

DEPRESSION AND ANXIETY AMONG PATIENTS SEEKING RHINOPLASTY

Sikandar Ali Khan, Ghazanfar Ali, Maqbool Raza, Muhammad Tariq*, Imran Adeel**, Ahsan Masood Butt

Combined Military Hospital Multan/National University of Medical Sciences (NUMS) Pakistan, *Combined Military Hospital Jhelum/National University of Medical Sciences (NUMS) Pakistan, **Bahawalpur Victoria Hospital, Bahawalpur Pakistan

ABSTRACT

Objective: To evaluate the presence and relation of depression and anxiety among patients seeking rhinoplasty

Study Design: A cross-sectional study.

Place and Duration of Study: Departments of Psychiatry, department of Plastic Surgery and ENT, Combined Military Hospital Multan, from Jan 2019 to Mar 2020.

Methodology: A total of 102 patients were recruited that reported to Plastic surgery and ENT unit. Patients were divided equally in two groups of 51 each. One group included patients seeking rhinoplasty while other group included those patients that reported in Plastic surgery and ENT unit for reasons other than rhinoplasty. Symptom were assessed using Beck Depressive Inventory for depression and Beck Anxiety Inventory for anxiety.

Results: A total of 102 participants were included in the study, of these 51 were patients seeking rhinoplasty and 51 were controls. Significant correlation exist between anxiety and depression ($p < 0.00$).

Conclusion: There is a very high frequency of anxiety and depression among patients seeking Rhinoplasty along with significant positive correlation.

Keywords: Anxiety, Depression, Rhinoplasty.

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INTRODUCTION

The desire to strive for facial beauty is not surprising that cosmetic and functional rhino/septoplasty (RSP) ranks among the most commonly performed surgical procedures all over the world.¹ Psychological impact is more profound to rhinoplasty than it is to other facial plastic surgical procedures, because patients seeking other plastic surgery procedures are simply in pursuit of a return to a previously favorable self-image on the other hand rhinoplasty patients have been living with the insecurity of their nose as a formative part of their body image.² These patients are more apprehensive about the options and proposals given by plastic surgeons as they often have a preferred self-image in their mind but are unable describe that image,³ Presence of Psychiatric disorder is one of the predictors of poor outcome in cosmetic plastic surgery patients.⁴ In today's era media projects ideal physical images that leads to discord between actual physical appearance of individual and mental ideal image consequently it leads to dissatisfaction and request for physical change rather than change in mental image.⁵ Commonly people seek rhinoplasty for uplift of their facial features in order to reduce their distress and discord between actual physical appearance and ideal mental image.⁶

Dissatisfaction with body image can lead to depression,⁷ anxiety and poor psychological adaptation to changes brought by surgery.⁸ Studies have shown that even a subtle change in appearance of a person can influence others behaviors. This interplay between perceiver and patient leads to incorporation of perceivers expectations into mental image which if not in accord with actual physical appearance it will lead to negative impact on patient in the form of anxiety, depression and social avoidance.⁹

This study was planned to assess relationship between presence of depression and anxiety among patients seeking cosmetic surgical procedure of rhinoplasty. Surgeons are not Psychiatrist or psychologists therefore results of this article will help surgeons to appreciate the psychiatric aspect of cosmetic surgery and will help in early detection of any psychiatric illness to facilitate appropriate management and better outcome.

METHODOLOGY

This cross-sectional study was conducted at the department of Psychiatry, Combined Military Hospital Multan in liaison with the department of plastic surgery and ENT department from January 2019 to March 2020. A sample size of 102 was estimated via EpiTools Epidemiological Calculator while keeping level of significance 5%, confidence level 95%, estimated true

Correspondence: Dr Sikandar Ali Khan, Department of Psychiatry, Combined Military Hospital, Multan Pakistan

proportion 63% based on the observation made in the study by Marx, and 5% of absolute precision.¹⁰ Total number of sample size was equally matched and divided into two groups of fifty one. One group of fifty one participants represented those who were seeking rhinoplasty as cosmetic surgery. Second group of fifty one participants included those who were getting consultation from surgeon for other reasons. Both groups of 51 were assessed for anxiety and/or depression based on the diagnostic criteria of International Classification of Diseases version 10 after approval from the hospital ethical committee. All inductees were interviewed after the informed written consent and their confidentiality was ensured. Individuals with other disabling diseases and past psychiatric history were not included.

Demographic details of the inductees were documented. Detailed assessment and symptom were assessed using Beck Depressive Inventory (BDI) for depression and Beck Anxiety Inventory (BAI) for anxiety.^{11,12} BDI consists of 21 questions, each with four possible answers that are assigned a score ranging from 0-3. Higher scores indicate more severe symptoms. Total score is obtained by adding individual scores of 21 items and total score ranges from 0-63. The cut off score for presence of symptoms is.⁹ It may be noted that BDI is for detecting depressive symptoms and not for diagnosing depression. BAI consists of 21 items, scored on Likert-type scale from 0-3 where 0 is considered negative, 1 is judged as mild, 2 is deemed moderate, and 3 is considered severe. The cut off score for presence of symptoms is.¹⁵ Descriptive statistics like mean with standard deviation was calculated for age. Frequency along with percentages was calculated for socio-demographic variables.

Data analysis was performed using Statistical Package for Social Sciences (SPSS) version 20. The data were described as numbers and percentages. For association and comparison Pearson's chi square test was used. All the inferences were made at 95% confidence interval and *p*-values of ≤0.05 were considered significant.

