Relationship between cognitive emotion regulation strategies and body image with eating disorder symptoms in secondary school students

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Abstract

Currently, eating disorders is a concern of the World Health Organization. Because these disorders have highest mortality rate among mental illnesses devotes itself. Accordingly, the present study aims to determine the prevalence of eating disorders in high school students. The relationship between these disorders and cognitive emotion regulation and body image, which is known as a variable in social psychology. The study was a descriptive research study -correlation and three scores, Body image questionnaire (MBSRQ), eating disorders and cognitive emotion regulation has been used to collect data. Statistical population includes 300 female high school students who were selected as samples. The results showed that cognitive emotion regulation and body image and its dimensions have a significant relationship with eating disorders and dimensions between eating disorder symptoms and significant positive correlation with blaming others. In other words, variable the blame to others is the ability to predict eating disorder symptoms among female students as well. There is a significant negative correlation between satisfaction of eating disorder symptoms and evaluate the fit of the body. In other words, the increase in satisfaction with areas of the body and assess the appropriateness of the symptoms of eating disorders is reduced.

Keywords: cognitive emotion regulation strategies, body image, eating disorders, female students

Introduction

Eating disorders adversely affect physical health, eating habits, social and family relationships, mood, work and school performance. We tested for cross-cultural validity of the Body Image Screening Questionnaire (BISQ), a screening measure validated in Spain, which assesses potential eating disorders related to anorexia, perception of obesity, orthorexia and vigorexia, in a Romanian sample from both clinical and general populations(1). The measure showed adequate internal consistency and allowed distinguishing clinical vs. general subsamples. Significant differences based on clinical characteristics were obtained (2). The measure can be utilized as screening tool of individuals who need further assessment and prioritize primary intervention strategies with at risk population(1). Eating disorders is the most common disease after disease such as obesity and asthma have been defined (2). According to the

serue studies and formal statistics is exposed that infected women compared with men, had a significant difference to these disorders, so that, women are more than men(3). Abnormal behaviors associated with this disorder include: excessive eating and eating with vomiting, eating, fasting, eating food and using laxatives and diuretics long (4).

Reviews have shown is that one reason for the rising prevalence of the disorder in adolescent girls and young people, is related to their perception of their body image, that main cause of this problem is considered the today modern and stylish(5,6). Also, according to Giddens, social norms defined for girls and women, on the physical beauty is related. On the other hand, studies show that this type of thought that period of adolescence and young adulthood is associated with self-esteem and uncoordinated The perception of body image ideals asked, reduces confidence in this group(7). Therefore, it is obvious that this disorder according to the demands of the today world can be with a variety of psychological problems such as depression stylish, anxiety, social phobia and obsessive-associated(8).

It is obvious that in human life, the experience of negative emotions, is inevitable. Psychological stress that is typically associated with negative emotions, by stimulating the glands and hormones that weaken the immune system, causing widespread effects on the body. Experience of negative emotions, in addition to weakening the immune system, can be increase unhealthy behaviors such as drinking alcohol, using drugs, smoking and over-eating, causing sickness (9). In other words, Experience of stress and psychological pressure can lead to excessive risk-taking behaviors. Long-term studies show that body image dissatisfaction is a good sign for predicting the likelihood of the emergence of eating disorders. In fact, one of the pre-requisites for developing eating disorders is body image dissatisfaction. People with negative body image are more likely have eating disorders and shows than pathetic, such as depression, loneliness, isolation, low self-esteem and suffer obsessive about weight loss (10).

Research results show that effective capacity of people in regulating emotions impacts on happiness,

psychological, physical and interpersonal and emotion regulation emotional response is absolutely inherent tendencies (11). In fact, emotion regulation refers to actions to change or modify an emotional state. The general concept cognitive emotion regulation implies cognitive manipulation excited caller data entry (11). Cognitive emotion regulation strategies refers to them on how people think after the occurrence of a negative experience or trauma. Numerous studies show that troubled adjustment of emotions, such as anger and anxiety, lead to the incidence of health problems such as heart disease - cardiovascular and digestive contribute (8,12). On the other hand, cognitive emotion regulation can be play an important role in evoked emotional processing and information management (13). In addition, the review of the literature suggests that people with this disorder do not have enough emotional awareness; and have a true understanding of your emotions (14).

According to the material presented, it appears that this type of the relationships between eating disorder with emotional variables and body image, can increase the therapeutic interventions based education and makes more smoothly of path to a better understanding eating disorder. Accordingly, the present study is to investigate the relationship between body image and emotion regulation with eating disorder symptoms.

