



**Forecast emotional overeating Based on emotional self -regulation and the problem solving ability in women suffering from obesity**

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**Abstract**

*The aim of this study was to predict an emotional eating based on emotional regulation and problem solving ability in women suffering from obesity. This study was correlational research. This sample studied has formed consisted of 100 women suffering from obesity . Emotional Eating Scale Arnow et al (1995), difficulties in emotion regulation scale Giritz and Romer (2004) and the short form of social problem solving skills Dizoryla- Maydyv and Alyvars (2002) was used to collect information. In order to analyze the data, descriptive statistical methods using SPSS statistical software was used logistic regression. The results showed that self-regulating emotions as significant emotional overeating forecasts in the whole sample studied . obesity in women in addition to regulatory, maladaptive aspects of problem solving was also significant role in predicting emotional overeating, As well as three components: the rejection of emotional responses, lack of emotional clarity and limited access to emotion regulation strategies as positive, forecasts emotional overeating in total sample , and the components of social problem solving, rational style of problem solving as negative and problem-solving style avoidance as positive, emotional overeating predicted based on avoidance style and momentum - careless solve the problem Style.*

**Key words:** *emotional eating, emotional self-regulation, social problem solving ability, obesity*

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**Introduction**

In the twentieth century, and especially in recent decades, new to the new to the new understandings speed of beauty. In a general approach, something worldly beauty (against sacred), relative (versus absolute), details (in general) and most importantly the appearance (in the backend) is considered as a set of factors such as: of defined Fitness, makeup, dress and attractiveness (Synnot, 1990). This approach, which focuses on aspects of beauty that able to acquiring, developing and creating and On this basis emphasize removed on the natural beauty.

This change in perception of the beauty industry achievements with medical and other beauty is not only a characteristic physical and life and find properties acquired (Webster and Driskell, 1983). Emotional eating as eating in response to a range of negative emotions in order to adapt to negative emotions have been described (Faith, Allison and Geliebter, 1997). Despite the lack of real mode, hunger happens often in adults is associated with high body mass(van Strien and et al,1985). Emotional states can have a major impact on people's eating behavior, these modes are leading to overeating or anorexia. Several reviews have investigated the relationship between



emotional eating with a mass body mass (Faith, Allison and Geliebter, 1997; van Strien, 1995). These studies often have negative emotions such as depression and fear (Arnou, Kenardy and Agras, 1995) and mostly obese and normal weight subjects have compared. Although the findings are conflicting, but most studies relative overeating in people with obesity have shown the incidence of negative emotional states (Kaplan and et al, 1957). So it seems that people who suffer from emotional overeating have difficulty regulating and disabilities in their emotions. In psychology to a series of attempts by the person to regulate emotional states, which occur increase in positive emotions and reducing negative emotions, so-called self-regulating emotions. self-regulation is closely related to self-awareness and refers to methods by which to control and to discuss the behavior and actions. Emotional self-control theory, states that we compare through self-awareness our behavior with their standard and if there were gaps're trying to reduce it (Daivid son, 2002 to the Amjadian, 1390). In Self-regulating emotions, require that a person of inner experience (normal emotional states, internal positive and negative) are aware, your emotions will recognize effectively compatible with them or tolerate them (Linehan, 1993). Emotional arousal generally by reducing the contractions of the abdominal hunger, and reduces appetite. But obese people have a bad emotion regulation in response to intense excitement for an increase in a desire to eat during the show emotional arousal ; The answer is known as emotional eating (Carter et al., 2002; Spence and Courbasson, 2012). It seems that people in stressful situations or severe problem situation who suffered negative emotions, are unable to resolve your issues and it is also assumed that the relationship can be reversed. This means that people who have difficulty regulating their emotions, they can not function properly in problem-solving situations. Social problem solving ability as a cognitive-behavior process in which an individual seeks identify and discover effective solutions and consistently for specific problematic situations in daily life they are facing, defined(D.zurilla and et al,2002, According to the Abvalmaly,1389). In this definition, problem solving as a purposeful activity, diligently and carefully considered. This process of cognitive-behavioral variety allows accessing the of effective potential solutions to a problem And to choose effective solutions to the various solutions increases. Zvryla D. et al (2002) by combining the results of the review of past theories and research about problem solving and which had done research, have developed a model of social problem solving that focuses on five dimensions. Of this fifth dimension, two dimensions: problem positive orientation (PPO) and negative problem orientation (NPO) and the three-dimensional orientation variables: Rational problem solving (RPS), style impulsive / careless (ICS) and avoidant style (AS ) are patterns of problem solving. As a result, P PO RPS dimensions and manufacturer NPO, IS and AS are inappropriate problem solving performance (Abvalmaly, 1389). In the same way that the relationship between emotional overeating and problem solving ability, Davis et al. (2004) in their study with an emphasis on the issue, that people overeat are not just a passive response to environmental stimuli prominent and powerful drives physiologically, But largely related to their choose, to test the hypothesis examined whether weaker problem solving ability and the desire to overeat under stressful conditions in 41 healthy women is associated with high body mass. The researchers found that two independent variables, emotional overeating and weaker problem solving ability, predicted high body mass (35/0 =R2). In view of the above, the main question is whether the problem solving ability and self-study emotion regulation, emotional overeating predict in women suffering from obesity?



