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# Comparison of emotional intelligence, body image, and quality of life between rhinoplasty candidates and control group

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## Abstract:

**INTRODUCTION:** Psychological factors affect the tendency of individuals toward cosmetic surgeries although their contribution has not been clearly understood. Therefore, the current study aimed at comparing the emotional intelligence, body image, and quality of life between rhinoplasty candidates and the control group.

**METHODS:** The current case-control study was conducted on 160 individuals referring to Rhinoplasty Clinic of Imam Reza Hospital in Tabriz, Iran, from 2018 to 2019. The tools used in this study including demographic information, Schering's emotional intelligence questionnaire ( $\alpha = 0.75-0.85$ ), the 36-item Short Form Health Survey Questionnaire ( $\alpha = 0.75$ ), and body image ( $\alpha = 0.77-0.91$ ) were used to collect data. Data were analyzed by the Kolmogorov-Smirnov and *t*-tests for the two independent groups.  $P < 0.05$  was considered as the level of significance.

**RESULTS:** There was no significant difference between the groups in terms of the overall mean of emotional intelligence and its subcomponents ( $P > 0.05$ ), except social skills, such as self-awareness ( $P = 0.019$ ). Appearance evaluation and appearance orientation variables were statistically significant between the two groups ( $P < 0.05$ ), while the quality of life was not statistically significant ( $P = 0.051$ ).

**CONCLUSION:** In the psychological parameters studied, we found that the appearance evaluation and social skills of the rhinoplasty applicants are low, and it is better to have interventions before the rhinoplasty in people who have difficulty with these variables.

## Keywords:

Body image, emotional intelligence, quality of life, rhinoplasty

## Introduction

Rhinoplasty has become one of the most common cosmetic surgeries in adolescence and youth,<sup>[1]</sup> and Iran is one of the countries with the highest number of rhinoplasty candidates.<sup>[2]</sup> According to the results of the studies, psychological factors play a major role in cosmetic surgeries such as rhinoplasty, of the most prominent psychological issues emotional

intelligence, body image, and quality of life are noteworthy.<sup>[3]</sup>

Emotional intelligence is the ability of individuals to identify, understand, use, and manage emotions, which varies in different individuals. Some forms of emotional intelligence protect people from stress, such as emotional self-control skills that are positively correlated with mental disorders (stress, depression, hopelessness, etc.); according to evidence, people with lower emotional intelligence are more likely

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to apply to cosmetic procedures (rhinoplasty) and with psychosocial interventions, we can enhance emotional intelligence, so that we can prevent unnecessary cosmetic surgery as much as possible.<sup>[4,5]</sup>

The body image can be defined as an individual's experience of self-imaging, which involves the evaluation of body weight, size, and shape; in general, body image, both in terms of personal growth and quality of life, is an important dimension of personal identity, and the most important dimension of self-evaluation in females.<sup>[6]</sup> Body image dissatisfaction is a negative mental evaluation of appearance and the body; such conditions directly affect health, personality, communication, and quality of life.<sup>[7]</sup>

Quality of life is broadly related to emotional issues and mental health of an individual, and addresses internal state and expresses changes and abilities as well as the satisfaction of an individual with multiple functions of life effects. Reduced quality of life can draw the attention of the individual to his/her body image and even cause distortion of the image; in addition, quality of life is a factor associated with rhinoplasty. It has been observed that people who are candidates for rhinoplasty in most cases have a low quality of life and are seeking to improve their quality of life by performing rhinoplasty.<sup>[3]</sup>

Given the high tendency of Iranian society toward rhinoplasty, because emotional intelligence and quality of life are among the most fundamental and important factors that can contribute to the body image of individuals, and the decisions, they will make for their bodies in future. The aim of this study was to investigate the relationship between emotional intelligence, quality of life, and body image in candidates for rhinoplasty surgery.

## Methods

The current case-control study was performed on 160 participants (80 patients in the control group and 80 patients in the rhinoplasty group) in Imam Reza and Sina Hospitals affiliated to Tabriz University of Medical Sciences, Tabriz, Iran, from December 22, 2018, to August 16, 2019. The sample size was estimated based on a similar study by Zare Bahramabadi and Dehghani.<sup>[3]</sup> The participants in the rhinoplasty group were selected among the clients of the ENT Clinic at Imam Reza Hospital that underwent rhinoplasty procedures during the study. The control group was comprised of other clients of the clinic that were matched by age, gender, level of education, and marital status with the case group; it should be noted that the patients in the control group were family members of patients with rhinoplasty, who had no medical condition or problems,

affecting the variables studied. The study participants were recruited through a convenience sampling method (sampling method for both groups), and questionnaires were completed in the week before the surgery and in the mentioned hospitals.

Inclusion criteria were aged at least 18 years and being a candidate for elective rhinoplasty (for the rhinoplasty group); exclusion criteria were having the history of rhinoplasty (for both groups) or cosmetic surgery (for both groups), and being under the supervision of a psychiatrist for depression, bipolarity disorder, and stress.

