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Comparison of the Effectiveness of Emotion-Focused Therapy Group and Schema Group Therapy on the Difficulties in Emotion Regulation and Health Promoting Lifestyle of Obese Women

Reza Yaghoubi[1], Mohammad Hossein Bayazi[2*], Mahnaz Babaei[3], Javanshir Asadi[1]

[1] Department of Psychology, Gorgan Branch, Islamic Azad University, Gorgan, Iran.
[2] Department of Psychology, Torbat-e-Jam Branch, Islamic Azad University, Torbat-e-Jam, Iran.
[3] Department of Psychology, Golestan University, Gorgan, Iran.

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Abstract

Background: *Obesity is one of the most common problem among women, leading to many chronic diseases such as heart disease and cancer. Various factors such as emotional problems and lifestyle have a special role in women's obesity. The aim of the present study was to compare the effectiveness of emotion-focused therapy group (EFT-G) and schema group therapy (SGT) on the difficulties in emotion regulation and the health-promoting lifestyle of obese women referred to nutrition clinics in Mashhad in 2018.*
Methods: *Thirty-six obese volunteer women were selected and assigned into two experimental groups (each group consisted of 12 women) and a control group (n=12). A meeting was held to explain the objectives of the research and intervention. Each one of the experimental groups received 90-minute weekly sessions for 2.5 months (10 sessions), while the control group did not receive any intervention. Before and after the training phase, all of the participants completed the demographic questionnaire. Finally, they had also completed the difficulties in emotion regulation scale and the health-promoting lifestyle profile. Data were analyzed by using SPSS 22 software. The significant level was set at 0.05.*
Results: *The outcomes of data analysis by using multivariate analysis of variance (MANOVA) indicated that there is no significant difference between the two experimental groups on the research variables (Pvalue>0.05). The results also showed that EFT-G and SGT improved health promoting lifestyles and difficulties in emotion regulation in obese women (Pvalue<0.05). Also, the results showed that EFT-G was effective on difficulties in emotion regulation, but group schema therapy was not effective on emotional regulation difficulties in obese women (Pvalue>0.05).*
Conclusions: *Generally, the results showed that there is no significant difference between the two experimental groups on the difficulties in emotion regulation and health-promoting lifestyle. The EFT-G decrease the difficulties in emotion regulation and increase the health promotion lifestyle in obese women. Furthermore, this study illustrated that the EFT-G can improve the difficulties in emotion regulation and the health promotion lifestyle of obese women.*

Keywords: Emotion-focused therapy, Schema group therapy, Obesity, Difficulties in emotion regulation, Health promotion lifestyle.
***Corresponding to:** MH Bayazi, **Email:** bayazi123@gmail.com
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Introduction

Obesity is defined as unusual or excessive fat accumulation that presents a health risk. A crude population measure of obesity is the body mass index (BMI), a person's weight (in kilograms) divided by the square of his or her height (in meters). A person with a BMI of 30 or more is generally considered obese. Obesity is one of the most important risk factors for some chronic diseases such as diabetes, cardiovascular disease and cancer. Although this problem once existed only in developed countries, overweight and obesity have now increased dramatically in low- and middle-income countries, especially in urban areas.[1]

It is now widely believed that obesity is the result of overeating unhealthy foods and not exercising. However, at the individual level, although there are many factors that can be significantly associated with obesity, some have not been identified.[2] Research shows that emotional factors play an important role in obesity and negative emotions seem to be one of the factors that increase the risk of obesity and threaten the health of society.[3] People with high appetite have more difficulties in emotion regulation than those with low appetite.[4] Studies have also shown that eating is an emotional strategy or response to emotional distress or injury.[5] Emotional networks have been identified in the brain, which can lead to obesity by stimulating eating behaviors. Factors such as stress also increase emotional activity by activating a neural response network and creating behaviors that can lead to obesity.[6] Some theories consider the difficulty in emotion regulation to be a meta-diagnostic model in eating disorders[7] and show the relationship between emotion-related structures and lack of control over adult eating behavior.[8] Emotion regulation is a skill that can predict natural changes in body mass index (BMI). Even children who are emotionally weak are more likely to be obese.[9] In regard, researches have shown the importance of emotion regulation in obesity. Khodapanah et al.[10] showed that emotion regulation plays an important role in predicting eating behaviors in overweight and obese people. Another set of analyzes shows that difficulties in emotion regulation is important in bulimia and eating pathology.[11]