## Background Research

In studies conducted in the field of study, the same research can be achieved in this area, here are the results of some of them, Harris Agah, Alipur, Janbozorgi, Mousavi and Nohy (1391) In his research, it seems that through the use of specific methods of intervention such as self-monitoring, correction destructive thoughts, problem solving skills and coping strategies with environmental clues and emotional eating, subjects in both groups can increase Self - control, and resist that stimulus and in this way help to improve the efficiency lifestyle weight and your weight loss , also it can be argued that factors related to cognitive and cognitive-behavioral intervention can Affect the impact on the vigilant way (Selection of appropriate interventions for weight management) and unconscious way (emotional and physical) Mind-body connection, psychological factors associated with obesity and overweight(Including anxiety, disinhibition, motivation and dysfunctional behaviors eating) And in this way to weight loss, improved lifestyle, weight efficiency and lead the promotion of health indicators .Mataji Amirrood, Taghdisy, Shidfar and Gohary (2013) in their study to evaluate the effect of problem solving education on food behavior of 90 women with weight gain and obesity . Educational interventions with an emphasis on problem-solving skills, training was given for 6 weeks. The results showed a significant increase occurred in subjects eating behavior useful, the research concluded that the correct way of thinking in obese women could be leads to improved eating behavior. Werthmann and et al(2014) in their research explores this issue that whether attentional bias to food, to report on the effect of emotional overeating, modifies in a sad mood temper85 participants were randomly assigned to one of two modes induced mood (sad / normal) were replaced. Attentional bias for high-calorie foods, through tracking exploring visual images of food and neutral images were evaluated. The results of hierarchical manner multiple regression showed emotional overeating, Do not anticipate the changes due to food and choices food in any of the positions. However, maintaining attention to food symptoms, have significantly relationship by increases food intake, especially in the neutral position but this relationship was not in the Sad mood position. Researchers at the end argue that of emotions overeating may do not predict that what people are eating in a sad time, at least in healthy women and the lab that the results also suggest that maintaining attention to food, have relationship with motivation to eat in a neutral emotional . And it may be a general cognitive mechanism associated with increased food intake. In this study, Gianini, White and Masheb (2013) hierarchical regression analysis showed that the problem in emotion regulation have significant role in predicting both criterion variables: Emotional overeating and eating the affected public, have negative relationship despite gender and emotion. The researchers infer the end that emotion regulation, may play a significant role in maintaining emotional overeating and eating pathology in obese people with eating disorders have a drink. Raman, Smith, Hay(2013) in their research seeks to answer the question whether psychological variables such as floors behavior habits, bad emotion regulation, temperament and health knowledge ,are reflected Interaction with executive function and in eating behaviors and binge eating obese people? In response to this question based on clinical factors that can control obesity, emotional self-regulation as a dynamic system , responsible for responding to all emotional experiences, including both automated and controlled process that may be applied through performance(Gross & Thompson, 2007). Johnstone, Wahlestedt, Silva(2013) As a result of their research to draw a remarkable similarity to the



