

Sociological Aspects of Rhinoplasty

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Abstract. Although the psychological aspect of the rhinoplasty operation has been a subject of interest for a long time, with the exception of a few studies, sociological factors have been almost totally ignored. In this prospective study the personality characteristics and socioeconomic backgrounds of 216 rhinoplasty patients were evaluated. Between 1994 and 2000, a questionnaire and the Minnesota Multiphasic Personality Inventory (MMPI) were given preoperatively to 157 females and 59 males. The MMPI was also given to age-matched people as a control. Six months after surgery, patients were called on the telephone and asked to rate their satisfaction. According to questionnaire, a great majority of the rhinoplasty patients were young, unmarried women with high education levels. In the rhinoplasty group, one or more scales of the inventory were not in the normal ranges in 45% of the patients, whereas this proportion in the control group was 28% ($p < 0.01$). When MMPI results are considered, female patients of this study could be described as egocentric, childish, highly active, impulsive, competitive, reactive, perfectionistic about themselves, talkative, and emotionally superficial. Male patients could be described as rigid, stubborn, over-sensitive, suspicious, perfectionistic, pessimistic, over-reactive, and having somatizations. Tension and anxiety with feelings of inferiority were found to be characteristics of the male patients. The satisfaction rate after six months was reported as 72%. There was no significant correlation between MMPI results and demographic variables, nor satisfaction rate. In conclusion, the rhinoplasty patients in our study are young people at the very beginning of their careers. It could be that their personalities and socioeconomic backgrounds combine

to make aesthetic surgery rewarding enough, both socially and personally, to encourage them to follow through.

Key words: Rhinoplasty—Psychiatry—MMPI—Wiggin's Test

The nose is the most prominent facial feature, plain to everyone and impossible to cover or hide. As it is today, it has long been a subject of interest. It has been associated with ethnic or familial background and it has occasionally been associated with the penis in some ancient cultures and even in the current literature [3,15]. The despair and consequences of the having crooked nose were reported as early as 1928 by Brunswick and later by Joseph [4,17]. Through the decades, the explanations of the motivation for aesthetic surgery have evolved. Until the late 60s, analytic psychology suggested that patients were motivated by their internal conflicts [11,12,16,19]. As aesthetic procedures gained popularity, seeking rhinoplasty was no longer seen as a completely negative psychological sign, though pessimistic reports still exist [14,20,26]. According to the latest reports, it is a patient's dissatisfaction with their body image that leads them to aesthetic surgery [21,23]. Currently, the major motivation for aesthetic surgery is defined as "Heightened dissatisfaction with the specific body feature considered for surgery, but not more global dissatisfaction with entire body" [25]. Interestingly, sociological factors are almost completely ignored in the literature, except for in a few studies [18]. Still, there is no consensus about what the motivations are that lead a healthy individual to an operation. The aim of this study was to define social and psychological background 216 rhinoplasty patients and consequently to analyze the major motivations for operation within this population.

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Materials and Methods

In this prospective study, the socioeconomic status, and personality of 216 rhinoplasty patients were evaluated. Between 1994 and 2000, all rhinoplasty candidates applying to the plastic surgery department, were asked to participate to the study, and 157 females (73%) and 59 males (27%), between 16 and 47 years of age (mean 25), agreed to join voluntarily. No benefit or discount was offered to these patients.

The study was composed of two phases. Preoperatively, each patient was asked to answer a questionnaire that was designed to obtain data about their social, economic, and educational status; how they perceived their nose; and their expectations from surgery. Besides this questionnaire, the patient completed the *Minnesota Multiphasic Personality Inventory* (MMPI) [8]. The MMPI was also given to a control group of 127, age-matched people who were staff members or interns on our medical faculty.

The MMPI is a self-report inventory and is one of the most widely-used personality assessment instruments [22]. The test consists of 566 statements to which subjects must respond with “true,” “false,” or “can not say.” The MMPI gives scores on three validity and 10 clinical (standard) scales. Each scale rates empirically selected items shown to separate medical and psychiatric patients from normal control subject. Please note that a high score on one particular scale alone does not mean that a subject has a psychiatric illness. Recent evidence indicates that religion and race are both potential variables in MMPI responses. Hence, a modified form of this test, in which the validity and objectivity scales were tested and proven in Turkish people, was used in this research [5,13,25]. Near the end of the research, a new version of the MMPI became available, but since this study had been in progress with the older version for years and since the new version had not yet been tested in Turkey, the older one was used throughout the study.

The MMPI scores were evaluated using the Wiggins Method. In this method, the MMPI answers are assessed using another 13 clinical scales to enhance the interpretation of the MMPI profiles.

Based on the assumption that edema due to operation resolves within six months, all participating patients were contacted by phone six month postoperatively and asked their final satisfaction level with the result of their noses. The patients who underwent secondary rhinoplasty or for whom second operation was planned for were automatically classified in the unsatisfied group.

