The comparison between early maladaptive schemas and dysfunctional attitudes and coping strategies in people with Body Dysmorphic Disorder and healthy people in a study population in Tehran

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Abstract

Body dysmorphic disorder (BDD) is a relatively common disorder associated with body image impairment that causes clinically significant distress or impairment in social, occupational, or other important areas of functioning. There are many people who are placed under the aesthetic surgery blades instead of appropriate treatment. The existent evidence suggests that the formation of early maladaptive schemas and dysfunctional attitudes and ineffective coping strategies can affect these patients. The present study was conducted to compare early maladaptive schemas and dysfunctional attitudes and coping strategies in people with body dysmorphic disorder and healthy people. This research was conducted using causal-comparative method. The statistical population consisted of all individuals referring to the Lipomatic center for beauty and fitness in district 1 of Tehran in 2015-2016. The study subjects included two groups of 85 (170 persons) of patients seeking beauty care referred to the beauty center and healthy subjects among the personnel of Shahid Chamran Hospital in Tehran were selected using convenience sampling method. (Both healthy and BDD groups were selected after clinical interview and completed questionnaires). In this research, Young Schema Questionnaire (YSQ-205), Dysfunctional Attitude Scale (DAS-26), Lazarus and Folkman's Coping Strategies Scale (CSQ-66), Yale-Brown Obsessive-Compulsive Scale – and Body Dysmorphic Disorder (Y-BOCS) (YBOCS-BDD) were used. To analyze data, mean, standard deviation and multivariate variance analysis (MANOVA) were used in SPSS-22. Results showed that in four areas of early maladaptive schemas of disconnection and rejection, impaired autonomy and performance, impaired limits and over-vigilance and inhibition, the mean use of these schemas were significantly higher in people with body dysmorphic disorder compared to healthy subjects. But in the other-directedness area there was no significant relationship between the two groups. Additionally, in terms of vulnerability toward dysfunctional attitudes toward perfectionism, need for approval of others and need to satisfy others there was a significant difference between the two groups of people with body dysmorphic disorder and healthy people. Individuals with body dysmorphic disorder had higher mean in dysfunctional attitudes. There was a significant difference in the coping strategies of people with body dysmorphic disorder and healthy people, so that the individuals with BDD use more emotional-focused coping strategies and healthy people use more problem-oriented coping strategies. Therefore, it seems that early maladaptive schemas and dysfunctional attitudes and emotional-focused coping strategies can be important factors in the formation of body dysmorphic disorder.

Key words: Early Maladaptive Schemas, Dysfunctional Attitudes, Coping Strategies, Body Dysmorphic Disorder

