

ORIGINAL ARTICLE

Comparison of the Temperament and Character of Patients Referred to Cosmetic Nasal Surgeon in Shiraz Hospitals, 2015

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ABSTRACT

Background: Rhinoplasty is the most common cosmetic surgery which has been dramatically increasing in Iran. Currently, Iran is ranked the first in the world in rhinoplasty. In the present study, we aimed to assess the character and temperament traits of the applicants referred to rhinoplasty surgeons in Shiraz, southwest Iran in 2015.

Methods: In this cross-sectional study, we recruited 500 participants among rhinoplasty applicants for case and among students and clerks residing in Shiraz by convenience sampling method in 2015. The two groups were matched regarding the gender, age and educational level. Data were collected using a demographic questionnaire and temperament and character inventory to assess the four dimensions of temperament (including novelty seeking; harm avoidance; reward dependence; persistence) and the three dimensions of character (including self-directedness; cooperativeness; self-transcendence). Data were analyzed using SPSS software, version 20. Chi-square and t-test were used as appropriated.

Results: The mean±SD age of the participants was 27.43±6.6. The results showed a significant difference between the case and control groups with respect to the temperaments of novelty (9.47±2.80), harm avoidance (9.12±3.3), persistence (2.69±1.04), the characters of cooperativeness (15.38±4.02), and self-transcendence (9.48±3.41).

Conclusion: Evaluating character and temperament traits in rhinoplasty applicants will be so helpful in identifying and predicting good candidates for such cosmetic surgery. Selecting the ideal patients can not only reduce the costs resulting from rhinoplasty imposed on families and society but also enhance the satisfaction of the patients and the surgeons.

KEYWORDS: Aesthetic surgery; Character; Personality; Rhinoplasty; Temperament

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INTRODUCTION

Beauty is a familiar concept¹ and a common instinct among human beings.² It is the combination of feelings and perceptions which can affect and be affected by the culture of a society. Moreover, individuals' appearance plays a substantial role in their social relationships.³ For centuries, humans have been concerned about their beauty as well as grooming and adorning themselves; therefore, they have always sought to improve their physical attractiveness using makeup and cosmetics surgeries.⁴

Currently, the increasing trend toward cosmetic and aesthetic surgeries has placed Iran among the top 10 countries in the world in this regard.⁵ Some genetic factors such as the shape of their face, especially nose, as well as ethnic and racial factors are considered as the major reasons of Iranians' tendency towards such surgeries. Since Iranians, typically, have large noses with a bony and cartilaginous hump, rhinoplasty causes such a significant change in the appearance of the surgery applicants which is not comparable with other types of cosmetic surgeries.⁶

Besides, human body's limitations and potentials have always been under the influence of socio-cultural values of the society. Social expectations can also influence the structure of human body and its physical capabilities.⁷

Research indicates that psychological issues are also important factors in increasing the demands for rhinoplasty.^{2,8} A closer look at different communities shows that dissatisfaction with one's appearance is now considered normative. Such concern, which can be intensified by individual aesthetic standards promoted by advertisement industry, may affect the people's body image negatively and increase their willingness to undergo cosmetic surgeries. Besides, research shows that the demands for such surgeries decrease by a decline in the rate of cognitive impairment.⁹

Personality is defined as the realization of the innate idiosyncrasy and perceptions

of an individual which determines the specific patterns of thought, emotion and behaviors in interaction with physical and social environment.¹⁰ Cloninger also analyzes the underlying biogenic structures of personality¹¹ by assessing the two dimensions of temperament and character.¹²⁻¹⁴ According to Cloninger et al., temperament refers to genetically individual differences in behavioral reactions which are constant throughout the life;¹³⁻¹⁵ however, character refers to the learned psychosocial and sociocultural influences on personality which matures throughout one's life.