The data collection instrument used in the study was a paper-based questionnaire completed by the researcher assistant (a research team member) in the inpatient ward (for rhinoplasty participants) or the clinic (for the control group) and consisted of four main sections: the first part includes demographic information such as age, gender, level of education, and marital status; the second part was the emotional intelligence questionnaire developed in 1996 by Shering to assess the emotional intelligence dimensions and includes self-motivation, self-awareness, self-control, empathy, and social skills components. This questionnaire was utilized in Iran in studies by Miri *et al.* and Khanzadeh *et al.* Its reliability using Cronbach's alpha was also reported 75%–85%.<sup>[8]</sup>

The third part of the questionnaire was the 36-item Short Form Health Survey Questionnaire used to assess the quality of life; its Persian version was introduced by Montazeri *et al.*, using the translation/back-translation technique and standardized on 4163 patients. The reliability coefficients reported for its subscales (range: 0.77–0.99), and it is also applicable to the Iranian community. It has 36 items, 35 of which are categorized into eight subscales. This scale has two dimensions of physical health and mental health; the first four subscales including physical functioning, role limitation, bodily pain, and general health, and the last four subscales including energy/fatigue, social functioning, emotional well-being, and mental health are integrated into the "mental health" dimension that was considered as the total score in the current study.<sup>[9]</sup>

The fourth part of the questionnaire was the Multidimensional Body-Self Relations Questionnaire. It was developed by Cash *et al.*, in 2000 to measure different levels of satisfaction and dissatisfaction with body image and includes ten subscales such as appearance evaluation, appearance orientation, fitness evaluation, fitness orientation, health evaluation, health orientation, illness orientation, body areas satisfaction, overweight preoccupation, and self-classified weight. In the current study, two subscales of appearance

evaluation and appearance orientation were used: the appearance evaluation subscale evaluates how attractive or unattractive and how happy or unhappy the individual feels with his/her physical appearance. The appearance orientation subscale assesses the time and efforts spent by the individual to look good. Lower scores indicate apathy about appearance and lack of attention and effort by the individual to look good. The validity of the subscales based on Cronbach's alpha was 0.77–0.91 and 0.77–0.90 for Iranian males and females, respectively.<sup>[10]</sup> The questionnaires were printed out to each respondent, and they were asked to mark the desired answers with a pen and take rest if felt tired. In addition, the researcher assistant accompanied them during the completion of the questionnaires to justify the questions in case of ambiguity.

Ethical principles were considered in the current study,<sup>[11-14]</sup> that is, informed consent was obtained from all the participants, the research objectives were explained to participants, participation in the study was voluntary, and the participants were free to withdraw from the study at any time. Data were completed and collected by the researcher assistant (a member of the research team). All the completely filled questionnaires were analyzed by SPSS ver 20/IBM Corporation, Armonk, New York version; the Kolmogorov–Smirnov test was used to assess the normal distribution of data; *t*-test was also utilized to evaluate the two groups in terms of emotional intelligence, quality of life, and body image with a 95% confidence interval.

## Results

A total of 160 questionnaires were collected, and the respond rate was 100% (no drops out). The data were then analyzed. The mean ± standard deviation age of the study participants was 26.12 ± 3.19 years, of which 128 (80%) were female. In addition, 114 (71.25%) had higher educations, and 80 (50%) were married. The analysis of demographic data using the Kolmogorov–Smirnov test showed normal distribution of data, and there were no significant differences between the two groups in all the studied variables ( $P \geq 0.119$ ) [Table 1].

The evaluation of the components of emotional intelligence indicated no significant difference between the two groups in the overall mean of emotional intelligence and subcomponents such as self-awareness, self-control, empathy, and self-motivation, while the mean scores of social skill in the rhinoplasty group was significantly lower than that of the control group ( $P = 0.019$ ); hence, with 95% confidence interval, it can be concluded that the social skills of ordinary individuals were higher than that of rhinoplasty candidates [Table 2].

According to the results of Table 2, there was a significant difference between the means of the appearance evaluation and appearance orientation ( $P < 0.05$ ). In other words, with 99% confidence interval, ordinary individuals had a higher score in the appearance evaluation, but lower score in appearance orientation compared to the ones in the rhinoplasty group [Table 3].

According to the results shown in Table 3 although the mean quality of life in the control group was higher than that of the rhinoplasty group, the difference was not statistically significant ( $P = 0.051$ ).

