

Predictive Factors for Cosmetic Surgery in Iranian Females

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Received 2016 October 18; Revised 2017 March 15; Accepted 2017 May 10.

Abstract

Background: Cosmetic surgery became increasingly popular in recent years. In some cases, cosmetic surgery caused some complications and did not create a durable improvement of quality of life.

Objectives: The current study aimed at determining the predictive factors for cosmetic surgery in Iranian females.

Methods: The current case-control study was conducted on 98 females admitted to the plastic surgery clinics (the case group) and 102 females admitted to other clinics as the control group. The simple random sampling method was used. The inclusion criteria were no obvious physical defects and known mental disorders. Duplicates and the ones not interested to cooperate with the study were excluded. Study data were collected using demographic, the multidimensional scale of perceived social support (MSPSS), and the Cohen perceived stress scale (PSS). The Chi-square test was used to assess the categorical variable. The logistic regression model was applied to measure odds ratio.

Results: The relationship between educational level as well as occupation, and cosmetic surgery were statistically significant. The social support from friends and others was significantly associated with tendency toward cosmetic surgery. While family support and perceived stress showed no differences between the females with and the ones without cosmetic surgery. The logistic regression analysis showed that higher education level, being a housewife, and external supports had a significant relationship with cosmetic surgery.

Conclusions: Factors including higher education level, being a housewife, and external supports were the important factors affecting the tendency toward cosmetic surgery among females in Ilam, Iran. Identifying the risk factors of unnecessary cosmetic surgery is needed in every society, to plan counseling programs and reduce unnecessary surgeries.

Keywords: Cosmetic Surgery, Perceived Social Support, Perceived Stress

1. Background

Cosmetic surgery is one of the most attractive medical procedures and has become increasingly popular in recent years. Although cosmetic surgery is divided into 2 areas including medical and non-medical motives, evidence shows that a large number of cosmetic surgeries have no medical origins. Unfortunately, most people undergo cosmetic surgeries just to change their appearance (1).

According to the international society of aesthetic plastic surgery (ISAPS), more than 23 million cosmetic surgeries were conducted in the world in 2013. However, the US had the highest rate with almost 16 million cosmetic surgeries in 2014 (2); Iran is also among the top countries with the highest rate in this regard.

Overall, females undergo cosmetic surgeries more than males; about 92% of cosmetic procedures were performed on females (3).

However, most individuals are pleased with the outcome and have a better feeling about themselves after cosmetic surgery (4), it should be noted that cosmetic surgery does not cause a durable improvement in quality of life

(QOL) and mental health of individuals (5, 6). It is noteworthy that the risk of suicide and death increased in some of the individuals undergoing cosmetic surgery (7, 8).

Why individuals accept and attempt when there is no need for cosmetic surgery is an important question and many studies were focused on the topic worldwide (9-11).

2. Objective

Based on the assumptions about the factors affecting tendency toward cosmetic surgery and such a high number of injuries in the Iranian population, especially among females in Ilam, the current study aimed at determining the predictive factors for cosmetic surgery in the Iranian females.

3. Materials and Methods

The current case-control study evaluated 200 females admitted to the specialized plastic surgery clinics in Ilam, Iran.

So far, no similar study was conducted on the same population; therefore, $\alpha = 0.5$, $P = 0.5$ and $d = 0.1$ were considered in the current study. The case group included 98 females admitted to the cosmetic surgery clinics, and 102 females admitted to other clinics were considered as the control group. The simple random sampling method was used to select the subjects (12, 13). In Iran, there are 6 working days per week, from Saturday to Thursday. Researcher dedicated on the sampling for 3 days in a cosmetic surgery clinic and 3 days to other clinics, each week. The inclusion criteria were females without obvious physical defects and known mental disorders. All duplicates and the subjects with no interest to participate in the study were excluded. Several factors were considered as the bias risks of the current study. First, all confounding factors including age, marital status, education level, and occupation were adjusted during the analysis.

Since the season changes may influence the willingness to undergo cosmetic surgery, the sampling was performed during a full year from April 2015 to March 2016.

Probably, the socioeconomic status affects the tendency of females toward cosmetic surgery. Therefore, maybe the females with higher socioeconomic status refer to cosmetic surgical centers outside the province. Therefore, performing the sampling in Ilam cosmetic surgery clinics can be considered as a limitation for the study.

In the present study, the social support and perceived stress were considered as independent variables and cosmetic surgery was considered as the dependent variable. All factors such as the age, marital status, educational level, and occupation were considered as confounding factors. Study data were collected using demographic scale, the multidimensional scale of perceived social support (MSPSS) and the Cohen perceived stress scale (PSS) (14).

3.1. The multidimensional Scale of Perceived Social Support

The MSPSS is developed by Gregory D. Zimet in 1988. The MSPSS has a good internal and test-retest reliability as well as construct validity. The 12-item version of MSPSS employed in the current study included 3 subscales, each addressing a different source of support. The MSPSS subscales include family, friends, and others. A 5-option Likert scale from 'totally agree' to 'totally disagree' was used to score the participant's responses. Validity and reliability of these instruments was confirmed in Iranian population (15).