Temperament domain includes four dimensions of novelty seeking (NS), harm avoidance (HA), reward dependence (RD) and persistence (P). NS is defined as behavioral reactions in response to novel stimulation which are reinforced by pursuit of rewards and escape from punishment. HA is manifested as inhibition of behavior in response to non-reward, null and punishing stimuli. RD is the tendency to respond to signals of reward and maintain previously rewarded behaviors. P refers to the maintenance of behavior.¹⁶

The three dimensions of character are as follows: Self-directedness (SD), cooperativeness (CO) and self-transcendence (ST). SD refers to the control of the self to achieve objectives and beliefs. CO is the individual's behavior consistent with family and community norms. ST is the ability to accept and understand the rules and the environment as an integrated whole.¹⁷

Biopsychosocial model of Cloninger consists of psychobiological aspects of temperament and character which are developed to evaluate an individual's personality specifications through inheritance (temperament) or the environment (character).¹¹

Previous studies revealed that cosmetic surgeries can change several psychological constructs such as the sense of competence and self-esteem. In a study on temperament and character traits of women who underwent mammoplasty, the participants reported significant higher RD scores but lower P

scores.^{2,18-23}

Most of the previous studies have focused on the variables of self-esteem, character and satisfaction changes after rhinoplasty. Accordingly, it seems necessary to investigate temperament and character, as biological components of personality, in the applicants of rhinoplasty. In the present study, we aimed to evaluate these two traits in the patients referred to rhinoplasty surgeons in Shiraz, southern Iran.

PATIENTS AND METHODS

This is a cross-sectional study. Convenience sampling was used to recruit the participants in both groups among people who gave their consent to participate and had the inclusion criteria. We recruited 250 rhinoplasty applicants referred to Shahriar and Dastgheib hospitals in Shiraz, Southern Iran during February to April 2015. The 250 participants of control group were selected from the students of universities and other educational institutes and clerks who were resident of Shiraz during the study and had no history of cosmetic surgeries. The participants were matched in terms of age, gender, and educational level.

Inclusion criteria for enrollment in the case group were age between 18-60 years and intention to undergo cosmetic surgery only for aesthetic improvement. Exclusion criteria were history of anxiety, depression, delirium, body dysmorphic disorder and psychotropic medication consumption according to the applicant's declaration.

The sample size was calculated 250 in each group based on the data of similar studies and the following formula (power: 80%; α : 0.05; β =0.2; $Z=1.96$).

$$N = \frac{2(Z_{1-\alpha/2} + Z_{1-\beta})^2 S^2}{(\mu_2 - \mu_1)^2}$$

Written informed consent was obtained from all the participants after explaining the aim and method of the study. Moreover, confidentiality and anonymity of the

participants were guaranteed.

Data were collected using a demographic questionnaire and temperament and character inventory (TCI-125). Demographic questionnaire contained questions on age, sex, marital status, education, occupation, place of residence, employment status, income, purpose and people who encourage the patients for undergoing cosmetic surgery as well as history of depression and anxiety. TCI-125 is a 125- item scale developed by Cloninger et al. (1994) to assess the 7 dimensions of personality with a total of 29 subscales.²⁴ It is self-rating and paper-and-pencil test with the true-false format. Questions were about the respondent's interests, desires, attitudes, emotional reactions, goals and values. The questions are designed in a way that the right or the wrong answers increase the score of the same scale depending on the content of the expression.²⁵

The validity and reliability of the questionnaire were confirmed by Kaviani and Poornaseh (2005) in a study on 1212 residents of Tehran, Iran. Reliability coefficient was obtained for each dimension using test-retest (NS= 0.86; HA= 0.88; RD=0.73; P=0.79; CO=0.86; SD=0.90; ST=0.86) and its validity was confirmed using criterion validity.²⁶

The collected data were analyzed using SPSS software, version 20. Statistical qualitative tests including Chi-square test and t-tests were used as appropriate. P values lower than 0.05 were considered as significant.

