

The Comparison of Emotion Regulation Strategies in Obese Women with Negative and Positive Body Image

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Objectives: With considering the increasing prevalence of obesity and its effect on people's body image, women's higher vulnerability, and the unquestionable role of women's health on the society and future generations' health, the effects of having a negative body image on women's eating habits and mental health, and the lack of a successful long-term treatment protocol, the aim of present research was to compartment of emotional regulation strategies in obese women with positive and negative body images. **Methods:** This research was a causal-comparative. The statistical population of this research consisted of 100 obese women with a $BMI \geq 30$ who had referred to five nutritional clinics in Tehran, Iran. The clinics and the participants were selected using the available sampling method. The data collection tools were the SCIDI/II, BMI, the cognitive emotion regulation questionnaire, and Fisher's body image scale. **Results:** founding indicated that obese women with a negative body image had higher mean scores in inefficient emotion regulation strategies such as self-blame, rumination or focus on thoughts catastrophizing. Moreover, the mean scores of obese women with positive body images was higher in efficient emotional regulation strategies such as acceptance, positive refocusing, refocusing on planning, perspective taking, and positive reappraisal. **Discussion:** Emotion regulation strategies are significant variables in obese people with positive and negative body images.

Keywords: emotion regulation strategies, body image, self-blame, obesity

Obesity refers to the overt accumulation of fat tissue in the body. It threatens an individual's general health by creating physical and mental problems (Marcus, Levine & Kalarchian, 2003). It seems that people who suffer from nutritional disorders, especially obesity, have problems in perception about their body; which is called body image. Body image is the mental image an individual has of oneself which could be real or not (Cash & Fleming, 2002), and is defined as the degree to which an individual is satisfied with his/her physical appearance include size, shape, and general appearance (Brozekoeski & Bayer, 2005).

Body image can be perceived as negative or positive by an individual. Body image disorder

(negative body image) is an important aspect in the formation of obesity and this disorder is considered as a risk factor in creating women's weight control behavior, eating disorder, body dysmorphia, low self-esteem, and mental disorders such as depression and anxiety (Utter, Neumark Sztainer, Wall & Story, 2003). Obese people with a positive body image are sufficiently satisfied with their body because they accept their physical defects and focus on other aspects of their appearance (Frise'n, & Holmqvist, 2010).

Emotional regulation has been recognized as a cognitive factor that is important for mental health. However, the relationship between emotional regulation and body image has not been fully explored. Emotional regulation is a set of processes that enable individuals to influence what emotion to select, when to show it, and how to experience it (Gross, 1999). When people confront emotional situations, they need the best cognitive functions to regulate their emotions (Damasio, 1994) and try to control their emotions.

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Since, emotional regulation affects cognitive variables, it can be concluded that emotional regulation affects body image. Studies show that people with negative body image often use inefficient approaches such as scolding themselves instead of using efficient strategies such as acceptance. Such inefficient strategies are accompanied by eating disorders and incorrect eating habits (Hughes & Gullone, 2010). Studies indicated that women with eating disorders and negative body image are less aware of their emotions and have problems in self-controlling comparison with positive body image women (Gilboa – schechtman, Avnon, Zubery & Jeczmiem, (2006).

With regards to increasing prevalence of obesity and its effect on people's body image, women's higher vulnerability, and the unquestionable role of women's health on the society and future generations' health (Sadook, Sadook, 2010), the effects of negative body image on women's eating habits and mental health, the aim of present research is compartment emotional regulation strategies in obese women with positive and negative body image. It seems that emotion regulation strategies have immense impacts on the reduction or elimination of negative body image.

Method

Study design and participants

This study was a causal-comparative cross-sectional study. The statistical population of this study consisted of 100 obese women with a BMI \geq 30 who had selected from five nutritional clinics in Tehran, Iran. The clinics and the participants were selected using the available sampling method. Based on Fisher's body image scale, the participants were placed into two equal groups, those with a positive body image and those with a negative one. The inclusion criteria were: \geq 18 years of age, having a diploma or higher, BMI \geq 30, no mental disorders, no eating or personality disorders.