Methods

Participants:

The population of this study were the students of all female secondary schools of the city of Urmia. Due to problems with easy access to all schools, as well as the review of a psychiatric disorder in the target population, available sampling was employed. So that researchers from 10 schools that intervention and have easy access to it; the sample are obtained on the other hand classes be done randomly selected. This means that, from all field and grade, a class was randomly selected. According to the number of this study, and using Gray and Morgan table, a sample of 322 individuals was selected for present study. Eventually, to prevent drop of subjects in this study, 330 people were selected as

sample. But because of incomplete and impurity of some questionnaire, eventually, 300 people were included in the statistical analysis.

Apparatus:

Cognitive emotion regulation questionnaire (CERQ), Body image questionnaire (MBSRQ) and eating disorder questionnaire (EAT- 26) were used to collect data.

Cognitive Emotion Regulation Questionnaire (CERQ):

The CERQ was developed by Garnefski et al (2001) (15) and adapted into Iranian by Delkhosh and shirinbayan (2013). This questionnaire consists of nine subscales, namely, Blaming (Self and Others), Acceptance, Rumination, Refocusing, Planning, Positive Reappraisal, Putting into Perspective, and Catastrophizing. Cronbach alpha of the total scale was calculated.78 and item-total correlations rangedfrom 18 to 46. The questionnaire assessed the cognitive styles of the public, especially those who have had a negative experience. Also, the questionnaire can be used in different age groups with different educational levels, mental patients and normal controls (15). The original version of this has 36 substance.

Body image questionnaire (BCQ):

The BCQ is a reliable and valid measure of body checking behaviors. It is a 23-item self-report questionnaire with higher scores associated with more intense body dissatisfaction, body-image avoidant behaviors, and general eating disturbances. The BCQ measures a high-order factor (body checking) with three subfactors that are highly correlated: overall appearance (OA), specific body parts (SBP) and idiosyncratic checking (IC). The Italian version has been validated by Calugi et al. and confirmatory factor analysis confirmed the same three-factor structure of the English version. In our study, Cronbach's α was 0.92 for the BCQ total score and 0.88, 0.90, 0.79, respectively, for the OA, SBP and IC subfactors, also Clash revised version (1991) was used.

Eating Disorder Questionnaire (EAT- 26):

In the present study, in order to measure eating disorders, Eating Attitudes Questionnaire (EAT-26) by

Garner and Garfinkel built in 1979, was used. Eating Attitudes Questionnaire or EAT self-assessment as a screening instrument widely used to eating attitudes and behaviors pathological. And its efficacy has been proven in recognition of anorexia nervosa and bulimia nervosa (16). Each of the items on the scale six core values EAT (always, often, often, sometimes, rarely or never) been graded. EAT as a valuable tool in screening for eating disorders, has proven that it is appropriate reliability and validity. And in research, on the basis of scores from the questionnaire divided into 3 groups is dumped: down 20 score is without eating disorders, score between 20 and 40 with anorexia nervosa neurological and score higher than 40 is bulimia nervosa. This self-evaluation tool assess range of anorexia nervosa and bulimia nervosa symptoms and validity and reliability of it in a wide range that performed. In the present study 26-item assessment Form (EAT-26) was used. According to Gardner et al, 1983, the concurrent validity and predictive validity and the same proportion have confirmed its reliability. In the present study, obtained by Cronbach's alpha coefficient equal to the number of 26 questions (α=0.781), respectively. According to the present results, the correlation coefficient between the scores of the EAT questionnaire in the two stages 91/0, which shows good reliability. In this study, the Cronbach alpha for the questionnaire was 86/0, respectively.

Procedure:

Design of present study is descriptive – correlation. Variables of present study were Predictor variables: cognitive emotion regulation and body image, Variable criteria: Eating disorder.

In the present study, after coordination with officials of the selected schools, secondary schools the second period questionnaires in three consecutive days in randomly selected classes were distributed. After the instructions for completing the questionnaires, the students completed questionnaires and then were collected by the researcher. Then the questionnaires were given to participants in order are to be the first questionnaire eating disorders, body image after; and in the end tool cognitive emotion regulation. Of the total

330 individuals, 300 completed questionnaires will be completely handed over to the researcher; and eventually the amount entered in the statistical analysis.

