

Prediction of Cosmetic Surgery Tendency Based on Mindfulness, Personality Dimensions, Perfectionism and Mental Health Components

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Abstract

Background: In all ages, people capitalize on different aspects of their body. A number of studies have indicated the relationship between mindfulness and body image.

Objectives: The aim of this study was to investigate the relationship between cosmetic surgery tendency and mindfulness, personality-dimensions, perfectionism and mental health among female high school students in Isfahan.

Materials and Methods: The population consisted of all female high school students who were enrolled in Isfahan high schools in academic year of 2014 - 2015. Two hundred students were randomly selected from six educational districts in Isfahan city, Iran. Personality inventory (NEO-PI-R), multidimensional body-self relations questionnaire (Kims), multidimensional perfectionism scale (MPS) and general health questionnaire (GHQ-28) were used to collect data. Pearson correlation, multiple regression analysis were used for data analysis.

Results: The results showed that the correlation between cosmetic surgery and mindfulness was -0.68. Also, correlation coefficients of cosmetic surgery and personality-dimensions, mental health and perfectionism were 0.62, 0.57 and 0.20, respectively ($P < 0.01$). All the predictive variables appropriately predicted the cosmetic surgery tendency variable and predicted 0.58 variance of cosmetic surgery tendency.

Conclusions: According to these results, individuals who have depressive and perfectionism tendencies are not flexible in their thoughts and emotions, and cannot accept their body as it is, without judgment and with unconditional. Also, those who have closed personality with negative evaluations of their appearance are more likely to seek cosmetic surgery. Regarding the effectiveness of psychological factors in tendency towards the cosmetic surgery, it is better to refer patients to the psychological and mental health centers and take a test to determine whether the problem is mindfulness or other variables.

Keywords: Cosmetic Surgery Tendency, Mindfulness, Personality

1. Background

In all ages, people capitalize on different aspects of their body. Based on the importance attached to this speculation, they pay attention to the feedback they receive from others in this regard. In adolescents and young people, physical appearance and body image are important aspects of a person's identity formation (1). Physical, cognitive and social changes in this period, concerns about physical attractiveness and uncertainty regarding social relationships cause anxiety concerning the evaluation of one's physical structure by others (2). When a society's culture focuses on physical attractiveness, especially for women, concerns on body image and its change are gradually developed (3). From early 1990s, the demand for cosmetic surgery has increased by 80% and is currently experiencing an upward trend. Young women are responsi-

ble for a high percentage of demand for cosmetic surgery, so that 95% of applicants for nasal and organ surgery are 14 - 45 year old women (4). The results of some studies in the field of cosmetic surgery show that psychological factors play a significant role in the trend towards cosmetic surgeries (5). In a study on 415 patients seeking cosmetic surgery to determine the psychological characteristics of cosmetic surgery applicants, Ishigooka et al. found that neurotic disorders, depression, phobia and social conflicts are outstanding disorders in them (6). In this connection, Moss and Harris in 2009 (7) found that the level of anxiety and depression in applicants of cosmetic surgery was 7.4% and 7.6% higher before surgery than the control group, respectively. Such applicants were also subject to disharmony and disorder in other aspects of social relationships (7). Marsh conducted a study on the relationship between body dissatisfaction and anxi-

ety, depression, social isolation, psychotic disorders, obsession, declining self-concept and self-confidence (8). In 2003, Green and Pritchard in their research stated that dissatisfaction and concerns about the body and preoccupation to change it were more prevalent among young applicants of cosmetic surgery (9). In one study, applicants of cosmetic surgery showed improvement in interpersonal sensitivity, obsessive concern about appearance, assertiveness, self-esteem and social adaptation after the surgery (10). Low self-esteem and negative body image often cause stress for the individual and they use specific coping strategies to overcome this stress. Personality characteristics affect the individual strategies to deal with stresses, and it is therefore important to understand the personality characteristics (11). Research shows that 5 personality traits are a strong predictor of attitudes towards body size (body image). Agreeableness, receptiveness and qualification of body image are associated with extraversion (12). In general, 5 personality traits, especially receptiveness are effective upon body image, especially acceptance of cosmetic surgery (13). In this respect, in a study in people seeking cosmetic surgery, personality patterns of receptiveness and extraversion were higher but neuroticism and agreeableness were lower compared to the control group (14). Perfectionism is another personality trait defined as an attempt to be perfect and seamless (15, 16). It seems that perfectionist persons are the majority of applicants of cosmetic surgery, especially rhinoplasty, and a major portion of dissatisfaction after surgery is observed in these individuals (17). Mindfulness is another psychological factor associated with body image experience as well as trends related to cosmetic surgery. It includes observation and inner experience (emotions, thoughts and physical sensations) without any reaction (18). The latest results of mindfulness indicate observation without judgment and emotional reaction of body image and its usefulness in reducing potential momentums, destructive behavior and increased insight to more complex experience of body image (19).

