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Developing and Studying the Effectiveness of Bioenergy Economy Program in Body Self-concept and Weight Loss of Women with Obesity

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Quantitative Study

Abstract

Background: Unusual accumulation of fat in the body is called overweight or obesity, which can affect health. This study was conducted with the aim to develop a bioenergy economy program and investigate its effectiveness on body self-concept and weight loss of women with obesity.

Methods: The methodology used was a quasi-experimental design with pretest and posttest, and a control group. The statistical population included obese individuals referred to psychological counseling centers and nutrition clinics in Tehran, Iran, during 2019. Using convenience sampling, 50 obese women were selected and randomly assigned to 2 experimental groups and a control group. Data were collected using Cash's Multidimensional Body-Self Relations Questionnaire (MBSRQ). Then, the weight and body mass index (BMI) of the participants were calculated. According to guidelines for the bio-economics protocol developed at the Energy Medicine University in California, USA, a specific training package was developed for obesity and the intervention group was trained in 8 sessions of 120 minutes for 8 weeks. Data were analyzed using the analysis of covariance (ANCOVA) in SPSS software.

Results: The results showed that the effect of bioenergy economics was significant on the attitude towards body image ($P < 0.01$).

Conclusion: To conclude, a bioenergy economy program can be an effective program on body self-concept. Considering the effect of this therapeutic approach on body self-concept and assuming the effects that may occur as a result of changes in this perception, it seems that this new intervention will have a positive effect on the weight control process over time. It is possible that the effect of this treatment on weight loss can also be seen by following this variable in the future.

Keywords: Obesity; Body image; Weight loss

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Introduction

Obesity and overweight are the result of the body's tendency to store energy in the form of fat and complex interactions between the environment, genetic factors, and human behaviour. Obesity is defined as a disorder of the body composition in the form of a relative or absolute increase in body fat storage. The rates of mortality and morbidity increase with increase in the body mass index (BMI). Currently, one of the most commonly used criteria for the diagnosis of overweight and obesity is BMI, which is obtained through dividing body weight (kg) by height squared (square meters). BMI is a statistical measure for comparing one's weight and height. In this method, the amount of obesity is not measured, but weight health is estimated according to height (James, 2008; Jensen et al., 2014). According to the World Health Organization (WHO), overweight is defined as a BMI of equal to or more than 25 and obesity as a BMI of equal to or more than 30 (World Health Organization, 2020).

The prevalence of obesity doubled worldwide between 1980 and 2008, with a higher prevalence of obesity among women than men, and this trend is increasing worldwide. Overweight and obesity have increased by 20%, on average, among women in the age group of 15-49 years in all regions of the world and among both the rich and poor (World Health Organization, 2020). In Iran, the prevalence of obesity was previously estimated to be higher among women (14%) than men (10.7%) (Rahmani, Sayehmiri, Asadollahi, Sarokhani, Islami, & Sarokhani, 2015).

Weight loss in medicine, health, and fitness is defined as a decrease in body size, which can be caused by disease or following obesity or overweight. Weight loss may be intentional and done for fitness purposes. Most people who are obese and overweight, are dissatisfied with their conditions and resort to different methods to lose weight, such as single diet, intake of diuretics, hydrotherapy, and strict diets not recommend by experts, which sometimes have dangerous side effects (Burke & Deakin, 2010).

People usually lose weight when they are unhappy and do not like their current conditions. In fact, dissatisfaction with the body is one of the most important causes of suffering for women of all ages and is itself caused by several factors (Grogan, 2016; Albertson, Neff, & Dill-Shackleford, 2015), one of which can be the effect of media and advertising. Many studies have confirmed that women who are more exposed to the media are more dissatisfied with their bodies (Albertson et al., 2015; Fardouly & Vartanian, 2016). This dissatisfaction is more common in obese women than others because media portray the ideal women as thin, and this affects women's mental image of themselves, their feelings, and attitudes toward themselves (Grabe, Ward & Hyde, 2008; Yamamiya, Cash, Melnyk, Posavac, & Posavac, 2005).

