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Comparative Study of Psychiatric Disorders in Rhinoplasty Applicants and Control Group in Kerman, Iran During 2017–2018

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Abstract

Introduction: Every year tens of thousands of cosmetic surgeries done to change the appearance and increase the level of satisfaction and individual self-esteem that be considered the result of a psychological need. This study done to compare psychiatric disorders in rhinoplasty applicants with control group.

Materials And Methods: The sample of this cross-sectional study were composed of 80 rhinoplasty applicants with control group over a 1-year period.

Results: Of 80 applicants of rhinoplasty, 66.2% were female. The age of 67.5% of them was in the range of 26-35 years. Most of them (53.8%) had bachelor's degree. The differences of personality pattern between two groups were significant in extroversion, agreeableness and openness aspects. The scale of anxiety and depression between two groups based on the Hamilton anxiety Inventory and Beck Depression Inventory questionnaire was not statistically significant. In compare of Yale symptoms between two groups, obsessions about contamination, physical obsessions and repeating procedures, were statistically significant.

Conclusion: We concluded that extroversion and openness in rhinoplasty applicants was more than the control group. There was no significant relationship between personality traits and obsessive introspection but people with symptoms of obsessive-compulsive disorder, experience more introspective tendencies and negative emotions such as anxiety and depression.

Keywords: psychology disorders; rhinoplasty; Beck depression questionnaire; Hamilton anxiety questionnaire; Yale-Brown obsessive-compulsive questionnaire

Introduction

The beauty is important as one of the components of social status in the evaluation of social situations. The formation of a phenomenon known as plastic surgery perhaps was the greatest possible help to those that were dissatisfied with their appearance [1,2]. During the last 20 years, developments in procedures and details in cosmetic surgery was obtained causing significant benefits to surgeons and patients [3]. Today, cosmetic surgery is accounted as one of the most common surgeries in the world that the utilization of it, is increasing [4]. Since the

advances in medical science, make it possible for human to manipulate and change in appearances, there has been many requests for cosmetic surgery among people. On the other hand, mental status and personality of applicants has been also effective in this performance [5]. Based on a report from American society of plastic and reconstructive surgery, numbers of Cosmetic surgeries have grown up about 11.9 percent, from 1997 to 1999, and reached to 4.6 million. A study in 1997 in America has shown that 56 percent of women and 43 percent men dissatisfied with their appearance. A large percentage of youth demand for cosmetic surgery are by the girls. So that 95 percent of

applicants for rhinoplasty were women and girls between 14 to 45 years and only 5 percent were men [6,7].

Demand for cosmetic surgeries increased about 80 percent from 70th decade, in our country, too. Because statistics on cosmetic surgeries were not recorded in Iran, thus, they were not exact, and information in this regard was made by estimation. Like most countries, the most common cosmetic surgery is rhinoplasty in Iran and remove facial wrinkles is in second place.

The greatest benefit of a cosmetic surgery is the psychological effects on the patient. Findings of researchers have shown several issues cause that, a human performs a cosmetic intervention, like increased confidence.

Ishioka in a study on 415 patients requesting cosmetic surgery to determine their psychiatry characteristics, found that neurotic disorders, depression, social phobia and inconsistencies between them was more remarkable than other disorders [8]. In this regard, Moss and Harris in 2009 found that before and after the surgery, applicants' anxiety and depression, respectively, were 4.7 and 6.7% greater than control group. Also, they had inconsistencies and disorder in other social aspects and relations [9]. Marsh in 1998 in a study examined the relationship between body dissatisfaction in cosmetic surgery clients with anxiety, depression, social isolation, psychotic disorder, OCD, depression, self-esteem and self-confident [10]. Pritchard and Green in 2003, stated that worry and dissatisfaction about body and preoccupation to change it, is greater among young volunteers of cosmetic surgery [11]. In a study of people who seek cosmetic surgery, after surgery more improvement in interpersonal sensitivity, obsessive and concerns about appearance, assertiveness, self-esteem and social adaptation was observed [12]. Like other specialty in medicine, cosmetic surgery interventions should be placed under careful clinical trials before its application on patients. The boundary between surgery innovation and experiment on humans is ambiguous and should always emphasize the protection of the health and well-being of patients [13]. In this regard, normal mental status in the satisfaction of cosmetic surgery is a central determinant and is more important than surgical technique [14]. In another study in 2009, by Masoudzadeh et al. 50 applicants of rhinoplasty was evaluated using NEO and public health GHQ-28 questionnaire and the results showed that in these patients, the character of openness and extraversion are more and emotional instability and agreements are lower and in general health, there were physical complaints, anxiety, depression and impaired sleep [15]. Attempt to cosmetic surgery in modern society is so widespread that

it can even be considered an epidemic event. However, there are only a few comprehensive studies on this surgery in the psychological scope and most research has been based on the results of cosmetic surgery with no controlling groups, this study compared mental disorders in rhinoplasty applicants and control group in Kerman, Iran during April 2017 to April 2018.

