decision ≥ 2.5 => Good

Table 2: Appearance of the Face (n=321)

Item	Not at all (1)	A little bit (2)	Quite a bit (3)	Very much (4)	Mean	Quality of Life
How much do you like how your face looks when you look your best?	29	60	115	117	3.00	Good
How your face looks when you are ready to go out (like to a party)?	21	48	107	145	3.17	Good
The shape of your face (eg, round or oval)?	23	60	98	140	3.11	Good
How your face looks in photos?	20	60	110	131	3.10	Good
How well both sides of your face match?	21	52	109	139	3.14	Good
How your face looks when you smile?	22	51	118	130	3.11	Good
How your face looks when you laugh?	14	70	106	131	3.10	Good
How your face looks from the side (your profile)?	25	53	111	132	3.09	Good
How your face looks up closely?	16	60	107	138	3.14	Good
Weighted Mean					3.11	Good

NB: Decision= (1+2+3+4)/4=10/4=2.5. Decision < 2.5 => Poor, Decision = 2.5 => Moderate Decision ≥ 2.5 => Good

Post-operative, Level of Satisfaction with Facial Appearance

Table 3: Satisfaction (n=321)

Item	Never (1)	Sometimes (2)	Often (3)	Always (4)	Mean	Quality of Life
I am happy with my life	16	48	77	180	3.31	Good
I njoy life	14	40	97	170	3.32	Good
I feel happy	11	51	100	159	3.27	Good
I feel okay about myself	7	50	90	174	3.34	Good
I believe in myself	7	53	84	177	3.34	Good
I am proud of myself	8	42	87	184	3.39	Good
I like myself	13	38	83	187	3.38	Good
I feel confident	9	46	97	169	3.33	Good
I feel great about myself	12	38	98	173	3.35	Good
I feel good about how I look	8	38	103	172	3.37	Good
Weighted Mean					3.34	Good

NB: Decision= (1+2+3+4)/4=10/4=2.5. Decision < 2.5 => Poor, Decision = 2.5 => Moderate Decision ≥ 2.5 => Good

The findings indicated that surgical intervention had a transformative impact on the aesthetic quality of life of respondents. Descriptive analysis showed that the appearance of the cleft scar (weighted mean = 2.95) and the appearance of the face (weighted mean = 3.11) and overall satisfaction with facial appearance were both rated as "good" by the patients. Specific facial attributes, such as facial appearance when smiling (mean = 3.11) and the symmetry of both sides of the face (mean = 3.14), received high satisfaction ratings. Inferential analysis revealed a statistically significant relationship between facial appearance and overall health-related quality of life. Most participants reported enhanced self-esteem following surgery.

Discussion

Globally, satisfaction with post-operative facial appearance among cleft lip and palate (CLP) patients is influenced by factors such as the skill of the surgical team, timing of repair, cultural perceptions of beauty, and patient expectations (WHO, 2021). Studies consistently show that early, well-executed surgical repair generally leads to higher satisfaction scores, improved self-esteem, and greater social integration (Strauss *et al*., 2020). However, residual scarring, asymmetry, or nasal deformity can negatively affect patients' perception of their appearance, sometimes requiring secondary corrective surgery to achieve optimal aesthetic results (Al-Bustan *et al*., 2020; (Paiva *et al*., 2021). Satisfaction levels are also shaped by cultural norms; what is considered an acceptable appearance in one community may differ from another, affecting how patients evaluate their post-operative outcomes (Adeyemo et al., 2021). This study found high satisfaction with facial appearance among patients, particularly regarding the nose, lips, and overall facial symmetry. These outcomes underscore the critical role of aesthetic outcomes in shaping the health-related quality of life (HRQL) of individuals with repaired cleft lip and palate (CLP). Previous research has consistently demonstrated that successful surgical interventions significantly enhance self-perception and social confidence (Chowdhury *et al*, 2021). In this study, improvements in nasal shape and lip contour were reported as the most influential factors contributing to positive self-image, aligning with findings that nasal and lip aesthetics are the primary determinants of psychological well-being and social acceptance among CLP patients (Zhao *et al*., 2022). Furthermore, satisfaction with facial appearance was closely linked to enhanced social interactions and reduced experiences of stigma or discrimination, as facial disfigurement often serves as a visible source of social anxiety and self-consciousness. Studies have shown that post-operative improvements in facial harmony and symmetry play a key role in fostering social integration and improving interpersonal relationships (Wong Riff et al., 2020). The perception of a natural-looking facial profile not only boosts individual confidence but also lessens the emotional burden associated with societal judgments, leading to improved psychosocial outcomes. According to Chen *et al* (2021), comprehensive care and multidisciplinary approaches that address both functional and aesthetic aspects of CLP rehabilitation are associated with superior patient-reported satisfaction levels. Therefore, the high satisfaction observed in this study highlights the importance of continuous aesthetic evaluation and personalized treatment plans in meeting the unique expectations of patients and their families.

CONCLUSION

Surgical intervention for cleft lip and palate in Jigawa State significantly improves the aesthetic and functional well-being of affected adults. The majority of patients report "good" satisfaction with their facial appearance and a corresponding improvement in their quality of life. However, the continued challenges regarding nasal symmetry and scarring in some patients indicate that surgery alone does not guarantee complete rehabilitation. The study recommends incorporating standardized tools like CLEFT-Q into post-operative care to monitor patient outcomes and increase awareness about the benefits of early cleft repair, ideally before the age of one.

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