There are many ways to treat obesity, including treatments such as diets, a variety of sports and medications, and psychological treatments. As the prevalence of obesity in the world cannot be explained by a specific cause or factor, it cannot be resolved by a single intervention. This epidemic requires the integration of all complex networks of factors such as politics, economics, the environment, social influences, behavior, and physiology (Hruby & Hu, 2015).

Bioenergy economics is one of the therapies that controls the mind and body and is based on energy. This approach has a systematic view of man and considers the human condition to be the result of the interaction between the physical, energy, spiritual, and mental systems within man. In this approach, health is the result of the interaction of these four systems in humans. The roots of the professional experiences of this approach are derived from the libido economics of Freud, Reich, Lyotard,

Deleuze and Guattari, biosemiotics of Leon, medical energy, semiotics of Pierce, systemic theory, histological therapies, especially methods based on mindfulness, physical phenomenology of Marlowe Ponti, and transpersonal psychology, as well as Eastern development traditions such as yoga, chi gong, and ricky, and most of all, rationalist psychology (Goli, 2010; Levold & Goli, 2017).

Recently, the effectiveness of bioenergy economics has been tested in various fields such as improving mood, reducing anxiety, and controlling pain in patients with migraine (Derakhshan, Manshaei, Afshar, & Goli, 2016), improving the signs and symptoms of tethered cord (Goli & Boroumand, 2016), treatment of autoimmune disorders such as ulcerative colitis and pemphigus (Goli, 2016), and improved sensitivity to anxiety and attention (Keyvanipour, Goli, Bigdeli, Boroumand, Rafienia, & Sabahi, 2019). There are also reports on improvement of educational performance and presence experience and awakening of teachers to their presence (Ahangar Ahmadi, Henning & Goli, 2017), attention bias modification (Keyvanipour, 2018), and symptoms and compassion for patients with chronic pain (Karimi, 2018) using this approach.

Due to the novelty of energy-based therapies in Iran and very little research in this field, no domestic research has been found that examines the effect of a bioenergy economic intervention on weight loss and obesity. Each of the biological (medical and nutritional) and psychological treatments may be effective alone as a short-term treatment for obesity. However, there seems to be a gap for a therapy that can examine a person in all dimensions of existence, including physical, feeling, emotional, and cognitive structures at a broader level. Research shows that using mixed methods that involve cognition, emotion regulation, directing attention, and awareness can have greater impact on weight loss and obesity treatment (Abdolkarimi, Ghorban Shirudi, Khalatbari, & Zarbakhsh, 2018).

Bioenergy economy is a very new intervention and has never been used to treat obesity. Therefore, it seems that because no research has been done in this regard in our country, it is a novelty in its kind. Because the disorder has intertwined biological, psychological, social, and cultural levels, it seems that bio-energy economy intervention can be effective in reducing the severity of symptoms, and increasing the efficiency of the individual and treatment of obesity. Bioenergy economy has a general protocol and this study will develop a special protocol to examine its effectiveness on body self-concept and weight loss in women with obesity. Based on the above explanations, this study was conducted with the aim to answer the question of whether or not the bioenergy economy program has an effect on body self-concept and weight loss in obese women.

Materials and Methods

This quasi-experimental research had a pretest-posttest design with a control group. The statistical population of the study included obese people referred to Tame Asrar Psychological Counselling Centre and Nutrition Clinic in Tehran, Iran, during spring and summer 2019. The inclusion criteria were women aged 15-49 years, a BMI of 30 or higher, and at least 1 year of weight stability. The exclusion criteria included chronic and acute psychosomatic illnesses, concomitant use of other therapies, being treated with medication, and absence from 2 sessions or more of the class.

For the comparison of the intervention and control groups, the sample size was calculated based on a 15% difference rate and considering a 5% error type I and a statistical power of 80; thus, 50 obese women were selected using convenience sampling method and assigned to the intervention and control groups. The choice of classes was based on age groups and level of education. The people in each class

were randomly assigned to either the intervention or control group. Eventually, the number of people in the intervention and control groups increased to 50. Because the study was one-way blinded, those who collected and analyzed the data were not aware of the subjects assigned to the intervention and control groups.