3.2. The Cohen Perceived Stress Scale

The PSS is a famous instrument developed in 1983 by Cohen. It is widely used in the studies to assess the stress of situations. The PSS has 3 versions of 4, 10, and 14 items

used to assess perception of stress in the past month. The 14-item version was used in the current study; 7 positive items assess the level of ability to cope with external stress during the past month. While 7 negative items assess the lack of control and negative emotional reactions. A previous study confirmed the reliability of the PSS among university students (0.82) (16). Validity and reliability of the PSS was confirmed in Iranian patients with cancer (17). A 5-option Likert scale, from 'always' to 'never', was used to score the participants' responses.

The protocol of the current study was approved by the ethics committee of Islamic Azad University of Ilam branch, Iran. To enhance confidentiality, all questionnaires were completed anonymously and only the required information was collected. After data collection, analysis was carried out with IBM SPSS for Windows version 20.0 (IBM Co., Armonk, NY, USA) using descriptive statistics. The Chi-square test was used to test the categorical variable. However, if the expected values for each cell of the table were less than 5, the Fisher exact test was used. The logistic regression model was applied to compute odds ratio (OR) with confidence interval of 95% (95% CI). A P-value less than 0.05 was considered as the level of significance.

4. Results

Why females tend to undergo cosmetic surgery in Ilam? To get the answer, 200 females admitted to the specialized plastic surgery clinics in Ilam, Iran, were studied.

There were no missing data and all participants completed the study. The most frequent age group was reported 21 to 30 years (64%). About 53% of the study subjects were married. Based on the results of the current study, the relationship between educational level as well as occupation, and cosmetic surgery were statistically significant. While, there was no significant relationship between age as well as marital status, and cosmetic surgery. Demographic characteristics and other factors related to cosmetic surgery are presented in Table 1.

Among the current study factors, the perceived social support and perceived stress were considered as the risk factors of cosmetic surgery among the study population. Is the frequency of cosmetic surgery differing among the subgroups of perceived social support and perceived stress?

The results of the current study indicated that receiving support from friends and others is significantly associated with cosmetic surgery among Iranian females, while the family support and perceived stress showed no significant difference between the females with and without cosmetic surgery (Table 2).

Table 1. Demographic Characteristics and Other Factors Related to the Cosmetic Surgery in the Study Groups^a

Characteristics	Group		Total, N	P Value ^b
	Case	Control		
Age, y				0.832
21 - 30	62 (48.8)	66 (51.6)	128 (100)	
31 - 40	36 (50)	36 (50)	072 (100)	
Education level				0.000
Non-academic	12 (37.5)	20 (62.5)	032 (100)	
Associate degree	12 (85.7)	02 (14.3)	14 (100)	
Bachelor	68 (54)	58 (46)	126 (100)	
Master degree or higher	06 (21.4)	22 (78.6)	028 (100)	
Marital status				0.264
Married	50 (53.2)	44 (46.8)	094 (100)	
Single	48 (45.3)	58 (54.7)	106 (100)	
Occupational status				0.001
Housewife	12 (25)	36 (75)	048 (100)	
Student	24 (52.2)	22 (47.8)	046 (100)	
Employed	54 (60)	36 (40)	090 (100)	
Others	08 (50)	08 (50)	016 (100)	

^aValues are expressed as No. (%).^bMeasured by the Chi-square test.**Table 2.** The Association Between Cosmetic Surgery With Perceived Social Support and Perceived Stress in the Study Groups^a

Characteristic	Group		t	P Value
	Case	Control		
Perceived social support				
Family support	16.92 ± 2.77	16.66 ± 2.52	0.686	0.494
Friends support	15.36 ± 3.44	14 ± 3.30	2.84	0.005
Others support	16.54 ± 3.04	15.22 ± 3.12	2.91	0.004
Perceived stress	24.62 ± 6.23	23.74 ± 5.52	1.03	0.304

^aValues are expressed as mean ± SD

The logistic regression analysis showed that higher education level, being a housewife, and external supports had significant relationships with cosmetic surgery among females in Ilam, Iran ($P < 0.05$) (Table 3).

5. Discussion

Today, the dissatisfaction of one's appearance and making changes by cosmetic surgery is growing with incredible speed, especially among females than males (18). Considering the complications and consequences of cosmetic

surgery, results of a study is helpful in order to change the situation. Previous studies pointed out that in addition to demographic variables, psychological and social factors also play a role in the tendency toward cosmetic surgery (19, 20). Therefore, the current study aimed at determining the risk factors for cosmetic surgery among females in, Ilam, Iran.

The current study results demonstrated statistically significant relationships between educational level as well as occupation and cosmetic surgery.