Instruments

In general, after being selected by a nutritionist and calculating the women's BMI, the researcher used the Structured Clinical Interview for DSM-IV Axis I Disorders (SCIDI/II) to screen and select the participants.

The data collection tools were the SCIDI/II, BMI, cognitive emotion regulation questionnaire, and Fisher's body image scale. The SCIDI/II has two main versions (First, Spitzer, Gibbon & Williams, 1997; First, Gibbon, Spitzer, Williams, & Benjamin, 1997), form I and form II. Form I was used for evaluating and excluding mental disorders associated with mental

disorders such as psychosis, body dysmorphic disorder, depression, suicidal ideation, and eating disorders. Form II was used for evaluating and excluding personality disorders associated with obesity, especially borderline personality and obsessive-compulsive disorders. The interview has a good validity and reliability or identifying mental disorders (Groth-Marnat, 1997). The BMI was calculated by dividing each woman's weight (kg) by her square height in meters (Williamson, Newton & Walden, 2006).

The cognitive emotion regulation questionnaire has 36 items scored on a five-point Likert scale (1=never to 5=always). Conceptually, the questionnaire had 9 separate subscales, each depicting a certain strategy among different cognitive coping strategies. These nine coping strategies are as follows: self-blame, other blame, rumination or focus on thought, catastrophizing, perspective taking, positive refocusing, positive reappraisal, acceptance, and refocusing on planning. The first four are negative emotional regulation, while the rest are positive ones (Garnefski, Kraaij, Spinhoven, 2002). The reliabilities of positive and negative strategies, and the total reliability using Cronbach's alpha were 0.91, 0.87, and 0.93, respectively (Garnefski, Kraaij, Spinhoven, 2002). The validity of the questionnaire for the Iranian population was tested by Yousefi using the total score correlation method. The range for these correlations was 0.40 to 0.68 with a mean of 0.56 and were all significant at the $P<0.01$ level (Yousefi, 2003). In this study, the reliability of the questionnaire for the all subscales was 0.60 using Cronbach's alpha.

The Fisher's body image scale was developed in 1970 by Fisher and consists of 46 items scored on a scale of 1 (very unhappy) to 5 (very happy). A score of 46 is indicative of disorder while higher scores show lack of disorder. The validity of this test for the Iranian population has been previously evaluated by Asgari, Pasha & Aminian in 2009. The calculated correlation coefficient for the test ranged from 0.81 to 0.87 and a significant correlation was found between first and second test results ($P<0.001$). The reliability of the questionnaire was 0.93 and 0.91 using Cronbach's alpha and the split-half method, respectively. Data were analyzed using SPSS 17 software.

Results

Table 1

Descriptive indices variables related to emotional regulation strategies in both groups

Variables	Positive body image		Negative body image	
	Mean	SD	Mean	SD
Self-blame	10.32	2.66	13.86	1.82
Rumination or focus on thought	9.72	12.2	11.54	1.94
Catastrophizing	9.26	2.71	14.94	6.06
Other blame	7.86	2.25	14.14	1.66
Acceptance	12.82	2.53	10.02	1.88
Positive refocusing	14.46	3.50	8.92	2.20
Refocusing on planning	14.94	3.35	9.34	2.20
Positive reappraisal	14.22	3.07	9.12	1.94
Perspective taking	13.28	2.66	9.40	1.89

As indicated in table 2, obese women with a negative body image had higher mean scores in inefficient emotion regulation strategies such as self-blame, rumination or focus on thought, catastrophizing, and other blame compared with obese women with a positive body image. Moreover, the mean scores of obese women with positive body image were higher in efficient emotional regulation strategies such as acceptance, positive refocusing, refocusing on planning, perspective taking, and positive reappraisal.

The multivariate analyze of variance test was used to compare the variables. The presumptions related to

this test were Box'M, Bartlett, and Levene's test. The Box'M test confirmed for the covariance matrix homogeneity of the variables related to emotion regulation strategies ($P=0.27$). The Bartlett's test showed sufficient correlation between these variables ($P=0.25$). Moreover, Levene's test showed that the variation of each variable related to emotion regulation strategies is not statistically significant ($P>0.05$).

