

Original Article

Quality of Life After Rhinoplasty in Adult Population of an Urban Setting

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Abstract

Objective: To determine the relationship between Rhinoplasty and quality of life (QOL) and its association with gender.

Methods: This cross-sectional study was carried out on apparently healthy individuals who willingly opted for nose job and gave permissions to be enrolled in the study. Interviews were also conducted with the study participants.

Results: Our study included a total of 62 cases of Rhinoplasty of which 31 were males and 31 were females. All the cases (100%) were satisfied with their sense of smell. Few females (35.4%) as compared to 83.8% males were satisfied with overall attractiveness and symmetry of their nose after Rhinoplasty, 41.9% females applied makeup to improve the appearance of their nose, 74.2% females as compared to 87.1% males were satisfied with breathing during routine tasks and exercise, 29% females complained of irritation and nasal obstruction whereas the 19.4% males had same complaints. Only 3.3% females had complaints of anxiety and depression after Rhinoplasty. A total of 80.6% females and 93.5% males reported an improvement in their QOL after Rhinoplasty.

Conclusion: Striking variations in some factors affecting QOL after rhinoplasty in each gender was reported with the greatest difference being in satisfaction with post rhinoplasty nasal appearance. Satisfaction about the overall attractiveness of nose was much higher in men than in women.

Keywords: Rhinoplasty, quality of life, nasal irritation, congestion, breathing, nose appearance,

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Introduction

Rhinoplasty is procedure of plastic surgery being used to reconstruct and correct functions, reinstating and aesthetic enhancement of nose by addressing nasal traumas like penetration, bluntness and blasting, respiratory impediment, congenital defect or a failed Rhinoplasty earlier.¹ Rhinoplastic surgeries are of two types, closed Rhinoplasty and open Rhinoplasty. Surgeon in

open Rhinoplasty creates a minor incision in the columella amongst both nostrils followed by some supplementary incisions inside the nose.² Surgeon in closed Rhinoplasty achieves each technical scratch in the nose without cutting columella, though columellar incision is mandatory. Various procedural and technical approaches of closed Rhinoplasty and open Rhinoplasty are alike.³

This surgical intervention enhances facial harmony by correcting undesirable nasal proportions⁴, any congenital birth defects⁵, deformities due to trauma⁶ and accidents or any impairment in breathing caused by defective nasal anatomy⁷. The procedure is well-sought for in both men and women. In a retrospective study, done by Haldun O and Kamburoğlu M.D, conducted in Ankara, Turkey, to observe the differences among adolescent boys and girls after cosmetic surgery and presented statistically insignificant difference in the level of satisfaction post-operatively among both genders regarding body image, life satisfaction and self-esteem.⁸

Another study on comparison of life quality after rhinoplastic surgeries presented significant improvements after each surgical interventions where there was no effect on therapeutic transformation in various surgeries on QOL of patients.⁹ A German study conducted in 2011 on QOL before and after Rhinoplasty and septoplasty in University of Heidelberg, which proposed that the studies on rhinologic QOL have insufficient evidence in accordance to laid down by Oxford Centre for Evidenced-Based Medicine. Though instrument used for studies on QOL is well established in English language but requires validation after translation in other languages. Otherwise a new questionnaire must prepared and validated before use.¹⁰ In USA, a study on the topic 'Subjective and Objective improvement in breathing after Rhinoplasty' was done by Richard A. Zoumalan, MD and Minas Constantnides MD, showing that patients with preoperative severe obstruction have the best overall improvement, whether measured subjectively or objectively¹¹. Another US based research was done in 2010 by the authors Saleh, Younes and Friedman, under the title 'Cosmetics and function: quality-of-life changes after Rhinoplasty surgery' concluded that among 370 patients invited, 126 participated and 113 provided completed questionnaires. It showed that modern rhinoplasty techniques that depend on a strong structural framework of grafts compared with the traditional reduction Rhinoplasty techniques significantly improve patient QOL in regard to nose function and appearance¹². Research done on 'Analysis of Outcomes After Functional Rhinoplasty Using a

Disease-Specific Quality-of-Life Instrument' by Sam and Most, in USA, in the year 2006 said that, forty-one patients completed preoperative and postoperative evaluations. No complications occurred. Functional rhinoplasty techniques are effective in improving nasal airway function as measured by a patient-based, disease-specific, quality-of-life instrument.¹³ In Nepal, Psychological impact of external nasal deformities prior and after Rhinoplasty was studied by Narmaya Thapa and Bibhu Pardhan. The study concluded a significant psychological impact due to external nasal deformity.¹⁴

