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Personality Traits Among Patients Who Underwent Cosmetic Rhinoplasty Surgery

Güncel Öztürk

Nisantaşı University, School of Health Sciences, İstanbul, Turkey

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Abstract

Objective: Rhinoplasty is one of the most common cosmetic surgeries in esthetic plastic surgery. Regardless, there is no consensus about the associations between rhinoplasty and psychiatric condition in the literature. Although it is well known that personality traits affect emotions, ideas, and behaviors, no study has investigated personality traits in individuals who have undergone rhinoplasty. The current study aimed to compare the personality traits, self-esteem, and body perception of patients who underwent rhinoplasty with those of a control group of healthy volunteers.

Methods: This study included 160 rhinoplasty patients and 100 healthy volunteers. The Basic Personality Traits Inventory (BPTI), the Rosenberg Self-Esteem Scale (RSES), and the Body Cathexis Scale (BCS) were applied to all the participants.

Results: The scores for the BCS and the personality trait of extraversion were found to be higher in the rhinoplasty group than in the control group. Additionally, there were significantly positive correlations between the BCS score and the personality traits of extraversion and openness. There were also significantly positive correlations between the RSES score and the traits of neuroticism and negative valence.

Conclusion: Patients who seek cosmetic rhinoplasty may have favorable personality traits such as extraversion. The present study is the first to demonstrate personality traits in cosmetic rhinoplasty patients. Further studies are needed to confirm these results.

Keywords: Rhinoplasty, personality traits, self-esteem, body perception

Kozmetik Rinoplasti Cerrahisi Geçiren Hastalarda Kişilik Özellikleri

Öz

Amaç: Rinoplasti, estetik ve plastik cerrahi alanında en sık uygulanan kozmetik cerrahilerden biridir. Literatürde rinoplasti ile psikiyatrik durumlar arasındaki ilişkiler konusunda fikir birliği yoktur. Kişilik özelliklerinin duygu, fikir ve davranışları etkilediği iyi bilinmektedir. Rinoplasti yapılan bireylerde kişilik özelliklerini araştıran herhangi bir çalışma bulunmamaktadır. Bu çalışmada, rinoplasti ameliyatı geçiren hastalar ile kontrol grubu arasında kişilik özellikleri ile benlik saygısı ve beden algısının karşılaştırılması amaçlanmıştır.

Yöntemler: Çalışmaya 160 rinoplasti hastası ve 100 sağlıklı gönüllü dahil edildi. Tüm katılımcılara Temel Kişilik Özellikleri Envanteri (BPTI), Rosenberg Benlik Saygısı Ölçeği (RSES) ve Beden Algısı Ölçeği (BCS) uygulandı.

Bulgular: Rinoplasti grubunda dışadönük kişilik özelliği skoru ve BCS skorunun kontrol grubuna göre daha yüksek olduğu bulunmuştur. Ek olarak, BCS skoru ile dışa dönüklük ve deneyime açıklık arasında anlamlı pozitif korelasyonlar olduğu, RSES skoru ile nörotisizm ve negatif değerlik arasında pozitif ve anlamlı korelasyonlar olduğu bulunmuştur.

Sonuç: Kozmetik amaçlı rinoplasti isteyen hastalar olumlu bir kişilik özelliği olarak dışadönüklük özelliğine sahip olabilirler. Bu çalışma, kozmetik rinoplasti hastalarında kişilik özelliklerini gösteren ilk çalışmadır. Bu sonuçları doğrulamak için daha fazla çalışmaya ihtiyaç vardır.

Anahtar Kelimeler: Rinoplasti, kişilik özellikleri, benlik saygısı, beden algısı

Rhinoplasty is one of the most common among esthetic and cosmetic plastic surgeries. The rate of admission for rhinoplasty has increased significantly over the last few decades. The estimated number of rhinoplasties is 300 000 annually in the USA.[1] The nose is considered an important part of the face in terms of esthetics, and it has been reported to be highly related to self-esteem.[2]

Individuals who have esthetic issues with their nose suffer from feelings of unattractiveness and may have problems communicating with other people. Reports have shown that rhinoplasty procedures frequently improve quality of life and self-esteem, and reduce symptoms of anxiety. However, for individuals with psychiatric problems such as depression, body dysmorphia, psychosis, or severe personality disorders, the results of rhinoplasty can worsen existing

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Corresponding author: Güncel Öztürk, Nisantaşı University, Nişantaşı – İstanbul, Turkey
e-mail: drgunceloz@gmail.com
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problems.[3,4] Thus, candidates for cosmetic rhinoplasty should be strictly assessed for the presence of psychiatric disorders. There is no consensus about the psychological aspects of rhinoplasty in the literature. While several studies have reported that patients who undergo cosmetic surgery have similar psychopathological patterns as the controls, other studies have indicated that these types of patients show greater psychopathological abnormalities.

