

## A Prospective Study on Evaluation of Patient and Physician Satisfaction Regarding Aesthetic Results in Rhinoplasty Procedures

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### Abstract:

**Background:** Rhinoplasty is a popular surgical procedure aimed at enhancing nasal aesthetics and functionality. Evaluating patient and surgeon satisfaction with rhinoplasty outcomes is crucial for assessing the procedure's success. Factors influencing satisfaction and potential disparities between patients and surgeons need investigation to improve surgical techniques and patient experiences.

**Methods:** A prospective cohort study was conducted at Patna Medical College and Hospital, Patna. Participants met inclusion criteria (age 18-35, no prior rhinoplasty, no major health or psychological issues). Standardized questionnaires collected data on demographics and satisfaction. Data analysis used SPSS 18.0, with significance set at 0.05.

**Results:** Gender impacted patient satisfaction with nostril outcomes one month after rhinoplasty (female: 29%, male: 17%). Younger patients (<25 years) expressed higher satisfaction with nasal width (56%) and general satisfaction (50%) than older patients (32%) three months post-surgery. Single patients showed greater satisfaction (80%) with middle-lower nose display than married patients (60%) three months after surgery. Patients without a high school diploma reported higher satisfaction one month post-rhinoplasty, especially regarding nasal hump, middle-lower nose display, nose proportions, and general satisfaction. Surgeon satisfaction increased after three months, while patients reported elevated satisfaction, particularly regarding aesthetic factors, but lower general satisfaction compared to surgeons.

**Conclusion:** Rhinoplasty outcomes vary by gender, age, marital status, and educational level. Tailored care strategies are needed to enhance patient experiences and satisfaction.

**Recommendations:** Surgeons should consider demographic factors when discussing rhinoplasty outcomes with patients. Preoperative counseling and managing expectations can improve patient satisfaction. Further research can explore additional variables influencing rhinoplasty satisfaction.

**Keywords:** Rhinoplasty, patient satisfaction, surgeon satisfaction, demographics.

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### Introduction

Rhinoplasty, a surgical procedure aimed at enhancing the aesthetic appearance and functionality of the nose, has gained immense popularity in recent years. Patients seek rhinoplasty for a variety of reasons, including correcting congenital deformities, improving breathing difficulties, or simply enhancing facial harmony by refining nasal features [1, 2]. The success of rhinoplasty is often gauged not only by the technical proficiency of the surgeon but also by the level of satisfaction experienced by both the patient and the treating physician.

The importance of assessing both patient and physician satisfaction with the aesthetic results of rhinoplasty cannot be overstated. Patient satisfaction reflects the fulfillment of their cosmetic desires and functional needs, while physician satisfaction

reflects the surgeon's ability to achieve these goals and deliver successful outcomes. This dual perspective provides valuable insights into the overall success of the procedure, influencing future decisions and improvements in rhinoplasty techniques [3].

Understanding the factors that contribute to satisfaction and potential discrepancies between patient and physician perspectives is vital for the advancement of surgical techniques, optimizing the patient experience, and ensuring that rhinoplasty continues to meet the evolving demands and expectations of patients and healthcare providers.

The aim of this study is to assess patient and surgeon perspectives on the aesthetic outcomes of rhinoplasty while investigating the influence of

demographic factors on satisfaction and specific nasal aesthetic factors one month and three months post-surgery.

### Methodology

**Study Design:** This study employed a prospective cohort design.

**Study Setting:** The research was conducted at Patna Medical College and Hospital, Patna, between 2018-2021.

**Participants:** The participants consisted of individuals who met the following inclusion criteria:

#### Inclusion Criteria:

1. Absence of congenital jaw or facial deformities.
2. Age between 18 and 35 years.
3. No history of pathologic lesions or deformities in the jaw or face.
4. No prior rhinoplasty procedures.
5. No significant systemic health problems.
6. No documented history of psychological issues.

**Exclusion Criteria:** Individuals not meeting the above inclusion criteria were excluded from the study.

**Bias:** Efforts were made to minimize bias by selecting a homogenous cohort of patients and using standardized questionnaires. Researchers maintained objectivity throughout data collection and analysis.