phenotype and neurological mechanisms underlying obesity and achieved drug dependency. BROGAN, HEVEY, PIGNATTI(2010) In their research showed that three groups of clinically have not significant relationship damage Iowa Gambling task assignments and learning and performance compared to the control group. Researchers at the end it seems that pathological eating behavior in anorexia nervosa, bulimia nerve and obesity determined through prefer immediate rewards quick . Meyer, Leung, Barry and De Feo(2010). In their research showed that there is a significant positive relationship between the subscales of emotional expressiveness and eating disorders . Especially women who had higher scores on a scale of eating disorders have formed the opinion that the expression of emotion is a sign of weakness. However, participants with high scores on eating disorders believe that you should control their excitement.

## **research questions**

### **The main research question**

Does predictable emotional overeating on the basis of adaptive and maladaptive social the problem solving ability and emotion self-regulation in obese women ?

### **Specific Questions**

Does predicted overeat Emotions based the following scale social the problem solving ability in obese women?

Does predicted overeat Emotions based the following scale emotional self-regulation in obese women?

## **research method**

This study seeks to make predictions emotional overeating based on self-regulating emotions and problem solving ability in obese women. this is the type of correlation design. Also, in terms of the purpose and nature of research take into account as applied research category . Population of this study consisted of all women suffering from obesity and diet referred to clinics in Tehran during the second half of 1393. On this basis study sample were selected consisted of 100 women suffering from obesity referred to two clinic nutrition and diet therapy (Shima Shekarchy clinic doctor, clinic Roshana). measuring devices of research included, a short form of social problem solving skills Dizoryla- Maydiv and Alivaris (2002) The question of test in the following was loaded five operating positive orientation, negative orientation, logical solution, avoidance style and impulsive / carelessness style. The reliability of the questionnaire using Cronbach's alpha and internal consistency were obtained, alpha coefficients for each of the factors, positive orientation toward problem solving, negative orientation to problem solving, logical problem solving, avoidance style and the style of carelessness / Aggression 0/68, 0/75, 0/62, 0/68, 0/68, and showed instruments a total alpha coefficient 0/69. Difficulties in Emotion Regulation Scale Geritz and Romer (2004), This scale report of their index to evaluate the difficulty associated with emotional regulation in a more comprehensive way than existing tools have been made in the field and has 36 words and 6 subscales. The results of the final



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analysis, shows that the scale has high internal consistency (total scale  $(0/93 = \alpha)$ , subscales of rejection  $(0/85 = \alpha)$ , impulsivity subscales  $(0/86 = \alpha)$ , knowledge subscale  $(0/80 = \alpha)$ , Strategies subscale  $(0/88 = \alpha)$ , and subscale of clarity  $(0/84 = \alpha)$ , and the reliability test - retested of this scale is good for grades  $(0/88, 0/01 > p)$  as well as for the subscales and  $(0/69)$  for rejection, for the purposes of  $0/69, 0/57$  for momentum, for information  $0/68$ , for the strategy  $0/89$  and for transparency is  $0/80, (p < 0/01)$ . about the validity of construct validity and sufficient predictive for the scale (Gratz and Roemer, 2004). Also consistency reliability were calculated, internal consistency translated into Persian form of the scale, during a pilot study on 48 students at Ferdowsi University of Mashhad University of Medical Sciences (31 females and 17 males). The results of this study showed high internal consistency for the total scale  $(0/86 = \alpha 91/31 = M$  and  $17/ = 78 Sd)$  (Alavi, 1388). Emotional Eating scale Arnow et al (1995), This is 25-item self-report scale that is simply normalized in clinical settings (Arnow et al, 1995). After a translation of the English version of the scale and approval by the supervisor, to calculate the credit, it conducted among 52 women. The results showed that high internal consistency and validity of the test exam questions using Cronbach's alpha coefficient was 0.94. Also in the final run on sample studied Cronbach's alpha coefficient was 0.93. This means that the research method, the researcher after obtaining a referral from the Islamic Azad University and later coordinated with nutrition and diet therapy clinic (clinic Shima Shekarchy doctor, clinic Roshana) and acted after obtaining the consent of the client, toward completion questionnaires as interviews design; So that first questionnaire emotional overeating, Arno and colleagues by patients who agree to participate in the study had been completed, and then calculate students' scores on emotional overeating questionnaire, individuals with scores above 30 were diagnosed as individuals with emotional eating and then emotional self-regulation questionnaire and their problem solving ability was completed to face interviews. to describe Statistical data from the drawing table the frequency, calculate indices mediocrity and distribution variance was used. for data analysis In addition to descriptive statistical methods (classification and description information), the method of logistic regression analysis was used to answer research questions.