Although there is limited interest in the associations between rhinoplasty and psychiatric conditions, no study has investigated the personality traits of individuals who have undergone rhinoplasty. It is well known that personality traits affect emotions, ideas, and behaviors.[5] According to the Big Five personality traits, higher degrees of neuroticism are related to increased levels of anxiety or affective symptoms,[6,7] while higher levels of extraversion are associated with better communication skills and positive outlook; and higher scores in agreeableness indicate tolerance, politeness, and willingness to share.[8] In addition, people who have higher levels of conscientiousness are known to be hardworking, tidy, and prudish, and people with high scores in openness are perceived as productive, imaginative, and highbrow.[9]

The present study aimed to compare personality traits, self-esteem, and body perception between patients who underwent rhinoplasty and an age- and education-matched control group. The study's author believes that rhinoplasty patients would differ in terms of their personality traits.

Methods

Participants

The current study was performed at 2 centers. Rhinoplasty patients were selected from one of the author's private clinics. Patients who were willing to participate in the study, had undergone rhinoplasty for esthetic purposes at least 1 year before the study, and had the appropriate education to understand the study's assessment tools were included in the research. Patients who had a history of psychiatric disorders and who were unwilling to participate in the study were excluded from the research. Of 172 patients, 160 met the inclusion criteria. The control group was selected from staff members of the university hospital. The exclusion criteria for the control group included having a psychiatric disorder or a history of psychiatric disorders, having a chronic disease, having another cosmetic problem, and an unwillingness to be included in the study after receipt of detailed information. Considering these inclusion and exclusion criteria, 100 healthy controls were included in the study. Two independent sample *t*-tests were used in the power analysis. The total sample size of 160 achieved 86.7% power with a significance level of 0.001 in order to detect an effect size of 0.99.

Ethical Issues

This study was approved by the Nişantaşı University Research Ethical Committee (Approval Date/Number: January 21, 2021/2021/01). All participants provided written informed consent before participating in the study.

Tools

Basic Personality Traits Inventory (BPTI)

The BPTI was created by Gençöz and Öcül[10] and is based on the Big Five personality theory for measuring personality traits. This inventory includes 45 items on a 5-point Likert-type scale and measures 6 personality traits.

Rosenberg Self-Esteem Scale (RSES)

The RSES was created by Winch and Rosenberg[11] in 1965, and the validity and reliability of the scale were confirmed by Çuhadaroğlu[12] in 1986. The first 10 items of the scale are used for the evaluation of self-esteem. A total score of 0-1 on these items indicates high self-esteem, a total score of 2-4 indicates average self-esteem, and a total score of 5-6 indicates low self-esteem. In sum, lower scores represent higher levels of self-esteem.[12]

Body Cathexis Scale (BCS)

The BCS has 40 items and was created by Secord and Jourard[13] in 1953. The items are ranked using a 5-point Likert-type scale that ranges from 1 (meaning I don't like at all) to 5 (meaning I really like). One score is determined from the scale. The lowest possible score is 40, the highest is 200, and higher scores indicate more positive evaluations.

Procedure

After approval from the ethics committee, the purpose and details of the study were explained to the participants. All the participants signed a volunteering acceptance form.

Statistical analysis

Statistical analyses were performed with the Statistical Package for the Social Sciences (IBM SPSS Corp., Armonk, NY, USA) version 23.0. The Shapiro–Wilk test was used for normality. The assumption of normal distribution was satisfied, and an independent samples *t*-test was used to compare the patients with the control group. Whether or not the sample used

Table 1. Descriptive Statistics

	Categories	n	%	x	s	Median	IQR
Group	Control	80	60.0			1.00	1.00-2.00
	Patients	160	40.0				
Age			29.21	3.65	4.0	28.00	25.00-32.00
Education (Years)				15.43	2.77	16.00	13.00-18.00
Gender	Male	50	20.83			2.00	1.00-2.00
	Female	190	89.17				
Rosenberg's Self-Esteem Scale		240		0.93	.27	.78	0.50-1.35
Body Cathexis Scale		240		99.12	24.78	93.00	85.00-133.75
Extraversion		240		31.33	4.52	32.50	28.00-36.00
Agreeableness		240		28.41	5.81	28.50	25.00-33.00
Conscientiousness		240		30.00	6.98	34.00	27.00-36.00
Neuroticism		240		24.02	7.33	25.00	18.00-30.00
Openness		240		25.59	3.61	22.00	22.00-26.00
Negative valence		240		10.80	2.52	11.00	8.00-15.00

Abbreviations: IQR, interquartile range.

in the study was sufficient was tested by the power analysis. Depending on the normality assumption for the correlation analysis, Pearson's coefficient of correlation was used. The level of significance was determined as 0.05.

Results

The participants' descriptive data are shown in Table 1. The patient group had significantly higher scores in extraversion and in the BCS when compared with the control group (P = .001 and P = .001, respectively) (Table 2). Pearson's correlation test was used to determine correlations between the BCS, RSES, extraversion, agreeableness, conscientiousness, neuroticism, openness, and negative valence. There were significantly positive correlations between the BCS and extraversion and openness. There were also significantly positive correlations between the RSES and neuroticism and negative valence (Table 3).