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Introduction

Body dysmorphic disorder (BDD) is characterized by mental occupation (rumination) with one or more defects in physical appearance, which is not significant enough or, in the eyes of others, to be minor, and is associated with repetitive behaviors (such as checking oneself in the mirror, excessive makeup, skin cleansing, or seeking reassurance from others) or mental activities (such as comparing oneself with others) in response to concerns about appearance (American Psychiatric Association, 2013, translation of Rezaei et al., 2014). This mental occupation (rumination) in people with BDD causes a person to suffer or a disruption to his or her career, social, or academic performance, and the severity of this distress is so high that sometimes it needs clinical attention. If a small abnormality really exists, one's concern about this abnormality is extreme. The DSM-5 has brought the body dysmorphic disorder (BDD) into obsessive-compulsive disorders spectrum, because it is similar to obsessive-compulsive disorders. Little research has been done about BDD disorders and partly that is why patients refer most often to dermatologists, internists (infectious), or plastic surgeons rather than psychiatrists. One study found that more than 50 percent of college students in their study were at least partly concerned with one of their facial aspects, and these concerns (worries) have impacted significantly about 25 percent of these students on their feelings and performance (Sadock and Sadoch, translated by Ganji, 2015). The prevalence of BDD in the general population was reported at 7% in two studies (Otto, 2001). Also the prevalence of BDD in the United States according to DSM-5 is 2.4 percent. Available information indicates that the most common starting age is between the ages of 13 and 15, and women are more likely to become affected. Most patients are single. BDD is usually co-morbid with other psychiatric disorders. One study found that over 90% of BDD patients had a major depression episode in their lives; about 70% have experienced an anxiety disorder and about 30% a psychotic disorder (Sadock and Sadock, 2015, translation: Ganji, 2014). Similarly, BDD co-morbidity is also commonly associated with social anxiety (social phobia), OCD and substance-related disorders (American Psychiatric Association, 2013, translation: Rezaei et al., 2014). In a study conducted by Erica it was claimed that adolescents with BDD suffer from somatization disorder, obsessive compulsive disorder, and depression. (Erica, 2011). In a study by Sarver, 7% of cosmetic surgery patients have BDD diagnostic criteria (Sarver, Sirand, 2004). One of the psychological variables influencing the body dysmorphic disorder that needs to be recognized is early maladaptive schemas. According to Young (1990), early maladaptive schemas include deep cognitive structures including beliefs about oneself. Schemas are structures of reality that grow as the result of objective experiences from the environment. Particularly those that originated from the early stages of life have a more significant effect. The development (growth) of schemas often returns to childhood. According to Young (1999), some people create early maladaptive schemas due to their negative childhood experiences, which may also include society's expectations that affect their way of thinking, feeling and behavior in the next sincere relationship and other aspects of their lives. Schemas that have grown in the early ages are often beyond the realm of consciousness, and when the stimuli of life stimulate one or more schemas, they are activated and process the personal information automatically in accordance with these schemas. Schemas are divided according to the five needs of the child's development into five areas of disconnection and rejection, impaired autonomy and performance, impaired limits, other-directedness, over-vigilance and inhibition (Young, Kolosko, Vishar, Bayat, Translated by Hamidpur and Andoz, 2014). Early maladaptive schemas do not result in specific mental disorders, but increase individual vulnerability to mental disorders. Young (1990, 1999) believes some schemas, especially those that are formed largely as a result of childhood adverse experiences, may be the core of personality disorders, mild manner problems, and many chronic disorders of axis I. One of the variables associated with body dysmorphic disorder is dysfunctional attitudes, the attitudes and beliefs that make a person susceptible to depression, or in general psychological distress, and prepare a person to interpret certain situations overly negatively and ineffectively. From the point of view of Beck, dysfunctional attitudes are inflexible and perfectionist criteria that a person uses to judge himself/herself and others. Since these attitudes are inflexible, extreme, and resistant to change, they are considered to be ineffective (dysfunctional) (Rock Roa et al., 2014). Coping strategies are another influential variable of body dysmorphic disorder. Based on Lazarus and Folkman's theory, coping behaviors in dealing with stress include two processes: the problem-oriented process in which a person encounters a problem that is the real cause of disturbance in him and the emotional processes on which the person tries to regulate his/her emotional response (Branon and Feist, 2006). Regarding the role of each of the coping styles on the overall health of the individual, researchers have found that people usually use two types of coping styles (emotion-focused, problem-oriented) in dealing with stressful situations. The results of study indicate the positive and effective role of problem-oriented coping style in increasing health and the negative role of emotion-focused coping styles in reducing health (Klince, 1994, Translated by Mohammad Khani, 2004). Regarding the fact that BDD is = relatively common and chronic, and there are many people who are suffering from this disorder, and instead of treatment, they are under the blade of various cosmetic surgeries, therefore, research in this field and the identification of the underlying and continuity causes of BDD can be very helpful for prevention and treatment of it. In the search for research done in Iran and abroad, in the study conducted by Khosh Iqbal (2014) it was found that those who seek cosmetic nose surgery, as compared to non-applicants, are more dissatisfied with their physical image, and the applicant is more perfectionist. Additionally, the applicant group has more maladaptive schemas than the non-applicant group. According to Yiddalli Bastani et al. (2012) schema therapy reduces the symptoms of body dysmorphic disorder, and increases positive body image, self-esteem, and self-efficacy in people with body

