



The Effectiveness of Cosmetic Surgery on the Feeling of Inferiority, Social Identity and Psychological Health of Cosmetic Surgery Applicant

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Abstract

Background: The effect of cosmetic surgery has always had doubts. In particular, these doubts are interpreted in the psychological field. Therefore, the study aimed to determine the effectiveness of cosmetic surgery on the feeling of inferiority, social identity, and psychological health of cosmetic surgery applicant.

Methods: The research method is pre-experimental (preliminary experiment) with a pre-test-post-test design with a six-month follow-up for one group. The statistical population of the study includes all patients referred to Pars clinic surgery center in Sari in 2020. The research population and by sampling method available to 15 of those who met the inclusion criteria and obtained the quorum from the research questionnaires as a sample of selection were. To collect information, the inferiority scale of Yao et al, the social identity questionnaire (SIQ) of Imani, and the psychological health questionnaire (PHQ) of Goldberg and Hillier were used. To analyze the research data, repeated measures analysis of variance with SPSS 18 software was used.

Results: The results showed that cosmetic surgery affected the cognitive and social factors of cosmetic surgery applicants ($P\text{value} \leq 0.01$). It has the greatest effect on psychological health, social identity, and inferiority, respectively.

Conclusions: The results of this study show that cosmetic surgery can have a significant effect on reducing feelings of inferiority and social identity and greater psychological health, which as a treatment method is effective on psychological factors.

Keywords: Cosmetic surgery, Inferiority, Social identity, Psychological health.

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Introduction

The title of beauty in medicine refers only to the beauty of the human physical body that is created through plastic surgery.¹ Cosmetic surgery creates balance and coordination between different parts of the body.² However, cosmetic surgery, which is used to improve appearance, is a specialty that restores, maintains, or improves a person's physical appearance through surgical and medical techniques.³ In general, it can be said that medical surgeries are called cosmetic surgeries that are performed to change and beautify or eliminate the apparent damage to a part of the face, which has increased significantly in the last decade.⁴

According to statistics published in 2018 in the United States, the five most common cosmetic surgeries include liposuction, breast augmentation, eyelid surgery, nose surgery and Botox injections,⁵ and laser hair removal, microdermabrasion, chemical peels and collagen injections has been suggested as the most common non-surgical cosmetic interventions.⁶ Psychiatric evaluations of beauty seekers were first reported in the 1950s and 1940s and were largely reflective of psychoanalytic trends in American psychiatry.⁷ People associate physical beauty with desirable personality traits such as intelligence, competence, and social acceptance, which indicates that they feel inferior.⁸ From their point of view, a feeling of inferiority or a constant belief about the depth of deep, unrealistic, and physical abilities, which leads to a decrease in the level of values and rationality and devaluation of the individual.⁹

In people with a sense of inferiority, a psychological effort begins to grow through which they hide their fear and inadequacy. The problem of feeling inferior among young people is increasing alarmingly, and in fact, the years of youth are years of enduring the burden of feeling inferior.¹⁰ The task of this psychological effort in a healthy mental life is to overcome the weakness and inadequacy felt and thereby re-creates excellence.¹¹ On the other hand, paying attention to the dimension of healthy psychology raises the issue of psychological health,¹² which according to the view of the world health organization is complete physical-psychological and social well-being so that the individual can adapt to the environment and to be outside.¹³ In other words, mental health is defined as the ability to adapt to the views of oneself, others and face the problems of daily life,¹⁴ referring to its physical and psychological dimension is influenced by surgery, which also has cosmetic surgery.¹⁵ Also, psychological health is always in interaction with health and social identity¹⁶ and social identity that is known as a sense of belonging and solidarity to a community, as a member of a community is distinct from other communities.¹⁷

It shows that a person feels commitment and obligation in front of the standards and values of his society and participates in its various affairs and meets the expectations of his society.¹⁸ Paying attention to the dimension of being a member of a community and responding to the expectations of the community makes it effective for people in the community to pay attention to surgery.¹⁹ In this regard, Aquino & Steinkamp in their research showed that cosmetic surgery is effective in

the development of the identity of the actors.¹⁴ Yin et al., found in their research that cosmetic surgery affects self-esteem, inferiority, self-efficacy, and evaluation of appearance.²⁰ Yoon & Kim concluded in their research that cosmetic surgery is effective on early maladaptive schemas and psychological health.²¹ In general, limited research has been done on the effect of cosmetic surgery on cognitive and social factors of cosmetic surgery applicants, and considering that one of the aspects of performing this operation is to improve the psychological status of people, it is necessary for this research adds that the research vacuum in the country also increases its importance, so the main purpose of this study was to determine the effect of cosmetic surgery on the feeling of inferiority, social identity and psychological health of cosmetic surgery applicant.