The effect of each demographic variables on the MMPI and on each scale was assessed using Analysis of Variance (ANOVA). Results which had been found statistically significant in ANOVA were further examined using Duncan's Test. Next, Chi-square tests were used to compare the groups categorized as normal or abnormal by MMPI. For the sake of

completeness, Chi-square tests were also used to assess the effects of the demographic variables on the categorized MMPI results. Statistical significance was presumed at $p < 0.05$.

Results

The rhinoplasty group was consisted of 157 (73%) women and 59 (27%) men, 216 patients in total. In the control group of 127 subjects, 70 (55%) were women and 57 (45%) were men. The average age in the rhinoplasty and control groups was 25 years of age (ranging between 16 and 47) and 27 years of age (ranging between 15 and 59), respectively. The average ages of the male and female subjects were comparable.

Demographic Data of the Rhinoplasty Group

The educational level of the subjects was quite high with 211 (97%) patients with high school diplomas or university degrees, regardless of the gender (Table 1). Eighty-four percent of the rhinoplasty patients were unmarried. A majority were students, followed by white collar and blue collar workers, 40%, 26%, and 20%, respectively. Only 35 (16%) patients had reported nasal trauma confirmed by medical records.

Perception of Nose and Motivation for Surgery

Out of 216 patients, 162 (75%) perceived their nose as either bad-looking or below average. Thirteen (6%) patients stated that the shape of their nose was normal or good-looking and 41 (19%) patients left this question blank. Deformity of the nose and/or difficulty in breathing were reported as a major reason for operation by 174 (81%) patients.

MMPI Results

In 97 patients (45%), one or more MMPI scales were not within the normal ranges, whereas in control group this number was 36 (28%) out of 127 patients ($p < 0.01$) (Table 2). There was no significant correlation between MMPI results and demographic variables, nor between patients' self-perception of their noses and their reasons for seeking a rhinoplasty operation.

The average values of each scale in the rhinoplasty group were comparable to those in the control group. K value, which indicates ego strength, was found to be lower than average in 59 (27%) subjects in rhinoplasty group, and in 23 (15%) subjects in control group (Table 3). In the rhinoplasty group, abnormal MMPI values were mostly encountered in the scales rating hysteria (14 patients), hypomania (13 patients),

Table 1. Demographic data obtained from rhinoplasty group

	Female		Male		Whole group	
	n	%	n	%	n	%
Educational level						
Primary school	4	2	1	2	5	2
High school	44	28	17	29	61	28
University	109	70	41	69	150	70
Total:	157	100	59	100	216	100
Marital status						
Divorced/widow	3	2	2	3	5	2
Married	29	18	6	10	35	16
Single	125	80	51	87	176	82
Total:	157	100	59	100	216	100
Social status and occupation						
Student	56	35	31	53	87	40
White collar	44	28	13	22	57	26
Blue collar	35	22	7	12	42	20
Unoccupied	13	8	2	3	15	7
Business	9	7	6	10	15	7
Total:	157	100	59	100	216	100
Trauma to nose						
Yes	20	13	15	25	35	16
No	137	87	44	75	181	84
Total:	157	100	59	100	216	100
Perception of the nose						
Ugly	105	67	38	64	143	66
Under average	18	12	1	2	19	9
Normal	3	2	2	3	5	2
Good	7	4	1	2	8	4
No response	24	15	17	29	41	19
Total:	157	100	59	100	216	100
Reason for surgery						
Deformity	69	44	7	12	76	35
Deformity and difficulty in breathing	37	23	28	48	65	31
Difficulty in breathing	23	15	10	17	33	15
Criticism from environment	11	7	2	3	13	6
Future expectations		0	3	5	3	1
No response	17	11	9	15	26	12
Total:	157	100	59	100	216	100

Table 2. Comparison of MMPI results in rhinoplasty and control groups

	Rhinoplasty Groups			Control Groups		
	Female	Male	Whole group	Female	Male	Whole group
Abnormal	69 (44%)	28 (47%)	97 (45%)*	17 (24%)	19 (33%)	36 (28%)
Normal	88 (56%)	31 (53%)	119 (55%)	53 (76%)	38 (67%)	91 (72%)
Total	157 (100%)	59 (100%)	216 (100%)	70 (100%)	57 (100%)	127 (100%)

* $p < 0.01$.

psychopathic deviance (11 patients), and *paranoia* (11 patients) (Table 3). In the control group, abnormal values were found in the scales for *hysteria* (4 patients), *hypomania* (5 patients), and *hypochondria is* (5 patients) scales.

Wiggins Scale

The abnormal *hypomania* scores were found in 124 (58%) patients in rhinoplasty group (Table 4). This

was followed by abnormal scores for *manifest hostility* in 111 (51%) and *religious fundamentalism* in 107 (50%) patients.

