

Original Research Article

Aesthetic rhinoplasty: a paradigm shift towards cosmesis in Indian population

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ABSTRACT

Background: The tremendous growth of cosmetic surgery among Asians is largely due to strength of indigenous economies accompanying globalization. This increase in number can also be attributed to usage of social media as well as increased desire to look perfect. The current study is an attempt to measures aesthetic outcome and identify possible interactions between other possible outcome determinants.

Methods: The present study was a 1.5 years prospective interventional study conducted at SMS Medical College, India from January 2021 to July 2022. A total of 51 samples were included in our study. The rhinoplasty outcome evaluation (ROE) questionnaire was used to assess patient satisfaction which was presented and completed by all patients before and after 6 months of surgery and data was analysed.

Results: In the present study mean age of study participants was 25.7 years and most subjects (64.7%) were male and (35.3%) were female. Mean total ROE at pre-op and post-op 6 months was 35.05 ± 13.4 and 57.4 ± 27.9 respectively and mean Total ROE difference between pre-op and post-op 6 month was -22.4 ± 36.1 . This difference was found to be statistically significant (p value 0.0001).

Conclusions: Aesthetic rhinoplasty in India is emerging as a lifestyle choice because of increased users of social media as well as awareness about procedures available for enhancing facial features. Our study gives a glimpse towards the shift of rhinoplasty in India and explains the possible reasons behind this shift.

Keywords: Aesthetics, Rhinoplasty, Indian, ROE, Satisfaction

INTRODUCTION

The nose, which dominates the contours of the face, is a key factor in how humans perceive beauty. People with crooked noses may seek treatment for aesthetic, functional, and psychological problems that may arise.¹ Rhinoplasty is one of the most popular cosmetic surgical procedures. A patient with polybeak deformity can completely change his "personality" when the surgeon enlarges the back and increases the apical protrusion. It is a surgery that requires continuous training.² Although this is one of the most difficult surgical procedures, it can also cause patient dissatisfaction. It is said that it is easy to

operate incorrectly and difficult to operate correctly. Rhinoplasty by surgeons corrects external nasal deformities as well as restores normal nasal function. It is mostly done for cosmetic purposes. Although the evaluation of surgical outcomes from the patient's perspective has been the subject of several studies, such analysis is of great importance because patient satisfaction is an important factor in surgical success. The range of individual rhinoplasty techniques is vast, and there is little evidence that any one technique is better than the other. It may be due to their perception of 'the consequences'.³

Several studies have been conducted to validate reliable questionnaires completed by patients undergoing cosmetic surgery to measure postoperative patient satisfaction. Questionnaires assessing quality of life and self-image became the gold standard, eventually replacing simplified forms that asked patients if they noticed any improvement after rhinoplasty.⁴

This study focuses on increased need for rhinoplasty in Indian population as youthful appearances of face has become an important lifestyle choice where nose place a dominant role and social media uses has added consciousness for oneself to look at oneself.

METHODS

The present study was a prospective interventional study conducted at SMS Medical College, Jaipur in India from January 2021 to July 2022. 51 patients who consented to rhinoplasty having external nasal deformity were included in the study. Patients with systemic comorbidities and haematological disorders, and those with previous facial surgery were excluded from the study. Adequate medical history and preoperative examination were performed after approval from the ethical committee of the institute.

Lateral photos were taken with the horizontal plane of Frankfurt parallel to the ground after taking prior consent. The rhinoplasty outcome evaluation (ROE) questionnaire was used to assess patient satisfaction and various other parameters were also assessed. Each ROE question has responses ranging from 0 to 4 grades, with 0 being the most negative and 4 being the most positive response. We added the responses to each question, divided the total by 24 and multiplied by 100 to get a score ranging from 0 to 100 (0=least satisfied, 100=most satisfied). The final results were divided into groups according to quartiles. 0 to 25 and 25 to 50 (no success), 50 to 75 (good), and 75 to 100 (excellent). A ROE questionnaire was presented and completed by all patients before and after 6 months of surgery.

Rhinoplasty outcomes evaluation (ROE) questionnaire includes:

- 1) How well do you like the appearance of your nose?
- 2) How well are you able to breathe through your nose?
- 3) How much do you feel your friends and loved one like your nose?
- 4) Do you think your current nasal appearance limits your social or professional activities?

- 5) How confident are you that your nasal appearance is the best that it can be?
- 6) Would you like to surgically alter the appearance or function of your nose?

Statistical analysis

The questionnaire was first checked for completeness. After creating the master chart, entered the data into Microsoft excel. Data analysis was performed using licensed statistical package for the social sciences (SPSS) software version 21.0 (Chicago, IL). First, univariate analyses were performed and results were presented using tables, text and pie charts. Descriptive statistics were used to calculate frequencies for categorical variables, and measures of central tendency and variability were used to describe continuous variables. Paired t-test was used to compare the continuous variable and Chi-square test was used for categorical variables. Data are presented as mean (standard deviation) or number or proportions. A p value <0.05 was considered as statistically significant.