dysmorphic disorder. Marmon and Eatal (2004) state that early maladaptive schemas are ineffective (dysfunctional) mechanisms that directly lead to psychological distress. In a study by McCinson and Jenny (2013), they found that early maladaptive schemas in adolescents could be associated with the psychological problems of axes I and II, problems such as inappropriate behavior, anxiety, depression, and, in general, endocrine and exocrine problems. In a study by Mirza'i Feizabadi and Ghanai Chaman-Abad and Taheri (2015) the variable of dysfunctional attitudes and femininity were a predictor of concern about body image. There was no significant difference between body image and scores of femininity and masculinity in both groups of those who had undergone cosmetic surgery and control. In the study by Kolosky and Kolosky and Boyce (2001), it was found that the dimension as a cognitive aspect of behavior is very influential in the process of creating tension. In the study on the relationship between dysfunctional attitudes and tension, people with dysfunctional attitudes, evaluate personal events and experiences as stressful. In a study by Wise and Benses (2009), it was found that coping with important life events is influenced by intermediary factors, and these intermediary factors are the same cognitive factors. In other words, the cognitive assessment, schemas, beliefs and attitudes of individuals about a condition effect on their compatibility. The results of Pico's (2001) studies state that stress-related illnesses and the deterioration of general health status are more commonly seen in those who are continually using emotion-focused coping. According to a study by Serafino and Mancus (2016), the results indicate that the reluctance to experience the thoughts related to appearance and negative feelings may lead to a negative relationship, the assessment of the body image to stereotypical behaviors and avoidance experiences. In a study by Alysse Baily et al. (2016), two-variable correlations showed that shame of the body has a positive relationship with self-objectivity, stereotypical appearance, and coping avoidance, but it has no relationship with positive logical acceptance. In addition, self-objectivity has a positive relationship with appearance, and coping avoidance, but it has no relationship with positive logical acceptance. Mediation analysis showed that shame of the body mediates to some degree in the relationship between self-objectivity and stereotypical appearance and coping avoidance, but does not mediate in the relationship between self-objectivity and positive logical acceptance. The main purpose of this research is the comparison of early maladaptive schemas and dysfunctional attitudes and coping strategies in people with body dysmorphic disorder and healthy people.

Materials and methods

In this research, which is causal-retrospective (causal-comparative), early maladaptive schemas and dysfunctional attitudes and coping strategies have been compared as a dependent variable in people with body dysmorphic disorder (BDD) and healthy subjects. Statistical population of the research consisted of all referring people (including women and men) aged 18 to 40 years, with the minimum level of diploma education to the beauty and fitness and lipomatic center of the 1st district of Tehran in 2015-2016. Healthy individuals were selected from the staff of Shahid Chamran Hospital in Tehran without body dysmorphic disorder (BDD). Both healthy and BDD groups were selected after clinical interview and completed the Yale Brown Obsessive-Compulsive Disorder for Body Dysmorphic Disorder. And those who were patient according to the DSM-5 criterions were selected as BDD. The statistical sample of the study is people with body dysmorphic disorder (BDD) and healthy people. Considering that random selection due to the large population size is difficult for ease in the sampling, the convenience sampling method with a four month period (March to June) was used. The sample size for this research was 170 people. Therefore, the sample size of the study was 85 subjects with BDD in one group and 85 healthy subjects in the other group. Information gathering by the researcher was conducted in the summer of 2016. Regarding the observance of ethical principles and based on willingness and satisfaction, the questionnaires were provided to the people and completed under the researcher's supervision.

Information gathering tool

1. Young's Early Maladaptive Schema questionnaire (YSQ-205)

This self-report questionnaire consists of 205 items to measure maladaptive schemas and 16 faulty schemas. In this questionnaire, the subject evaluates herself/himself on a six-point Likert scale (completely false, almost false, more true to false, slightly true, almost true and perfectly true). This questionnaire is available both in short form (75 items) and long form (205), and the researcher in this study used the long form for a more accurate assessment. In this study, the alpha coefficient from 83% to 96% for early maladaptive schema was obtained and the test-retest coefficient in the non-clinical population was obtained between 50% and 82%. This questionnaire showed a significant convergent and discriminant validity with a scale of psychological distress, a sense of value, cognitive vulnerability to depression and the semiotics (typology) of personality disorders. Internal reliability of test by calculating internal medicine coefficient of questionnaire and alpha Cronbach's coefficient a total score of questionnaire was reported 94% (Zolfaghari, 2008).

2. Dysfunctional Attitudes Questionnaire (DAS-26)

This is a self-report questionnaire. The original version of this tool (DAS-40) was developed by Beck & Weissman in 1978. The 26-item version of this scale has been provided by a 40-item version of the A-form for application in the Iranian clinical direction and its psychometric quality has been prepared. It's Cronbach's alpha is 92%, the correlation with original form is 97% and its validity by predicting health with GHQ-28 scores was obtained at 56% by Ebrahimi et al. The DAS-26 scale has 26 sentences that the subject answers on a 7-point Likert scale and scores are between 26 and 182, and those who score above 82 on this scale are considered as high risk individuals in terms of cognitive vulnerability (Ebrahimi et al., 2012).