## Discussion

By examining the results of this study, we found that the evaluation variables (body image subscale) and social skills (body image subscale) of rhinoplasty applicants were lower than the control group; also, there were statistically significant differences between the two groups in quality of life and emotional intelligence. Statistical significance was not found. Studies have shown that psychological causes play a major role in people's willingness to perform cosmetic surgeries.<sup>[3]</sup>

The study result showed no significant difference between the two groups in the components of emotional intelligence, except for social skills since

**Table 1: Comparison of the demographic information between the study groups**

Variable	Rhinoplasty group (n=80)	Control group (n=80)	P
Age (year), mean±SD	25.85±3.25	26.41±3.40	0.351
Gender, n (%)			
Male	16 (20)	16 (20)	0.281
Female	64 (80)	64 (80)	
Education, n (%)			
Academic	58 (72.50)	56 (70)	0.311
Nonacademic	22 (27.50)	24 (30)	
Marital status, n (%)			
Single	41 (51.25)	39 (48.75)	0.119
Married	39 (48.75)	41 (51.25)	

Data were analyzed using the Kolmogorov-Smirnov test;  $P < 0.05$ . SD=Standard deviation

**Table 2: Comparison of emotional intelligence components between the study groups**

Variable	Mean±SD		t-test	P
	Rhinoplasty group (n=80)	Control group (n=80)		
Self-awareness	30.12±3.55	31.95±3.20	0.149	0.882
Self-control	20.55±4.14	21.88±3.90	1.019	0.302
Empathy	18.99±3.20	19.12±3.40	1.512	0.129
Social skills	18.31±2.80	18.99±3.01	2.302	0.019
Self-motivation	16.92±2.11	17.55±3.01	1.103	0.201
Total	109.70±10.20	112.55±10.75	0.711	0.503

Data were analyzed using *t*-test;  $P < 0.05$ . SD=Standard deviation

**Table 3: Comparison of appearance evaluation and appearance orientation between the study groups**

Variable	Mean±SD		t-test	P
	Rhinoplasty group (n=80)	Control group (n=80)		
Appearance evaluation	19.01±3.01	22.15±3.18	2.800	0.009*
Appearance orientation	29.71±3.41	25.35±3.13	4.503	0.003*
Quality of life	75.19±13.45	78.15±12.65	1.390	0.051

Data were analyzed using t-test;  $P < 0.05$ , \*Significant. SD=Standard deviation

the score of this component in rhinoplasty candidates was lower than that of ordinary individuals in the control group; in other words, ordinary people have higher social skills than the ones who are candidates for rhinoplasty. In this regard, Parsamehr and Heddat stated in their study that people with lower emotional intelligence have lower levels of social adaptations that may prone them to cosmetic surgery. They also believed that social skills are inversely correlated with the need to be seen and apply for cosmetic surgery, so that the lower the social skill of individuals, the more they need to get cosmetic procedures; their results were in agreement with those of the current study.<sup>[15]</sup> Social skills include the ability to recognize and empathize with others, communicate effectively, listen deeply, ask important questions, and negotiate. Weakness in these skills can affect the self-esteem of rhinoplasty candidates and persuade them to compensate for it by changing their appearance by getting cosmetic surgery.

Other results of the present study also indicated that the appearance evaluation was higher, and appearance orientation was lower in ordinary individuals compared to rhinoplasty candidates. The lower appearance evaluation and higher appearance orientation indicate lower positive body image in rhinoplasty candidates. The mental image of people who are candidates for rhinoplasty is a dissatisfied image of appearance; in fact, they have a distorted perception of themselves and consequently, less satisfied with their appearance. Therefore, they consider rhinoplasty as a solution to improve their appearance. Cosmetic surgery candidates who undergo cosmetic surgery or even reconstructive procedure evaluate their body deformity excessively. Hence, it may be argued that other psychological aspects (requiring careful scrutiny), social and economic, are the main drivers of the tendency for rhinoplasty. The results of the study are in line with those of Ahmadpanah *et al.* and Yin *et al.*<sup>[16,17]</sup>

The result of the study also found no significant difference in the quality of life between individuals undergoing rhinoplasty and the control group, indicating that the quality of life cannot be considered as a key factor alone in the tendency of people toward rhinoplasty. The lack of difference between the two groups in quality of life might be due to the small sample size and utilization

of the convenience sampling method in the current study. The results of the present study, however, are in line with those of the study by Kotzampanakis *et al.*, indicating a significant increase in quality of life after rhinoplasty,<sup>[18]</sup> however, inconsistent with the results of the study by Yang *et al.*, reporting evident improvement in the quality of life after rhinoplasty in all the studied patients;<sup>[19]</sup> Cultural differences in the two communities studied (our study and those cited) as well as the lack of quality of life after rhinoplasty may be the main reasons for these differences.

Failure to compare the results of the studied variables before and after the surgery to determine the reality of results and failure to control presurgical stresses (which may influence research results) are the limitations of the present study.

### Suggestion

The researchers of this study suggest that intervention courses aimed at positively influencing the appearance and social skills of patients referred to the clinics for rhinoplasty before surgery will result in decision-making. Specified to perform rhinoplasty.

### Conclusion

The results of this study indicated that there were no differences in quality of life and total emotional intelligence scores between the two groups of rhinoplasty and control groups, while there were no variables such as physical evaluation and social skills in the rhinoplasty group. The witness was lower, while their apparent level of investment was higher than that of noncandidates. The results of the present study appear to be helpful to the candidates for rhinoplasty, their families and therapists, and may ultimately reduce the economic burden on the family and society.

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### Conflicts of interest

There are no conflicts of interest.

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