Individuals eligible for the study were 100 women who referred to the Tame Asrar Institute. Prior to the intervention, participants were asked to complete a demographic questionnaire and the Multidimensional Body-Self Relations Questionnaire (MBSRQ). Each participant's weight was determined and recorded using a scale. The intervention group received bioenergy economics intervention and the control group received no training or intervention. After the interventions, participants were again asked to complete the MBSRQ, and their weight was measured and recorded afterwards. After the posttest, the control group also received the bioenergy economy program. Then, the pretest and posttest were analyzed using multivariate analysis of covariance (MANCOVA) in SPSS software (version 24; IBM Corp, Armonk, NY, USA).

Ethical principles were observed in the process of conducting this research. Participants attended the meetings voluntarily with personal consent. They were assured of the lack of any danger and their status and well-being in the study was guaranteed. Before the intervention, participants were informed about the number, length, and content of the sessions and were asked to commit to attending the sessions. They were also notified that they could withdraw from the study whenever they wished and were assured that all their information would be kept confidential.

Multidimensional Body–Self Relations Questionnaire (MBSRQ): The first edition of the MBSRQ was developed in the form of a 294-item scale by Cash (1983). In subsequent editions, duplicate sections were removed and some sections were moved according to new criteria. Currently, it is a 69-item questionnaire that measures one's attitude toward different dimensions of the body image and has 68 phrases and 3 scales. These scales include the Body-Self Relations Questionnaire (BSRQ) measuring physical appearance, fitness, and health, each of which includes 2 areas of assessment and awareness (assessment of appearance and awareness of appearance, assessment of physical fitness, and awareness of physical fitness, assessment of health, and health awareness), the Body Areas Satisfaction Scale (BASS) evaluating satisfaction with different parts of the body (including face, upper torso, middle torso, and lower torso), muscle consistency, weight and height, and overall appearance, and the scale related to one's attitude toward weight evaluating preoccupation with overweight and weight assessment (Cash & Fleming, 2002). The items of the MBSRQ are graded on a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5). Higher scores indicate greater satisfaction. The validity of the main parts of the questionnaire was examined and confirmed, with a reported reliability of 0.81 (Brown, Cash & Mikulka, 1990).

Treatment Process

According to the guidelines for the bioenergy economic protocol developed at the Energy Medicine University, California, USA, a specific training package was developed for obesity, and the intervention group was trained in 8 sessions of 120 minutes for 8 weeks. In the interval between classes during the week, the 2 intervention groups were asked to perform the exercises. Moreover, the summary of the educational materials in each class and the exercises of each session were presented to the class members in the forms of a CD and a written summary, respectively. A summary of the sessions is presented in table 1.

Table 1. Clinical versus pathophysiological narratives

Session	Focus	Objective	Activities
Session 1	Economy of body	Familiarity with the subject of the program and class members	The subject of obesity as a common problem (definition of obesity, causes of obesity, and complications of obesity) Emotional eating (definition, symptoms, etc.) The subject of obesity and overweight as an important issue in life Accepting the reality of obesity and overweight Psychological issues of the missing link between us and the goals of the diet Definition of bio-energy economy The role of self-compassion/self-efficacy/body self-concept in weight loss and obesity
Session 2	Economy of body	Familiarity with the concept of bioenergy economics	Definitions of economics: resources/needs, home planning: where is the home? Body awareness Definition of the cycle of thoughts-feelings-body Familiarity with emotions, body emotional map, and unhealthy emotion regulation strategies Feeling of insecurity in the body, body armor, and character armor Friendship and kindness with the body is necessary to solve the problem of obesity and overweight Relaxation exercises, breathing technique, and conscious eating exercises
Session 3	Economy of body	Review of life experiences and joys, lasting joys, and control key practice at the time of stress	Body-feeling-thinking cycle, emphasis on the body in the rupture of this chain Progressive relaxation training (PRT) feedback, weekly schedule presentation Experience of better quality, more pleasure in eating, substitution in pleasure of eating Practice of eating less, more pleasure Definition of internal bodily sensations, awareness of internal bodily sensations (ICA) Practice of eating with pleasure Practice of caressing and knowing and being kind to the body Hearing the sound of the body, the underlying feelings of hunger War and peace with the body (craving as an enemy or friend) The difference between satiety/hunger-satiety/fullness
Session 4	Economy of narration	Happiness stabilization and energy processing levels	Body in balance, isotension, body rhythm, concepts of work and load, and circumstances Vibration training Definition of values Need, demand, and pyramid of Maslow's needs (shortage/fundamental needs) Benefits of obesity (balance of benefits of obesity and weight loss), value-focused why, prioritization of values in weight loss Commitment to being obese Impulsive, reactionary, active, and conditional relaxation exercises
Session 5	Economy of narration	Careful guidance of attention	Definition of economy of narration Careful guidance of attention Internal/external guidance Life story Reflective meditation practice Practice of writing goals Body memory and barriers to happiness in the body, free energy flow in the body, energetic vibration exercises, and deployment exercises