3. Lazarus and Fulkman's coping strategies questionnaire (CSQ-66)

This questionnaire examines the thoughts and reactions that are used to deal with everyday stressful events. This scale was developed by Lazarus and Fulkman in 1984 based on phenomenological cognitive theories related to stress and coping, known as psychological stress, assessment and coping theory, in 1985. This questionnaire consists of four problem-oriented coping styles (problem solving styles, positive re-assessment (re-evalution, accountability (responsibility and search for social support) and four emotion-focused coping styles (direct confrontational styles, restraint [continence], avoidance, and denial). This questionnaire consists of 66 articles, 16 of these tests are deviant, and 50 others measure 8 coping styles (strategies). Each scale consists of a set of questions. Individuals respond to each on a Likert scale of four options, which shows the frequency of each strategy in this way. The zero score is applied to the answer "Not at all". Lazarus and Folkman reported a reliability coefficient of Cronbach's alpha for each subscale of problem-oriented style 60% to 75%, and for the emotion-focused style subscales in the range of 66% to 79%. In Iran, the internal consistency coefficient using Cronbach's alpha coefficient (61% to 79%) and the test-retest reliability of this test in the four-week interval was reported at 59% to 83% (Ghadamgahi and Dezhakam, 1998, quoted by Abolqasemi and Narimani, 2005).

4. The Yale Brown Obsessive-Compulsive Disorder for Body Dysmorphic Disorder (YBOCS-BDD)

This is a self-report 12-item questionnaire that measures the severity of the symptoms of body dysmorphic disorder. In an analysis on 125 outpatients diagnosed with body dysmorphic disorder, Rabiee found that this scale has a two-factor structure and two additional questions. These factors include: 1) obsessions 2) compulsions 3) two additional questions in the field of insight and avoidance. In general, studies have shown that this scale has good reliability and validity (Rabiee et al., 2010). In Rabiee's research Cronbach's alpha coefficient for the whole scale was obtained at 93%. The correlation between the forms using half-splitting method was 84% and the Gutmann's half-splitting coefficient was 91%, which is consistent with the Phillips findings (Philips, 1997).

Data analysis method

To investigate the research hypotheses and analyze the data obtained from the research, SPSS-22 software was used in this study. In this research, we used mean and standard deviation the descriptive statistics section and multivariate covariance analysis (MANOVA) was used for hypotheses and comparisons of variables.

Findings

Descriptive findings

Table 1 Descriptive indexes of the group by sex

Marital status	People with body dysmorphic disorder		Healthy people	
	Frequency	Frequency (%)	Frequency	Frequency (%)
Male	32	37.6	31	35.5
Female	53	62.4	54	63.5

As shown in the table above, most people in both sample groups of research are women.

Diagram 1 Descriptive indexes of the group by sex

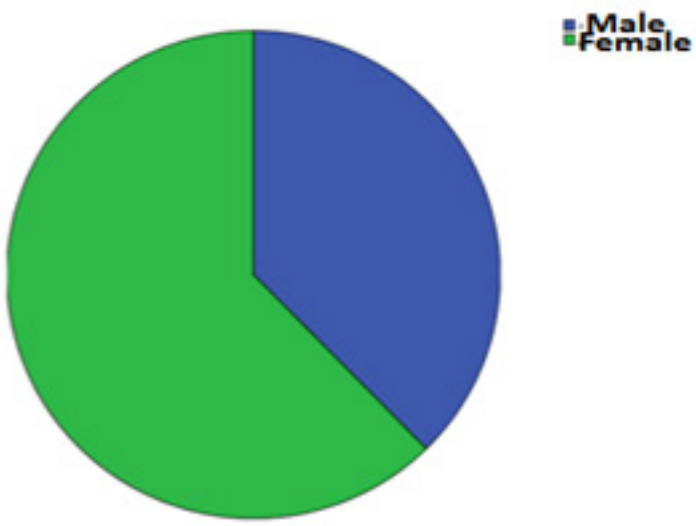

Table 2 Descriptive indexes of the groups in terms of education

Education	People with body dysmorphic disorder		Healthy people	
	Frequency	Frequency (%)	Frequency	Frequency (%)
Diploma	25	29.4	26	30.6
Associate degree	12	14.1	12	14.1
Bachelor's degree	42	49.4	41	48.2
Master's degree	4	4.7	4	4.7
Unknown	2	2.4	2	2.4

As shown in the table above, most individuals in both sample groups have a bachelor's degree.