A number of studies have indicated the relationship between mindfulness and body image. The results of these studies show that women who react to their emotions are more likely to have a high level of self-esteem (20). Therefore, with respect to the relationship between body image and mindfulness with cosmetic surgery (21), personality traits and mental health problems in applicants of cosmetic surgery (22), the aim of this study was to predict the trend of cosmetic surgery according to elements of mental health, personality traits, dimensions of perfectionism scheme and mindfulness among female students in secondary schools. Also, our results could be a basis for planning effective interventions to change positive at-

titude to do cosmetic surgery and reduce cosmetic surgery tendency among young people.

2. Objectives

The present study aimed to explore the predictive role of mindfulness, personality-dimensions, perfectionism and mental health in cosmetic surgery tendency among female high school students.

3. Materials and Methods

This is a field and descriptive study of correlational type based on multiple regression analysis. The population consisted of female high school students enrolled in Isfahan high schools in academic year of 2014 - 2015. A total of 200 students were selected by cluster random sampling method from 10 high schools in six educational districts of Isfahan. Two hundred participants who completely and correctly answered the questions were included in the study. The sample size was sufficient according to the formula suggested by Tabachnick and Fidell (23). In addition, questionnaires were anonymous and the participants were assured that their personal information would be kept confidential. Also, the consent of school administrators and related staff was taken. The data were statistically analyzed by Pearson correlation and multiple regression analysis using SPSS version 16.

3.1. Research Tool

In this study, five questionnaires including the personality inventory (NEO-PI-R), multidimensional body-self relations questionnaire (Kims), multidimensional perfectionism scale (MPS), general health questionnaire (GHQ-28) and attitude questionnaire were used.

3.1.1. Personality Inventory (NEO-PI-R)

The revised version of neuroticism extroversion openness personality inventory (NEO-PI-R, Costa and McCrae, 1992) (24), a 60-item NEO-PI-R with five degree Likert style scale (from totally disagree to totally agree), was applied to evaluate five big factors of personality (neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness). The reliability of 0.63 to 0.83 in a three-year interval and 0.68 to 0.83 in a six-year interval were reported (Costa and McCrae, 1988). This inventory in Iran has been normalized by HaghShenas (1999) (25) on 502 subjects with no psychiatric history. Cronbach's alpha coefficients of five big factors of personality in sixth and seventh months intervals for internal consistency were 0.81, 0.71, 0.57, 0.71, 0.83 and for test-retest stability were 0.53, 0.74, 0.76, 0.60, 0.64, respectively.

3.1.2. *Multidimensional Body-Self Relations Questionnaire (Kims)*

KMIS is a self-report questionnaire which has been made by Baer et al. (26). This criterion contains 39 items and four subscales and is used to evaluate mindfulness skill. Four skills of this questionnaire include:

1) Observing: mindfulness consist of observing and knowledge with regard to different stimuli of internal phenomena like (physical sensations knowledge) and external phenomena (sounds, smells).

2) Describing: includes descriptions, classification, or refer to the observation without judgment.

3) Acting with awareness: be aware about individual involvement in current activity. Skill of company and one-mindfully are dialectical behavioral therapy (DBT).

4) Accepting without judgment: permit to present some-thing without judgment, avoidance or changing it.

Items are ranked in 5 Likert from 1 (never to rarely true) to 5 (almost or always true) items reflex mindfulness descriptions and lack of these skills to which is characterized by negative scores. This instrument has good internal consistency. The alpha coefficients for subscales including observing, describing, acting with awareness and accepting without judgment were 0.91, 0.84, 0.76, 0.87 and for retest reliability were 0.65, 0.81, 0.86, and 0.83, respectively. There was a negative correlation between the KIMS questionnaire and acceptance and action questionnaire (AAQ) and Toronto Alexithymia scale and NEO five-factor inventory. Also, there was a positive correlation between trait meta-mood scales which measure emotional intelligence. This inventory in Iran has been normalized by Taghavi and Dehghan (2012) (27) on 226 students with no psychiatric history. Cronbach's alpha coefficient of this questionnaire was 0.82.

