Outcome of Patients Undergoing Nasal Plastic Surgery in KSA: A Cross-Sectional Study

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Abstract: Objective: This research aims to determine the Outcome of Patients Undergoing Nasal Plastic Surgery in KSA.
Methods: This study will employ a cross-sectional design to assess the outcomes of patients who have undergone nasal plastic surgery (rhinoplasty) in Saudi Arabia. The study will collect data from patients at a single time to evaluate their post-surgical satisfaction, complications, and quality of life.
Results: The study included 290 participants. The study included 290 participants. The most frequent gender among them was female (n= 196, 58.2%) and male (n= 121, 41.7%). The most frequent age among study participants was 36-40 years (n= 84, 29%) followed by 25-30 years (n= 64, 22.1%) then more than 40 years and 31-35 years (n=48,16.6%) at least less than 25 years (n=38, 13.1%). The most frequent marital status among study participants was married (n= 129, 44.4%), followed by divorced (n= 87, 30%%), then single (n=87,18.9%). The participants were asked if they had the surgery, participants most of them didn't. Their answers were no (n=181, 62.4%) and yes (n=109, 37.5%). The participants were asked about the reason for undergoing rhinoplasty. The responses were the most frequent reason was for beauty (n=170, 58.6%), followed by insisting on friends and family (n=66, 22.8%), then to show off (n=29, 10%), other reasons (n=15, 5.2%) and to catch up with the mode (n=10, 3.4%).
Conclusion:

This study reveals that rhinoplasty is a prevalent procedure in Saudi Arabia, primarily driven by patients' desire for aesthetic enhancement. These results emphasize the importance of thorough medical evaluations and psychological consultations before surgery to ensure alignment between expectations and potential outcomes.

1. Introduction

Many people look at the nose as a measure of attractiveness because of how prominent it is on the face. A person's sense of self-esteem, self-confidence, and self-worth are strongly related to their facial attractiveness. Nose structural abnormalities, whether due to trauma, surgery, or natural causes, may have far-reaching effects on a person's mental health [1]. Cosmetic rhinoplasty allows patients to change the shape or size of the nose while maintaining or improving the nasal airway, making it an option for those who are unhappy with their nose's look [2]. The psychological and aesthetic impacts of rhinoplasty and revision rhinoplasty, two types of face cosmetic procedures, are substantial [1].

Thirty percent of Saudi Arabia's cosmetic surgery treatments are rhinoplasty surgeries, which has been on the rise in recent years. A desire to fix a dysmorphic face feature is one reason for this upsurge, but social media's portrayal of beauty standards is having a bigger impact [3]. According to reports, the amount of time spent on social media consuming content about cosmetic surgery and the portrayal of ideal features has a significant impact on people's decision to have such an operation [4].

Rhinoplasty, and particularly reduction rhinoplasty, carries with it the usual set of dangers. There are a lot of potential short- and long-term issues that might cause cosmetic dissatisfaction, patient unhappiness, and even functional issues, while serious consequences are uncommon [5]. There are two types of rhinoplasty complications: aesthetic, which may need a second procedure, and non-aesthetic, which might cause problems with breathing (as reported by 70% of patients undergoing a second procedure). Furthermore, numbness, atrophy, fibrosis, and the development of cysts from displaced mucosa or subcutaneous granulomas may result from harm to the skin and soft tissues. Despite their rarity, infections pose a serious risk of toxic shock syndrome, which may be fatal. Combining sinus surgery with rhinoplasty increases the risk [7-10]. When considering rhinoplasty, patients should be cognizant of the potential for problems.

2. METHODS

Study design

This study will employ a cross-sectional design to assess the outcomes of patients who have undergone nasal plastic surgery (rhinoplasty) in Saudi Arabia. The study will involve collecting data from patients at a single point in time to evaluate their post-surgical satisfaction, complications, and quality of life.

Study approach

The study will be conducted in multiple plastic surgery clinics and hospitals across major cities in Saudi Arabia, including Riyadh, Jeddah, and Dammam. Both public and private healthcare institutions specializing in nasal plastic surgery will be included.

Study population

The target population will consist of male and female patients aged 18 and older who have undergone rhinoplasty within the last 12 months in Saudi Arabia.

Study sample

A total sample size of approximately 300 patients will be targeted to ensure adequate representation and statistical power. A convenience sampling method will be used to recruit patients from the participating clinics and hospitals. Patients will be invited to participate in the study during follow-up appointments or through direct contact via hospital records.