**research findings**

**The descriptive findings**

Table 1. Descriptive indicators: age, height and weight in women suffering from obesity

ABUNDANCE	Variables	
35/04	Average	Variable age
10/27	The standard deviation	
1/072	Tilt	
1/197	Elongation	
77/03	Average	Variable Weight
13/65	The standard deviation	
0/74	Tilt	
0/631	Elongation	
146/23	Average	Variable Height
6/89	The standard deviation	
0/464	Tilt	
-0/105	Elongation	

Information Table (1) The mean age of subjects with obesity 04/35 years (standard deviation = 27/10) and an average weight of subjects with obese is 03/77 kg (SD = 65/13). Average Height subjects with obesity is 23/164 cm (SD = 89.6) . The index strain and Tilt the distribution of scores for all variables with normal distribution have not significantly different (if the index marks  $(1-\leq KU \geq +1)$  and Tilt  $(1-\leq SK \geq +1)$  distributed between +1 and -1 is almost normal distribution.



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**Table 2. Descriptive Index score of emotional self-regulation in obese women**

EMOTIONAL SELF-REGULATION COMPONENTS							Statistics
total score emotion self- regulation	Lack of emotional clarity	Limited access to emotion regulation strategies	Lack of emotional awareness	Impulse control problems	Difficulty handling purposeful behavior	Lack of acceptance of emotional response	
90/6	6/57	15/44	20/65	16/07	14/75	17/12	Average
15/23	5/56	4/9	4/90	4/18	3/24	6/42	Standard deviation
0/599	-0/763	-0/356	0/690	0/495	0/562	0/689	Elongation
0/452	0/119	-0/587	0/335	0/021	0/199	0/188	Tilt
57	3	7	9	6	9	7	Minimum
137	14	30	30	26	25	35	Maximum



Information Table (2) shows that components of Lack of acceptance of emotional response, lack of emotional awareness, limited access to emotion regulation strategies and total score emotion regulation, The subjects suffering from obesity were earned high scores, also in the index of elongation and Tilt the distribution of scores for all variables distribution is almost normal.

Table 3 Descriptive Index score of emotional overeating in subjects suffering from obesity

						Groups
						Statistics
Maximum	Minimum	Elongation	Tilt	Standard deviation	Average	
100	29	0/837	0/817	14/48	47/16	Obese

Information Table (3) shows that the score of emotional overeating, subjects suffering from obesity have earned a high score. Also in the index of elongation and Tilt the distribution of scores for all variables is almost normal distribution.

Table 4 Descriptive Index score and problem-solving ability and its components in women suffering from obesity

COMPONENTS OF SOCIAL PROBLEM-SOLVING ABILITY					Statistics
Impulsive, careless style	Avoidant style	Negative orientation	The logical solution	Positive orientation	
12/62	8/27	11/03	16/09	17/3	Average
3/13	3/11	3/14	3/87	3/73	Standard deviation
0/817	0/276	0/818	-0/044	0/256	Tilt
0/277	-0/578	0/392	0/264	0/344	Elongation
7	4	5	5	9	Minimum
21	17	19	25	30	Maximum

Information of the above table shows that the negative orientation problem and avoidance of problem-solving styles, subjects suffering from obesity have achieved an





acceptable score. Also in the index of elongation and Tilt the distribution of scores for all variables distribution is almost normal.

### Inferential findings

#### Exam study questions

Does predictive emotional overeating on the basis of adaptive and maladaptive the problem solving ability social and emotion self-regulation in obese women ?