3.1.3. *Multidimensional Perfectionism Scale (MPS)*

The multidimensional perfectionism scale (MPS) assesses levels of multi-dimensional perfectionism in adults. Hewitt and Flett (1991) (16) devised the MPS, a 45-item measure, that rates three aspects of perfectionist self-presentation: self-oriented perfectionism, other-oriented perfectionism, and socially prescribed perfectionism. Self-oriented perfectionism is having irrational expectations and standards for oneself that lead to a perfectionist motivation. An example is the constant desire to achieve an ideal physical appearance out of vanity. Other-oriented perfectionism is having irrational expectations and standards for others that in turn pressure them to have perfectionist motivations of their own. Socially prescribed perfectionism is developing perfectionist motivations due to the belief that significant others expect them to be perfect. Parents that push their children to be successful in

certain endeavors (such as athletics or academics) provide an example of this type of perfectionism, as the children feel that they must meet their parents' lofty expectations. The coefficient alpha is reported for this scale ranges between 0.74 and 0.89 and the small scale correlated with the structure of that theoretically similar and was not affected by response bias. The respective alpha coefficients were 0.88, 0.74, and 0.81 for self-oriented, other-oriented, and socially prescribed perfectionism in a sample of 263 psychiatric patients (Hewitt and Flett, 1991) (16). This inventory in Iran has been normalized by Besharat (2004) (28). Cronbach's alpha coefficients of three aspects of perfectionist (self-oriented perfectionism, other-oriented perfectionism, and socially prescribed perfectionism) were 0.92, 0.87 and 0.84, respectively.

3.1.4. *General Health Questionnaire (GHQ-28)*

The mental health test used in this study is general health questionnaire (GHQ-28) of Goldberg and Hillier (29) that has four scales: A) physical characteristics: individual's feeling about their own health, tiredness and physical characteristics, B) stressful symptoms: including stress and sleeplessness, C) disorder in social functioning: ability of people in professional desires and daily issues of life, and their feelings about usual situations of life, and D) depression: severe depression and tendency to suicide. The average time specified for this test is 8 minutes. The test investigates positive healthy moods of subject during the last month (one month before test). To score the test, the Likert's test scoring method (0 - 3) was used. In the study of Goldberg and Hillier (29), sensitivity of GHQ-28 is 84% and its average trait is 82%. This inventory in Iran has been normalized by Hooman (1997) (30). Cronbach's alpha coefficient of this questionnaire was 0.85.

3.1.5. *Attitude Questionnaire*

The attitude test used in this research is an attitude questionnaire (Henderson-King and Henderson-King, 2005) (31) that has fourteen. To score the test, Likert's test scoring method (0 - 7) was used. Cronbach's alpha coefficient of the attitude questionnaire in a ten-day interval for test-retest stability was 0.70.

4. Results

The total number of subjects was 200 high school females. Participants had a mean age of 15.64 years with a standard deviation of 1.01. Eighty participants were in the first year of high school, 72 students in the second year and 48 students in the third year. Also, in this sample, 56 persons were in the field of humanities, 28 persons were

in the field of science, and 36 persons were in the field of mathematics. Results showed that there was a significant negative correlation between mindfulness and cosmetic surgery tendency, with correlation coefficients of -0.68. However, there was a significant positive correlation between cosmetic surgery tendency and personality dimensions, mental health, and perfectionism, with correlation coefficients of 0.62, 0.57 and 0.20, respectively. All the correlation coefficients were in significance level of 0.001. In Table 1, mean, standard deviation and correlation coefficients of cosmetic surgery tendency, mental health, perfectionism, mindfulness and personality features have been shown.

In Table 2, predictive coefficients of mindfulness, personality-dimensions, mental health and perfectionism for criterion variable have been presented using the stepwise regression method. As can be seen, all the predictive variables appropriately predict the cosmetic surgery variable. Model I, which includes mindfulness variable, justifies 47% of variance. Inclusion personality-dimensions in model II explain 51% of the variance in the model, and presence of mental health and perfectionism explain 56% and 58% of variance, respectively.

5. Discussion

The present study focused on mindfulness, personality-dimensions, mental health and perfectionism toward cosmetic surgery. According to the results, there was a negative correlation between mindfulness and cosmetic surgery tendency. People who do cosmetic surgery are not flexible in the thoughts and emotions and cannot accept their body as it is, without judgment and with unconditional and lack of flexibility can cause problems with their body image. Their trap categories (schemas, rules and initiatives cognitive) and this in turn are limiting behaviors and emotions (32), one of these representations can also change the appearance of behavioral constraints method with high risk, such as cosmetic surgery. On the other hand, according to the results of the present study, there was a positive correlation between cosmetic surgery with personality-dimensions, mental health and perfectionism. Less open and more emotionally stable individuals had a greater likelihood of accepting cosmetic surgery in order to maximize its self-oriented benefits. As suggested above, closed individuals may maintain more negative evaluations of their appearance, which in turns leads to a greater acceptance of cosmetic surgery if it is able to enhance their appearance (32). Also, for many perfectionists, the discrepancy between the perfect body that they desire and the imperfect body that they perceive is a source of distress. Moreover, perfectionistic