Materials and Methods

The research method is pre-experimental with a pre-test-post-test design with a six-month follow-up for one group. All patients were referred to Pars Clinic Sari surgical center in 2020 and surgical applicants formed different parts of the face of the research community. Sample size according to the population size based on the following equation and values obtained from previous researches²¹ and the formula below was 10.06. Sample size according to the population size based on values obtained from previous researches and the formula below 10.06 samples was proposed and with the possibility of error in calculating the number of samples, 15 people were selected using the available sampling method. Also based research questionnaires (cognitive and social factors) were administered among individuals (applicants for cosmetic surgery).

$$n = \frac{2\sigma^2(z_{1-\frac{\alpha}{2}} + z_{1-\beta})^2}{d^2} = \frac{2(1.50)^2(1.96 + 1.62)^2}{5.661} = 10.06$$

Inclusion criteria: Applicants for cosmetic surgery have different facial features, the age range of 20 and 40 years, and women gender. They were married. People are satisfied to participate in the study. Be at least literate.

Exclusion criteria: Incomplete completion of the questionnaires, doubt about having any of the inclusion criteria during the intervention, dissatisfaction in any of the intervention stages, use of sedatives or hypnotics, concomitant psychological disorders such as epilepsy, whenever willing to leave the study, leaving to be diagnosed by a doctor or psychologist center.

In the field, after receiving the code of ethics (IR.IAU.BABOL.REC.1399.063) by referring to the Pars clinical surgery center of Sari, the case was reviewed and the sampling process was done by contacting and obtaining permission from the people. Before sampling, the ethical considerations such as research objectives, confidentiality, and privacy were expressed and informed consent was obtained from individuals as a commitment to participate in the research, then a pre-test was obtained from the group and at the end of surgery from the post-test group. And after 6 months, the follow-up was done. After collecting data, descriptive statistics of mean and standard deviation were used for analysis, and in

inferential statistics, repeated measures analysis of variance was used with SPSS18 software.

Inferiority Questionnaire: The inferiority questionnaire of Yao et al., was made with 34 questions.²² This scale is a self-reporting tool that measures 17 items of inferiority related to their judgments and 17 items of judgments of others. Based on a five-point Likert scale (not completely correct=1 to correct=5), the lowest possible score will be 34 (34 times one), and the highest score will be 170 (34 times five), and the highest score will indicate it is more than a feeling of inferiority and negative. Structural validity and simultaneous questionnaire were confirmed by the manufacturer and reliability was obtained by Cronbach's alpha method for the whole 0.91. In Iran, the validity of the structure by Yousefi, Mazaheri, and Adhamian²³ and at the same time the questionnaire was confirmed by the manufacturer, and the reliability was obtained by Cronbach's alpha method for the whole at 0.89.

Social identity questionnaire: This questionnaire was designed by Imani²⁴ with 20 questions. The questionnaire has 20 questions with a Likert scale (very much in favor of 5 to very much against 1). It has a general score and a score between 20 and 47 indicates a low social identity in the person. A score between 47 and 75 indicates a moderate social identity in the person. A score between 75 and 100 indicates a high social identity in the person. Structural validity and simultaneous questionnaire were confirmed by the manufacturer, and reliability was obtained by Cronbach's alpha method for the whole at 0.82.

Psychological health questionnaire: The questionnaire was developed by Cold Berg and Heller²⁵ with 28 questions. The questionnaire has 4 sub-scales and each scale has 7 questions. These scales are the physical symptoms scale, the anxiety and sleep disorder symptoms scale, the social functioning scale, and the depression symptoms scale. Liberty scores range from strongly disagree 5 to strongly agree 1. A higher score indicates less health and vice versa. Structural validity and simultaneous questionnaire were confirmed by the manufacturer and reliability was obtained by Cronbach's alpha method for the whole at 0.87. In Iran, the validity of the structure was confirmed by Nazarpour and Shirini²⁶ and at the same time the questionnaire was confirmed by the manufacturer, and the reliability was obtained by Cronbach's alpha method for the whole at 0.81.