However, scientific findings suggest other factors influencing obesity. One of the most important of these is health-promoting lifestyle. This term has various definitions. According to Walker, a health-promoting lifestyle is "a pattern of perceptions and actions that are initiated by the individual and help maintain and improve the individual's level of health and self-healing," which in addition to maintaining and encouraging, increases the level of health and the welfare of

individual Satisfaction. Modifying the lifestyle requires the change of behaviors that make up a large part of one's daily habits.[12] Researches have shown that there is a negative and meaningful relationship between eating behaviors and quality of life.[13] Obesity and overweight are strongly associated with sedentary lifestyle and inactivity in adults.[14] Other researchers have shown the role of lifestyle behaviors such as physical activity and nutrition in obesity.[15] Although there are limited studies that can help us treat obesity, Cochran's study has shown that lifestyle programs can be effective in weight loss.[16] Therefore, the weight loss programs can have the greatest impact, when people have a healthy lifestyle.[1] Studies have shown that many weight loss programs fail in the long run, and half of those who lose weight are re-treated within a year.[17] Previous research on weight control has shown that moods and emotions play an important role in preventing weight loss and inducing recurrence.[18] One of the methods considered in the treatment of obesity today is emotion-focused therapy (EFT). This method is one of the most effective interventions in people with eating disorders (both in terms of weight loss and later positive effects on their psychological problems). The main hypothesis of this treatment is that emotions are inherently compatible and contain important information.[19] These feelings are often learned in situations that evoke our inner emotional response and may be wrong and inconsistent. Automatic emotional responses are learned when organized into an emotional plan or program (as much as biological responses are internalized and integrated).[20] Repeated activation of maladaptive emotion schemas leads to impairment in adaptive functioning and emotion regulation, examples of which include a deep fear of abandonment or shame of incompetence.[21] After a change in maladaptive emotional patterns, the psychological symptoms diminish and disappear because they are no longer needed.[19] EFT-G empowers the obese person to increase their emotional awareness, correct maladaptive feelings such as anxiety, depression, and hopelessness, control past semi-finished situations, and enhance their psychological well-being. Analysis of interviews with people undergoing EFT-G showed improvement in their performance in many areas, including a significant reduction in emotion regulation problems.[22] In researches such as Wnuk, Greenberg, and Dolhanty,[19] EFT-G showed a significant reduction in periods of emotional overeating, improved mood, and improved emotion regulation and self-esteem for women with anorexia. Some of the researchers such as Mahmoudvandi Baher et al.[23] showed also that hope increased among divorced women EFT-G and the negative self-efficacy reduced. Researches have done by Brennan, Emmerling, and Whelton[24] also showed that the EFT-G improves self-criticism in patients with eating disorders.

People with obesity in today's societies are exposed to harassment, discrimination, and bias, and these labels and discrimination have a negative impact on their health. Given this, people with obesity with such painful experiences are more likely to be exposed to the acquisition of early maladaptive schemas and appearance schemas. For this reason, some researchers, emphasizing their findings and considering the severe discrimination and social exclusion of people with obesity, suggest that in addition to the relevant medical and sports treatments, more attention should be paid to psychological therapies, especially considering the schemas in this group of people. Research shows that obese people have certain schemas that distinguish them from normal people. For example, people with overeating scored significantly higher on schemas of abandonment, instability, emotional deprivation, and inadequate self-control and self-discipline.[25]

Health-promoting behaviors and improving the quality of life is an international approach and is one of the main challenges for researchers and health care providers. Therefore, research on obesity as a social problem and a risk factor and threat to health and the importance of women's health as one of the most important pillars of society and family, are among the health priorities of any country. Although many studies have been conducted to prevent and treat obesity and have provided relatively good results, these studies have not almost investigated the effectiveness of emotion focused therapy group and group schema therapy on difficulties in emotion regulation. In light of the above, the researcher seeks to answer the question of whether there is a difference between group-based emotion therapy and group schema therapy in terms of effectiveness in promoting health and the difficulties of emotional regulation in obese women?