**Variables:** Key variables included Age, Gender, Educational level, Marital status, Nasal hump reduction, Nostril refinement, Nose tip size modification, Upward sloping of the nose tip, display of the middle-lower nose, Nasal width alteration, Proportion of nose to face.

**Data Collection and Analysis:** Data collection involved administering a questionnaire to patients and the treating surgeon. The questionnaire included demographic information and inquiries related to patient satisfaction with their facial and nasal appearance. Questionnaire reliability and validity were assessed using the Kappa index. A follow-up questionnaire was administered one-month post-surgery.

**Statistical Analysis:** Descriptive statistics included measures of central tendency and distribution. SPSS 18.0 package was used for data analysis. The significance level was set at 0.05.

**Ethical Considerations:** Informed consent was obtained from all participants, and they had the option to withdraw from the study at any stage. The study received approval from the Ethics Committee. Confidentiality of patient information was strictly maintained.

### Result

In this study, the influence of gender on patient satisfaction with nostril outcomes one month after rhinoplasty was examined. According to the study, 29% of female patients were completely satisfied with their nostrils, compared to 17% of male patients. The study also delved into the impact of age on satisfaction with different nasal factors, both one month and three months post-surgery. Patients aged younger than 25 years expressed higher satisfaction with nasal width (56%) than those aged 25 or older (32%). Additionally, those under 25 reported greater general satisfaction (50%) compared to older patients (32%) three months post-rhinoplasty.

Marital status was assessed concerning satisfaction with the display of the middle-lower nose three months post-surgery. Notably, 80% of single patients were completely satisfied, while 60% of married patients expressed the same level of satisfaction. The study explored the impact of educational level on satisfaction with various factors one month post-rhinoplasty. Patients without a high school diploma showed higher satisfaction with nasal hump, middle-lower nose display, nose proportions, and general satisfaction compared to their counterparts with higher educational levels.

Continuing the analysis of educational level, this time focusing on satisfaction with nasal hump three months after rhinoplasty, the study indicated that patients without a high school diploma (43%) were more likely to be completely satisfied than those with higher education (56%). Furthermore, the study compared the opinions of surgeons and patients regarding satisfaction levels at different intervals after rhinoplasty. Surgeons expressed higher satisfaction three months post-surgery (61%) compared to one month (33%). Patients, on the other hand, reported increased satisfaction with various factors, such as nasal hump (41%) and upward sloping of the nose (61%), three months post-rhinoplasty.

**Table 1: Comparison of Patients' Opinions**

Satisfaction Level	One Month After Rhinoplasty (%)	Three Months After Rhinoplasty (%)	P-value
Nasal Hump	25	41	0.003
Upward Sloping of the Nose	38	61	0.001
Nose Proportions	43	73	0.043

Finally, when comparing patient and surgeon opinions three months after rhinoplasty, the study found that surgeons showed higher satisfaction with the display of the middle-lower nose (78%) compared to patients (73%). However, patients reported lower general satisfaction (41%) compared to surgeons (61%). These findings provide valuable insights into the factors influencing patient and surgeon satisfaction with rhinoplasty outcomes at different time points after the procedure.

### Discussion

The present study examined the impact of various factors on patient and surgeon satisfaction with rhinoplasty outcomes at different time points post-surgery. Gender differences were noted in patient satisfaction with nostril outcomes one month after rhinoplasty, with 29% of females completely satisfied compared to 17% of males. Patients under 25 years old expressed higher satisfaction with nasal width (56%) and general satisfaction (50%) than older patients (32%) three months post-rhinoplasty.

Marital status influenced satisfaction levels, with single patients showing greater satisfaction (80%) with the display of the middle-lower nose than married patients (60%) three months after surgery. Educational level also played a role, as patients without a high school diploma reported higher satisfaction with various factors, including nasal hump, middle-lower nose display, nose proportions, and general satisfaction, one month post-rhinoplasty.

