

ORIGINAL RESEARCH

The Effect of Hypnotherapy for Obesity

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ABSTRACT

Objectives • The aim of this study was to evaluate the effects of hypnotherapy on the treatment of obesity, which seriously affects people's quality of life. We evaluated the changes in Body Mass Indexes with hypnotherapy used to treat obesity.

Methods • A total of 230 subjects with a Body Mass Index of 25 and over, who completed a minimum of 10-week sessions, were included in the study. The participants were first identified with the information form and the Body Mass Index. Then, once a week hypnotherapy session was performed for at least 10 weeks. This study is a non-randomized prospective study examining the effect of hypnotherapy on body mass index.

Results • There was no statistically significant difference between the, dinner heavy meals and regular exercise or movement, and there was no statistically significant

difference in terms of the baseline and endpoint of hypnotherapy ($P = .777$ and $P = .770$). There was a statistically significant difference in terms of sex and night feeding status at the beginning and end of hypnotherapy ($P = .042$ and $P < .001$). According to the Body Mass Indexes at the beginning and end of hypnotherapy; The initial Body Mass Index was 34.83 ± 5.81 and the end Body Mass Index was 32.61 ± 5.66 . The difference was statistically significant ($P < .001$).

Conclusions • It has been found that hypnotherapy is an effective method in the obesity treatment. It is easy to apply, cheap, effective, no side effect potential, the advantages of being added either alone or in other treatments. (*Altern Ther Health Med.* 2023;29(2):258-263)

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INTRODUCTION

Obesity is a chronic disease which is caused by the energy consumed by the nutrients and the body fat mass which is higher than the energy consumed and increases compared to the lean body mass.^{1,2} In a broader sense, the number of fat cells increases and grows due to the imbalance between the received energy and the consumed energy.³ Although there are many methods used in the diagnosis of obesity, body mass index (BMI) and waist circumference measurement are recommended in diagnosis and classification. The World Health Organization (WHO) makes the definition of overweight and obesity based on BMI. The BMI is calculated by dividing the body weight in kilograms by the square of the length in meters. As a result, people with

BMI of 25.0-29.9 kg/m² are defined as overweight and those with BMI above 30 kg/m² are defined as obese.²⁻⁵ BMI has epidemiological validity, reliability, reproducibility and availability.⁶ The use of BMI as a measure of obesity has been accepted all over the world and is used as an indicator for life expectancy and obesity related complications.⁷

Obesity may develop in different individuals for different reasons. The development of obesity may be influenced by the imbalance between energy intake and expenditure.⁸ Moreover, it may be influenced by biological factors such as metabolism and genetics,⁸ and behavioral factors such as nutrition and physical activity.^{9,10} Obesity is also associated with significant psychosocial deterioration. In the background of obesity, specific mental mechanisms related to the functions of the brain shaping eating behavior can be effective.¹¹

The prevalence of obesity worldwide has almost doubled between 1980 and 2016. In 2016, 15% of women aged 18 and over were obese, 39% were overweight, 11% of men aged 18 and over were obese and 39% were overweight. Thus, about 2 billion adults worldwide are overweight and more than half

of them are obese. Overweight and obesity have increased significantly over the last 4 years.³

The primary principle in obesity management is the provision of protective services to the individual. Preventing obesity and long-term management is a more rational approach after obesity or related diseases occur rather than short-term treatment. The treatment methods used in obesity include diet, exercise, behavior change, drug therapy, surgical medicine and alternative medicine.¹² The treatment of obesity consists in reducing the energy input below the energy consumption.¹³ Another issue that makes the evaluation of obesity from psychiatric point of view is the treatment approaches of obesity. The effects such as the results, the results and compliance with the treatment necessitate psychiatric approach in the treatment of obesity.¹⁴

Hypnotherapy is the use of hypnosis in the treatment of a medical or psychological disorder or concern.^{15,16} Today, hypnosis is used as a type of therapy (hypnotherapy) in many areas. In 1955, the British Medical Association officially recognized hypnosis and recommended that it be taught in medical schools. In 1958, the American Medical Association and the American Psychiatric Association formally recognized hypnosis as a safe and effective treatment.^{17,18} Hypnosis, known to have a history that has been expressed for centuries, is increasingly used today to support modern treatment.¹⁹

According to the sociocognitive model, it is called the cognitive-behavioral model of hypnosis and is consistent with modern cognitive-behavioral psychotherapies that emphasize the impact of thoughts, beliefs and thoughts on behavior and emotion.¹⁶ Hypnotherapy is used for different purposes in medicine such as acute and chronic pain control, support during delivery, smoking cessation, anxiety relief, schizophrenia and insomnia, and treatment of conversion disorders.²⁰⁻²²

