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Mental health in rhinoplasty applicants, before and after surgery

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Summary

Background: Rhinoplasty surgery is among the most common cosmetic surgeries and patients applying for rhinoplasty comparing to other cosmetic surgeries have more psychological disorders. Present study aims to investigate the mental health in rhinoplasty applicants, before and after Surgery.

Materials and methods: This is cross – sectional study conducted on 179 applicants for rhinoplasty in Abadan city during first half of 2018 by using convenience sampling method. The data collection tool was Symptom Checklist-90.

Results: Results of this test indicated that there was a significant difference between dimensions of mental health before and after surgery (R<0.001).

Conclusion: In conclusion, finding of this study, indicated the mental health situation of rhinoplasty applicant surgery, was better in all dimensions after surgery.

mental health, applicants, rhinoplasty surgery

INTRODUCTION

Since the progresses of medical science has made the manipulating and changing the face of people possible, most people have just volunteered for cosmetic surgery [1]. Besides the intention of people to the face superiority and distinguish due to the face beauty, one could consider the beauty face as one of the elements influencing on evaluating the social situation of very important people [2, 3]. Rhinoplasty is most common among cosmetic surgeries and patients applying for rhinoplasty comparing to applicants of other cosmetic intervention are more dissatisfied from their appearance because seeing yourself at the mirror reminds the ugly face of you on daily based and causing your distress [2]. According to diagnostic – statistical guide, psychological disorders, people with obsessive – compulsive mental involvement in their physical appearance, called as body deformation disorder that is one of the kinds of physical impairment disorders [3].Continuance of these conditions may dissatisfy such people from their physical image and such dissatisfaction followed by disorders such as depression [4, 5], social dis-

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tress [6] and double reduction of self-esteem [7]. Any of such conditions besides having annoying aspects, by interacting together may intensify themselves and in the long term, if not being cured, may create other disorders [8]. Stimulant factors) Psychological factors and tendency to beauty (must be reviewed and examined by surgery and considering all facts and considering the psychological measures, the surgeon may make decision for administer the surgery for patient or not [9 – 11]. Healthy mental state of applicants is deterministic in their satisfaction after cosmetic surgery [12, 13]. Belli et al. also suggested that the evaluation of psychiatric pathology and synergies can help define the clinical profiles of those who apply for rhinoplasty [14]. Previous studies indicated that a rhinoplasty applicant expresses greater psychopathological abnormalities [15, 16].

The possibility of screening applicants with mental disorders in one of the potential high-risk groups, may be improve the knowledge of applicants and surgeries and by Considering the progressive trend of cosmetic surgeries followed by increased judicial refers and complaints cases disposed in the Medical System related to the applicants of such kind of surgeries, it seems that rhinoplasty patients have more mental instability than other people and this issue besides providing the tendency to various cosmetic surgeries in such people, may provide them with dissatisfactions, improper evaluations, irrational expectations and negative thoughts and excitements after surgical operation. So the aim of this study was investigate a mental health in rhinoplasty applicants, before and after Surgery.

MATERIALS AND METHODS

Population, sample size, and sampling method

This is a cross-sectional study conducted in 2018 in Abadan, Southwest of Iran. The statistical population was rhinoplasty applicants who referred to Clinic Pars, during first half of 2018. During first half of 2018 (1 January – 1 July), 179 rhinoplasty applicants reffered to clinc Pars, so all of patients were selected, using convenience sampling method.

Inclusion and exclusion criteria

Inclusion criteria included people who applied for rhinoplasty surgery during first half of 2018, their satisfaction for participating in the research plan (Based on oral consent to participate in the study), lack of any known and treated or treating mental disease; and exclusion criteria included dissatisfaction from participation in the study and presence of a mental reason) According to a person's report (for nasal surgery.

Instruments of collecting data

The data collection tool was standard Symptom Check List (SCL) with 90 items. SCL-90-R is a widely used questionnaire developed by Leonard R. Derogatis. This questionnaire evaluates 9 dimensions including aggression, obsession, individual sensitivity, physical complaints, psychosis, paranoid imagery, depression and anxiety. According to study conducted by Modbernia about high school students in Iran, using the Cronbach's alpha coefficient, the reliability of SCL-90-R were estimated at 0.85 [17].

Method of collecting data

The procedure of this study initially included gaining consent from participants, and then questionnaires of SCL were distributed to participant. The researcher asks from participant to completed questionnaire in two turns, first visit and 3 month after operation (due to heal of wounds and fully removal of bruising and relative nasal formation out of the adhesive).

Statistical analysis

The data were analyzed by SPSS, Version 20. The indices of mean, SD and frequency were used for data description. Independent t-test, Pearson Correlation, one way ANOVA and depended t-test were used for data analysis. The significance levels in all tests were considered about 0.05.