Although the mentioned studies have investigated many components for the prevention and treatment of obesity and have relatively provided good results, almost none of the studies directly examined the effectiveness of EFT-G on the difficulty in emotion regulation and the health-promoting lifestyle of obese women. Therefore, this study has attempted to investigate two major variables in women's obesity, i.e. health-promoting lifestyle and difficulties in emotion regulation, which can be used in the treatment of obesity. In other words, the main question of this study is that whether the EFT-G is effective in the health promoting lifestyle and the difficulties in emotion regulation of obese women?

Materials and Methods

This research, which has a quasi-experimental design using pretest-posttest, and control, was performed through easy sampling. The statistical population of this study included obese women referring to one of the nutrition clinics located in Mashhad between 2018 and 2019, who were diagnosed with obesity based on body mass index (BMI). Inclusion criteria included informed consent, body mass index above 30, woman, age between 20 and 59 years and a minimum level of education, and exclusion criteria included other psychiatric disorders such as binge eating disorder, anorexia nervosa, personality and psychotic disorders, substance abuse, and severe family problems.

This article is taken from the author's Ph.D. thesis with the code of ethics of IR.IAU.MSHD.REC.1397.064. Ethical issues confirmed by the Declaration of the world medical association of Helsinki[26] such as informed consent, the confidentiality of information obtained from them, and voluntary withdrawal from the study were also considered in this study. Thirty-six obese women were also selected for the study. This sample size is good because the sample size for adults and children is usually considered between 8 and 20 according to the rules of group therapy.[27] In previous similar studies, the sample size in each group was considered equal to 1219, which is another confirmation of the sample size used in this study.

All participants were randomly divided into three groups of two intervention groups (each group includes n=12), and one

control group (n=12). The experimental groups received 90 minutes' weekly sessions for three months (10 sessions), while the control group did not receive any intervention. Finally, the control group participated in the new intervention after completing the investigation. All women in this study also responded to the difficulties in emotion regulation scale (DERS; Gratz & Roemer, 2004) and the health-promoting lifestyle profile (HPLP II; Walker & Hill-Polerecky, 1997) before and after the intervention. Group therapy data were collected using personal information forms (demographic questionnaire), which included information such as age, marital status, education, height, and weight.

The difficulties in emotion regulation scale designed by Gratz & Roemer in 2004, consists of 36 questions, which describes emotion regulation patterns in six subscales of no acceptance of emotional responses (NONACCEPT), difficulty engaging in goal-directed behavior (GOALS), impulse control difficulties (IMPULSE), lack of emotional awareness (AWARENESS), limited access to emotion regulation strategies (STRATEGIES), and lack of emotional clarity (CLARITY), and are measured in the Likert scale (always=5, often=4, sometimes=3, rarely=2, never=1). At this scale, the items 1, 2, 6, 7, 8, 10, 17, 20, 24, and 34 are inverse, the higher the score, the greater the difficulty in emotion regulation. Gratz and Roemer (2004) reported reliability of this questionnaire based on the retest, 88%, and its internal reliability based on Cronbach's alpha for the whole scale, 93%, and for subscales above 80%.[28] In research done by Mazloom et al.[29], the reliability of the Persian version was also investigated and Cronbach's alpha coefficient was 85% for the whole scale, and 62 to 75% for the subscales. To determine the validity of the questionnaire, the scores of the questionnaire were correlated with that of Zuckerman emotionality questionnaire, which their correlation was also positive and significant. This indicates that the difficulties in emotion regulation questionnaire is valid (Pvalue=0.043, r=0.26, n=0.59).[4]

The health-promoting lifestyle profile II, which was designed by Walker et al. consists of 52 items, which measures six dimensions such as nutrition, exercise, health responsibility, stress management, interpersonal support, and self-healing in a Likert scale (always=4, never=1). The internal consistency Cronbach's alpha for the original English version of HPLP-II was satisfactory, with 0.94 for the total scale of HPLP-II, and from 0.79 to 0.87 for its six subscales.[30] In the research of Mohammadi Zeidi et al.[31] for investigating the reliability and the validity of the Persian version, Cronbach's alpha coefficient was 82% for the whole scale, and 64% to 91% for the subscales. Analysis of covariance was used for data analysis by using SPSS 22 software.