Hypnosis can be performed by giving suggestions for the situations that the person wants to do but cannot achieve in a conscious manner. In the literature, it has been reported that individuals with obesity are provided with hypnotic suggestions and loosening methods by changing the eating patterns of people.²³ The effectiveness of hypnosis for both the individual and other therapies for increasing weight loss in obese patients over the last 50-60 years has been demonstrated in many studies.²⁴ In a meta-analysis of 18 studies, hypnosis was added to cognitive behavioral psychotherapy and showed an improvement in more than 70% of patients; especially in the long-term follow-up of obesity has been reported to be effective.²⁵

In many studies, emotional, psychological and psychodynamic partnerships affecting eating behavior and weight care have been less understood and it has been reported that interventions such as hypnotherapy in modulating and modifying treatment are the most appropriate way.²⁴ When hypnotherapy was added to a weight reduction program, it was observed that it was beneficial over time.

However, the results are still controversial.²⁶ The aim of this study was to evaluate the effects of hypnotherapy on the

treatment of obesity, which seriously affects people's quality of life.

METHOD

This study is a non-randomized prospective study examining the effect of hypnotherapy on BMI. The study group consisted of 230 individuals who agreed to participate in the study voluntarily and completed a minimum of 10-week sessions with a BMI of 25 or higher. Participants were those who had not previously undergone hypnotherapy to treat obesity. Those who were eligible for hypnotherapy session and accepted to participate in the study were included in the study. Hypnotherapy sessions were conducted in the psychiatric outpatient clinic of the author. Firstly, an information form was created by the author to determine the sociodemographic characteristics and nutritional habits of the participants. The dietary habits in the information form were created by the author to determine which implications would be applied to the participants. Then the height, weight (in the morning on an empty stomach) measurements and the Body Mass Indexes were determined. Then, at least once a week, a hypnotherapy session was applied for at least 10 weeks. Body mass indexes were determined at the end of at least 10 weeks. By comparing the body mass indexes at the beginning and end of therapy, the effectiveness of hypnotherapy was evaluated. Sociodemographic characteristics and nutritional habits were evaluated according to differences in BMIs at the beginning and end of therapy.

Study Design

The study included 252 patients who volunteered to participate in the study, whose BMI was above 25 and who were considered eligible to participate in the hypnotherapy session. The participating patients' medical conditions were evaluated based on hospital records, patient files and patients' statements.

Before the study was started, patients were informed about the study, and inclusion and exclusion criteria of the study. Of the 252 participants, 22 who did not meet the inclusion criteria were excluded from the study. The reasons why these 22 patients were excluded from the study were as follows: Four moved to another city, eight could not get permission from their workplaces because their working hours did not comply with the therapy hours and six stated that hypnotherapy did not help them. The remaining four patients left the study without giving any reason.

None of the participants received treatment for obesity.

Inclusion and Exclusion Criteria

Those who agreed to participate in the study and were eligible for the hypnotherapy were included in the study. Those who had a comorbid physical disorder (diabetes, other endocrine diseases, etc.), who had psychological and mental problems (schizophrenia, mental retardation, alcohol and substance addiction, etc.) and who took medication likely to prevent hypnosis and / or to affect the results of the study were not included in the study. Those who did not participate

in hypnotherapy sessions for two consecutive weeks and those who participated in the study less than 10 weeks were excluded from the study.

Hypnotherapy Session Stages

Conversations in the beginning of the sessions: At the beginning of the speech, the establishment of therapeutic cooperation with the patient (i.e. creating trust, informing about hypnosis, realizing the unrealistic expectations of the person), evaluating the expectations about hypnotherapy and testing the indoctrination of the person were tested. Nutritional habits were evaluated and what was to be applied during the suggestion and an animation was discussed.

In the second part, hypnotic mind structure was formed with suggestions, including convincing, preparing, induction and deepening. By the preparing it was aimed to focus and respond to therapeutic suggestions with convincing. Induction applications were made to the person suggesting hypnosis. After deepening, therapeutic suggestion was applied to suggestions about healthy and balanced nutrition in subjects that were determined by the participant in the animation part of the mind. The person was then removed from the hypnosis. The session was completed with suggestions.