Study tool

For the current study, a questionnaire was adopted for data collection, which was also categorized as a study tool.

Data collection

Data will be collected through structured questionnaires administered either in person or online. The questionnaires will include sections on demographic information, satisfaction with aesthetic and functional outcomes, postoperative complications, and changes in quality of life after surgery.

Data analysis

Descriptive statistics (means, medians, frequencies) will summarize patient demographics, satisfaction levels, and complication rates. Inferential statistics, such as chi-square tests for categorical variables and t-tests for continuous variables, will be applied to examine associations between demographic factors and surgical outcomes. Multiple regression analysis will be used to identify patient satisfaction and quality of life predictors. Statistical significance will be set at $p < 0.05$.

Ethical considerations

Ethical approval will be obtained from the Institutional Review Board (IRB) of each participating hospital or clinic before data collection begins. Informed consent will be obtained from all participants, and they will be assured of the confidentiality and anonymity of their responses. Participation will be voluntary, and patients will have the right to withdraw from the study at any time without consequence. Data will be securely stored and only accessible to authorized research personnel.

3. RESULTS

The study included 290 participants. The most frequent gender among them was female (n= 196, 58.2%) and male (n= 121, 41.7%). Figure 1 shows the gender distribution among study participants. The most frequent age among study participants was 36-40 years (n= 84, 29%) followed by 25-30 years (n= 64, 22.1%) then more than 40 years and 31-35 years (n=48,16.6%) at least less than 25 years (n=38, 13.1%). Figure 2 shows the age distribution among study participants. The most frequent marital status among study participants was married (n= 129, 44.4%), followed by divorced (n= 87, 30%%), then single (n=87,18.9 Figure 3 shows the distribution of BMI among study participants.