Results

Regarding the demographic characteristics of individuals, 9 (60%) are 20 to 30 years old and 6 (40%) are 31 to 40 years old.

Table 1 shows the mean scores of pre-test, post-test, and follow-up of feeling inferior, social identity, and mental health in the experimental group (cosmetic surgery applicants), showing that the mean scores of feeling inferior in the post-test have decreased compared to the pre-test. There is no reduction in proportion to follow-up. Regarding social identity, it is shown that the mean scores in the post-test have increased compared to the pre-test, but there is no increase in proportion to the follow-up. Regarding the mental health variable, it is shown that the mean scores in the post-test have decreased compared to the pre-test, but there is no

decrease in proportion to the follow-up. After descriptive analysis of the data, the distribution was confirmed to be normal by skewness and elongation tests and Shapiro Wilkes test. The three stages of pre-test, post-test, and follow-up were considered as in-subject factors. To investigate the significant differences between the means in the three stages of treatment, first, the assumptions of homogeneity of variances were made by the Levin test and the Machley sphericity test.

The results of table 2 show that in the intragroup factor, the value of F calculated for the effect of steps (pre-test, post-test and follow-up) is significant at the level of 0.05. As a result, it shows the effect of cosmetic surgery on the feeling of inferiority, social identity and psychological health of cosmetic surgery applicants. It has the greatest effect on psychological health (0.997), social identity (0.936) and feeling of Inferiority (0.991), respectively.

Table 1. Mean and standard deviation of pre-test, post-test and follow-up scores

ndent variable	Pre-test		Post-test		Follow-up	
	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation
Inferiority to their judgments	35.21	5.10	33.19	4.53	33.12	4.50
Inferiority associated with the judgments of others	40.28	4.22	25.23	4.21	25.13	4.22
Feeling inferior	94.46	10.18	84.38	9.64	84.28	9.61
Social identity	39.38	5.87	49.41	8.05	49.21	8.03
Physical symptoms	14.06	2.13	10.09	1.08	10.01	1.07
Anxiety and insomnia	15.96	2.03	11.51	1.71	11.42	1.69
Social dysfunction	17.22	3.15	12.38	2.25	12.31	2.22
Depression	13.45	2.78	10.19	1.17	10.12	1.16
Psychological health	24.39	3.12	18.22	3.19	18.15	3.17

Table 2. Results of repeated measures analysis of variance with intragroup factors

Dependent variable	Total squares	Degree of freedom	Mean squares	F	Pvalue	Effect size
Inferiority to their judgments	31452.055	1	31452.055	1375.366	0.000	0.966
Inferiority associated with the judgments of others	5851.854	1	5851.854	1635.800	0.000	0.978
Feeling inferior	7054.393	1	7054.393	1788.463	0.000	0.991
Social identity	1896.100	1	1896.100	251.253	0.000	0.936
Physical symptoms	12534.857	1	12534.857	4875.785	0.000	0.993
Anxiety and insomnia	18751.461	1	18751.461	3669.452	0.000	0.992
Social dysfunction	22131.285	1	22131.285	4122.251	0.000	0.992
Depression	15421.336	1	15421.336	1699.807	0.000	0.976
Psychological health	2536.785	1	2536.785	6874.369	0.000	0.997

Discussion

The study aimed to determine the effect of cosmetic surgery on the feeling of inferiority, social identity and psychological health of cosmetic surgery applicant and according to the results, cosmetic surgery affects the inferiority of cosmetic surgery applicants. This finding is the result of some consistent studies. Yoon & Kim concluded in their research that cosmetic surgery is effective on early maladaptive schemas and psychological health.²¹ Yin et al., found in their research that cosmetic surgery affects self-esteem, inferiority, self-efficacy, and evaluation of appearance.²⁰ Aquino & Steinkamp in their research showed that cosmetic surgery is effective in developing the identity of the actors.¹⁴ In explaining the effect of cosmetic surgery, it can be said that each person's face is in the center of his face and we can say that it is one of the organs that is very visible and if it has a defect, it causes problems for the person.²⁷ Usually, at such times, the person feels that his face has overpowered his whole identity and performance, and this over-empowerment has made it possible for him to be ridiculed by those around him.²⁸ At a time when the patient suffers from inferiority and cannot fight it and create a balance in itself that in cosmetic practice by changing the structure of the organ can maintain satisfaction and improve the attitude of the person towards himself, which ultimately improves and reduces the feeling of inferiority.²⁹ In practice, beauty can give people who are always concerned