In all sessions after the first session, after evaluating the general condition, suggestions regarding healthy and balanced diet were applied repeatedly. Approval was obtained from the Ethics Committee of the Faculty of Medicine of Cumhuriyet University with the decision no 2016-11/24. The participants were informed about the study and their written approvals were obtained.

Statistical Method

SPSS 22.0 program was used in the study. Kolmogorov Smirnov test was used to determine whether the data were suitable for normal distribution. It was observed that the groups were distributed normally. Paired-Samples *t* test was used to test the significance of the difference between the measurements at the beginning and end of therapy. The

Independent Samples *t* test was used to see if the difference between the two groups was significant. One-way analysis of variance (ANOVA) was used to compare the averages of more than two groups and the Tukey test was used to determine the difference between the groups. The error level was accepted as .05.

RESULTS

The mean age of the participants was 43.03 ± 11.37 years, gender distribution, night eating habits and regular exercise or movement conditions were given in Table 1. There was no statistically significant difference in terms of BMI at the beginning and at the end of hypnotherapy according to heavy meals of the dinner and regular exercise or movement status ($P > .05$; Table 1).

In terms of BMI at the beginning and end of hypnotherapy, there was a statistically significant difference according to gender and night eating status ($P = .042$ and $P = .000$, Table 1).

Participants' BMI groups are given in Table 2. According to BMI Groups; there was a statistically significant difference in terms of BMI at the beginning and end of hypnotherapy ($P = .002$). Accordingly, the difference between the BMI values of 25.0-29.9 and the BMI values above 35.0 was statistically significant. In addition, differences between the BMI of the participants measured before and after the hypnotherapy were analyzed using the correlation analysis. There was a statistically significant correlation between the BMI differences and BMI values, which is an indicator of weight loss. Accordingly, those with higher BMI values lost more weight (Table 3).

The Kolmogorov-Smirnov test was found to be appropriate for normal distribution of baseline and end BMI values. According to the BMIs at the beginning and end of hypnotherapy; The initial BMI was 34.83 ± 5.81 and the end BMI was 32.61 ± 5.66 . There was a statistically significant difference for the difference 2.22 ± 1.36 (Table 4) ($P < .001$).

Table 1. Sociodemographic characteristics and Eating Habits, comparison on BMI differences

Age	Mean		Sd.		First BMI		Last BMI		Mean	Sd.	<i>t</i>	<i>P Value</i>
	n	%	Mean	Sd.	Mean	Sd.						
Gender	Famale	208	90.4	35.04	5.88	32.76	5.77	2.28	1.36	0.420	.042 ^a	
	Male	22	9.6	32.89	4.85	31.22	4.31	1.67	1.26			
Heavy dishes in dinners	Yes	117	50.9	35.66	6.52	33.37	6.29	2.29	1.37	-0.734	.777	
	No	113	49.1	33.98	4.85	31.82	4.83	2.15	1.36			
Night-eating habits	Yes	56	24.3	34.30	4.97	32.53	4.88	1.76	0.89	3.728	.000 ^b	
	No	174	75.7	35.01	6.06	32.64	5.90	2.37	1.45			
Regular exercise or work outs	Yes	52	22.6	33.08	5.21	30.81	5.14	2.27	1.52	-0.294	.770	
	No	178	77.4	35.35	5.89	33.14	5.71	2.21	1.32			

^a $P < .05$

^b $P < .001$

Table 2. Groups by BMI, comparison on BMI differences

Groups by BMI	n	%	Mean	Sd.	F	P Value
25.0-29.9	51	22.2	1.78	1.06	6.228	.002 ^a
30-34.9	86	37.4	2.11	1.33		
Over 35	93	40.4	2.57	1.46		

^a*P* < .05

Table 3. Correlation between BMI and BMI differences

	BMI	BMI differences	
BMI	Pearson Correlation	1	.215 ^a
	<i>P</i> Value	.001	
BMI differences	Pearson Correlation	.215 ^a	1
	<i>P</i> Value	.001	

^aCorrelation is significant at the .01 level (2-tailed).

Table 4. Paired Samples test results

	Mean	Std. Dev.	Matched Paired test <i>t</i>	<i>P</i> Value
First – Last BMI	2.22	1.36	24.726	.000 ^a

^a*P* < .001

DISCUSSION

The number of participants who participated in our study and completed at least 10 weeks was 230. Montgomery et al. (2011) concluded that the number of samples in the hypnotherapy study and the effect size in hypnosis studies require validity to be at least 132 participants per trial and this has not been met by many of the former reported trials.²⁷ The number of cases in our study; When the literature is reviewed, it is one of the highest number of cases in this field.