Table 1. Clinical versus pathophysiological narratives (Continue)

Session	Focus	Objective	Activities
Session 6	Economy of relation	Relation	Rotation of attention from subject to the body My feeling, my relation, my limit Distance, angle, ratio My relationship with food/eating Middle way/love limit Body refinement practice Non-stereotyped practice for memories/worries/encounters in relation Positive no practice
Session 7	Economy of intention	Emphasis on body awareness; free flow of energy in the body and creation of peace, improvement of happiness with gratitude, remaining of gratitude, obstacles to gratitude for oneself and others and existence	Intentionality, approach, noise absorption (4 topics to consider) Obstacles to empowering intention, gratitude, surprise, forgiveness, donation Psychosomatic power and psychokinesis of intention Activation of intention power Relation with the transcendental realm Active imagination practice Boundless exercise
Session 8	Economy of intention/ conclusion	The way of love: kindness is with me	Heart, acceptance Hell machine Familiarity with consistency and the role of energetic system in mind-body coordination Energetic vibration exercises and deployment of consistency and manipulations Abandonment of intention

Result

Demographic characteristics of the participants are presented in table 2. According to data presented in table 2, most members of both the bioenergy economy experimental and control groups were married and high school graduates and undergraduates. Distribution of the above variables was almost equal in both groups.

As shown in table 3, the heights and ages of the participants ranged from 150 to 175 cm and 17 to 49 years, respectively, in the experimental and control groups. Distribution of the above variables was almost equal in both groups.

Table 2. Demographic characteristics by marital status and education of participants

Group	Variable		n (%)
Bioenergy economy program	Marital status	Single	7 (28)
		Married	18 (72)
	Education	Up to high school diploma	10 (40)
		Undergraduate	9 (36)
		Postgraduate	5 (20)
		Ph.D.	1 (4)
Control	Marital status	Single	10 (40)
		Married	15 (60)
	Education	Up to high school diploma	9 (36)
		Undergraduate	5 (20)
		Postgraduate	9 (36)
		Ph.D.	2 (8)

Table 3. Demographic characteristics by the height and age of participants

Group	Height (cm)			Age (years)		
	Mean ± SD	Min	Max	Mean ± SD	Min	Max
Bioenergy economy	163.36 ± 5.72	153	175	31.52 ± 9.02	18	45
Control	161.4 ± 5.13	150	173	35.96 ± 9.17	17	47

SD: Standard deviation

Table 4 shows mean and standard deviation of the studied variables by the experimental and control groups in the pretest and posttest stages. In the posttest, the body self-concept scores and the total score increased almost in all components in both bioenergy economy and control groups (Table 4). Moreover, the posttest weight and BMI values of the participants decreased in both the experimental and control groups.

In this section, MANCOVA was used to examine the research questions. The assumption of analysis of covariance (ANCOVA): the normality of the data can be determined by the Kolmogorov-Smirnov test.

In table 5, the P values in the total score and components are greater than 0.05. Therefore, the body self-concept and weight loss variables have a normal distribution. It is also possible to examine the homogeneity of variance in the experimental groups using Levin test.