The multivariate analysis of variance test results for emotional regulation strategies in both groups presented in tables 2 and 3.

Table 2

Multivariate analysis of variance for compare emotion regulation strategies in groups

effect	value	F	Df	Sig
Pilla Trace	0.80	40.90	9	0.001
Wilks Lambda	0.19	40.90	9	0.001
Hotelling s Trace	4.09	40.90	9	0.001
Roy Largest Root	4.09	40.90	9	0.001

According to multivariate tests, there is significant difference between obese women with positive and

negative body images ($P<0.001$) at least in one of the emotional regulation strategies.

Table 3

Difference between the two groups in emotion regulation strategies

Indices	Square of sums	Df	Square sums	F	sig
Self-blame	313.29	1	313.29	60.09	0.001
Rumination or focus on thought	82.81	1	82.81	19.96	0.001
Catastrophizing	806.56	1	806.56	36.48	0.001
Other blame	985.96	1	985.96	250.29	0.001
Acceptance	196.00	1	196.00	39.17	0.001
Positive refocusing	767.29	1	767.29	89.50	0.001
Refocusing on planning	784.00	1	784.00	97.25	0.001
Positive reappraisal	650.25	1	650.25	98.05	0.001
Putting into perspective	376.36	1	376.36	70.37	0.001

As indicated in tables 3, there are significant differences in all subscales of emotion regulation strategies between obese women with positive and negative body images ($P < 0.001$, tables 3).

Discussion

Since obesity is an illness with cognitive and emotional aspects, its treatment should also be based on cognitive and emotional variables. In this regard and in contrast to previous studies, our study assessed and compared different variables of cognitive beliefs and emotional regulation strategies in obese people with a positive and negative body image because body image is one of the most fundamental cognitive and emotional variables because obese people with positive and negative body image have unique fundamental thoughts and beliefs that are related to the two mentioned variables. Therefore, by altering fundamental cognitive beliefs and using efficient emotional regulation strategies can help obese people reduce and stabilize their weight. Negative body image is an important aspect in the formation of obesity and negative emotions and thoughts gradually create a negative body image and changing this negative body image helps reduce these people's weight. Previous studies have been focused on changing emotions and beliefs in treatments, especially cognitive-behavioral therapy. However, recurrence and weight gain is still possible.

Result indicated that significant differences in emotional regulation strategies between obese women with a positive and negative body image. These findings are consistent with previous studies (Jarus, 2007; Wichianson, Bughi, Unger, & et al. 2008; Czaja, Rief, & Hilbert, 2009; Mussap, 2007; Lofton, 2009; Alipoor, Moazami-Goodarzi, Zarra-Nezjad & Zaheri, 2009; Elizabeth, Hughes & Gullon, 2011). The inability to regulate emotions leads to negative consequences such as obesity because the individual cannot find logical solutions in different situations and this would lead to problematic eating habits. In such situations signs such as severe irritability to food, tendency for obesity, and escape from problems would lead to binge eating.

Emotion regulation strategies moderate the relationship between body image and psychological disorders such as eating disorder, bulimia, and depression. Studies show that by improving emotion regulation strategies, the relationship between body image and psychological disorders tend to weaken (Hughes & Gullon, 2011; Legenbauer, Vocks & Rüdell, 2008). On the other hand, emotional regulation, as a cognitive variable, affects other cognitive variables. Therefore, it can be implied that emotional regulation affects a person's body image

and self-perception. So obese people with a negative body image have inefficient emotion regulation strategies and are less aware of their emotions compared with obese people with a positive body image. Using inefficient approaches brings about irreversible and dangerous consequences on individuals and might lead to mental illness (Hughes, & Gullone, 2010; Clyne & Blampied, 2004). Our study showed that efficient emotion regulation strategies could reduce various eating disorders.

This study had some limitations. First, since we have only studied women, we cannot generalize our findings to all obese people, regardless of their sex. Moreover, since this research was a causal-descriptive, we cannot obtain causal relationship among the variables.

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