Another Turkish study conducted in 2013 on assessment of QOL after septorhinoplasty among patients using two types of instruments and presented improved life quality in adult patients.¹⁵ A Research conducted in United States entitled "Rhinoplasty: An outcome research" by Meningaud et.al, reported that regardless of the indication (cosmetic, posttraumatic, or functional) of Rhinoplasty, the scores of outcome evaluation increased significantly.¹⁶ Ramin Zojaji, *et.al*, in Iran studied prevalence of personality abnormalities among patients intending Rhinoplasty & revealed that recognition of patients' personality may be main characteristic which manipulates level of satisfaction after nose plastic surgery.¹⁷ Another Iranian research conducted by Reza Rastmanesh in 2009 to compare cosmetic Rhinoplasty and body dissatisfaction in relation to veil-practicing Muslim women. She concluded that strict veil-practicing women had a greater level of self-esteem, body satisfaction while stringent religious practices showed a high level of feeling of protection on psychological health.¹⁸

Clearly the demand of Rhinoplasty in people around the globe is very high. However, the purpose behind this procedure in each gender is not generally the same. Therefore this study will help us draw together facts and figures reflecting the influence of a changed facial profile on different aspects of an individual's life, ultimately giving us an insight to the popularity and consequences of Rhinoplasty and how different they are for each sex. Our study aims to assess and compare the QOL in men and women after Rhinoplasty and to draw a reasonable comparison on how differently this procedure might affect

QOL of each gender.

Materials and Methods

A cross-sectional study was carried out in a public sector hospital and completed in a year. Face to face interviews were conducted with 62 patients who underwent "Rhinoplasty" in a healthcare setting. About 31 of the interviewed patients were females and 31 were males on the basis of a non-probability convenience sampling to select the study subjects who were apparently healthy and gave informed consent for participation in our research. Adults undergoing Rhinoplasty between 18 to 50 years of age were included. All the cases of Rhinoplasty below or above this age limit were excluded. Adults undergoing nasal surgeries other than Rhinoplasty were excluded and individuals having a psychological state that prevented them from giving a proper description of their QOL were excluded. These two points were confirmed by medical records and specialists of respective fields. Quality of Life was defined according to The World Health Organization QOL (WHOQ-OL). Permissions were granted to conduct the study. A questionnaire with all relevant inquiries and interview questions were given to the selected cases. The data collected through pre tested, semi structured questionnaires. The data were statistically analyzed using SPSS-16 and results compiled to report frequencies and percentages.

Results

A total of 62 cases of Rhinoplasty consisting of males and 31 females were included in this study. All the cases (100%) were satisfied with their sense of smell. 35.4% females as compared to 83.8% males were satisfied with overall attractiveness and symmetry of their nose after Rhinoplasty. 41.9% females applied makeup to improve the appearance of their nose whereas none of the males used any kind of makeup or device after Rhinoplasty. 74.2% females as compared to 87.1% males were satisfied with breathing during routine tasks and exercise after Rhinoplasty. After Rhinoplasty, 29% females complained of irritation and nasal obstruction whereas the percentage of males with same complaints was only 19.4%. Only 3.3% females had complaints of anxiety and depression after Rhinoplasty. 77.4% females as compared to

96.7% males felt better after Rhinoplasty. 90.1% females and 93.5% males were satisfied with their overall health after Rhinoplasty. In comparison to 80.6% females, 93.5% males reported an improvement in their QOL after Rhinoplasty. Quality of Life improved in 80.6% females after Rhinoplasty while 93.5% males have improved QOL after Rhinoplasty indicating slight differences in satisfaction levels between the two genders after Rhinoplasty (**Fig-1**). Only 35.4% females were satisfied with attractiveness and symmetry of nose after Rhinoplasty as compared to 83.8% males showing a greater disparity between the satisfaction levels of both genders in respect to facial appearance (**Fig-2**). Around 29% females as compared to 19.4% males complained of nasal irritation and obstruction after Rhinoplasty showing the majority of each gender was satisfied as shown in (**Fig-3**). Almost equally, 90.1% females as compared to 93.5% males were satisfied with overall health after Rhinoplasty showing better health improvements after Rhinoplasty in both genders with the improvements inclined more towards the male gender (**Fig-4**). Only 3.3% females reported complaints of anxiety and depression after Rhinoplasty while none of the male counterparts did, showing a very low incidence of these complaints after the procedure (**Fig-5**).