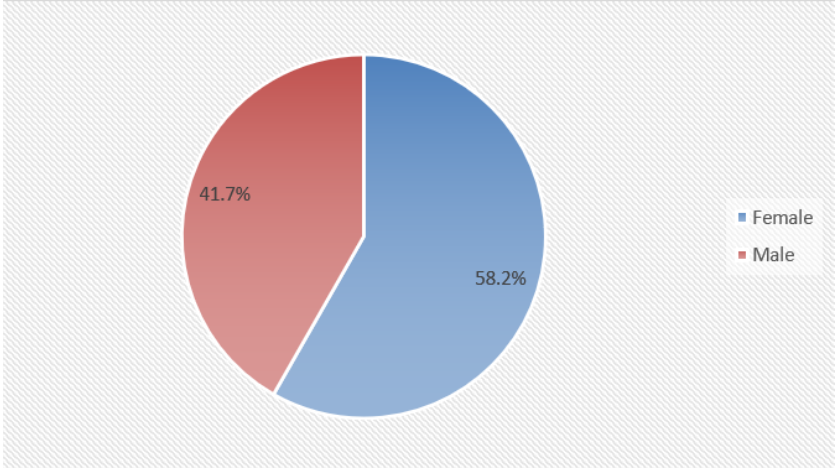

Figure 1: Gender distribution among study participants

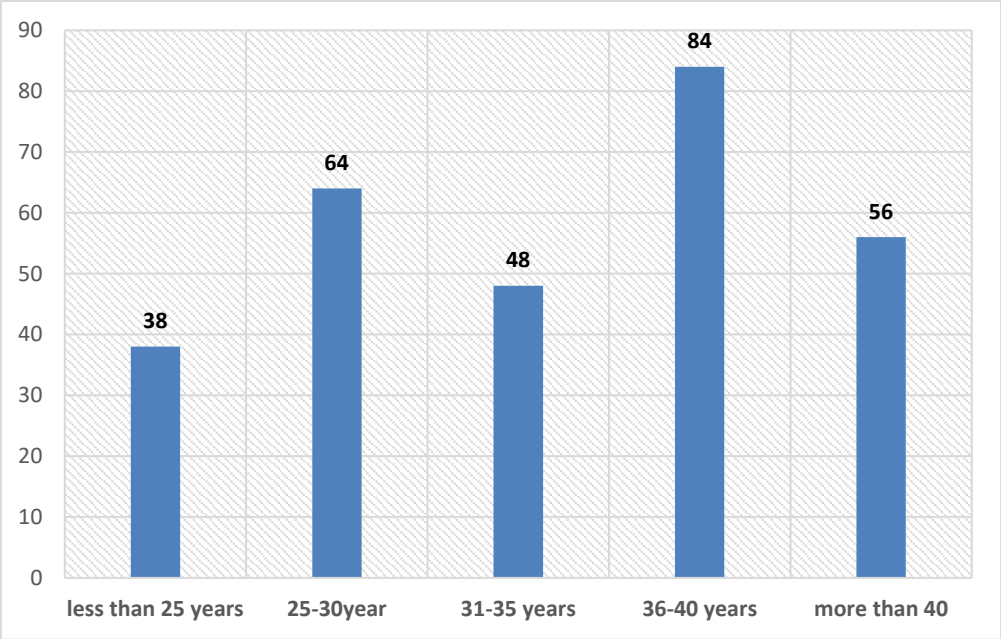

Figure 2: Age distribution among study participants

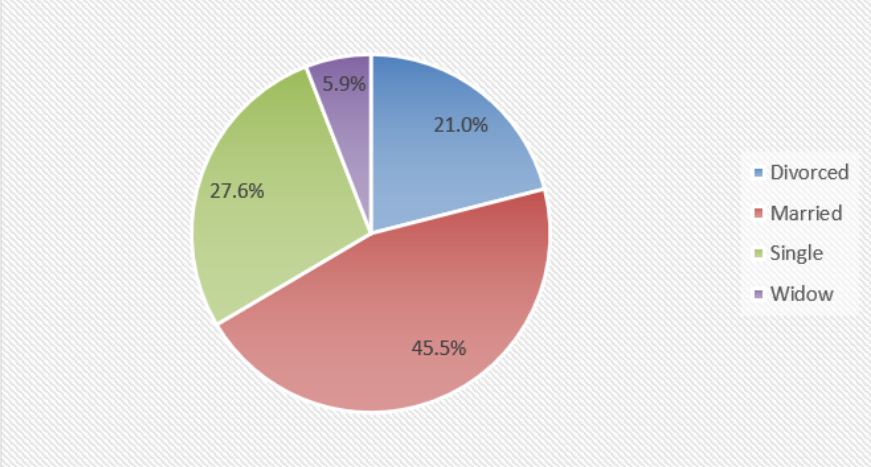

Figure 3: Marital status distribution among study participants

The participants were asked if they had the surgery, participants most of them didn't. Their answers were no (n=181, 62.4%) and yes (n=109, 37.5%). Figure 4 shows whether the participants had the surgery or not.

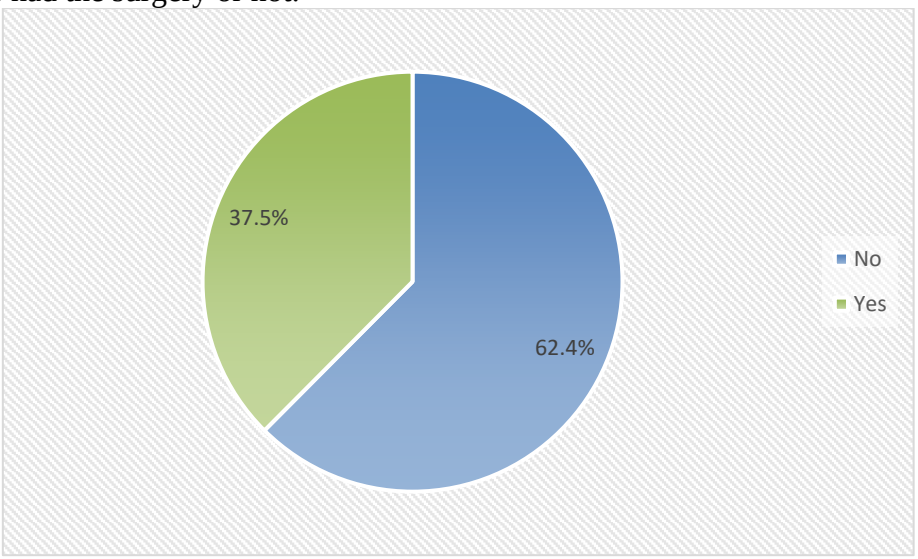

Figure 4: Had-surgery distribution among study participants

Participants were asked to assess their Evaluation of Rhinoplasty Outcomes. Their responses and results are presented in Table 1.