Table 4: Mean and standard deviation of body self-concept and weight loss

Group	Variable	Pretest	Posttest
		Mean ± SD	Mean ± SD
Bioenergy economy	Preoccupation with weight	3.40 ± 0.54	3.64 ± 0.57
	Mental weight	1.50 ± 0.43	1.86 ± 0.55
(N = 25)	Physical satisfaction	5.24 ± 1.96	6.88 ± 1.64
	Disease tendency	17.12 ± 3.87	19.76 ± 3.04
	Health orientation	23.84 ± 4.11	25.96 ± 3.74
	Health assessment	17.88 ± 2.87	20.08 ± 4.50
	Fitness orientation	40.12 ± 6.90	43.08 ± 6.75
	Fitness assessment	9.44 ± 2.20	9.92 ± 2.37
	Appearance orientation	43.52 ± 4.43	47.28 ± 4.43
	Appearance assessment	23.40 ± 3.10	24.52 ± 2.78
	Total score	185.46 ± 18.30	202.98 ± 14.70
Control	Preoccupation with weight	3.50 ± 0.38	3.46 ± 0.43
	Mental weight	1.48 ± 0.58	1.66 ± 0.60
(N = 25)	Physical satisfaction	6.00 ± 2.10	6.16 ± 1.28
	Disease orientation	16.40 ± 3.59	19.12 ± 3.24
	Health orientation	24.72 ± 4.53	24.84 ± 2.39
	Health assessment	17.00 ± 2.51	20.12 ± 4.34
	Fitness orientation	39.56 ± 7.71	42.2 ± 7.78
	Fitness assessment	8.68 ± 2.95	9.44 ± 1.85
	Appearance orientation	43.04 ± 5.37	43.72 ± 4.64
	Appearance assessment	23.24 ± 4.59	24.20 ± 2.85
	Total score	183.62 ± 22.24	194.92 ± 15.90
Bioenergy economy	Weight	89.73 ± 9.65	87.48 ± 8.95
(N = 25)	BMI	33.76 ± 3.72	32.88 ± 3.44
Control	Weight	89.32 ± 12.29	87.56 ± 11.7
(N = 25)	BMI	34.12 ± 4.00	33.40 ± 3.62

SD: Standard Deviation; BMI: Body mass index

Table 5. Normal distribution and significance levels of the body self-concept and weight loss variables based on the Kolmogorov-Smirnov test

Variable	Pretest	Posttest
Preoccupation with weight	0.2	0.2
Mental weight	0.2	0.2
Physical satisfaction	0.068	0.08
Disease tendency	0.2	0.2
Health orientation	0.2	0.052
Health assessment	0.076	0.41
Fitness orientation	0.168	0.2
Fitness assessment	0.059	0.051
Appearance orientation	0.2	0.195
Appearance assessment	0.2	0.2
Total score	0.078	0.2
Weight	0.2	0.2
BMI	0.058	0.169

BMI: Body mass index

The significance levels of greater than 0.05 for the total score and its components in the groups (Table 6) indicate the homogeneity of variance in the groups.

Based on the test results, the assumptions of ANCOVA were determined based on normality of data, significance, and homogeneity of variance. Therefore, MANCOVA was used to analyses the results.

According to the data presented in table 7, there is a significant relationship between the dependent variable (body self-concept) and the covariate (pretest) ($P < 0.01$); thus, the null hypothesis is rejected and the opposite hypothesis is confirmed. Among the components, body satisfaction ($P < 0.05$) and appearance orientation ($P< 0.001$) were significant. Therefore, the effectiveness of the bioenergy economy program on the improvement of the body self-concept was confirmed.

The results presented in table 8 show no significant relationship between the dependent variable (weight loss) and the covariate (pretest). Hence, the opposite hypothesis is rejected and the null hypothesis is confirmed, meaning that the bioenergy economy program was not effective on weight loss.