RESULTS

The mean±SD age of the participants in the two groups was 27.43±6.6. Women (70.8%) had a higher prevalence rate than men (29.2%) in the study. The case and control groups were matched with respect to the variables of age, sex and educational level; however, there was a significant difference between the two groups in terms of marital status ($P<0.05$) and occupation ($P=0.100$) that could be due to our large sample size. (Table 1)

Table 1: Frequency distribution of the participants' demographic variables

Variables		Case Group		Control Group		P value
		Frequency	Percentage	Frequency	Percentage	
Gender	Male	73	14.60	73	14.60	>0.99
	Female	177	35.40	177	35.40	
Educational Level	Primary school	4	0.80	4	0.80	>0.99
	Junior high school	4	0.80	4	0.80	
	High school	25	5.00	25	5.00	
	Diploma	74	14.80	74	14.8	
	Associate's Degree	28	5.60	28	5.60	
	Bachelor's degree	96	19.20	96	19.20	
	Master's degree	14	2.80	14	2.80	
	PhD	5	1.00	5	1.00	
Marital Status	Single	162	64.80	150	60.00	0.009
	Married	86	34.40	89	35.60	
	Other	2	0.80	11	4.40	
Occupation	Self-employed	64	25.50	88	35.20	0.001
	Clerk	47	18.70	26	10.40	
	Housewife	41	16.30	28	11.20	
	Student	43	17.10	74	29.60	
	Unspecified	56	22.30	34	13.60	
Employment Type	Official employee	23	25.30	47	34.80	0.100
	Contract employee	39	42.90	34	27.20	
	Other	29	31.90	44	35.20	
Encouragers for undergoing cosmetic surgery	First-degree relatives	93	37.20			
	Other relatives	34	13.60			
	Friends	77	30.80			
	Coworker	11	4.40			
	Unspecified	35	14.00			
Purpose of undergoing cosmetic surgery	Beauty	146	58.4			
	Improvement of Appearance	5	2.00			
	Self-confidence	5	2.00			
	Changing appearance	1	0.40			
	Personal reasons	1	0.40			
	Social status	1	0.40			
	Bad feeling	1	0.40			
	Unspecified	90	36.00			

*Chi-square test

No significant difference was observed between the groups with respect to their employment type ($P < 0.05$) and they can be statistically assumed to be identical in this regard.

Regarding the variable of encouragement to undergo cosmetic surgery, the first-degree relatives (54.8%) and regarding the variable

of the purpose of undergoing surgery, improvement of appearance (58.4%) had the highest frequency in the case group.

The Mean±SD of temperament and character dimensions in the two groups are reported in Tables 2 and 3, using t-test and a confidence level of 95%. There was a statistically significant difference between the case and

Table 2: Comparison of temperament and character dimensions in the case and control groups

Subscales	Case group	Control group	P value	Effect Size
	Mean±SD*	Mean±SD*		
NS1 (exploration-excitability)	2.61±1.05	3.19±1.09	<0.001	-0.53
NS2 (Impulsiveness)	2.12±1.26	1.58±1.28	<0.001	0.42
NS3 (Extravagance)	2.33±1.17	1.85±1.44	<0.001	0.34
NS4 (Disorderliness)	2.39±1.26	2.02±1.07	<0.001	0.35
NS (Novelty Seeking)	9.47±2.80	8.65±3.00	0.002	0.27
NS=NS1+NS2+NS3+NS4				
HA1 (worry and pessimism)	2.27±1.09	2.28±1.19	0.90	-0.01
HA2 (Fear of uncertainty)	2.42±1.22	2.36±1.36	0.60	0.04
HA3 (Shyness)	2.25±1.32	2.04±1.37	0.08	0.15
HA4 (Fatigability)	2.17±1.28	1.67±1.33	0.001	0.38
HA (Harm Avoidance)	9.12±3.30	8.36±3.75	0.01	0.20
HA=HA1+HA2+HA3+HA4				
RD1 (Sentimentality)	3.12±1.10	3.46±1.10	<0.001	-0.30
RD3 (Attachment)	2.65±1.15	2.72±1.35	0.54	-0.05
RD4 (Dependence)	2.22±1.28	2.06±1.33	0.18	0.12
RD (Reward Dependence)	8.00±2.00	8.24±2.63	0.23	-0.09
RD=RD1+RD3+RD4				
P (Persistence)	2.69±1.04	3.05±1.32	<0.001	-0.27