Diagram 2: Descriptive indexes of the group in terms of education

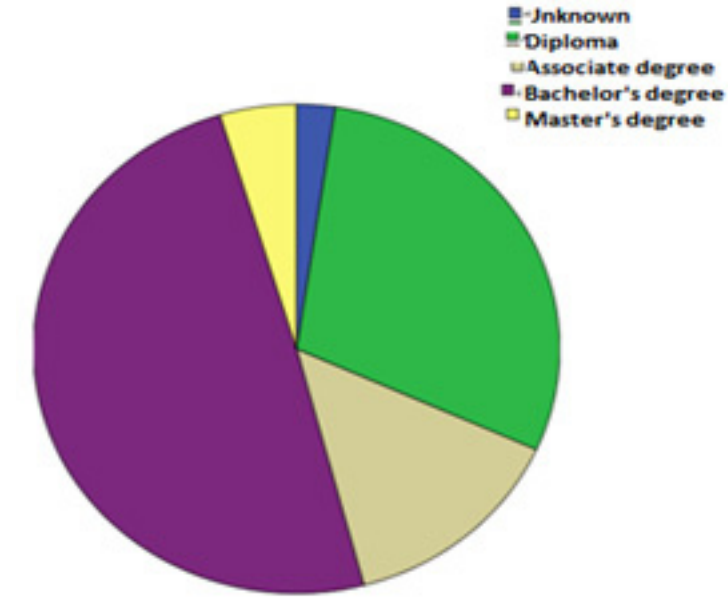

Table 3: Descriptive indexes of the group in terms of age

Variable	People with body dysmorphic disorder		Healthy people	
	Mean	SD	Mean	SD
Age	30.72	5.93	30.56	5.99

As shown in the table above, the mean age of individuals in both groups is about 30 years.

Examining the normal distribution of data

Table 4 Kolmogorov–Smirnov test results to verify the normal distribution of data

Variable	Z	Significance level
Disconnection and rejection	1.43	0.03
impaired autonomy and performance	1.34	0.05
impaired limits	0.80	0.55
other-directedness	1.72	0.01
over-vigilance and inhibition	1.26	0.09
Problem-oriented	1.16	0.13
Emotion-focused	2.07	0.01
Perfectionism	2.07	0.01
Need to be approved by others	1.05	0.22
Need to satisfy others	0.80	0.43
Vulnerability	1.61	0.01

As shown in Table 4, the z-values of the Kolmogorov–Smirnov test for many are not statistically significant (P <0.05); therefore, the distribution of data is normal and a parametric test can be used.

Table 5: Box test to examine matrix homogeneity

Box's M	23.77
F	2.06
Df1	66
Df2	89993.30
Sig	0.17

As the box test indicates, regarding insignificancy of Sig = 0.17, F (668993.30) =2.06, the homogeneity condition of the variance-covariance matrices is confirmed.

Table 6: Leven's test for Homogeneity of Variances

Variable	F	df1	df2	Sig
Disconnection and rejection	0.14	1	168	0.94
impaired autonomy and performance	5.10	1	168	0.03
impaired limits	0.08	1	168	0.78
other-directedness	51.94	1	168	0.001
over-vigilance and inhibition	2.80	1	168	0.11
Problem-oriented	3.01	1	168	0.07
Emotion-focused	2.91	1	168	0.09
Perfectionism	6.96	1	168	0.009
Need to be approved by others	1.24	1	168	0.27
Need to satisfy others	3.12	1	168	0.06
vulnerability	9.63	1	168	0.002

The Leven's test is performed to investigate the homogeneity of variances. As the results of the table show, in most components, the significance level of calculated F is greater than P≤0.05, which indicates that the difference between variances is not statistically significant and the assumption of homogeneity of variances is approved; therefore the results of the multivariate analysis of variance analysis can be reported.

Inferential Findings

Hypothesis 1: There is a difference between early maladaptive schemas in people with body dysmorphic disorder and in healthy people.

Table 7: Descriptive Indicators of early maladaptive schemes in patients with body dysmorphic disorder healthy people

	Group	Mean	SD
Disconnection and rejection	Healthy People	139.71	36.53
	Body dysmorphic disorder	193.06	40.46
impaired autonomy and performance	Healthy People	89.6	26
	Body dysmorphic disorder	71.27	18.86
impaired limits	Healthy People	55.33	16.33
	Body dysmorphic disorder	71.26	18.86
other-directedness	Healthy People	66.93	21.36
	Body dysmorphic disorder	70.51	12.67
over-vigilance and inhibition	Healthy People	63.82	21.90
	Body dysmorphic disorder	69.41	13.84

In the table above, the mean and standard deviation of the early maladaptive schemas in people with body dysmorphic disorder and in healthy people are presented; as can be seen, in the mean of early maladaptive schemas in people with body dysmorphic disorder and healthy people some differences are observed. To examine the significant differences observed, the results of the multivariate analysis of variance are reported.