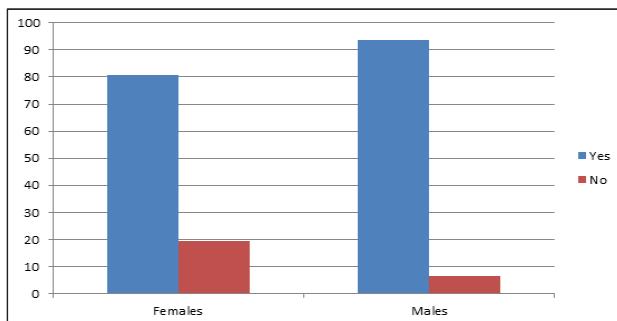


Fig-1: Quality of life improved after rhinoplasty.

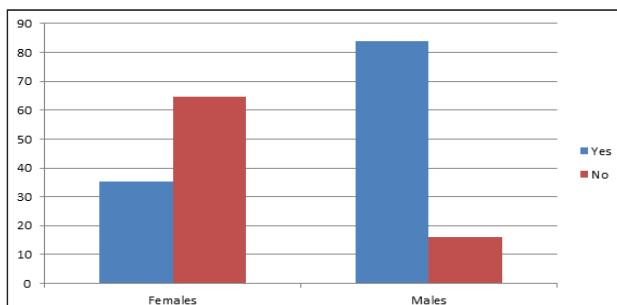


Fig-2: Satisfaction with overall attractiveness and symmetry of nose after rhinoplasty.

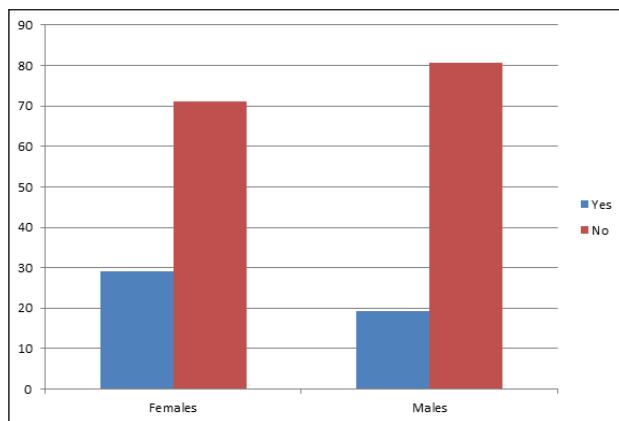


Fig-3: Complaints of nasal irritation and obstruction after rhinoplasty.

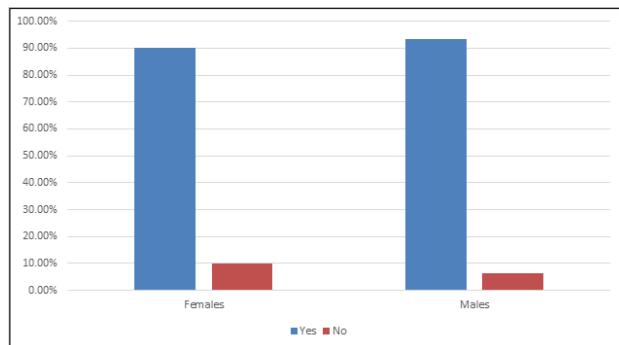


Fig-4: Satisfied with overall health after rhinoplasty

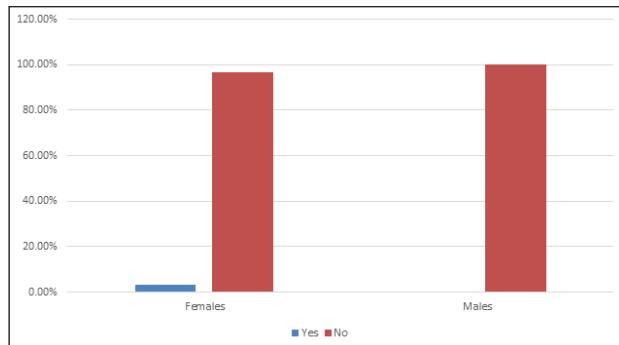


Fig-5: Complaints of anxiety and depression after Rhinoplasty

Discussion

In the available literature, the main focus of study was to document QOL after Rhinoplasty but fails to explore the potential relationship of QOL and satisfaction with the subject's gender. In our study, keeping this dearth of research data available in consideration, we have focused not only on the post-operative effect on QOL, but also made the analysis gender based. We have