*t-test

Table 3: Comparison of character dimensions between case and control groups

Subscales	Case group	Control group	P value	Effect size
	Mean±SD*	Mean±SD*		
SD1 (Responsibility)	2.85±1.35	2.51±1.42	0.007	0.24
SD2 (Purposefulness)	2.80±1.26	2.91±1.57	0.39	-0.07
SD3 (Resourcefulness)	2.88±1.31	3.33±1.61	<0.001	-0.28
SD4 (Self-acceptance)	1.84±1.40	1.47±1.48	0.004	0.25
SD5 (Enlightened second nature)	2.62±1.27	2.56±1.41	0.59	0.25
SD (Self-directedness)	13±4.44	12.79±5.81	0.64	0.04
SD=SD1+SD2+SD3+SD4+SD5				
CO1 (Social Acceptance)	3.05±1.24	3.46±1.42	<0.001	-0.29
CO2 (Empathy)	3.13±1.18	3.3±1.08	0.099	-0.15
CO3 (Helpfulness)	2.87±1.10	3.08±1.09	0.036	-0.19
CO4 (Compassion)	3.13±1.36	3.54±1.39	<0.001	-0.29
CO5 (Integrated Conscience)	3.19±1.11	3.68±1.28	<0.001	-0.38
CO (Cooperativeness)	15.38±4.02	17.08±4.78	<0.001	-0.35
(CO=CO1+CO2+CO3+CO4+CO5)				
ST1 (Self-forgetfulness)	3.09±1.35	3.41±1.22	0.007	-0.26
ST2 (Transpersonal identification)	3.27±1.30	3.50±1.15	0.032	-0.20
ST3 (Spiritual acceptance)	3.11±1.35	3.56±1.27	<0.001	-0.35
ST (Self-Transcendence)	9.48±3.41	10.48±2.81	<0.001	-0.36
(ST=ST1+ST2+ST3)				

*t-test; SD: Standard deviation

control groups in terms of NS dimension and its subscales ($P<0.001$). The effect size was medium ($0.3<|EF|<0.5$) for all NS sub-scales but weak for NS dimension ($|EF|<0.3$).

Among the subscales of HA, we observed only a significant difference between the groups in terms of fatigability (HA4) ($P=0.001$); however, no statistically significant

difference was found with respect to other HA subscale including worry and pessimism (HA1), fear of uncertainty (HA2) and shyness (HA3) ($P>0.05$). Accordingly, the two groups are identical regarding these three subscales. The effect size was medium ($0.3<|EF|<0.5$) for HA3 but weak for HA dimensions and its subscales (HA1, HA2, and HA3).

No statistically significant difference was found between the case and control groups in terms of RD dimension and its subscales of attachment (RD3) and dependency (RD4) except for the subscale of sentimentality (RD1). The effect size of RD and its subscales of RD1, RD3 and RD4 was weak ($|EF|<0.3$).

There was a significant difference between the two groups regarding P dimension and its effect size was weak ($|EF|<0.3$). Our results also reported no statistically significant difference between the case and control groups regarding SD dimension and its subscales including purposefulness (SD2) and enlightened second nature (SD5); however, a significant difference was found in terms of its other subscales including responsibility (SD1), resourcefulness (SD3) and self-acceptance (SD4) ($P<0.05$).