Surgeons displayed increased satisfaction (61%) three months post-surgery compared to one month (33%). Patients reported higher satisfaction levels three months post-rhinoplasty, particularly regarding nasal hump (41%) and upward sloping of the nose (61%). However, patients reported lower general satisfaction (41%) compared to surgeons (61%) three months after the procedure.

Recognizing the pivotal role of facial aesthetics, particularly the nose, in enhancing one's overall beauty is widely acknowledged. Cosmetic procedures, such as rhinoplasty, possess the potential to profoundly influence an individual's appearance and facial proportions. Among plastic surgeries, rhinoplasty stands out as one of the most frequently performed procedures. Interestingly, despite its popularity, rhinoplasty is frequently associated with lower levels of patient satisfaction in comparison to other cosmetic surgeries [4]. This becomes especially challenging in the context of revision rhinoplasty, where the primary objective is to address functional or structural issues arising from prior unsuccessful surgeries, thereby underscoring the importance of meeting patient expectations [5].

Assessing the success of any surgical procedure entails evaluating both qualitative and quantitative outcomes. In the field of plastic surgery, procedures are typically elective and mainly pursued for aesthetic reasons. Unlike certain medical treatments, there is no universally accepted standard for gauging surgical success [6]. Consequently, it becomes intricate to objectively compare the effectiveness of diverse surgical techniques and the skills of individual surgeons. Patient satisfaction following rhinoplasty is influenced by various factors, including age, gender, educational level, and marital status [7]. Additionally, individual traits associated with nasal aesthetics and proportions play a significant role as criteria for appraising the success of rhinoplasty [8]. Curiously, disparities in perceptions of nasal beauty and proportions can arise between patients and surgeons [7].

Salah *et al.* conducted research into post-rhinoplasty satisfaction and its impact on the quality of life of patients, discovering notably elevated levels of post-rhinoplasty satisfaction among patients [9]. Meanwhile, Yu *et al.* focused on evaluating the functional and aesthetic concerns of patients who underwent revision rhinoplasty, comparing these concerns with objective deformities identified by surgeons. Key concerns encompassed issues such as nasal asymmetry, respiratory difficulties at the nasal tip, and the sloping of the middle one-third of the nose [7]. Swami *et al.* explored the multifaceted factors influencing satisfaction with rhinoplasty, revealing a positive and substantial association between the inclination toward cosmetic surgery and an individual's cultural and social attitudes toward appearance. Conversely, this inclination exhibited a negative correlation with satisfaction regarding one's existing appearance, age, and body mass index [10]. In another study by Litner *et al.*, the impact of cosmetic facial surgery on patient satisfaction with their appearance and overall quality of life was scrutinized. Their findings demonstrated a significant enhancement in the quality of life following such surgeries. Furthermore, it was observed that men and women may possess distinct motivations and experiences concerning cosmetic procedures, reflecting varying effects on their quality of life [11].

### Conclusion

In conclusion, this study highlights notable variations in patient and surgeon satisfaction with rhinoplasty outcomes based on gender, age, marital status, and educational level. Female patients tend to be more satisfied with their nostrils, while younger individuals, especially those under 25, express greater contentment with nasal width and general satisfaction three months post-surgery. Single patients exhibit higher satisfaction with middle-lower nose display. Patients without a high school diploma report higher satisfaction one month after

rhinoplasty, particularly regarding nasal hump, middle-lower nose display, nose proportions, and general satisfaction. Surgeon satisfaction increases after three months, while patients report elevated satisfaction, particularly regarding aesthetic factors, but lower general satisfaction than surgeons. These findings underscore the importance of demographics and time in shaping post-rhinoplasty satisfaction and highlight the need for tailored patient care strategies to enhance overall experiences.

**Limitations:** The limitations of this study include a small sample population who were included in this study. The findings of this study cannot be generalized for a larger sample population. Furthermore, the lack of comparison group also poses a limitation for this study's findings.

**Recommendations:** Surgeons should consider demographic factors when discussing rhinoplasty outcomes with patients. Preoperative counseling and managing expectations can improve patient satisfaction. Further research can explore additional variables influencing rhinoplasty satisfaction.

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