Previously, the relationship between educational level

Table 3. The Association Between Cosmetic Surgery and Other Variables Based on the Logistic Regression Analysis in the Study Groups

Characteristic	OR (95% CI)	P Value ^a	Adjusted OR ^b (95% CI)	P Value ^c
Age, y		0.832		0.971
31 - 40	1.0 (reference)		1.0 (reference)	
21 - 30	1.06 (0.6 - 1.9)		1.01 (0.53 - 1.93)	
Education level		0.001		0.003
Master degree or higher	1.0 (reference)		1.0 (reference)	
Bachelor	0.45 (0.14 - 1.44)		0.5 (0.15 - 1.64)	
Associate degree	0.5 (0.01 - 0.26)		0.05 (0.01 - 0.31)	
Non-academic	0.23 (0.1 - 0.61)		0.26 (0.1 - 0.7)	
Marital status		0.265		0.08
Married	1.0 (reference)		1.0 (reference)	
Single	1.37 (0.79 - 2.4)		0.56 (0.29 - 1.07)	
Occupational status		0.002		0.000
Employed	1.0 (reference)		1.0 (reference)	
Student	1.38 (0.67 - 2.81)		1.24 (0.54 - 2.82)	
Housewife	4.5 (2.07 - 9.79)		6.85 (2.76 - 17)	
Others	1.5 (0.52 - 4.36)		1.83 (0.57 - 5.92)	
Perceived social support				
Family support	0.96 (0.87 - 1.07)	0.506	0.95 (0.85 - 1.06)	0.378
Friends support	0.9 (0.82 - 0.98)	0.013	0.89 (0.81 - 0.97)	0.009
Others support	0.88 (0.8 - 0.96)	0.005	0.86 (0.78 - 0.95)	0.004
Perceived stress	0.98 (0.93 - 1.02)	0.344	0.98 (0.93 - 1.02)	0.413

Abbreviation: CI, confidence interval; OR, odds ratio.

^a Measured by the univariate logistic regression analysis.^b Adjusted for age, marital status, educational level and occupation as confounding factors.^c Measured by the multivariate logistic regression analysis.

and cosmetic surgery was confirmed. Clearly, individuals with a college education had more tendencies toward cosmetic surgery than the ones with lower education levels (21).

The current study found a significant relationship between the social support from friends and others, and tendency toward cosmetic surgery. Receiving social support increases the self-concept and improves the body image. In fact, proper social protection causes people to adopt appropriate coping strategies when faced with stress (18).

The current study results proposed the higher perceived stress among females with cosmetic surgery than the ones without cosmetic surgery, although the difference was statistically insignificant.

In contrast with the current study results, a study reported an increase of self-esteem after the cosmetic surgery among female college students (21).

Certainly, high stress levels increase life dissatisfaction.

Therefore, it is reasonable to expect individuals to do such things to change the situation.

Results of the logistic regression analysis in the current study showed that higher education level and being employed had a significant relationship with the tendency toward cosmetic surgery among the study participants. In line with the current study result, another Iranian study showed the relationship between education level and willingness to undergo cosmetic surgery (22). Actually, higher prevalence of cosmetic surgery was expected among employed females than housewives; the authors expected it due to better financial situation among the employed females (23). But, the current study results showed that the prevalence of cosmetic surgery was about 7 times more among housewives than the employed females. Perhaps the difference in the current study results with the previous studies was attributed to other affecting factors such as differences in self-esteem, psychological problems (18),

and free time among employed and unemployed females.

Based on the logistic regression analysis in the current study, all females who received social support from friends and others had lower tendency toward cosmetic surgery. In another study, in line with the current study results, the social conflict was accepted as a risk factor of cosmetic surgery (24). In fact, the prevalence of personality and mental disorders was higher among the individuals undergone cosmetic surgery without medical indications, compared with the others. They often had a negative attitude toward themselves and used cosmetic surgery to change their body image and be accepted by others (25).

It could be said that several factors including higher education level, being a housewife and external supports affect the tendency toward cosmetic surgery among females in Ilam, Iran.

Certainly, identifying the factors affecting the tendency toward cosmetic surgery can help planning proper trainings to reduce unnecessary cosmetic surgery.

The current study had many limitations. First, the authors believed that the socioeconomic status may affect females' tendency toward cosmetic surgery. The current study sampling was performed in Ilam plastic surgery clinics; therefore, it can be considered as a limitation for the study. Second, both researchers and subjects were blind to the results. Third, the study subgroups were not specified to each cosmetic surgery.

5.1. Conclusions

Various factors including education level, occupation, and external supports are the important factors affecting the tendency of females toward cosmetic surgery. It is necessary to plan counseling programs to identify the risk factors of unnecessary cosmetic surgery, and reduce them.

Acknowledgments

The current study was approved by Ilam University of Medical Sciences, Ilam, Iran. Authors wish to thank the coordinators and data collectors for their assistance.

Footnotes

Authors' Contribution: Masoumeh Heidarian designed the study, collected the data and drafted the manuscript. Fathola Mohamadian performed the study design, study concepts and supervision. Ashraf Direkvand-Moghadam performed the statistical analyses and interpretation of data, drafting the manuscript, and administration and translation of the manuscript. All authors read and approved the final manuscript.

Declaration of Interest: Authors declared no potential conflict of interest

Funding/Support: The study was financially supported by Ilam University of Medical Sciences, Ilam, Iran.

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