Material and Methods

This study is a cross-sectional study using a control group. The study population was all applicants of rhinoplasty admitted to Shafa hospital (Central hospital of cosmetic surgery of Kerman) in Kerman, Iran during April 2017 to April 2018. Sample included 80 people had planned to carry out cosmetic surgery and rhinoplasty and 80 non-applicants that were matched regarding demographic characteristics (age, gender, education level). These individuals were considered as the control group and completed the short form of NEO questionnaire, Beck Depression Inventory, Hamilton Anxiety Scale and Yale Brown obsessive-compulsive symptoms questionnaire. NEO FFI (NEO Five Factor Inventory) is the short form of NEO-PI questionnaire prepared by McCrae & Costa in 1989. The questionnaire contains 68 questions and assesses the following five personality patterns:

1. Openness (O)
2. Agreeableness (A)
3. Nervousness (N)
4. Conscience (C)
5. Extroversion (E)

Self-reported Beck Depression Inventory with 13 articles that state the particular symptoms of depression. Any statements of the questionnaire include a scale of four items that are arranged from zero to five and maximum and minimum score of between 0 and 55.

Hamilton Anxiety Scale: This test includes four components, each of which contain a series of symptoms. Each of these components scaled from zero (no symptoms) to four (very severe or disabling). The overall score is 0 to 56.

Yale- brown obsessive-compulsive scale: The scale developed by Goodman and colleagues in 1989 and includes 10 items that examine aggressive obsessions, obsessions about contamination, physical obsessions and compulsions, obsessions washing, cleaning, checking rituals, sexual obsessions and Data analyzed by SPSS software and the significance level was set at 0.05 contractually. Ethical

Table 1: Determination and comparison of the average scores of personality patterns in the two groups.

pattern	Applicant	Control	P value*
N (Nervousness)	24.15±7.15	24.22±6.48	0.945
E (Extroversion)	29.17±5.46	26.81±6.37	0.013
A (Agreeableness)	24.78±8.11	26.92±4.9	0.045
C (Conscience)	28.58±8.66	29.78±7.39	0.348
O (Openness)	28.8±6.53	24.53±5.62	0.001

Table 2: Determination and comparison of anxiety levels in the two groups.

Scale	Applicant Number (percent)	Control Number (percent)	Total Number (percent)	P value
Light	58 (72.5%)	52 (65%)	110 (68.8%)	0.252
Average	14 (17.5%)	19 (23.8%)	23 (20.6%)	
Severe	6 (7.5%)	3 (3.8%)	9 (5.6%)	
Very severe	2 (2.5%)	6 (7.5%)	8 (5%)	

Table 3: Determination and comparison of the frequency of depression in the two groups.

Frequency of depression	Applicant	Control	Total	P value
0	27 (33.8%)	22 (27.5%)	49 (30.6%)	0.841
Normal	17 (21.2%)	18 (22.5%)	35 (21.9%)	
Light	14 (17.5%)	15 (18.8%)	29 (18.1%)	
Average	6 (7.5%)	9 (11.2%)	15 (9.4%)	
Average-Severe	8 (10%)	7 (8.8%)	15 (9.4%)	
Severe	3 (3.8%)	6 (7.5%)	9 (5.6%)	
Very Severe	5 (6.2%)	3 (3.8%)	8 (5%)	

Table 4: Determination and comparison of Yale symptoms and its components in the two groups.

Frequency of depression	Applicant	Control	Total	P value
0	27 (33.8%)	22 (27.5%)	49 (30.6%)	0.841
Normal	17 (21.2%)	18 (22.5%)	35 (21.9%)	
Light	14 (17.5%)	15 (18.8%)	29 (18.1%)	
Average	6 (7.5%)	9 (11.2%)	15 (9.4%)	
Average-Severe	8 (10%)	7 (8.8%)	15 (9.4%)	
Severe	3 (3.8%)	6 (7.5%)	9 (5.6%)	
Very Severe	5 (6.2%)	3 (3.8%)	8 (5%)	

committee of Kerman University of Medical Sciences by registered No. 930038 approved this Study.

Results

In this study, among 80 applicants of rhinoplasty, 53 individuals (66.2%) were female and 27 applicants (33.8%) were male. Most number of individuals were in the age group between 26-35 years old and there was no individual in the age group of 36-45 years old. Most rhinoplasty candidates had the bachelors' degree (53.8%).