Discussion

The present study found that the BCS scores and personality traits such as extraversion were higher in the rhinoplasty group than in the control group. Moreover, there was a significant correlation between the BCS and RSES scores and the BPTI subscores.

Individuals' personality traits have been investigated in relation to various conditions. Although the definition of personality has varied over time, it currently describes the differences between individuals rather than the similarities between them.[10] The five-factor model of personality was created to describe the differences between individuals through the discovery of consistent cognitive, emotional, and behavioral patterns that are otherwise known as traits.[14] This model has a taxonomic character and 5 orthogonal factors in English, both in self- and peer-rated measures, that can be applied regardless of the factor analytic method.[15] The 5 factors include extraversion, agreeableness, conscientiousness, neuroticism, and openness. The factors are also consistent with almost all personality theories.[15]

The current study found that the score of extraversion was higher in the rhinoplasty group than in the control group. Among personality traits, extraversion is considered to be associated with positive affectivity,[7,9,16] and people who have higher scores of extraversion are regarded as agreeable in social interactions.[17] Additionally, reports have indicated that low scores in extraversion and higher scores in neuroticism are related to depression and anxiety disorders.[18] Individuals who have undergone rhinoplasty are frequently considered to have a higher percentage of psychiatric disorders than the normal population. Nonetheless, the results of previous studies have been inconsistent.

Table 2. Comparisons of Study Subjects (Patients Versus Control) by the Independent Samples ***t***-Test

	Group	n	x	*s*	*t*	*P*
Age	Control	80	27.22	4.31	−1.04	.077
	Patients	160	29.12	5.12		
Education (Years)	Control	80	15.32	1.91	1.01	.079
	Patients	160	16.21	2.77		
Rosenberg's Self-Esteem scale	Control	80	0.91	0.12	0.42	.67
	Patients	160	0.93	0.11		
Body Cathexis Scale	Control	80	93.87	26.01	−2.39	.001
	Patients	160	104.55	23.72		
Extraversion	Control	80	29.21	5.21	−3.34	.001
	Patients	160	35.29	6.32		
Agreeableness	Control	80	32.00	7.91	1.01	.247
	Patients	160	31.23	6.89		
Conscientiousness	Control	80	34.57	6.71	1.10	.73
	Patients	160	33.05	6.01		
Neuroticism	Control	80	31.66	8.79	−0.54	.64
	Patients	160	32.59	8.69		
Openness	Control	80	24.13	4.333	−1.31	.06
	Patients	160	26.65	3.025		
Negative Valence	Control	80	12.28	3.73	−1.42	.14
	Patients	160	11.99	3.75		

One prior study concluded that people who undergo rhinoplasty should be strictly screened for psychological conditions and specifically for the presence of body dysmorphic disorder.[19] Another study reported that rhinoplasty patients and individuals undergoing various other types of cosmetic surgery had higher rates of psychiatric disorders than healthy controls.[20] In addition, while several studies have reported higher rates of depressive disorder in people who undergo cosmetic surgical interventions,[21,22] other studies have demonstrated improvements in mental image, self-esteem, the ability to cope with anxiety, and quality of life in individuals who have undergone rhinoplasty.[23,24] In spite of these findings, no study has specifically investigated personality traits in patients who have undergone rhinoplasty. Thus, the results of the present study are the first to demonstrate a favorable personality trait, such as extraversion, in rhinoplasty patients.

Table 3. Correlation Analysis Between Rosenberg's Self-Esteem Scale, Body Image Scale, and Personality Traits

	Extraversion	Agreeableness	Conscientiousness	Neuroticism	Openness	Negative Valence
Rosenberg's Self-Esteem Scale	$r = 0.35$, $P = .08$	$r = 0.28$, $P = .12$	$r = 0.40$, $P = .06$	**$r = 0.64$, $P < .001$**	$r = 0.22$, $P = .42$	**$r = 0.59$, $P = .002$**
Body Cathexis Scale	$r = 0.77$, $P < .001$	$r = 0.21$, $P = .09$	$r = 0.33$, $P = .07$	$r = 0.12$, $P = .62$	**$r = 0.72$, $P < .001$**	$r = 0.14$, $P = .54$

The current study has several limitations. Although the associations between personality dimensions and other variants are compared between groups, certain scores, such as those for extraversion and the BCS, may have been associated with successful surgical outcomes. The rates of female participants in both groups were higher than male participants, and this issue can be accepted as a confounding factor. Thus, a follow-up study could provide stronger evidence, and future studies may focus on this limitation as an objective.

In conclusion, this study argues that patients who seek cosmetic rhinoplasty may have favorable personality traits, such as extraversion. Although the present study is the first to demonstrate personality traits in cosmetic rhinoplasty patients, further studies are needed to confirm these results.

Ethics Committee Approval: Ethics committee approval was received for this study from the ethics committee of Nişantaşı University (Date: January 21, 2021, No: 2021/1).

Informed Consent: Written informed consent was obtained from patients who participated in this study.

Peer-review: Externally peer-reviewed.

Conflict of Interest: The author have no conflicts of interest to declare.

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