Manifest hostility was the most common abnormality in the control group (38%), followed by abnormal scores on the *religious fundamentalism and feminine interests* scales. No significant relation has been detected between scores on each MMPI scale and demographic variables, self-perception of the nose, or motivation for surgery. However, when

Table 3. Abnormal MMPI results in rhinoplasty and control groups

	Rhinoplasty Group			Control Group		
	Female	Male	Whole Group	Female	Male	Whole Group
K value	37	22	59	14	9	23
Ilipochondriazis	5	3	8	1	4	5
Depression	0	0	0	0	1	1
Hysteria	10	4	14	1	3	4
Psychopathic Deviation	9	2	11	0	2	2
Masculinity – Femininity	8	1	9	0	0	0
Paronia	7	4	11	0	0	0
Psychasthenia	3	3	6	0	2	2
Schizophrenia	5	2	7	0	1	1
Hypomania	13	0	13	3	2	5
Social introversion	3	1	4	0	1	1

Each subject may have more than one abnormal scale.

Table 4. Abnormal Wiggins's subscales in rhinoplasty and control groups

	Rhinoplasty Group			Control Group		
	Female	Male	Whole group	Female	Male	Whole group
Social maladjustments	44	21	65	27	20	47
Depression	61	22	83	22	13	35
Feminine interests	58	15	73	35	23	58
Poor morale	50	25	75	23	12	35
Religious fundamentalism	71	36	107	30	27	57
Authority conflict	73	24	97	30	19	49
Psychoticism	54	18	72	14	12	26
Organic symptoms	50	13	63	20	12	32
Family problems	60	18	78	16	15	31
Manifest hostility	85	26	111	33	26	59
Phobias	65	18	83	30	12	42
Hypomania	95	29	124	27	18	45
Poor health	65	22	87	21	15	36

Each subject may have more than one abnormal scale.

compared with control group, the number of the abnormal MMPI *hypomania* and *paranoia* scores and abnormal Wiggins scores for *religious fundamentalism* and *hypomania* were found to be significantly higher in the rhinoplasty group ($p < 0.05$).

Satisfaction with Operation

Of 216 patients, 106 (49%) could be reached by phone six months after their surgery. This low rate might be because many in the rhinoplasty group were university students who were mostly living in dormitories, where it can be difficult to reach somebody and the residents are usually temporary. The number of the satisfied patients outweighed the number not satisfied (72% versus 28%, respectively) (Table 5). Although not significantly correlated with gender, the satisfaction rate was 69% among females and 80% among males. There was no significant relationship between

the satisfaction rate and other variables. Though not statistically significant, the percentage of dissatisfied patients was higher among those with abnormal MMPI results than among those with normal MMPI results (31% and 26%, respectively).

Discussion

Physical form is the oldest recognized and probably most predictive factor in social relations. The effects of appearance on our lives start with birth and exist in every aspect, whether it is school, family, or dating [1,2,6,7,10,27]. A good-looking nose might encourage people to think you are more honest, trustful, successful, and loyal [9]. In this respect, nobody could argue the logic of rhinoplasty for patients with crooked or severely deformed noses. In the study, the rhinoplasty patients were mainly young, unmarried people. The great majority were

Table 5. Relationship of satisfaction rates and MMPI outcomes

	Normal MMPI	Abnormal MMPI	Total
Not satisfied	14 (26%)	16 (31%)	30 (28%)
Satisfied	40 (74%)	36 (69%)	76 (72%)
Total	54 (100%)	52 (100%)	106 (100%)

students who were unemployed and at the very beginning of their careers. It should not be surprising that people in these circumstances would seek a better nose, especially if they are aware that physical appearance influences their abilities to find a job, to gain social credit, and to find a spouse [9,10,27]. Among females the main reason for operation was nasal deformity, whereas difficulty breathing was the most common reason among males. This finding was actually not unexpected given the patriarchal tradition of Turkey.

The motivation for rhinoplasty cannot be explained by socioeconomic factors alone since it is obvious that not all the members of single socioeconomic group undergo operation. Further explanation may be found in the personalities of the rhinoplasty patients, which are partially influenced by their individual socioeconomic backgrounds. According to the MMPI, female rhinoplasty patients were egocentric, childish, highly active, impulsive, competitive, reactive, perfectionistic about themselves, talkative, and emotionally superficial. Male patients were more pessimistic, overreactive, and had somatizations. These men could be described as rigid, stubborn, over-sensitive, suspicious, and perfectionistic. Tension and anxiety with feelings of inferiority were also found to be characteristics of male patients. When we analyzed these MMPI results, both female and male patients had low K-values, indicating weak ego strengths, high energy levels, and over-sensitivity. In this population, it is best to interpret the MMPI results as non-average but not pathologic findings unless associated with detected psychological disturbances. This population was different from the normal population but not far from normal.

Rhinoplasty is motivated by two separate but interactive factors—social pressure and individual pressure. When the socioeconomic backgrounds of these patients are considered, it could be assumed that these patients have enough reason to demand rhinoplasty operation because their improved appearance will be rewarded by their community. The personality of the patient is another major force for the operation. According to MMPI results, they have enough energy and motivation to realize their goal. The combination of these mutually enforcing factors helps encourage the patients to seek rhinoplasty.

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