Similar to our study results, hypnotherapy was found to be effective in the treatment of obesity. In a meta-analysis of 26 studies conducted in recent years, hypnotherapy was reported to be very effective in losing weight over a relatively short period. This meta-analysis was performed in two stages: (1) studies conducted to assess the effect of hypnosis as an intervention on obesity were analyzed, (2) studies conducted to assess the effect of cognitive-behavioral therapy (CBT) and hypnotherapy given together on weight loss were analyzed. In the first stage of the meta-analysis, 14 studies in which hypnotherapy and control groups were compared were analyzed. At the end of the treatment, the participants in the hypnotherapy group lost weight more than 94% of the participants in the control group. In the second stage of the meta-analysis, 12 studies in which hypnotherapy + CBT group and CBT alone group were compared were analyzed. At the end of the treatment, the participants in the hypnotherapy + CBT group lost weight more than 60% of the participants in the CBT group.²⁸

Between 1959 and 2003, more than 50 reports on the use of hypnosis for weight loss were published. The studies

ranged in size from more than 100 participants with smaller trials of 20 to 75 patients. Thirty-four (77%) of 43 studies cited showed that hypnosis was effective in increasing weight loss in obese patients. Only 17 out of 43 trials contained a control group which makes it difficult to accurately evaluate the claims made in many of these reports and in only 9 studies were patients followed-up after their hypnosis-induced weight loss to monitor for weight regain, and usually for six months or less.²⁴ Several recent reviews have also reported the usefulness of hypnosis for weight loss,²⁷⁻³² the study also confirmed the efficacy of using hypnosis as an adjunct to cognitive behavioral therapy in weight loss programs.^{25,33-35}

In the study of Scheneider; subjects were divided into two groups. One group heard suggestions for weight loss while the other group hypnotized them. Scheneider found that the hypnotized group lost significantly more weight than the control group. The results showed that hypnosis can be an effective adjunct in the treatment of female obesity.³⁶

According to BMI groups, there was a statistically significant difference in terms of BMI at the onset and end of hypnotherapy (*P* = .002). According to this, the decrease in BMI : above 35.0 group was higher than the other groups and this decrease was statistically significant compared to the BMI: 25.0-29.9 group. As the group above 35.0 is overweight compared to the other groups, their wishes and motivations are higher. To the best of our knowledge, there is no study on the effect of hypnotherapy on BMI by grouping in this way.

In addition, in this study, in addition to the determination of the effect of hypnotherapy in the treatment of obesity, the decrease in BMI was compared according to the nutritional habits. Some of the data in the study (such as dinner heavy meals, night feeding and regular exercise or movement) were used by the author for suggestions during the hypnotherapy session. When the participants were analyzed in terms of gender, the rate of women was 90.4% and the rate of men was 9.6%. Turkey Nutrition and according to the Health Survey-2010 study, 20.5% in obesity prevalence of men, 41.0% women, while the society was found to be 30.3%.³⁷ In a study conducted with university students, the idea of losing weight and staying at the same weight is shown to be higher in girls and the weight gain is higher in men.³⁸

In the study of Lemon et al., the female male ratio was 79%, 21%. Women were more likely to apply weight-loss attempts with evidence-based strategies than men (47.6% vs. 29.0% *P* = .001) and women were more sensitive. Differences in self-esteem and socio-cultural influences and expectations likely contribute.³⁹ working with a sample of college aged women, Quinlivan and Leary observed that women may over-report their body dissatisfaction in an effort to maintain self-esteem and to gain positive reinforcement from others.⁴⁰ As seen in the above studies and in our study, women are more likely to have obesity than men. The limitation of this study is that the number of female applicants is about 10 times that of men. In spite of this limitation, a comparison was made in terms of gender and baseline BMIs at the onset

and end of hypnotherapy. There was a statistically significant difference ($P = .042$). BMI values of women decreased significantly compared to men's BMI values. To get more reliable results; the number of men should be close to the number of women. Therefore, further studies on these issues are required.