Table 8: Leven's test for Homogeneity of Variances

Variable	F	df1	df2	Sig
Disconnection and rejection	0.14	1	168	0.94
impaired autonomy and performance	5.10	1	168	0.03
impaired limits	0.08	1	168	0.78
other-directedness	51.94	1	168	0.001
over-vigilance and inhibition	2.80	1	168	0.11

The Leven's test is performed to investigate the homogeneity of variances. As the results of the table show, in most components, the significance level of calculated F is greater than P≤0.05, which indicates that the difference between variances is not statistically significant and the assumption of homogeneity of variances is approved; therefore the results of the multivariate analysis of variance analysis can be reported.

Table 9: Results of the comparison of early maladaptive schemas in patients with body dysmorphic disorder and healthy people

Sources of Changes	Sum of Squares Ss	Df	Mean of squares MS	F	Significance level
Disconnection and rejection	120977.79	1	120977.79	81.43	0.001
Error	249582.35	168	1485.61		
impaired autonomy and performance	18159.11	1	18159.11	36.14	0.001
Error	84415.48	168	502.47		
impaired limits	10800.15	1	10800.15	34.71	0.001
Error	52271.55	168	311.14		
other-directedness	543.62	1	543.62	1.76	0.19
Error	51790.82	168	308.28		
over-vigilance and inhibition	1327.21	1	1327.21	3.96	0.05
Error	56380.94	168	355.60		

According to the results of Table (9), the difference between disconnection and rejection with value of F (1.168) = 81.43, impaired autonomy and performance with the value of F (1.168) = 36.14, impaired limits with value of F (1.168) = 34.71 and over-vigilance and inhibition F (1.168) – 3.96. There is a significant difference between the person with body dysmorphic disorder and healthy people (P<0.05); which in the schemas of disconnection and rejection, impaired autonomy and performance, impaired limits and over-vigilance and inhibition the people with body dysmorphic disorder had a higher mean than healthy subjects, and in other-directedness, with F (1.168) =1.76 no significant difference was found between people with body dysmorphic disorder and healthy subjects (p≤0.19).

Hypothesis 2: There is difference between people with body dysmorphic disorder and healthy people in dysfunctional attitudes.

Table 10: Descriptive indexes of dysfunctional attitudes in body dysmorphic disorder and healthy people

Variable	Group	Mean	SD
Perfectionism	Healthy people	34.84	9.57
	People with body dysmorphic disorder	55.68	14.03
Need to be approved by others	Healthy people	14.40	4.12
	People with body dysmorphic disorder	18.67	3.20
Need to satisfy others	Healthy people	16.87	5.09
	People with body dysmorphic disorder	25.41	2.58
Vulnerability	Healthy people	13.85	4.46
	People with body dysmorphic disorder	16	3.36

In Table 10, the mean and standard deviation of dysfunctional attitudes in people with body dysmorphic disorder and healthy people are presented; as can be seen, the mean of dysfunctional attitudes in people with body dysmorphic disorder and healthy people is different and to evaluate the significance of observed differences, the results of the multivariate analysis of variance are reported.

Table 11: Leven's test for homogeneity of variances

Variable	F	df1	df2	Sig
Perfectionism	6.96	1	168	0.009
Need to be approved by others	1.24	1	168	0.27
Need to satisfy others	3.12	1	168	0.06
Vulnerability	9.6	1	168	0.002
	2.80	1	168	0.11

The Leven's test is performed to evaluate homogeneity of variances. As the results of the table show, in most components, the significance level of calculated F is greater than P≤0.05, which indicates that the difference between variances is not statistically significant and the assumption of homogeneity of variances is approved; therefore the results of the multivariate analysis of variance can be reported.

Table 12: Results of the comparison of dysfunctional attitudes in patients with body dysmorphic disorder and healthy people

Sources of Changes	Sum of Squares Ss	df	Mean of squares MS	F	Significance level
Perfectionism	18470.49	1	18470.49	81.43	0.001
Error	24232.12	168	144.24		
Need to be approved by others	775.11	1	775.11	56.93	0.001
Error	2287.18	168	13.16		
Need to satisfy others	3100.45	1	3100.45	190.09	0.001
Error	2740.17	168	16.31		
Vulnerability	196.99	1	196.99	12.62	0.001
Error	2623.01	168	15.61		

According to the results of Table 12, the difference between perfectionism with the value of F (1.168) =128.66, the need to be approved by others with the value of F (1.168) =56.93, need to satisfy others with the value of F (1.168) =190.09 and vulnerability with the value of F (1.168) =12.62, there is a significant difference between people with a body dysmorphic disorder and healthy people (P< 0.01)); so that mean of dysfunctional attitudes in people with body dysmorphic disorder was more than healthy people.