#### answer the question of main research

Table (5) percent of classification accuracy regression model

Predicted		emotional overeating		observed	
Percentage of correct predictions		1	0		
	47/1	9	8	0	Emotional Overeating
	94/8	73	4	1	
	86/2	The overall percentage Forecasting the model			

Table 6. The estimation results of logistic regression stepwise emotional overeating

P	Wald	SD	exp(B)	B	independent variable
0/001	12/678	0/042	1/861	0/149	Emotional self-regulation
0/037	4/362	0/574	1/302	1/119	Maladaptive aspects of problem solving
			(0/001) 39/392		2Chi test (significance level)

On the implementation of the model in the subjects, a total of 94 persons were included in the analysis and Complete model was significantly reliable (chi-square = 39/392 and  $df = 2$ ,  $p < 0/01$ ). In total, 88% of predictions were right. As results in Table 6 shows that in subjects, Emotional Overeating based on self-regulating emotions and sizes maladaptive problem solving as predicted significantly.



**answer the first specific questions**

Table 7-Percentage of classification accuracy regression model

Predicted		emotional overeating		observed	
Percentage of correct predictions		1	0		
	52/9	8	9	0	Emotional Overeating
	94/8	73	4	1	
	87/2	The overall percentage Forecasting the model			

Table 8. The estimation results of logistic regression stepwise emotional overeating

P	Wald	SD	exp(B)	B	independent variable
0/001	16/112	0/138	1/574	0/555	Avoidance styles of problem-solving
0/046	3/969	0/135	1/765	0/268	Impulsive, careless style
			(0/001)34/673		2Chi test (significance level)

On the implementation of the model in the subjects, a total of 94 persons were included in the analysis and reliable complete model was significantly reliable (chi-square = 34/673 and df =2, p <0/01). in total of 86% of the predictions were right. As results in table 8 shows that in subjects, emotional overeating based on avoidance styles and Impulsive, careless style of problem-solving as predicted significantly.



answer the second specific questions

Table 9 Percentage of classification accuracy regression model

Predicted		emotional overeating		observed	
Percentage of correct predictions		1	0		
	76/5	4	13	0	Emotional Overeating
	97/4	75	2	1	
	93/6	The overall percentage Forecasting the model			

Table 10. The estimation results of logistic regression stepwise emotional overeating

P	Wald	SD	exp(B)	B	independent variable
0/008	6/984	0/112	1/743	0/297	Rejection of emotional responses
0/003	9/024	0/214	1/525	0/644	Lack of emotional clarity
0/020	5/439	0/094	1/803	0/219	Limited access to emotion regulation strategy
				(0/001) 50/753	2Chi test (significance level)

On the implementation of the model in the subjects, a total of 94 persons were included in the analysis and reliable complete model was significantly reliable (chi-square = 50/573 and df = 2, p < 0/01). In total of 93/6% of the predictions were right. As results in table 10 shows that in subjects, emotional overeating based on Rejection of emotional responses, Lack of emotional clarity and Limited access to emotion regulation strategy as predicted significantly.

**Conclusion**



The aim of this study was to predict the emotional overeating by self-regulating emotions and problem solving ability in women suffering from obesity. According to the results of this study showed that self-regulating emotions and its components emotional forecast overeating, On the one hand, and the results of other studies on the Important and influential role of self-regulating emotions emphasize eating behavior, can be argued that one of the important variables that can predict emotional overeating in obese women Self-regulating emotions is Self-regulating emotions. It might be argued that the self-regulating emotions, as a self-regulatory process, it is possible to control the process of emotional eating. So when people have from the weak treasury of the strategies such as defects in the control system, they may not be able to provide answers based on the habit of doing and prevent them (Joormann and Gotlib, 2010). These results will have implied frequency applications in diagnosis, treatment and prevention programs for people with emotional overeating. On the other hand, since the results of the study showed that the rational style, and avoidance styles of problem solving forecast emotional overeating, it can be argued that the ability to problem-solving, play critical role in managing individuals emotions; It is also possible exists a reciprocal relationship between emotion self-regulation and problem-solving ability; It seems that people who are in stressful situations or problem situation, severe suffered negative emotions, are unable to resolve their problems and this relationship can be assumed as the image. This means that people who have difficulty regulating their emotions, they can not function properly in problem-solving situations

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