Present therapies plan (Tables 1 & 2) was initially evaluated on five obese women based on valid psychologist, nutritionist, and scientific articles. Also, it was evaluated by three psychologists and one nutritionist, which they finally validated this plan.

Table 1. Emotion-focused therapy group sessions derived from Greenberg's model (2015)

Sessions	Title	steps/Content of the sessions
Stage one: transplant therapy and emotional awareness		
1	Transplantation and awareness and therapeutic alliance	The first session was held for creating the therapeutic alliance, introducing the volunteers, and explaining the holding purpose and group formation. Description of the EFT was stated. In the following, the rules of the group such as confidentiality, respecting each other's rights, and responsiveness was expressed.
2	The goals of the treatment	The second session was included orientation of therapy and psychological introduction and education about obesity and emotion, which was consisted of a description of working principles on emotion and agreement with subjects about treatment goals.
3	Getting to know and identification the emotions	Review the previous session. Improve the awareness of internal experience, acceptance, and tolerance. Allow for the emotional experience. Focus on identification and naming emotions by words for helping the problem solution. We during this session also helped to learn more about their physical reactions against emotions without inhibiting and cutting them.
4	Discover markers and emotion scheme recognition	Review the previous session. Pay to different indicators at different levels of the processing process of clients. The therapist worked with a diverse set of indicators at various levels. The initial indicators include sub-indicators such as the audio quality of clients and the depth of experience and degree of arousal. During this session tried to highlight the frequency and role of clients in creating their experiences. We also emphasized the personal role and responsibility in creating the experiences and try to define the emotion scheme.
Step two: motivation and exploration		
5	Maintain an emotional experience to access the emotional information	Review the previous session. Arouse and discover initial emotions through the Gestalt technique such as two-chair dialogue by putting their conflicting parts against each other and by talking to them. Then, the experience of those feelings for the emotional experience and connection with the emotion is used. In the process, the therapist by using emotion regulation delivers clients to a degree of arousal to experience it easier and recognize that this is the primary or secondary excitement.
6	Revitalize the emotional experience in order to access information	Pay to the emotional experiences during last week and their experience from the previous session. Use motivational ways for reviving the experience of the subject such as imaginal confrontation. Pay to the signs and symptoms of the process at present for creating the best state that can strengthen and stimulate the key experiences and emotions. The client will be able to access information that they contain experience when the emotional experience of the client is stimulated.
7	Removing interruptions and overcoming breaks	Review the previous session. Discover and overcome the interruptions and obstacles of emotion's expression, avoidance processes, and eliminating breaks through two-chair activities on the personal break. Subjects do the breaking processes as the dramatic to experience themselves as the perpetrators of breaking processes.
8	Access to maladaptive emotion scheme	Review the previous session. Achieve initial emotions or central maladaptive emotional plan through arousing the stopped emotions. Work on the sub-markers and the binding responsibilities, and achieve to obtained needs. The purpose of this session is the change of feelings, the achievement of hidden primary emotions, the interlinked automatic assessment, and finally the achievement of the needs of clients.
Step three: Convert		
9	Emotion processing and emotional scheme change	Review the previous session. Create new responses and emotional regulation for changing the form of the central maladaptive plan through improving contemplation to give meaning to experience, to give accrediting to new feelings and the protection of created sense relative to the person himself.
10	Consolidate adaptive emotions and end group therapy	Prepare the group to end meetings. Organize emotion after a change in the emotional process. Provide activities that can strengthen the changes. Encourage expression instead of overeating. Clients were participated by the therapist in experiential education to the intellectual strength of changes in person viewpoint.

Table 2. Schema group therapy sessions derived from Farrell & Shaw model (2012)