RESULTS

A total of 102 participants were included in the study, of these 51 were patients seeking rhinoplasty

and 51 were controls. The mean ages were 25.6 ± 6.59 years and 28.2 ± 7.79 years for rhinoplasty group and control group respectively. Most of the participants in both groups were single, educational status and employment status is shown in Table-I. Anxiety was present in 25 (48%) patients of rhinoplasty group as compared to 13 (28%) patients of control group as shown on figure. Depression was present in 15 (30%) patients of rhinoplasty group as compared to 10 (19%) patients of control group (Table-I).

Table-I: Distribution of demographic variables.

	Rhinoplasty Group n=51(%)	Control Group n=51(%)
Age (Mean ± SD)	25.6 ± 6.59	28.2 ± 7.79
Gender		
Male	5 (10.1)	10 (19.3)
Female	46 (89.8)	41 (80.6)
Marital Status		
Single	42 (81.7)	36 (70.4)
Married	7 (14.5)	14 (27.2)
Divorced	2 (3.6)	1 (2.2)
Educational Status		
Primary	5 (9.4)	4 (8.1)
Secondary	9 (18.2)	11 (21.5)
Under graduate	29 (57.3)	34 (68.3)
Graduate	8 (14.8)	2 (1.8)
Occupational Status		
Employed	11 (21.2)	15 (29.6)
Un-employed	40 (78.7)	36 (73.3)
Mental Health		
Anxiety	25 (48)	13 (25)
Depression	15 (30)	10 (19)

After evaluating statistical correlation of anxiety and depression in rhinoplasty and control group, a significant correlation was found with both anxiety and depression (*p*≤0.001) (Table-II) on the other hand educational status (*p*=0.23) and marital status (*p*=0.193) was not found to be significantly correlated (Table-III).

Table-II: Anxiety and depression with relation to rhinoplasty and control groups.

Group	Anxiety n (%)	Depression n (%)	<i>p</i> -value
Rhinoplasty Group	25 (48)	15 (30)	<0.001
Control Group	13 (25)	10 (19)	

Table-III: Educational status and marital status with relation to Rhinoplasty with Control group.

Group	Educational Status, n (%)				<i>p</i> -value	Marital Status, n (%)			<i>p</i> -value
	Primary	Secondary	Under Graduate	Graduate		Single	Married	Divorced/Widow	
Rhinoplasty group	5 (9.4)	9 (18.2)	29 (57.3)	8 (14.8)	0.230	42 (81.7)	7 (14.5)	2 (3.6)	0.193
Control group	4 (8.1)	11 (21.5)	34 (68.3)	2 (1.8)		36 (70.4)	14 (27.2)	1 (1.2)	

DISCUSSION

This study was done to highlight the presence of Anxiety and Depression that is present in significant number of patients who seek Rhinoplasty. While devising a management plan for those seeking rhinoplasty it is important to incorporate thorough assessment of mental health as it has lasting impact on the outcome of surgery.¹³

Results of this study are consistent with other studies as majority of patients seeking rhinoplasty were young, single females. Similar results were observed in studies done by Abbas,¹⁴ de Brito,¹⁵ and Bouman,¹⁶ in which there was higher prevalence of females seeking rhinoplasty as they are preoccupied with physical appearance of their breast, hip with particular focus on skin tone, color, hairs or shape of nose,¹⁷ as compared to males who are more concerned about their body hairs, genital and height.¹⁸ In this study 50% of females were employed as compared to the study done by Aguila in which 76% of the females were employed this difference is indicative of cultural difference.¹⁹

Subjective distress and impairment of psychosocial functioning due to physical appearance warrants psychological evaluation of patients seeking rhinoplasty.²⁰ These patients are depressed, anxious and constantly remain preoccupied with the physical image that is not in accordance with the mental image of their body.²¹ Aguila in her study reported that 45% of patients seeking rhinoplasty had depression while 92% had average anxiety as it can be seen in this study where number of patients having anxiety is higher than those who exhibited depression.¹⁸ Similarly Kucur *et al* has observed that anxiety and depression scores among patients seeking rhinoplasty were higher than control group.²² Results of this study also show that Anxiety was 48% while Depression was 30% in patients seeking rhinoplasty as compared to control group where anxiety was 25% and depression in 19% of patients, but contrary to these results Benjamin Jane in their study have shown higher prevalence of depression (50.6%) as compared to anxiety (32.9) among patients undergoing cosmetic surgery.²³

In the study by Ghahremani *et al*, it was observed that significant correlation was found among age, gender, marital status and job and that complaints of anxiety and depression was higher among female patients seeking rhinoplasty.²⁴ Similarly study by Strazdins found significant correlation between age, gender, marital status, occupation and psychological characteristics in patients seeking cosmetic surgery.²¹ In this

study although presence of Anxiety and depression among patients seeking rhinoplasty is significantly higher but contrary to other studies there is no significant correlation between and educational status, marital status and psychological complaints in patients seeking rhinoplasty.

RECOMMENDATIONS

Psychiatric assessment of patients seeking rhinoplasty should be routine practice for detection and proper management of anxiety and depression in these patients.

CONCLUSION

Cosmetic surgeons are not Psychiatrist or Psychologist but they are faced with patients who have a very high prevalence of anxiety and depression while they seek rhinoplasty. This study has highlighted the importance of early detection and timely management of anxiety and depression in patients seeking rhinoplasty as its early detection has tremendous impact on post-surgical outcome. This can only be done with realization, early identification, close co-ordination and early involvement of psychiatrist for proper management of anxiety and depression in patients seeking rhinoplasty.

Conflict of Interest: None.

Authors' Contribution

SAK: Data collection, compilation and discussion, GA: Data collection and interpretation, MR: Archive data search, MT: Data entry and statistical analysis, IA: Data analysis, AMB: proof reading and compilation

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