about their shape a better sense of their overall appearance, and gain self-confidence and self-esteem, and ultimately increase their social identity and mental health.³⁰ Many patients feel better about themselves after cosmetic surgery, even when the changes are minor.³¹ The present study showed that cosmetic surgery has an effect on the feeling of cognitive and social factors of cosmetic surgery applicants and has the greatest effect on psychological health, social identity, and inferiority, respectively. The results of this study show that cosmetic surgery can have a significant effect on reducing feelings of inferiority and having a social identity and greater psychological health, which is an effective method of treatment of psychological factors.

This research was limited to Pars Clinic surgery center Sari city in 2020, limited to 20 to 40 years old, limited to women gender; due to lack of Adequate access to the samples was not possible for the control group at the time of the outbreak of corona virus.

The present study showed that cosmetic surgery has an effect on the cognitive and social factors of cosmetic surgery applicants and has the greatest effect on psychological health, social identity, and inferiority, respectively. The results of this study show that cosmetic surgery can have a significant effect on reducing feelings of inferiority and having a social identity and greater psychological health, which is an effective method of treatment of psychological factors.

All ethical principles were considered in this article. The participants were informed about the purpose of the research and its implementation stages and signed the informed consent; they were also assured about the confidentiality of their information; Moreover, they were allowed to leave the study whenever they wish, and if desired, the results of the research would be available to them. The present study has been registered under the code of ethics of IR.IAU.BABOL.REC.1399.063 at Azad University of Babol.

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Conflict of Interest

The authors declare that they have no conflict of interest.