Table 6. Homogeneity of variance of the body self-concept and weight loss variables based on the Levin test

Variable	Pretest	Posttest
Preoccupation with weight	0.2	0.148
Mental weight	0.2	0.2
Physical satisfaction	0.2	0.2
Disease tendency	0.2	0.2
Health orientation	0.089	0.13
Health assessment	0.059	0.2
Fitness orientation	0.2	0.2
Fitness assessment	0.2	0.054
Appearance orientation	0.2	0.091
Appearance assessment	0.06	0.2
Total score	0.2	0.2
Weight	0.2	0.2
BMI	0.2	0.2

BMI: Body mass index

Table 7. Analysis of covariance for effectiveness of the bioenergy economy program on the body self-concept and its components

	Source of variation	df	MS	F	P-value.	η2
Preoccupation with weight	Pretest	1	0.43	1.679	0.201	0.034
	Group	1	0.494	1.927	0.172	0.039
	Error	47	0.256			
	Total	50				
Mental weight	Pretest	1	0.001	0.001	0.970	0.000
	Group	1	0.499	1.455	0.234	0.03
	Error	47	0.434			
	Total	50				
Body satisfaction	Pretest	1	21.095	11.959	0.001	0.203
	Group	1	11.295	4.403	0.015	0.12
	Error	47	1.764			
	Total	50				
Disease orientation	Pretest	1	215.906	39.136	< 0.001	0.454
	Group	1	0.663	0.12	0.730	0.003
	Error	47	5.517			
	Total	50				
Health orientation	Pretest	1	77.241	9.143	0.004	0.163
	Group	1	23.475	2.779	0.102	0.056
	Error	47	8.448			
	Total	50				
Health assessment	Pretest	1	54.501	2.891	0.096	0.058
	Group	1	1.821	0.097	0.757	0.002
	Error	47	18.851			
	Total	50				
Fitness orientation	Pretest	1	2025.972	182.461	< 0.001	0.795
	Group	1	1.833	0.165	0.686	0.004
	Error	47	11.104			
	Total	50				
Fitness assessment	Pretest	1	64.93	19.937	< 0.001	0.298
	Group	1	0.242	0.074	0.786	0.002
	Error	47	3.257			
	Total	50				
Appearance orientation	Pretest	1	609.374	75.23	< 0.001	0.615
	Group	1	128.714	15.89	< 0.001	0.253
	Error	47	8.1			
	Total	50				
Appearance assessment	Pretest	1	89.151	14.296	< 0.001	0.233
	Group	1	0.874	0.14	0.710	0.003
	Error	47	6.236			
	Total	50				
Total	Pretest	1	8294.116	131.621	< 0.001	0.737
	Group	1	589.173	9.35	0.004	0.166
	Error	47	63.015			
	Total	50				

df: Degree of freedom; MS: Mean of Square

Table 8. Analysis of covariance for effectiveness of the bioenergy economy program in weight loss

	Source of variation	df	MS	F	P-value	η2
Weight	Pretest	1	4742.987	477.303	< 0.001	0.91
	Group	1	2.582	0.260	0.613	0.005
	Error	47	9.937			
	Total	50				
BMI	Pretest	1	515.197	280.813	< 0.001	0.857
	Group	1	0.55	0.3	0.587	0.006
	Error	47	1.835			
	Total	50				

df: Degree of freedom; MS: Mean of Square; BMI: Body mass index

Discussion

The findings suggest that the bioenergy economy program has a positive effect on improving the body self-concept. A probable explanation for this finding is that many of the successes and failures that people experience in life are closely related to their self-concept as an image of oneself and one's relationship with others. In other words, self-concept is an interpretation of one's inner world and one's relationship with others. The way people look at themselves and their co-workers is not inherent, but is shaped by people's interactions with society and their experiences throughout life, and can change over time (Purkey, 1988). Negative emotions, such as anger, guilt, and frustration, increase the urge to overeat in obese and overweight people. People's dissatisfaction with their body image under the influence of culture and peer group can lead to incorrect evaluations and negative thoughts and emotions in them, and provide the grounds for them to lose confidence. Under these circumstances, these people limit their social relationships and may even become isolated and anxious about their social interactions. Social isolation and distance from peers can cause them to become depressed and grow and expand their negative evaluations to such an extent that cause serious disorders and, as a result, damage their body self-concept.