RESULTS

In the present study, out of 51 participants, 27 were above the age of 25 years and 24 were up to age of 25 years and mean age of study participants was 25.7 years and most subjects (33) were male and (18) were female (Table 1). Out of 51 patients, 49 (96.1%) were belongs to high literacy and 2 (3.9%) were belongs to low literacy (Figure 1). Out of 51 participants, 34 (66.7%) were unmarried and 17 (33.3%) were married (Figure 2). 29 (56.9%) participants had rhinoplasty due to only cosmetic reason and 22 (43.1%) due to both cosmetic and functional reason (Figure 3). Mean total ROE at pre-op and post-op 6 months was 35.05±13.4 and 57.4±27.9 respectively and mean Total ROE difference between pre-op and post-op 6 month was -22.4±36.1 (Table 2). This difference was found to be statistically significant (p value 0.0001).

Table 1: Age and gender distribution.

Age and gender	Frequency	Percent
Age (years)		
≤25	24	47.1
>25	27	52.9
Gender		
Female	18	35.3
Male	33	64.7

Table 2: Distribution and comparison of pre-op ROE with ROE at 6-months follow-up.

Surgical phase	Mean	Min-max	SD	SE Mean	95% confidence interval of the difference		P value
					Lower	Upper	
Pre -op	35.049	8.33-66.66	13.416	5.049	-32.526	-12.245	0.0001
6 months Follow up	57.435	0.00-79.16	27.893				

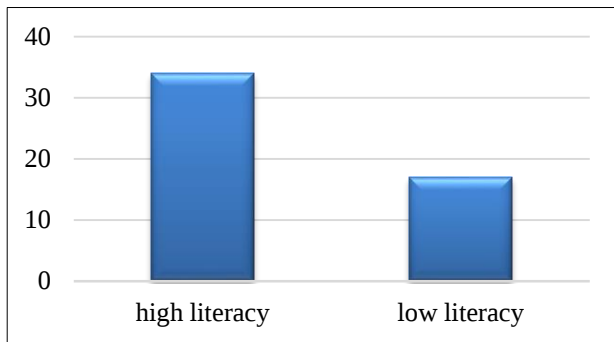


Figure 1: Distribution according to education status.

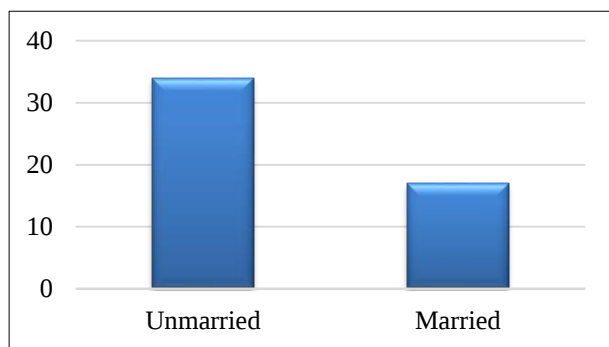


Figure 2: Distribution according to marital status.

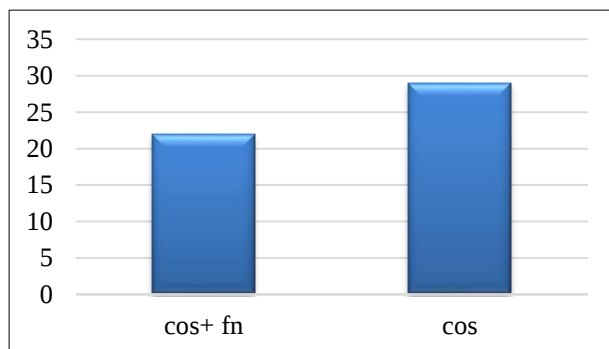


Figure 3: Distribution according to reason for rhinoplasty.



Figure 4: Preoperative and 6-months follow-up clinical images.

DISCUSSION

India saw the advent of cosmetic surgery as early as 600 BC with the works of Sushrut which he compiled in his manuscript titled Sushrut Samhita. cosmetic surgery in modern India owes a great deal to Sir Harold Gillies, Eric Peet, and BK Rank for developing this speciality Aesthetic surgery as a distinct entity in India began as late as the 1990s, and there has since been a steady progression in the number of aesthetic procedures performed. ISAPS 2018 database stated that India stood at number five in the number of aesthetic procedures conducted around the world.¹⁵ The goal of rhinoplasty is to restore the function and youthful appearance of nose and improve quality of life. It is important to understand why patients want rhinoplasty.⁵ It is also important to set realistic expectations about the patient's pre-treatment and ensure that the patient fully understands what rhinoplasty can and cannot achieve. The aesthetics of a person's nose can have a significant impact on how they are perceived by the outside world. The current study is also an attempt to identify possible interactions between aesthetic outcome and other possible outcome determinants.