RESULTS

In this study, 179 patients applied for rhinoplasty surgery during first half of 2018. The age mean of these patients was 29.07±8.84 and in the age range of 18-58 years old. Most patients applying for rhinoplasty surgery were women 136 (76). Based on marital status, maximum frequency was among singles 86 (48) and based on occupation, 53 (29.6) were employed. Table 1 indicates the frequency description of demographic variables of participants in the study.

Table 1. Frequency description of demographic variables of participants in the study (N=179)

Variable		Frequency (%)
Gender	Male	43 (24)
	Female	136 (76)
Marital status	Single	86 (48)
	Married	79 (44.1)
	Divorced	12 (6.7)
	Widow	2 (1.1)
job	housewife	39 (21.8)
	Employee	53 (29.6)
	Self-employed	40 (22.34)
	student	20(11.2)
	Unknown jobs	27 (15.08)

Paired t-test was used for determining the difference between mean dimensions of mental health before and after surgery. Results of this test indicated that there was a significant difference between dimensions of mental health before and after surgery (R<0.001). The mean dimensions of mental health were reduced after operation than before operation and such difference was statistically significant. (Table 2).

Table 2. Comparing the mean for dimensions of mental health before and after surgery

Elements of mental health	Pre-surgery	Post-surgery	P-value*
	Mean ±SD	Mean ±SD	
Aggression	7.91±2.17	7.13±1.37	<0.001
Anxiety	11.22±2.79	10.29±2.03	<0.001
Obsession	14.26±2.59	13.34±2.03	<0.001
Individual sensitivity	12.80±3.11	11.33±1.93	<0.001
Physical complaints	13.97±2.09	13.26±1.55	<0.001
psychosis	11.68±2.14	11.03±1.61	<0.001
Paranoid imagery	10.35±2.96	10.18±2.81	<0.001
Depression	17.24±4.31	16.09±2.21	<0.001
Phobia	8.34±1.62	7.70±1.09	<0.001

* Paired t-test

The Pearson Correlation Test was used for determining the relation between age (continuous quantitative) and dimensions of mental health pre and post-surgery. Results of this test indicated that there was a significant relation before surgery between variable of age and dimensions of aggression (P=0.03), obsession (P<0.001), individual sensitivity (P<0.001), Physical Complaints (P<0.001), paranoid imagery (P<0.001) and depression (P=0.001). After surgery, there was a significant correlation between age and variables such as anxiety (P=0.04), obsession (P<0.001), individual sensitivity (P<0.001), physical complaints (P<0.001) and paranoid imagery (P<0.001).

Results of independent t-test indicated that before surgery there was a significant difference between variable of gender and dimensions of anxiety (P=0.03), physical complaint (P=0.004) and phobia (P<0.001) between females and males. Table 3.

Table 3. Comparing the mean for dimensions of mental health before surgery according to sex

Elements of mental health	male	female	P-value*
	Mean ±SD	Mean ±SD	
Aggression	8.06±2.44	7.78±2.08	0.59
Anxiety	10.44±1.90	11.47±2.98	0.03
Obsession	14.72±2.66	14.72±2.66	0.19
Individual sensitivity	12.09±3.05	12.09±3.05	0.08
Physical complaints	13.18±1.54	13.18±1.54	0.004
psychosis	11.86±2.17	11.86±2.17	0.53
Paranoid imagery	10.27±2.77	10.27±2.77	0.84
Depression	17.16±4.01	17.16±4.01	0.9
Phobia	7.58±0.79	8.59±1.74	<0.001

After surgery there was a significant difference between variable of gender and dimensions of anxiety (P=0.009), physical complaint (P<0.001) and Phobia (P<0.002) between females and males. table 4.

Table. 4. Comparing the mean for dimensions of mental health after surgery according sex

Elements of mental health	male	female	P-value*
	Mean ±SD	Mean ±SD	
Aggression	7.09±1.39	7.15±1.37	0.8
Anxiety	9.86±1.05	10.42±1.59	0.009
Obsession	13.58±2.18	13.26±1.98	0.4
Individual sensitivity	10.88±1.87	11.47±1.93	0.07
Physical complaints	12.67±1.04	13.45±1.64	<0.001
psychosis	11.48±2.09	10.89±1.41	0.08
Paranoid imagery	10.09±2.57	10.21±2.89	0.8
Depression	15.30±2.30	15.50±2.44	0.64
Phobia	7.25±0.58	7.84±1.18	<0.002

Results of One-Way Variance Analysis indicated that before surgery there was a significant difference between various occupational groups between job and all dimensions (P< 0.05) except Obsession before (P=0.35) and after (P=0.11) surgery. Similarly, according to results, there was a significant difference before surgery between variable of marital status and all dimensions except Phobia before and after (P>0.05) surgery table 5.