Hypothesis 3: There are differences between people with body dysmorphic disorder and healthy people in coping strategies.

Table 13: Descriptive indexes of coping strategies in people with body dysmorphic disorder and healthy people

Variable	Group	Mean	SD
Problem-oriented	Healthy people	34.53	7.89
	People with body dysmorphic disorder	29.28	7.69
Emotion-focused	Healthy people	30.80	8.29
	People with body dysmorphic disorder	44.75	7.12

In the table above, the mean and standard deviation of coping strategies in people with body dysmorphic disorder and healthy people are presented; as can be seen, the mean of coping strategies in people with body dysmorphic disorder and healthy people is different and to evaluate the significance of observed differences, the results of the multivariate analysis of variance are reported.

Table 14: Leven's test for homogeneity of variances

Variable	F	df1	df2	Sig
Problem-oriented	3.01	1	168	0.007
Emotion-focused	2.91	1	168	0.09

The Leven's test is performed to evaluate homogeneity of variances. As the results of the table show, in most components, the significance level of calculated F is greater than P≤0.05, which indicates that the difference between variances is not statistically significant and the assumption of homogeneity of variances is approved; therefore the results of the multivariate analysis of variance can be reported.

Table 15: Results of the comparison of coping strategies in patients with body dysmorphic disorder and healthy people

Sources of Changes	Sum of Squares Ss	df	Mean of squares MS	F	Significance level
Problem-oriented	1170.09	1	1170.09	19.06	0.001
Error	10312.40	168	61.38		
Emotion-focused	8260.15	1	8260.15	138.23	0.001
Error	10038.80	168	59.76		

According to the results of Table 15, the difference between problem-oriented coping strategy with the value of F (1.168) =19.06 and emotion-focused coping strategy the value of F (1.168) =138.23, there is a significant difference between people with a body dysmorphic disorder and healthy people (P< 0.01); so that people with body dysmorphic disorder use more emotion-focused coping strategy while healthy people =use more problem-oriented coping strategy.

Discussion

The purpose of this study was to compare the early maladaptive schemas and dysfunctional attitudes and coping strategies in people with body dysmorphic disorder and healthy people. Disconnection and rejection, impaired autonomy and performance impaired limits other-directedness over-vigilance and inhibition

Hypothesis 1: There is a difference between people with body dysmorphic disorder and healthy people in early maladaptive schemas.

Table 7: According to the findings, the mean of early maladaptive schemas are different in people with body dysmorphic disorder and healthy people. According to the results body dysmorphic disorder had higher mean in schemas of disconnection and rejection, impaired autonomy and performance, impaired limits and over-vigilance and inhibition than healthy subjects. This finding was in line with research of Khosh-Eghbal (2015), Yadolahi Bastani and colleagues (2012), Marmon et al. (2004) and McCinson & Jenny (2013). In explaining this finding, it can be said that people with BDD, with regard to their etiology, their past experiences, and harassment and maltreatment in childhood, values and personality traits tend to overestimate the aesthetics and from psychodynamic point of view, due to unconscious replacement of emotional or sexual conflict or feelings of humiliation, guilt, or poor self-concept and community's focus on appearance, these people are at risk and all of these issues have led to the formation of conditional beliefs and ideas that have a major impact on the individual's performance in the cognitive, emotional and interpersonal areas (Rabiee, 2011). Also, in the other-directedness, there was no significant difference between people with body dysmorphic disorder and healthy subjects. This finding is not consistent with the research by Daon Alivand et al. (2015), Nilfrushan and Navidian and Shamommadi (2015). This difference is likely to be due to differences in the samples of these two studies. For example, in the study of Nilfrushan et al. (2015), with experimental group, 60 samples and women were considered as the statistical population, while in the present study, 85 samples were considered in two groups of male and female, and also in the research of Nilfrushan et al. (2015), the majority of surgery group had diploma degree, while in the present study the majority of the experimental sample were baccalaureate and in the study of Nilfrushan et al. (2015) the marital status was considered, while in the present study, marital status wasn't taken into account. Therefore, hypothesis 1 is confirmed in four main domains of early maladaptive schemas other than the fifth domain (other-directedness) in people with body dysmorphic disorder.

Hypothesis 2: There is a difference between people with body dysmorphic disorder and healthy people in dysfunctional attitudes.