There was no statistically significant difference in terms of BMIs at baseline and at the end of hypnotherapy according to regular exercise or movement status ($P > .05$; Table 1). As mentioned above, these data were used during the hypnotherapy session applied to participants. In our study, we compared the idea that physical activity may be effective in decreasing BMI in obesity. Indeed, there are studies in the literature showing that physical activity significantly decreases BMI values.⁴¹

Individuals attending the hypnotherapy session were divided into two groups as physical activity and non-performing BMI changes before joining the hypnotherapy session. Accordingly, as mentioned above, no statistically significant difference was found. While there are many studies on the effect of physical activity on the treatment of obesity and the comparison of hypnotherapy with physical exercise activity, there is no study comparing such a comparison in terms of physical activity in hypnotherapy for obesity treatment. However, based on this data, with the addition of exercise suggestions to hypnotherapy applied to obese, the result of hypnotherapy suggests that the two groups bring the BMI exchange values closer together. Again in the present study, the severity of heavy meals before the study was evaluated and hypnotherapy session baseline and end BMI values were compared. The difference between the start and end values was not statistically significant ($P = .777$). Obesity with hypnotherapy in a study that evaluates the status of dinner could not be compared to the literature could not be compared. However, after hypnotherapy, BMI differences are very close to each other; In the evening, those with severe eating habits, behavior change by creating a behavior similar to those who do not have the habit of eating the evening suggested that BMI may decrease. Night eating behaviors are among the causes of obesity. After dinner, consuming high-energy foods, unhealthy food preferences are frequently observed in night-eating behaviors and may adversely affect health and cause weight gain and obesity.⁴² In the study where the nutritional behaviors of obese individuals were questioned, it was stated that 15.7% of the obese individuals had night eating behaviors.⁴³ Ozturk et al. (2018) in their study, a strong relationship between night eating disorders and obesity was found to be questioned in the treatment of obese patients is emphasized that the question of eating disorders in the night.⁴⁴ In our study, individuals who participated in hypnotherapy sessions were evaluated according to their night eating habits, the beginning and end BMI values were compared. A statistically significant difference was found ($P = .000$). Those who have previously had a night eating habit; have less weight loss than those without. With this data; behavior change in people with

night-eating habits; With hypnotherapy suggestions, it can be thought that it may be more difficult and longer. In order to support this idea, it is understood that it is appropriate to make a long-term and comprehensive study on this subject.

Many of the obesity therapies are experiencing the challenges of diet and exercise-based programs, and long-term weight loss has low success in achieving success.^{45,46} As a result of weight loss attempts of obesity patients (diet, acupuncture, exercise, pharmacological therapies etc.), they can lose weight only at moderate level and easily recover their weight after this treatment. Obesity surgery is also popular nowadays but 30% of the patients gain weight after surgery.¹⁴ In a meta-analysis, Kirsch also re-used the calculated data to show that weight loss after hypnotherapy continued and thus hypnotherapy was more beneficial in the treatment of obesity.² This approach aims to preserve the change in a healthy lifestyle over time, as most overweight/obese patients do not maintain these habits at the end of these interventions.²⁶ After this study, we are planning to reevaluate our study group in the long term in order to determine whether the effect of hypnotherapy on healthy and balanced nutrition behavior is permanent.

Most of the hypnotherapy studies in obesity patients have small number of cases, differences in procedure, lack of control groups in general, different values of response measurement and lack of long-term follow-up and limitations of study.^{2,24,25,27,31,32} The lack of a group to compare the effects of hypnotherapy on BMIs with other methods (diet, acupuncture, exercise, CBT/cognitive behavioral therapy) is the limitation of our study. Lack of control group in the study is a major shortcoming. It is difficult to prove the effectiveness of a 10-week hypnotherapy intervention on obesity, albeit statistically significant, as there is no control group. Patients may also have lost weight due to regular psychotherapy and expectation to lose weight.

However, the main purpose of this study was to investigate the effect of hypnotherapy on BMIs in the treatment of obesity. In the following periods, we plan a study comparing the effectiveness of hypnotherapy with other treatment modalities for obesity. The fact that no measurement method was used other than BMI (such as waist circumference measurement) and no other scales were used to determine nutritional habits were within the limitations of our study.

CONCLUSION

The purpose of hypnotherapy to use the hypnosis technique in obese individuals, to make a healthy and balanced diet habit and to feel good. In this study, it was seen that hypnotherapy significantly reduced the body mass indexes.

In our study, despite various limitations; Hypnotherapy was found to be an effective method in the treatment of obesity. Hypnotherapy was found to be more effective in individuals with a BMI of more than 35.0. It is easy to apply, cheap, effective, no side effect potential, the advantages of being added either alone or in other treatments. It is thought

that it will be more permanent with hypnotherapy for obesity by making a healthy and balanced diet habit. There is a need for new studies in this area which can be compared with other methods.

AUTHORS' DISCLOSURE STATEMENT

There are no financial interests that can compete in this study.

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