Body dissatisfaction may be more prevalent in obese women than in others; media that portray ideal women as thin and accusation of obesity in society can have adverse effects on self-concept, self-efficacy, and self-compassion in obese women. Therefore, it seems necessary to perform more effective weight loss interventions to improve self-image among obese women (Derakhshan, Manshani, & Afshar, 2013). It seems that focusing only on weight loss is not effective on increasing the health and well-being of overweight and obese people; therefore, targeting psychological processes in this regard helps to improve the conditions of these people. Most energy medicine studies have focused on contact/non-contact manipulation and bioenergy-based evolutionary systems. However, the bioenergetics evolutionary response is not only the result of spatial bioenergy emission, but can also be facilitated and/or stimulated by biocycle modification, cognitive-behavioral interventions, and environmental modifications. There is no single life force or evolutionary energy; there are multiple energy systems in the living body and many ways to influence them. The state of life and health is the result of the integrity of these systems that work together in interconnectedness and partnership, through which diseases and disorders disrupt the bio-energy flow. These concepts, combined with the findings of body-work,

bio-energy, and movement therapy, enable energy science to gain its rightful place in future medicine (Oschman, 1989).

Thus, bio-energy economy can provide a comprehensive and unique model for combining and applying different forms of energy-based therapies. In addition, it is considered a conventional theoretical and clinical foundation for holistic medicine. Bio-energy economy does not address the field of diagnostic classifications as it is not disease-oriented, but provides a combined and individual-centered approach that deals with the opening of energy pathways and bio-psychosocial balance. Thus, interventions of this approach are also conscious and intelligent guidance of the flow of matter-energy-information-knowledge in extra/intra/transpersonal spaces. The intra/inter/transpersonal levels of human beings are the physical self, equations of matter-energy homeostasis and the person as the body, intrapersonal self, and the individual as conscious and unconscious experiences, etheric self, organization of the biological field, and the individual as the vibrational system, the interpersonal self of the social world, and the individual as the behavior, and the transpersonal self, the world of free will, and the individual as a pure consciousness and the hidden order, the transpersonal self is the state of the unity of man-nature, in which consciousness is an individual and at the same time universal thing (Goli, 2010).

Bioenergy therapies are based on deep and effective communication and attention to transpersonal events; such a communication can have a profound psychological effect, and subsequently, immunological results. Moreover, clinical experiments with the bioenergy flow and its transference from the therapist can, similar to inductive and hypnotic effects, lead to the regulation of immunity, and thus, evolution of people. The direct effect of induced energy on cells, especially the nervous system, cannot improve mood and reduce anxiety. These changes in the mental system are based on the effects of 3 mechanisms, that is, cognitive-behavioral, inductive, and bioenergy factors, which can control and regulate the immune system and improve diseases (Goli, 2010).

As a care system, bioenergy economy programs strive to integrate the material-energy-information-awareness process at 4 levels, including the body economy, narrative economy, relation economy, and will economy. For this purpose, the techniques of working with the body, energy, mind, and psyche are used with a coherent approach (Goli, 2016). The body economy involves the knowledge of the mechanical body that goes beyond merely the physical body and includes not only the matter, but also energy, symbols, and reflexes. Balanced distribution of bioenergy in the body requires muscle economy to eliminate unnecessary cramps and muscle tone in the body. The result of body economy is the storage of mental and emotional capital in the body and the release of the body from the past and the future. Economy of narration focuses more on body care based on self-compassion and coordination of the bioenergetics process, and its goal is to organize the flow of information-energy in the symbolic body. Economy of relation focuses on the awareness of interpersonal contexts (Goli, 2018).

The present study findings also show that bioenergy economy has no effect on weight loss. In explanation, the goal of obesity treatment is to lose weight significantly and stay at a desired weight in order to reduce the risk of diseases and disorders caused by overweight. A weight loss of 5%-10% seems to be the first goal in the weight loss process from the perspective of many obesity therapists. The next step is to maintain a 10% weight loss successfully over a year. Studies have shown that about 21% of adults can maintain a 10% weight loss in a year, but fewer succeed in

the long run. There are several ways to treat obesity, including reducing energy intake in diet, physical activity and exercise, behavior change, medication, and surgery. The choice of treatment depends on the severity of obesity, the presence of comorbidities, weight loss therapies and their success rates in the past, and lifestyle.