The comparison performed for different personality patterns between control and applicant group (Table 1). The differences between two groups were significant in Extroversion (E), Agreeableness (A) and Openness (O) aspects. There were no significant differences in Nervousness (N) and Conscience (C) between two groups.

As shown in (Table 2), based on Hamilton Anxiety Inventory questionnaire, the two groups have no statistical difference in Anxiety Scale (P.V = 0.252).

According to (Table 3), there are no differences between two groups in terms of depression according to Beck Depression Inventory questionnaire (P.V = 0.84).

In this study, two groups evaluated according to presence and the type of obsessive-compulsive symptoms (80 items Yale-Brown scale checks). Overall, the average scores obtained from the Yale scale in two groups was statistically significant (P = 0.006). In each item the scores were collected and compared with the other groups and there were statistically significant differences (P <0.05), in items obsessive about contamination (Yb), physical or somatic obsessions (Yc), washing obsessions (Yd) and repeating procedures (Yf). (Table 4)

Discussion

This cross-sectional study, compared the 80 rhinoplasty applicants with the 80 other non-applicants as a control group. In a study by Niknam et al. that compared 58 rhinoplasty applicants with 58 controls matched with the case group, the number of women (29 individuals, 58 percent) using cosmetic surgery was more than men (21 individuals, 42 percent) that was consistent with our results. In our study most cases were in the age range of 26-35 years which is consistent with the study of Niknam et al. that most cases seeking rhinoplasty were in the range of 26-30 year [16]. In the studies of Afkham and Ghalebadi, and a study by Toutouchi and colleague's majority of applicants were under 25 years that was not consistent with our study

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[17,18]. One of the possible reasons for the existence of this contradiction may be differences in the type of surgery and the number of studied samples, gender, age, etc. and other reasons may be due to differences in cultural and social values and beliefs of men and women in different societies.

In the study between the two groups on three-personality factors extraversion, openness (flexibility in the face of experience) and agreeableness there was a significant difference. The applicant group compared with the control group was more extroverted and had less flexibility to experience and agreeableness. In a study by Masoudzadeh and colleague's personality characteristics, "emotional instability and Agreeableness" was lower in applicant group. This means they had less aggressive features were not hasty and shy and had good tolerance to deal with stress, also it was seen that the personality traits openness and extraversion were more in applicant group than the control. In that study, agreeableness in the applicant group was lower than the control group and characteristics of openness and extraversion in applicant group were more than the control group, which is consistent with our study. Also, in Masoudzadeh study, emotional instability in the applicants was less than the control group, but in our study between two groups, there were no significant difference in the characteristics of emotional instability [15]. In addition, the number of members of the applicant that obtained the average score in the trait of conscientiousness were less than the control group. This group placed on the two ends of the spectrum, this means, more than the control group got high and low-range scores, in fact, the conscience in the applicants in comparison to the control group was not in balance. This difference was statistically significant ($P = 0.011$), which was in contrast to our study. In our study between the applicants and the control groups was not statistically different in the conscientious trait.

In the Alamdar Saravi study, the most common personality disorder in people seeking cosmetic surgery was narcissism and histrionic personality that characterized with pervasive and widely self-showing and great excitement and attention attraction. Personality trait agreeableness in most individuals in two groups was moderate, the remaining minority, low scores on this trait in the cases was more than the control group, which is consistent with our results [19]. Also, In the study of Ghalebandi, the highest prevalence of narcissistic personality disorder and obsessive traits were in rhinoplasty applicants, which in this people, the agreeableness trait is slightly low, as in consistent with our study [17]. In our study, depression and anxiety disorder in applicants and non-applicants were not significantly different. In our study, independent t-test results showed

that, the individuals in applicant group are more obsessive-compulsive significantly. In the present study obsessions of contamination, sexual obsessions and compulsions, washing obsessions and repeating procedures has been more in applicants than the controls. In 2017 study, the personality of cosmetic surgery applicants compared with normal individuals. In this study, the millon II personality disorders questionnaire used. The results showed that statistically significant difference the compulsive personality disorder between the applicants and the controls, so that, the cosmetic surgery applicants are more obsessive-compulsive and it was consistent with our study results [20].

Conclusion

According to previous research results and findings of this study, it concluded that high scores on neuroticism traits, followed by experiencing negative emotions and increasing psychological damage. People with symptoms of obsessive-compulsive disorder, experience more introspective tendencies and negative emotions such as anxiety and depression. Due to the differences in the results of existing studies, it is suggested to perform more studies with larger sample sizes and a broader level of academic medical centers as well as private sectors and in different cities.

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Conflicts of Interest

None.

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