Table 1: Evaluation of Rhinoplasty Outcomes

	Not satisfied at all	slightly satisfied	neutral	somewhat satisfied	satisfied	completely satisfied
Satisfaction score	10 (3.4%)	31 (10.7%)	21 (7.2%)	3 (1%)	134 (65.5%)	91 (31.4%)
Breathing ability score	11 (3.8%)	15 (5.2%)	8 (2.8%)	3 (1%)	175 (60.3%)	78 (26.9%)
Friends-like nose	4 (1.4%)	14 (4.8%)	26 (9%)	2 (0.7%)	96 (33.1%)	173 (59.7%)
Social activity limit	14 (4.8%)	26 (9%)	20 (6.9%)	2 (0.7%)	77 (26.6%)	151 (52.1%)
Confidence score	8 (2.8%)	4 (1.4%)	18 (6.2%)	5 (1.7%)	116 (40%)	143 (49.3%)

The participants were asked about the reason for undergoing rhinoplasty. The responses were the most frequent reason was for beauty (n=170, 58.6%), followed by insisting on friends and family (n=66, 22.8%), then to show off (n=29, 10%), other reasons (n=15, 5.2%) and to catch up with the mode (n=10, 3.4%).

4. DISCUSSION

In 2022, the United States (US) saw around 45,000 rhinoplasties, placing it third in terms of popularity among face cosmetic surgery procedures, after blepharoplasty and rhytidectomy (2022 ASPS Statistics). Philosophically and technically, rhinoplasty has come a long way from its first 1887 description by John Roe. There is a vast range of current reasons for rhinoplasty, each requiring a unique set of methods [11]. These include improving nasal airflow, enhancing aesthetics, affirming gender, and reconstructing after cancer or damage. Reduction techniques were the mainstay of early rhinoplasty, which was purely cosmetic. A more balanced method of the procedure, including cartilage transplant and suture improvement, emerged as knowledge of the nose anatomy increased.

Jacques Joseph, Samuel Fomon, Jack Sheen, and Maurice Cottle were among the first rhinoplasty surgeons, and their methods are being used, albeit to different extents, today. German surgeon Joseph, who worked in the 1900s, was an outspoken supporter of the psychological benefits of cosmetic surgery and an advocate for nasal septum correction and dorsal hump reduction [12]. In 1954, Cottle established the American Rhinological Society. He is known for developing the dorsal preservation method to reduce hump size and for acknowledging the importance of the nasal septum in determining the external nose size and shape. “As the septum goes, so goes the nose [13].” Furthermore, in 1964, with Goldman and Fomon, Cottle co-founded the American Academy of Facial Plastic and Reconstructive Surgery. Having started his work as an anatomist, Fomon took his knowledge and enthusiasm for teaching to the field of face surgery. He later served as an officer in the United States Army Medical Corps during World War I. In the middle of the twentieth century, he made rhinoplasty theory and practice instruction widely accessible in the US [14]. Though he is most recognized for his 1978 first edition of Aesthetic Rhinoplasty, Sheen’s ideas paved the way for revision rhinoplasty and non-Caucasian/ethnic rhinoplasty. His 1984 description of the spreader graft method [15-16] has been very beneficial to the latter.

With the development of rhinoplasty procedures came a deeper understanding of the complicated relationship between the little space within the nose and factors such as psychology, respiration, scent, and aesthetics. A negative result in these areas might affect the patient’s view of the outcome, whilst a positive one can have several positive effects. The stakes are quite high when trying to make major changes to the nose since it is the face’s most prominent feature and because its symmetry and proportions are closely related to how attractive a person’s face is [17]. Finding consistent results can be challenging, even for highly experienced surgeons, due to the wide range of nasal appearances across genders, ethnicities,

ages, and trauma/prior surgery-related anatomical variations. Additionally, there are countless described surgical techniques, and each patient has their own preferences. Nose form changes throughout time, particularly after surgery, so it's more art than science to try to foretell how a nose will look in 20 years. It is for this reason that the wisdom of a rhinoplasty surgeon's abilities is supposedly best realized just before retirement.

5. CONCLUSION

This study reveals that rhinoplasty is a prevalent procedure in Saudi Arabia, primarily driven by patients' desire for aesthetic enhancement. These results emphasize the importance of thorough medical evaluations and psychological consultations before surgery to ensure alignment between expectations and potential outcomes

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