We found no statistically significant difference regarding the subscales of empathy (CO2) and helpfulness (CO3) ($P>0.05$); however, a significant difference was reported regarding CO dimension and its other subscales including social acceptance (CO1), compassion (CO4) and integrated conscience (CO5) ($P<0.05$). The effect size was medium for CO and CO5 ($0.3<|EF|<0.5$) but weak for the subscales of CO1, CO2, CO3 and CO4 ($|EF|<0.3$).

A statistically significant difference was found between the case and control groups in terms of ST dimension and its subscales including self-forgetfulness (ST1) and spiritual acceptance (ST3) ($P<0.05$) except for the subscale of transpersonal identification (ST2) ($P=0.032$). The effect size was medium for ST and ST3 but weak for ST1 and ST4.

DISCUSSION

Our results showed that the number of

women seeking rhinoplasty is more than men. Accordingly, our findings are consistent with other researchers who investigated the personality traits of the patients seeking cosmetic rhinoplasty.^{27,28} However, our results were in contrast with those of another study that examined the relationship between psychological symptoms and satisfaction after rhinoplasty.²¹

Another study in Iran revealed that appearance and beauty have been more often an issue for women than men so that they receive more recommendations from friends to undergo cosmetic surgeries. This is consistent to our observations in our research community.²⁹ Moreover, major appearance changes have been more acceptable in women than men as they usually pay more attention to their physical attractiveness. In other words, a woman values herself when she can continue her perfect life by undergoing cosmetic surgeries.³⁰

Rhinoplasty applicants have different age ranges; the age group most likely applying for rhinoplasty is the late teens to young adulthood. New concerns about physical appearance begin almost from the age of 20 years and one of the most important concerns for both men and women about their appearance is the size and shape of their nose.³¹ Other researchers reported that internet has always been the main source of obtaining information on rhinoplasty as most internet users are young people.³²

Similar to the findings of another study, the majority of our participants expressed that their purpose of undergoing cosmetic surgeries is their desire to become beautiful. Accordingly, it can be concluded that a successful rhinoplasty makes the applicants satisfied with their new nose appearance and, consequently, enhances their satisfaction with their whole body.² Furthermore, people are encouraged to undergo cosmetic surgeries after seeing the results of successful surgeries performed on other people.

Our results are, also, in the same line with those of previous studies,^{8,23,30} indicating that

the majority of the women seeking cosmetic surgeries have been single; that might be due to the instrumental view which exists about women in the society and forces them to act and behave based on the men's desire.²⁹ Furthermore, bachelorhood and marriage can also play an important role in people's interest in undergoing cosmetic surgeries.²²

Novelty seeking (NS) includes all individual differences in response to new stimuli.³³ The results of this study revealed higher NS scores in the case group compared to the control group. Furthermore a significant difference was seen between the participants who have had cosmetic surgeries and their peers in the case group with respect to NS scores in its all subscales. Our findings were consistent with those of Haktanir et al. and Shahi et al. but in contrast with that of AliMohammadi et al. in this regard.^{18,34,35} We can conclude that the people who are interested in cosmetic surgeries commonly have personality traits such as feeling bored of monotony, persistence in making changes and willingness to take risks.³⁶ Such people may consider cosmetic surgery as a method to eliminate such feeling.

Hence, several factors such as variety seeking, possibility of making changes in the face, decreasing dissatisfaction with physical appearance, durability of changes,³⁷ recent advances in cosmetic surgery techniques, television advertisement, promises to improve the appearance and increasing self-confidence play important roles in encouraging people to experience cosmetic surgeries.³⁸

The results of the present study revealed a significant difference between the case and control groups in terms of HA scale scores ($P < 0.05$) which is similar to the findings of other studies.^{34,39} Our results showed higher HA scores reported by the participants of the case group compared with their counterparts in the control group. Accordingly, higher HA score signifies the personality traits such as sensitivity to criticism and punishment, not being comfortable when meeting strangers, shyness, pessimism and dependence on

others' help in normal situations.³³ Hence, such people would like to undergo cosmetic surgeries due to their low self-esteem, friends' recommendation, the importance of community's attitudes toward beauty and appearance,²⁹ enhancing the shape and appearance of their nose, looking more attractive and improving their appearance, achieving success in marriage, gaining more confidence in social interactions and satisfying their family and friends.²