Behavior modification is an important part of any obesity treatment program. The goal of behavior change strategies is to identify the stimuli that lead to unhealthy behavior, to prepare for the onset of behavior change, to continue healthy behavior, and to identify barriers that may prevent continuous healthy behavior. Goal setting, self-monitoring, attention to feedback, constant motivation, and support are important components of behavior change programs implemented in individual or group meetings. Success in changing eating pattern and physical activity depends more on persistence, support, and lifestyle changes than on a particular diet or exercise program. Furthermore, methods such as diet, lifestyle changes, psychotherapy, and medication have been very slow and unsuccessful in many patients with obesity and overweight. As a result, many people with fatal obesity turn to other and sometimes dangerous treatments, such as surgery. It seems that effective therapies for weight loss are those that have a multifaceted approach.

Energy-based evolution systems (energy-based therapies) are based on the belief that humans not only have a physical system and bio-chemical processes, but also an energy system, acting as an energy field that flows within and around us and interacts with the environment. These energy-based evolution systems include acupuncture, pressure therapy, Qigong, tai chi, aikido, yoga, polarization therapy, touch therapy, touch evolution, reiki, homeopathy, color/sound/light therapy, and prayer. A holistic approach to care and treatment, transplantation of the soul, mind, and body, relying on the inner evolution power of the human, a person-centered rather than disease-oriented approach to treatment, self-help and behavioral improvement to promote nature, connection with nature and emphasis on health care education, importance of quality of life (QOL) and spirituality, and emphasis on mental purification and evolutionary mind while learning knowledge and expertise are common among various methods of energy-based evolution (Goli, 2010).

Since the bioenergy economy program is a new approach and is being polished and corrected on the test page, this systemic approach needs to be re-evaluated over and over. Considering the effect of this therapeutic approach on the body self-concept and assuming the effects that may occur as a result of changes in this perception, it seems that this new intervention will have a positive effect on the weight control process over time, because a major weight loss requires a long-term procedure despite the limited time taken to do this research. It is possible that the effect of this treatment on weight loss can also be seen by following this variable in the future to justify the ineffectiveness of the bio-energy economy intervention on weight loss.

Conclusion

The bioenergy economics intervention can also be effective on weight loss through improvement of the body self-concept both directly and indirectly. Currently, medical science is moving from reductionist pathological strategies to holistic approaches that can encompass the various dimensions of human existence, a system-based and development approach that is able to integrate the mind and the body, self and other, and man and nature. To achieve single-dose and evolutionary medicine, the specific responses and reactions of each individual to the disease and

the stressors must be identified, and then, determined to help the individual as a human system find a way to overcome the stressors and treat the disease. In addition, to focus on the physical structure, genome, and chemistry of the body, medical knowledge that seeks to be sensitive to specific circumstances must also include knowledge of nature, mood, beliefs, self-expectations, life, and therapy. This knowledge helps the therapist to understand potential socio-psychological-biological responses.

It seems that many of the effects of energy approaches are based on the response to general relaxation and the underlying effects on mind-body conditions. These background (structural) effects are important both in techniques that use direct induction and physical, respiratory, and visual exercises, and in methods in which the patient is in a passive and receptive state. The connection between the evolver and evolved takes place under self-intrapersonal conditions and the flow of information-energy occurs in self-other relationships (behavioral-cognitive interventions), but the experience of evolution can expand to the field of bio-communication and the experience of presence at the transpersonal level. Regarding the intentionality of energy-based therapies, it can be claimed that intentions can be motivated from any level, but all levels are affected somehow by vibrating the intentional waves. The field of bio-field evolution focuses on conscious bio-fields, that is, intentions of evolution in the bio-field evolution process originate from the conscious mind and directly develop in the local/spatial or indirect vibratory body in the unconscious mind, and then, affect the vibratory body through a transpersonal level as a hidden order (non-spatial path) (Goli, 2010).

Conflict of Interests

Authors have no conflict of interests.

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