Sessions	Title	Steps/content of the sessions
Step one: Communicate and regulate emotion regulation		
1	Establishing therapeutic alliances and teaching about group therapy	In the first session, the members of the group got to know each other and the need for commitment and respect in the group and the rules that govern it (such as confidentiality, punctuality, and maintaining order) were emphasized. In a supportive way, the group's basic rules were reminded and participants were helped to follow the rules.
2	Familiarity with schema therapy	In the second session, the schema therapy model was explained to the participants in simple and clear language. The participants understood the nature of the initial maladaptive schemas, their evolutionary roots as well as their mechanism, and then obesity was defined and its effects on physical health (including chronic diseases) was described.
3	Awareness of different mentalities	In the third session, the cognitive techniques of challenging schemas (such as schematic validity test, and establishing a dialogue between the healthy and unhealthy aspects of schemas) were introduced, taught, and used.
4	Launch mentalities	Neglected childhood needs and schematic mindsets that led to obesity were examined (by raising participants' emotional awareness through motor exercises and mental imagery).
Step two : changing the schema mentality		
5	Focus on common schemas of obese women	In this session, the identification of "early warning signs" is done by looking back. After the formation of a sense of security and initial communication with the therapist and other members of the group, the group enters the stage of "group activity" and a schematic change of mentality is formed.
6	Focus on common schemas of obese women	At this stage, when participants realize that some of the schemas lead to behaviors such as overeating or low activity, not paying attention to the amount of calories consumed, etc., they try to change their mindset about this type of lifestyle to The next steps are to establish these mentalities.
7	Removing interruptions and changing the schema mentality	Healthier coping and training to meet basic needs (eg, risk-taking for direct questioning) were taught, and the use of healthier coping behaviors was practiced.
8	Changing the schema mentality	At this stage, participants were helped to identify and deal with their borderline parenting experiences. The positive reactions of the group were also encouraged to express feelings and needs.
Step three: Self-regulation		
9	Clarify and stabilize identity	In this session, we tried to create and strengthen a healthy adult mentality. A healthy adult mentality had more control over behaviors, including more restraint on behaviors such as overeating and encouraging more physical activity or eating lower calorie foods.
10	Summarize and end the group with integration in the participants	An attempt was made to generalize the participants' interaction outside the group, and while informing the participants of their beliefs, needs, values, and feelings, the group was prepared to end the sessions and the clients were a;;owed to follow the sessions.

Results

In this study, 36 participants (women with BMI≥30) were allocated into one control and two experimental groups, which each group consisted of 12 women. The mean and standard deviation of the age in EFT-G, SGT, and control groups were 40.4±9.2, 41±3.2, and 40.2±8.7, respectively. In the EFT-G, SGT, and control groups, 16.7%, 8.3% and, 8.3% of women had below the diploma, 41.7%, 58.3%, and 66.7% had diploma, 8.3%, 8.3%, and 0.0% had associate's degree and 33.3, 25%, and 25% had BS/BA degree, respectively. Marital status in the EFT-G, SGT, and control groups were 16.7%, 8.3%, and 16.7% single, 66.7%, 75% and, 75% married, and 16.7%, 16.7%, and 8.3% divorced, respectively. Table 3 presents the descriptive characteristics of scores of participants in the experimental and control groups for the pre-test and post-test stages according to the difficulties in emotion regulation scale and health promotion lifestyle profile for these women.

Investigate the validity of the hypothesis (e.g. normal distribution of scores, equality of variances, homogeneity of covariance, matrixes), Kolmogorov-Smirnov results showed the normal distribution of difficulties in emotion regulation and health-promoting lifestyle scores (Pvalue>0.05). Levene's test results also showed the equality of variance (Pvalue>0.05). In other words, there was the equality of variance for the total score of difficulties in emotion regulation (F=0.69 and Pvalue>0.05), and the total score of health-promoting lifestyle (F=0.15 and Pvalue>0.05). Also, the results of the Box test confirmed the equality of covariance matrix (Pvalue>0.05). Therefore, according to the results of Kolmogorov-Smirnov, Levene's, and Box tests, the condition of covariance analysis is appropriate.

Investigating the comparison of the effectiveness of EFT-G and SGT on difficulties in emotion regulation and health-promoting lifestyle of obese women by using the multivariate analysis of variance (MANOVA) in the matrix program and control groups (tables 4 and 5) and LSD test presented in table 6 showed that there is no significant difference between the two experimental groups on the research variables (Pvalue>0.05), and about the effectiveness of EFT-G on the health-promoting lifestyle of obese women, it illustrated that the changes related to the post-test health-promotion lifestyle score were significant (Pvalue<0.05). Also, the results showed that EFT-G was effective in difficulties in emotion regulation, but group schema therapy was not effective on difficulties in emotion regulation in obese women (Pvalue>0.05).