Table-1: Frequency table of recorded variables

Gender	Questions	Females	Males
1	Satisfied with sense of smell	100%	100%
2	Satisfied with overall attractiveness of nose	35.4%	83.8%
3	Applied makeup to cover nose after Rhinoplasty	41.9%	0%
4	Satisfied with breathing during routine tasks	74.2%	87.1%
5	Satisfied with breathing during exercise	78.5%	79.7%
6	Complaints of irritation and obstruction	29%	19.4%
7	Complaints of congestion	29 %	19.4%
8	Complaints of anxiety and depression	3.3%	0%
9	Felt better after Rhinoplasty	77.4 %	96.7%
10	Satisfied with overall health	90.1%	93.5%
11	Improvement in QOL	80.6%	93.5%

found that not only is there a change in QOL of the patients who undergo this surgery, but also that this change varies according the patient's gender, with different rates of satisfaction found in women and men. Women were generally found to be unsatisfied with the overall symmetry and attractiveness of their nose. The results showed that only 35.4% females were satisfied compared to 83.8% males. High rates of satisfaction in men were consistent with findings of a study named 'Evaluate Pre-surgical and Post surgical Status of Male Cosmetic Surgery Patient's'¹⁹ that showed all patients were satisfied.

The fact that more women were unsatisfied with their facial appearance correlates to results of a study that researched on psychological study of facelift patients where all participants were females and 54% displayed short-term psychological disturbance, 30% transient depression and 28% improved self-esteem after the procedure.²⁰ The main common factor in both surgeries in studies (i.e. in our research and the research mentioned above) is that the procedures are done on the face and in both instances, women were generally unsatisfied. Our study showed that the majority of patients did not have any nasal obstructions postoperatively; only 29% females versus 19.4% reported such problems. The results matched a study done in Washington, which also showed a significant improvement in mean Nasal

Obstruction Symptoms Evaluation score.²¹ A general improvement was reported by 77.4% females and 96.7% males who participated in this study in wellbeing after Rhinoplasty. The fact that majority of patients are generally content was supported by a study done in UK that showed a postoperative satisfaction rate of 90%.²²

Likewise, 90.1% females versus 93.5% males reported good health postoperatively, showing that general health is not affected adversely by Rhinoplasty. Coherence of results was shown by a study published in 2001 that concluded Rhinoplasty has a very significant patient benefit.²³ The procedure was shown to have a positive psychological impact, with none of the males and only 3.3% females saying they suffered from anxiety and depression after the operation. A similar conclusion was derived from a study in London, UK, showing marked reduction of psychiatric symptom scores, with the control group showing no change, proving that the reduction was due to Rhinoplasty.²⁴

The present data showed that 100% of the female and 100% of the male participants were satisfied with their sense of smell after Rhinoplasty, showing lack of an adverse effect of the procedure on olfaction. Parallel to our findings, are the findings of a study done in Zurich, Switzerland in 2003²⁵ that concluded only one patient (2.6% of the total) developed hyposmia after Rhinoplasty and no patient developed anosmia.

A positive correlation was found between the facial appearance and the QOL after the surgery. Our results showed that only 35.4% females were satisfied with their facial profile and the percentage of women who reported an improved QOL after Rhinoplasty was 80.6%, showing both these variables are associated. In the studied male patients both variables had a higher value, with 83.8% showing satisfaction with their facial appearance after Rhinoplasty and 93.5% showing improved QOL, again confirming the interconnection between facial appearance and QOL. This data is backed up by the findings of a research published in 2007,²⁶ also showing a positive correlation between satisfaction with facial appearance and QOL among patients with bilateral cleft lip and palate. Keeping these results as basis, and also the dire absence of any

substantial study in Pakistan that would compare QOL between genders after rhinoplasty, it is suggested that there is need for furthering study on this topic by involving an extended study population. A country wide study would further solidify the presence of difference in outcomes of rhinoplasty in men and women.

Conclusion

The study showed that while satisfaction rate with regards to factors such as functional sense of smell, absence of any obstruction and presence of ease in breathing was comparable in both genders, it very well highlighted that satisfaction about the overall attractiveness of nose was highly different in men and women). To back up this data, our study also showed that only women used makeup or other devices to alter their facial appearance. Also notable is the result that more men than women felt generally better after rhinoplasty and no depression was complained of by men but the few female participants did complain of depression. Our research showed that improvement in QOL was different in both genders and the greatest factor that contributed to this discrepancy was the difference in satisfaction with post operational facial appearance.

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