Furthermore, we observed a significant difference between the case and control group in terms of RD scale scores in ($P < 0.05$), which is similar to other researches.¹⁸ Accordingly, people with lower RD scores are practical, though minded, cold, objective and socially insensitive with logical serious and beliefs as well as self-centered attitudes.³⁹ All these factors could encourage the youth and even the adults to seek a greater share of beauty and beauty enhancements based on their orientations and age requirements without considering its heavy cost and even with accepting all its physical and psychological consequences.⁴

The results of the present study showed a significant difference between the case and control groups in terms of P scores in ($P < 0.05$) which is similar to the findings of another study.³⁵ Therefore, the participants in the case group with lower P scores are action-oriented and easily get discouraged when faced with challenges, failures, and criticism.⁴⁰ Such people may have their own high standards and criteria, so they feel disappointed and dissatisfied when facing with problems. They are vulnerable to criticism and everything should be ideal for them; otherwise, they feel dissatisfied.³⁰

The mean of self-directedness (SD) scores reported by the participants of the case group was significantly different from those reported by their peers in the control group in the subscale of self-acceptance and intelligence. So, our result was consistent with other studies in this regard.^{18,35} The individuals with higher SD scores are mature, purposeful, self-sufficient and fantasize about beauty and

eternal youth.¹⁴ They try to increase their quality of life, self-confidence and positive mood by undergoing cosmetic surgeries. It seems that such surgeries increase the quality of life in the individuals with low self-directedness. World Health Organization defines the quality of life as an “individual’s perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns”.⁴¹

There was a significant difference between the case and control group with respect to the mean scores of CO in all subscales except for empathy and helpfulness. The participants of the case group reported lower C scores; therefore, they are opportunistic, self-centered, self-indulgent, impatient and critical and behave based on their prejudices and personal interests.⁴² Moreover, those with lower CO score are more likely to have cosmetic surgeries as they judge their appearance more negatively.^{43,44} They may find the surgeries as a means to improve their appearance and overcome their weaknesses.²³

We found a significant difference between the case and control groups with respect to the mean scores of ST in all subscales except for transpersonal identification. The participants of the case group reported lower ST scores as they were impatient, proud, materialistic, self-conscious, and dissatisfied with a strong imagination.⁴⁵ It can be concluded that, nowadays, life is a personal choice as people can do whatever they like and act based on their personal interests and benefits which indicate the trend of individualization.⁴⁶ Accordingly, cosmetic surgeries help people to achieve a good self-image and self-ideal sense through which they cure the feeling of not being desirable and dissatisfied with their appearance.²

The effect size estimated by the comparison of the mean scores was <0.5 in the subscale of adventurer, attachment and compatible habits and <0.3 in the other subscale indicating a statistically significant difference between the case and control groups. Besides, the effect of such difference is in the medium and weak

ranges which could happen due to our large sample size.

Considering the significant difference of the scores between the case and control groups, it can be concluded that both temperament and character traits, which are influenced by genetics and environment respectively, can affect the tendency toward rhinoplasty.

The strengths of this study are the large sample size and also assessing the temperament and character of rhinoplasty applicants for the first time in the world based on our researches. There were some limitations in our study. Firstly, the case and control groups were not matched in terms of their marital and employment status variables, and secondly the family income was not considered as an effective factor.

CONCLUSION

Considering the increasing number of rhinoplasty applicants and the importance of temperaments and characters in predicting biological-genetic traits of individual’s personality, evaluating such traits in rhinoplasty applicants will be so helpful in identifying and predicting ideal candidates for such surgery. Selecting the good patients can not only reduce the costs resulting from rhinoplasty imposed on families and society but also enhance the satisfaction of the applicants and the surgeons.

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