Table 10: According to the findings, the dysfunctional attitudes are different in people with body dysmorphic disorder and healthy people. Based on results, there is significant difference between people with body dysmorphic disorder and healthy people in perfectionism, the need to be approved by others, the need to satisfy others and vulnerability. People with body dysmorphic disorder had a higher mean than healthy people in dysfunctional attitudes. These findings are consistent with Mirzai Feyzabadi's research (2015), Weiss et al. (2009), Koluwski et al. (2001),

and hypothesis 2 is confirmed. In explaining this research finding for people with body dysmorphic disorder, it can be said that the variable of dysfunctional attitudes predict worry about body image. The attitude dimension is the cognitive aspect of behavior and is very influential in the process of creating tension. People with body dysmorphic disorder with dysfunctional attitudes evaluate events and their personal experiences as stressful. And they are always looking for approval of others and keep satisfying others regarding their own shape and appearance, and this apparent perfectionism creates some damage and *tension for them.*

Hypothesis 3: There is a difference between people with body dysmorphic disorder and healthy people in coping strategies.

According to the results of the findings, Table 13:
There is a significant difference between people with body dysmorphic disorder and healthy people in problem-oriented and emotional-focused coping strategies, which people with body dysmorphic disorder more frequently use emotion-focused coping strategies while healthy people use problem-oriented strategies more frequently. The findings are in line with the research of Pico (2001), Ellis Bailey (2016), Sferino and Mancas (2016) and Hartman et al. (2015). Therefore, hypothesis 3 is approved (confirmed). In explaining this research finding, it can be said that shame about the body has a positive relation with self-objectivity, stereotypical appearance and coping avoidance (Ellis Bailey, 2016), and that the reluctance to experience thoughts about negative appearances and feelings may lead to a negative evaluation of body image and stereotypical outcomes and coping and avoidance experiences (Sferino and Mancas, 2016). People with BDD have a more negative body image, a negative attitude toward their physical appearance and more dysfunctional coping strategies (Hartman et al., 2015). Accordingly, people with BDD in the face of stress, intellectual, emotional and behavioral efforts to address visual and aesthetic impairments are more likely to use emotion-focused coping strategies. If the coping focuses on relieving emotional stress, it is known as emotion-focused coping. It can be seen that people with BDD face a high level of psychological stress in coping with a stressful situation.

In summary, research findings indicate that patients with body dysmorphic disorder have more early maladaptive schemas compared with healthy people, and in dysfunctional attitudes have more perfectionism, and need to be approved by others, need to satisfy others and vulnerability, and in terms of coping strategies they have more emotional-focused coping strategies. Therefore, it is possible to prevent the formation of this disorder in a more effective way by considering the variables affecting the body dysmorphic disorder Or through civil programs looking at the 'cosmetic surgery industry' and protecting vulnerable people through health processes and regulations, teaching children in schools that their appearance is not the most important aspect of who they are, and encouraging belief in themselves, emancipating women form the 'marriage market', etc.

Research constraints
Using convenience sampling is one of the research constraints that make generalizations difficult.

Failure to distinguish people with body dysmorphic disorder with a certain social and economic status, and non-identifying of family structure is one of the other research constraints.

Considering that the method of studying in this study is causal, retrospective or comparative , lack of control in this method is another limitation of this research.

The research tools are self-reporting questionnaires that can be answered with bias.

The mere reliance on questionnaires is one of the other research constraints.

Research suggestions
Considering limited research on body dysmorphic disorder and the increasing rate of cosmetic surgery, for prevention and treatment, more research is needed.

The research by extensive statistical population and sample is required.

It is recommended the body dysmorphic disorder be investigated in different cultural and ethnic situations.

Given the limited research effort in the field of body dysmorphic disorder, it is suggested that interventional research be conducted in people with body dysmorphic disorder.

Functional suggestions
Based on research findings in early maladaptive schemas, it is suggested that therapists in psychotherapy of people with body dysmorphic disorder put the schema therapy approach in their treatment plans.

Based on the findings, people with body dysmorphic disorder have more dysfunctional attitudes. Regarding this finding, it is necessary to focus more on cognitive distortions, beliefs, rules and attitudes in psychotherapy, and to emphasize attitudinal reformation.

It is suggested that in educational settings, measures to be taken to educate and appropriate use of coping strategies in the face of stress and mental stress in all ages.

It is suggested that the components and variables that have been addressed so far in the field of body dysmorphic disorder, to be deployed in the prevention and treatment of people with body dysmorphic disorder.

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