Table 5. Comparing the mean for dimensions of mental health before and after surgery according job and marital status

Elements of mental health	Job				Marital status			
	Before		After		Before		After	
	F	P-value	F	P-value	F	P-value	F	P-value
Aggression	9.04	<0.001	8.34	<0.001	3.16	0.02	4.93	0.003
Anxiety	3.84	0.01	4.22	0.007	13.85	<0.001	3.23	0.02
Obsession	1.09	0.35	1.98	0.11	5.78	<0.001	3.04	0.03
Individual sensitivity	23.74	<0.001	17.21	<0.001	10.14	<0.001	6.60	<0.001
Physical complaints	10.42	<0.001	8.84	<0.001	14.75	<0.001	11.09	<0.001
psychosis	3.41	0.01	3.37	0.02	3.02	0.03	3.53	<0.001
Paranoid imagery	10.26	<0.001	10.79	<0.001	16.70	<0.001	18.76	<0.001
Depression	5	<0.001	5.74	<0.001	24.64	<0.001	20.03	<0.001
Phobia	7.37	<0.001	7.14	<0.001	1.30	0.82	0.33	0.8

DISCUSSION

Present study aimed to investigate the psychological specifications of applicants for rhinoplasty surgery before and three month after operation. Many studies investigated the psychological specifications of applicants for rhinoplasty surgery [18-20].

The most important result of this study indicated that there was a significant difference between dimensions of psychological health before and after operation. In all dimensions, the mean of mental dimensions was reduced than pre-surgery that was statistically significant indicating their better status than pre-surgery. This requires more discussions by specialists. This finding is consisting with study conducted by Samadzade et.al in Iran [21], study conducted by Strazdins et.al [22] and study of Mc Grath and Mukerji [23].

Maximum mean of disorders was related to depression, obsession, physical complaint, in-

dividual sensitivity, psychosis, anxiety, paranoid imagery, Phobia and aggression respectively. These results are conformed to the results of Tidi et al [24]. These results were also adapted to the study of Bili et al [14]. Bili et al conducted a study called "Psychopathology and Mental Illness among Patients who are seeking rhinoplasty surgery" and indicated that patients applying for rhinoplasty surgery have at least one of the psychological impairments [14].

Results of this study indicated that there was a significant correlation among age, gender, marital status and job with dimensions of mental health before and after surgery, the anxiety, physical complaint and Phobia was higher among females than males. These results were adapted to the results of Jianpour et al [25]. In their study, Jianpour et al stated that age, gender, marital status, and occupation are among factors influencing on kinds of cosmetic surgeries and there is a significant correlation between such variables and psychological characteristics of applicants for cosmetic surgery [25].

In final, despite the findings of this study demonstrated rhinoplasty surgery can improve the mental health of applicants, the question asked here is whether surgery is suitable for people? Could one recommend surgical operation for individuals? Because this study indicated that the level of depression, obsession, physical complaint, individual sensitivity, psychosis, anxiety, paranoid imagery, Phobia and aggression has just reduced post-surgery than pre-surgery, thus, we should not object the people applying for surgery and this requires more discussions as well.

On the other hand, our results may be confounded by variables not measured in this study like fear of an upcoming surgery, so regard the results of the present study, rhinoplasty surgery isn't recommended when it is merely for surgical purposes and it is better to hold advising courses for applicants of non-necessary surgeries for providing all age groups with trainings for knowing the improper behaviors and patterns in the surgical operations and prevent non-necessary surgeries by providing them with needed consultations and psychological services. Likewise, it is recommended to consider the key role of satellite TVs as advertising or training tools by holding training movies and expressing the outcomes and adverse effects of non-common and unnecessary cosmetic surgeries for people who applying for surgeries to prevent malicious and unnecessary advertisements.

STRENGTHS AND LIMITATION

The first strength of this study is using a valid survey or questionnaire for determining the mental health state among applicants for surgery. However, this study has some weaknesses as well, for instance. since our study is sectional type and it was impossible to determine the long term efficiency of the mental health state of participants. it is recommended to conduct a cohort study with longer follow up periods. Second limitation of this study was that considering the population selected in Abadan, regard to the cultural – attitude differences, the results of this study could not be generalized to other communities.

CONCLUSION

In conclusion, findings of this study indicated that most patients applying for surgery were among young females and employees. The finding showed that there was significant correlation between mental health before and after surgery and rhinoplasty surgery could improve the dimensions of their mental health causing reduced depression and anxiety together with other dimensions of mental health. Despite all this, it's recommended that Patient selection to be done very carefully to obviate not only physical, but also psychological postoperative complications.

Authors' contributions

L.GH. designed the article. T.R., and M.M., did write the article. M.F., was supervisor. All authors edited the article.

Conflict of interest

The authors affirm that there is no conflict of interest that may have influenced the preparation of this manuscript.

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