In our study, the mean age of study participants was 25.7 years, 27 (52.9%) participants were 25 years or older, 24 (47.1%) were 25 years or older. This can be explained with the fact that use of Instagram, facebook and snapchat is more common in younger age groups so in order to achieve maximum appreciation on social media, aesthetic surgery has become common in young people. One more explanation for maximum young age patients can be that in India 20-25 years is common age to get married.

In our study 33 (64.7%) were male, and 18 (35.3%) were female participants. Our results were comparable to a study by Hsiao et al in which 94% of patients were male and 6% were female.⁶ In addition, a study conducted by Khan et al found that 67% of patients were male and 33% were female.⁷ However, in a study conducted by Tamer, 83.8% of patients were female and 16.6% were male.⁸ Similar results were observed in study of 879 patients by Salcedo et al in which 812 (92.3%) were female patients and 67 (7.6%) were male patients.⁹ The conflicting results of our study may be due to our country's patriarchal society, and the lack of aesthetic awareness among women discourages women from choosing cosmetic surgery. In the present study, out of 51 participants, 34 (66.6%) were highly literate and 17 (33.3%) were low literate and 34 (66.7%) were unmarried and 17 (33.3%) were married. Disawal et al did a prospective study and they found that 75.6% participants were highly literate and 24.2% were low literate and 68.5% were unmarried and 31.5% were married, which was similar to our study.¹⁰ So, we conclude that the demand and quest for enhanced cosmesis is significantly higher in unmarried and highly literate individuals, associated with the social goals of attractiveness, a confident personality or employment prospects. More number of highly literate patients can also be explained with the increased number

of virtual meetings post-COVID. In the present study, 56.9% participants had rhinoplasty due to only cosmetic reason and 43.1% due to both cosmetic and functional reason in our study. Disawal et al did a prospective study from October 2018 to February 2020 and found 58.5% patients mentioned cosmetic reasons, 12.8% functional and a combination of cosmetic and only functional reasons in 28.5% subjects.¹⁰ So, we conclude that cosmetic rhinoplasty is an increasing trend in India due to increasing self-attention, media awareness and advancement in surgical manoeuvres.

One of the goals of our study was to assess rhinoplasty patients' satisfaction using the ROE questionnaire. Patient satisfaction may be influenced by local culture, life expectancy, and treatment expectations, which may or may not be appropriate. Standardized photographic documentation is essential to ensure that the patient and physician agree on a preoperative plan that takes into account the patient's anatomy.

In our study, the average total ROE before surgery and after six months of surgery was 35.05 ± 13.4 and 57.4 ± 27.9 , respectively. The mean total ROE difference between preoperative and postoperative 6 months was -22.4 ± 36.1 . This difference proved to be statistically significant. Due to the fact that postoperative scores for all patients were higher than preoperative scores, similar results were observed by Arima et al in their study and found that all patients experienced improvement after surgical treatment.¹¹ Preoperative and postoperative satisfaction varied by an average of 50.5 (27.2 before surgery and 77.7 after surgery), finding no association between the type of surgical technique and the mean difference in pre and postoperative satisfaction scores, similar to Alsarraf et al research i.e. 44.5% increase in ROE (38.8 before surgery and 83.3 after surgery).¹² According to Hellings et al, the mean difference between pre- and postoperative satisfaction scores for patients who required two or more rhinoplasties was 16 (42.8 before surgery and 58.8 after surgery), demonstrating the challenge in achieving excellent results in patients who undergo multiple surgical procedures.¹³ Günel et al used the ROE questionnaire to investigate a cohort of 58 patients undergoing aesthetic rhinoplasty.¹⁴ As a result, the preoperative score was 45 and the postoperative score was 73.48 ± 16.06 . The study concluded that rhinoplasty has strong positive consequences on aesthetic appearance and significantly improves quality of life. Another study by Khan et al found that the mean ROE for all patients preoperatively was 30.5, and at the mean 6 months after surgery it was 79.5.⁷ All patients showed a statistically significant improvement between preoperative and postoperative scores ($p < 0.01$), indicating high postoperative satisfaction.

Limitation of our study was shorter follow up and small sample size. Study with longer follow up and larger sample size for assessment of paradigm shift towards cosmesis will be appreciated.

CONCLUSION

Aesthetic rhinoplasty in India is emerging as a lifestyle choice because of increased users of social media as well as awareness about procedures available for enhancing facial features. Our study gives a glimpse towards the shift of rhinoplasty in India and explains the possible reasons behind this shift.

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