Statistics:

Statistical methods and data analysis According to the type of research objectives was determined. In this study, the descriptive statistics for the central and dispersion indices calculated from the mean, standard deviation and frequency were used. Also research findings have been reported in tables and graphs. In the second part; hypotheses were analyzed using statistical tests. To test the hypotheses, multiple regression was used. In addition, for data analysis, descriptive and inferential statistical methods, using SPSS version 18 was used. The level of significance was set to $p \leq 0.05$.

Results

In Table 1, descriptions results of the variables (body image, cognitive emotion regulation and symptoms of eating disorders) are provided.

Table1. Descriptive indicators variables of the total subjects

variables		mean	S.D
body image	Appearance Evaluation	22.84	4.21
	appearance orientation	18.47	2.48
	Fitness Evaluation	17.43	3.03
	Fitness Orientation	17.65	2.76
	concern with weight gain	20.10	2.81
	Body Areas Satisfaction	19.84	3.00
cognitive emotion regulation	self-blame	39.3	7.70
	acceptance	22.88	4.14
	positive renewed attention	16.65	4.13
	blaming others	6.84	2.70
eating disorders		15.29	8.01
age		16.60	1.07

Table 2. Results of the correlation between cognitive emotion regulation strategies compatible and eating disorders

Variables		1	2	3
cope and accept 1	Correlation	1		
	meaningful	-		
Positive thinking 2	Correlation	0.44	1	
	meaningful	0.002	-	
eating disorder 3	Correlation	0.05	0.007	1
	meaningful	0.35	0.90	-

The results in the table above show that between eating disorder symptoms consistent with cognitive emotion regulation strategies to cope and there is no significant relationship between acceptance and positive thinking.

Table 3. Results of the correlation between maladaptive cognitive emotion regulation strategies and eating disorders

Variables		1	2	3
self-blame 1	Correlation	1		
	meaningful	-		
blame others 2	Correlation	0.49	1	
	meaningful	0.001	-	
eating disorder 3	Correlation	0.006	0.16	1
	meaningful	0.3	0.007	-

The results in the table above show that only between eating disorder symptoms and maladaptive cognitive emotion regulation strategy of blaming others, a significant positive correlation (r= 0/16, P= 0/007) there. In other words, by increasing the tendency to blame others, the symptoms of eating is also increasing.

Table 4. regression and analysis of variance eating disorders through cognitive emotion regulation strategies compatible

Model	Sum of squares	df	Mean Square	F	r	R2	meaningful
regression	62.68	2	31.34	0.49	0.06	0.003	0.61
The remaining	1913.9	297	61.41				
Total	19193.77	299					

*:Prediction: Information cope and acceptance, positive thinking

Look at the table above shows that the F observed compared with the critical values of regression analysis, significant cognitive emotion regulation strategies consistent gets involved Not and eating disorder symptoms are not predictive ability (F=0/49, P= 0.61). Thus, the linear relationship between variables can not speak. Also according to the adjusted coefficient of determination They are characterized by cognitive emotion regulation strategy is consistent Overall, 0.3% of the variance in eating disorders among high school students predict virgin (R2= 0/003) The minimal amount.

Table 5. Analysis of variance of regression through the body image and eating disorder

Model		Sum of squares	df	Mean Square	F	r	R2	meaningful
	regression	1875.841	5	124.389	2.039	0.31	0.10	0.001
1	The remaining	17327.929	284	61.014				
	Total	19193.770	289					

Prediction of: Appearance Evaluation, Appearance Orientation, Fitness Evaluation, Fitness Orientation, preoccupation with weight gain, satisfaction with areas of the body

Look at the table above shows that the F observed compared with the critical values of regression analysis, significant and is the body image and eating disorder symptoms have the ability to predict its dimensions (f=2/04, p= 0/001). Thus, the linear relationship between variables can be addressed. Also according to the adjusted coefficient of determination is made clear that its dimensions in a total of 10% of the variance in body image and eating disorders in high school students predict virgin (R2= 0/10). Jdvl4-8 results of standardized regression coefficient beta shows.