References

- Walker CE, Krumhuber EG, Dayan S, Furnham A. Effects of social media use on desire for cosmetic surgery among young women. *Current Psychology* 2019;30:1-10. doi:10.1007/s12144-019-00282-1
- Sarwer DB. Body image, cosmetic surgery, and minimally invasive treatments. *Body Image* 2019;31:302-8. doi:10.1016/j.bodyim.2019.01.009
- McNichols CH, Diaconu S, Alfidil S, Woodall J, Grant M, Lifchez S, et al. Cosmetic surgery training in plastic surgery residency programs. *Plastic and Reconstructive Surgery Global Open* 2017;5:14-9. doi:10.1097/GOX.0000000000001491
- Higgins S, Wysong A. Cosmetic surgery and body dysmorphic disorder—An update. *International Journal of Women's Dermatology* 2018;4:43-8. doi:10.1016/j.ijwd.2017.09.007
- Dean NR, Foley K, Ward P. Defining cosmetic surgery. *Australasian Journal of Plastic Surgery* 2018;1:95-103. doi:10.34239/ajops.v1n1.29
- Eberlin KR, Perdakis G, Damitz L, Krochmal DJ, Kalliainen LK, Bonawitz SC. Electronic communication in plastic surgery: Guiding principles from the American society of plastic surgeons health policy Committee. *Plastic and Reconstructive Surgery* 2018;141:500-5. doi:10.1097/PRS.0000000000004022
- Mohammadpanah Ardakan A, Yousefi R. Assessment of beliefs about appearance and inferiority feeling in cosmetic surgery candidates. *Journal of Dermatology and Cosmetic* 2011;2:85-97.
- Mohammadzadeh A. Studying narcissistic traits and inferiority feelings among patients seeking cosmetic surgery. *International Journal of Behavioral Sciences* 2014;8:213-8.
- Hurst RA. Cosmetic surgery. *The International Encyclopedia of Human Sexuality* 2015;10:1-4. doi:10.1002/9781118896877.wbiehs104
- Wang W, Zheng X, Yue X, Zhong N. The role of beauty as currency belief in acceptance of cosmetic surgery and career aspirations among Chinese young women. *The Journal of Social Psychology* 2020;9:1-2. doi:10.1080/00224545.2020.1842314
- Liebelt C. Reshaping 'Turkish' Breasts and noses: On cosmetic surgery, gendered norms and the 'right to look normal'. *InBeauty and the Norm* 2019;1:155-76. doi:10.1007/978-3-319-91174-8-7
- Naami A, Mahmood Salehi H. Prediction of cosmetic surgery tendency based on mindfulness, personality dimensions, perfectionism and mental health components. *International Journal of School Health* 2016;3:1-6. doi:10.17795/intjsh-32746
- World Health Organization. World report on ageing and health. World Health Organization 2015, 22.
- Aquino YS, Steinkamp N. Borrowed beauty? Understanding identity in Asian facial cosmetic surgery. *Medicine, Health Care and Philosophy* 2016;19:431-41. doi:10.1007/s11019-016-9699-0
- Salahian A. Comparison of mental health and self-image between the applicants and non-applicants of cosmetic surgery. *Journal of Research and Health* 2019;9:686-91. doi:10.32598/JRH.1407.1
- Cohen EL, Atwell Seate A, Kromka SM, Sutherland A, Thomas M, Skerda K, et al. To correct or not to correct? Social identity threats increase willingness to denounce fake news through presumed media influence and hostile media perceptions. *Communication Research Reports* 2020;3:1-3. doi:10.1080/08824096.2020.1841622
- Slavin B, Beer J. Facial Identity and Self-Perception: An Examination of Psychosocial Outcomes in Cosmetic Surgery Patients. *Journal of Drugs in Dermatology: JDD* 2017;16:617-20.
- Fayemi AK. Racial identity, aesthetic surgery and Yorùbá African values. *Developing world bioethics* 2018;18:250-7. doi:10.1111/dewb.12180
- Walker CE, Krumhuber EG, Dayan S, Furnham A. Effects of social media use on desire for cosmetic surgery among young women. *Current Psychology* 2019;30:1-10. doi:10.1007/s12144-019-00282-1
- Yin Z, Wang D, Ma Y, Hao S, Ren H, Zhang T, et al. Self-esteem, self-efficacy, and appearance assessment of young female patients undergoing facial cosmetic surgery: a comparative study of the Chinese population. *JAMA Facial Plastic Surgery* 2016;18:20-6. doi:10.1001/jamafacial.2015.1381
- Yoon S, Kim YA. Cosmetic surgery and self-esteem in South Korea: A systematic review and meta-analysis. *Aesthetic Plastic Surgery* 2020;44:229-38. doi:10.1007/s00266-019-01515-1
- Yao SN, Cottraux J, Martin R, Mollard E, Bouvard M, Guerin J, et al. Inferiority, guilt and responsibility in OCD, social phobias and controls. A study with the intrusive thoughts and their interpretations questionnaire revised (ITIQ-R). *Psicoterapia Cognitiva e Comportamentale* 1997;3:210-11.
- Yousefi R, Mazaheri M, Adhamyan E. Inferiority feeling in social phobia and obsessive compulsive disorder patients. *Journal of Iranian Psychologists* 2008;5:63-8.
- Imani T. Youth lifestyle and social identity. Tehran: Satellite Publications 2004.
- Goldberg DP, Hillier VF. A scaled version of the general health questionnaire. *Psychological Medicine* 1979;9:139-45. doi:10.1017/S0033291700021644
- Nazarpour F, Shirini K. Investigation on the mental health indices in housewives and employed women in Ilam city. *SJIMU* 2015;22:75-80.
- Perrotta G. The concept of altered perception in "body dysmorphic disorder": the subtle border between the abuse of selfies in social networks and cosmetic surgery, between socially accepted dysfunctionality and the pathological condition. *J Neurol Neurol Sci Disord* 2020;6(1):1-7. doi:10.17352/jnmsd.000036
- Ligh CA, Lett LA, Broach RB, Enriquez FA, Jordan A, Percec I, et al. The impact of race, age, gender, income, and level of education on motivations to pursue cosmetic surgery and surgeon selection at an academic institution. *Plastic and reconstructive surgery* 2020;145:932-9. doi:10.1097/PRS.0000000000006734
- Ching BH, Xu JT. Understanding cosmetic surgery consideration in Chinese adolescent girls: Contributions of materialism and sexual objectification. *Body Image* 2019;28:6-15. doi:10.1016/j.bodyim.2018.11.001
- Danesh S, Foroozandeh E. The big 5 and body image in cosmetic surgery applicants in Esfahan. *Shenakht Journal of Psychology & Psychiatry* 2018;5:115-28. doi:10.29252/shenakht.5.1.115
- Higgins S, Wysong A. Cosmetic surgery and body dysmorphic disorder—An update. *International Journal of Women's Dermatology* 2018;4:43-8. doi:10.1016/j.ijwd.2017.09.007