Table 3. Mean and standard deviation of the research variables in the experimental and control groups in the pre-test and post-test

Variable	Mean (standard deviation)					
	SGT group		EFT-G group		Control group	
	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test
EFT-G	95.1(15.7)	90.3(12.1)	96.0(15.4)	83.5(11.9)	94.5(9.8)	94.5(10.7)
SGT	132.2(19.2)	139.5(14.3)	131.2(20.3)	141.4(16.02)	125.4(16.08)	126.8(13.9)

Table 4. Results of multivariate analysis of variance (MANOVA) in the matrix program and control groups

Tests	Value	F	df	Error df	α	η2
Pillais trace	0.27	2.67	4	66	0.039	0.14
Wilks lambda	0.72	2.75	4	64	0.035	0.14
Hotelling's trace	0.36	2.83	4	62	0.032	0.15
Roy's largest root	0.33	5.60	2	33	0.008	0.25

Table 5. Results of multivariate analysis of variance (MANOVA) on post-test scores

		Sum of squares	df	Mean square	F	sig
Group	Life promoting lifestyle	1507.16	2	753.58	3.43	.044
	Difficulties in emotion regulation	728.38	2	364.19	2.69	.083
Error	Life-promoting lifestyle	7235.58	33	219.26		
	Difficulties in emotion regulation	4464.58	33	135.29		

Table 6. Results of post hoc test (LSD)

Variable	Group(I)	Group(J)	Mean difference	α
Life promoting lifestyle	EFT-G	SGT	1.91	0.75
		Control	14.58	0.02
	SGT	EFT-G	-1.91	0.53
		Control	12.66	0.04
Difficulties in emotion regulation	EFT-G	SGT	-6.75	0.16
		Control	-10.91	0.02
	SGT	EFT-G	6.75	0.01
		Control	-4.16	0.03

Discussion

The purpose of this study was to compare the effectiveness of emotion-focused therapy group (EFT-G) and schema group therapy (SGT) on the difficulties in emotion regulation and health-promoting lifestyle of obese women. The descriptive results in Table 3 generally indicated that the EFT-G and SGT significantly reduced the scores of difficulties in emotion regulation and increased the scores of health-promoting lifestyle of obese women in the experimental group compared to that of the control group but no significant difference was observed between the two groups. According to reviews we did, no research in Iran and abroad has been conducted on the comparison of the effectiveness of EFT-G and SGT on the difficulties in emotion regulation and health-promoting lifestyle of obese women. Therefore, these findings have been considered as one of the most recent achievements in the field of obesity. These results have been compared with other studies in terms of similar variables. Accordingly, researchers have identified emotion regulation as one of the causes of obesity, and they have believed that emotions play an important role in endangering public health by increasing the probability of obesity.[2]

Although no research has compared the effectiveness of emotion-focused therapy and group schema therapy on the difficulties in emotion regulation and health-promoting lifestyle of obese women, the results of other research also show that emotion regulation is associated with obesity, and EFT-G is effective in regulating emotions in people with certain disorders, including eating disorders. For example, Wnuk, Greenberg, and Dolhanti[19] in their research showed that EFT-G improves negative emotions, emotion regulation, and self-efficacy in women with anorexia nervosa. In another study, Lafrance robinson, Mckig, and Wessel[22] found that EFT-G reduced emotion regulation problems for men and women with depression and anxiety.

However, in explaining the lack of difference between the two treatment approaches to the research variables, it can be said that both approaches have many technical similarities with each other. In fact, with the help of these two treatments, the participants' emotional regulation system and lifestyle can be affected and prevented the impact of destructive factors such as maladaptive emotions or early schemas. In both ways, participants learn to control their emotions and experience a better feeling by regulating emotion and correcting mental schemas. For example, both therapies use relaxation to regulate emotions. In the emotion-focused approach, therapists are seen as specialists in their own experiences. In this treatment, gestalt techniques are used for confrontation and in schema therapy, techniques of letter writing, imaginary conversation, and role-playing are used to evoke and regulate emotions. Both of these therapies promote mental order and coherence and reduce emotional turmoil. Therefore, controlling emotional resources can help a person have better mental health and be able to solve problems more calmly.