Table 6. regression features of eating disorders through body image

Variable	Standardized regression coefficients B	regression error standard deviation SEB	Standardized regression coefficients Beta	T- test (t)	meaningful
Appearance Evaluation	-0.58	0.24	-0.18	-2.46	0.015
Appearance Orientation	-0.63	0.24	-0.24	-2.64	0.009
Fitness Evaluation	-0.71	0.25	-0.24	-2.85	0.005
Fitness Orientation	-0.56	0.23	-0.20	2.41-	0.017
Preoccupation with overweight	-0.11	0.25	-0.04	0.44	0.663
Body Areas Satisfaction	-1.02	0.32	-0.40	-3.21	0.001

Results in Table (4-13) shows that beta-related variables tend to appear suitability evaluation and consent of the areas of the body at the level of 99% (P <0.01) and beta-related variables and trends appearance to fit the 95 percent confidence level is significant (P <0.05). The results show that satisfaction with areas of the body with beta 1.02- best predictor of eating disorder symptoms among female students are. In other words, the increase in satisfaction with body parts, the symptoms of eating disorders in students is reduced.

Discussion

The results of the correlation between are incompatible cognitive emotion regulation strategies and eating disorders show only the symptoms of eating disorders there is a significant positive correlation with blaming others. In other words, by increasing the symptoms of eating disorders increases the tendency to blame others. Whereas cognitive emotion regulation strategies there was no significant relationship with other compatible components such as coping and acceptance, positive thinking. Also regression analysis related to eating disorders via cognitive emotion regulation showed that cognitive emotion regulation strategies is the ability to predict symptoms of eating disorders. That these results is consistent with results of researchers, such as (17). In general, it can be concluded that the components of the symptoms of eating disorders and cognitive emotion regulation are related. Compare these results with previous research has suggested that these results consistent with the findings of studies Wichianson (2008), McKenzi (2008), Czaja and colleagues (2009) and Pirrehumbert et al (2004) (11,18,19,20). In confirm this finding can say that the ability to understand and to manage and regulate emotions, considered one of the principles of success in life and failure of emotion regulation could have negative consequences, such as eating disorders to be followed. According to the dynamic psychological, there are eating disorders in individuals that have difficulty in understand their feelings and emotions. In this research, a significant negative relationship between eating disorders and self-awareness component is confirms this theory. According to this theory, eating disorders in individuals that suffer from great inner turmoil and physical issues are concerned and in order

to feel calm and protected, they are turning to food. In viewed of these findings can be said to explain Organize and manage your emotions and power adjustment resulted in irritating situations.

People increasingly have inner need to replicate their appearance beauty with special models feel as a social norm. Nevertheless, understanding the boundaries between common desire to improve the appearance of a person and neuroticism, is very important. Extreme dissatisfaction from the appearance may be of hide pathological mental states and negligence of such may have serious medical consequences (21). In other words, the increase in satisfaction with areas of the body and assess the appropriateness decreases the eating disorder. In other words, each the size of the body and assess the proportion of subjects increase satisfaction, eating disorders decreased and vice versa. Whatever the person's perceived social pressure rises score also rises to him in eating disorders. In this regard, studies Paxton et al (1991) (22), Levine et al (1994) (23), Striegel-Moore, Schreiber, Pike, Wilfley, and Rodin, (1995) (24) also showed The pressure to get thin from family, friends, the media associated with diet and is linked to increased body image dissatisfaction. The regression analysis showed there are relationship between body image and eating disorders and body image dimensions via eating disorders and lead to ability to predict their eating disorder symptoms. The regression results show that eating disorder and body image satisfaction via body segments satisfaction is the best predictors of symptoms of eating disorders in students, In other words, the satisfaction of areas of the body by reducing the symptoms of eating disorders in student's decreases.

However, considering the impact of these disorders on physical and mental health of adolescents, identifying other biological agents, environmental, social and family influence in the development and progression of eating disorders in this group should be investigated. the results of this study show that the prevalence of eating disorders in adolescent girls are at a significant level Of course, this compares with a year earlier studies did not show an increase. Eating disorders has been received much more attention in recent years

and it seems that still more research in understanding the factors leading to the continuation and treatment of these disorders is neede(19,20)

According to our study, the prevalence of eating disorders in Iranian adolescents with many of the studies that have been conducted in Western populations is consistent and considerable. Iranian cultural vulnerability to these disorders is likely to influence the values of Western culture via mass media. More importantly, the cultural conflict that teenage girls in Iranian society is faced with is dumped. On the one hand influenced by invasion Western cultural values and are placed of his community cultural values of the Islamic cultural, This seems to be the most important factor to pay more attention the the health centers is demand. Also it seems that better control of eating disorders in overweight adolescents should be considered. Keep teens avoid Unhealthy weight control behaviors and decreace physical activity, especially in childhood, which can be a precursor to obesity and overweight in adolescence.

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