individuals tend to seek others' approval and to fear interpersonal rejection perfectionists do cosmetic surgery to win others' approval and acceptance. Perfectionists may also view cosmetic surgery as an opportunity to perfect the self and/or to change aspects of the self that cannot be changed through exercise or diet (16). Another reason for doing cosmetic surgery is preoccupation with psychophysical presence of various disorders such as depression, anxiety, paranoid and schizotypal personality. Depressed people have more negative attitudes towards themselves than other normal people. They often feel worthlessness and imagine themselves extremely incompetent in mental and physical various aspects. This negative attitude may cause a trend to cosmetic surgery in them thereby reducing their negative feelings (8, 33).

Cosmetic surgery without a medical reason is one of the most common surgeries in almost all countries and Iran is one of the countries where this type of surgery is progressing rapidly. According to our results, individuals who have depressive and perfectionism tendencies are not flexible in their thoughts and emotions and cannot accept their body as it is, without judgment. Also, they have closed personality with negative evaluations of their appearance, and are more likely to seek cosmetic surgery because they consider cosmetic surgery as a way that helps them to reduce their negative emotions and obtain others' approval. A link between perfectionism and cosmetic surgery is expected on several grounds. Perfectionists are often displeased with their bodies and frequently attempt to change them (2).

Cosmetic surgery may allow perfectionists to transform aspects of their bodies that cannot be modified by diet or by exercise (e.g., nose shape). Perfectionists may also regard cosmetic surgery as an opportunity to perfect the self and/or to eliminate perceived imperfections (34). Less open and more emotionally unstable individuals had a greater likelihood of accepting cosmetic surgery in order to maximize its self-oriented benefits. As suggested above, closed individuals may maintain more negative evaluations of their appearance, which in turns leads to a greater acceptance of cosmetic surgery if it is able to enhance their appearance. Emotional stability, on the other hand, may be linked with the intrapersonal factor because neurotic individuals are more likely to experience negative affect associated with negative self-evaluations of appearance (see also Kvaem et al. (12)). So, cosmetic surgery is a technique that helps depressed people get rid of their isolation and be more extraverted (35). Knowing these points will be useful in medical assistance. It is better to refer patients for surgery and take a test to determine whether the problem is mindfulness or other variables. If people have a psychological problem, rather than cosmetic surgery is better to

Table 1. Mean, Standard Deviation and Correlation Coefficients of Variables^a

Variables	Cosmetic Surgery Tendency	Mindfulness	Personality	Mental Health	Perfectionism
Mean ± SD	75.87 (35.51)	483.11 (83.30)	97.13 (25.13)	24.51 (5.14)	18.43 (6.77)
Mindfulness	-0.68 ^a	1	-0.67 ^a	-0.44 ^a	-0.56 ^a
Personality	0.61 ^a		1	0.58 ^a	0.88 ^a
Mental health	0.54 ^a			1	0.30 ^a
Perfectionism	0.21 ^a				1

^ap < 0.01.**Table 2.** Stepwise Regression Coefficient to Predict Cosmetic Surgery Tendency on Mindfulness, Personality-Dimensions, Mental Health and Perfectionism^a

Scale	β Non-Standard	SEB	β	R ²	ΔR^2
Mindfulness	-0.21	0.02	-0.50 ^b	0.47	-
Personality	1.16	0.21	0.81 ^b	0.51	0.51
Mental health	-2.74	0.48	-0.39 ^b	0.56	0.56
Perfectionist	-1.83	0.65	-0.35 ^b	0.58	0.57

^aStatistics definitions: ΔR^2 , adjusted R square; β Non-Standard, unstandardize coefficients beta; β , standardized coefficients beta; R², R square; SEB, standardized error beta.^bp < 0.01.

refer to psychological and mental health centers, on the other hand, further research in this area may lead to a better understanding of the psychological aspects of cosmetic surgery, as well as strengthen the basis for the promotion of healthier body image. One of the limitations of this study is lack of collaboration between some teachers and managers for doing this research. In conclusion, it should be mentioned that the population in this study consisted of female students, and the results can only be generalized to this gender. Therefore, it is recommended to conduct this research with a sample of male students. In addition, we suggest the study of college students to assess the possibility of generalization to other age groups.

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