Explaining the effectiveness on the difficulties in emotion regulation, it can be said that in the emotion-focused approach, therapists consider the skills and ability of clients to observe and regulate their emotions in their assumptions and studies.[20] Identifying, naming, experiencing, reinforcing, and articulating emotions by participants is an important factor in the change in emotion-focused therapy. In EFT-G, eating behaviors are related to the balance of psychological dimensions in the emotion regulation system. These behaviors can also provide significant clinical information. Therefore, they are part of the criteria for diagnosing obesity and treatment plan. In this regard, people who have been successfully treated often attribute their recurrence to their inability to cope with negative

emotions. Studies focusing on emotion therapy have shown the benefits of emotion therapy in treating patients with eating disorders and obesity. These results also emphasize the usefulness of cognitive-emotional processing techniques for the psychological change of obesity-related eating disorders and well-being. Researchers have identified emotional regulation as a major cause of obesity, and they believe that emotions play an important role in endangering public health by increasing the likelihood of obesity.[2]

EFT-G helps people to change their problematic feelings by using some techniques, including emotion processing, awareness of compatible emotions, and conversion of maladaptive feelings. In EFT-G, people are encouraged to question their disturbing thoughts and treat self-criticism in the context of EFT-G24. EFT-G empowers the obese person to increase their emotional knowledge so that they can change their maladaptive emotions (such as anxiety, depression, and hopelessness), control their past half, and increase psychological adjustment. Overall, this treatment helps obese women to identify their emotions. In the following, this treatment also causes that the mentioned women can adjust their emotions during this new experience and transforms their maladaptive emotions, which is a factor for removing obstacles located on the health promotion lifestyle.[32,33]

Regarding the ineffectiveness of group schema therapy on difficulties in emotion regulation of obese women in the present study, it can be explained that people may differ in how they conceptualize their emotions. In other words, people have different schemas about their emotions. These schemas reflect how individuals experience emotions and the belief that they have in mind the appropriate plan for action or how to act in response to the evocation of unpleasant emotions.[34]

Early maladaptive schemas in the field of cognitive development are formed based on reality or experience and these schemas actually help people to explain their experiences. Accordingly, although the change of these schemas cognitively can be very helpful. it is not very effective in changing emotional experiences and emotional regulation difficulties, especially in obese women who have schemas such as abandonment/instability, emotional deprivation, insufficient self-control and self-discipline.[25] Therefore, it seems that emotion focused therapy group is more effective and practical in changing difficulties in emotion regulation compared to group schema therapy.

Another explanation for the lack of effect of group schema therapy on health-promoting lifestyles is that some patients with avoidant traits or patients with extreme coping styles (which are characteristic of obese patients). They are more likely to participate in individual psychotherapy sessions and need individual group schema combination therapy models to achieve better treatment outcomes.[35]

This study, like all studies due to the conditions and possibilities of scientific research, has limitations that researchers can consider and eliminate them in future research. One of the limitations of this study is the exclusion of men from society. Hence, it is suggested that more research be focused on men to determine their effectiveness. Another limitation of this study, which is important in the research of the questionnaire, is that the self-report method was used to collect information. This method has little accuracy and there is a possibility of error. Also in self-reporting methods, the subject may try to show a good face, which affects the interpretation of the results. Another limitation of this study was the neglect of the follow-up phase, which was due to the time constraints of the research, while follow-up can be useful in better conclusions. It is suggested that similar research be conducted with more than ten sessions. In my opinion, you can increase the number of sessions and re-examine its effect on some components of the research. If you use this treatment as an effective method in medical centers, hospitals, nutrition clinics, counseling centers, and other psychiatric services to regulate various emotions, especially female teachers, nutrition, obesity, and overweight, it is recommended, because this method can be used to reduce the physical and psychological damage caused by obesity in women.

The results of this research showed that EFT-G and SGT improved health-promoting lifestyles in obese women. EFT-G also reduced the difficulties in emotional regulation, while group schema therapy did not affect the difficulties in emotion regulation of obese women. Also, there is no significant difference between the effectiveness of EFT-G and SGT on the two mentioned variables. Therefore, it has been concluded that psychotherapy approaches such as emotion-focused therapy group and group schema therapy can be useful in treating and reducing the difficulties in emotion regulation and increasing the health-promoting lifestyle that promote the health of obese women.

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Conflict of Interest

The authors declare that they have no conflict of interest.

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