

## Cognitive Behavioral Group Therapy: A Technique to Reduce and Maintain Overweight

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### Abstract

*According to cognitive behavioral therapy, the thoughts that overweight and obese people have about their body affect their weight loss. Many overweight and obese people complain of their weight; however, for different reasons, these people either they do not follow a diet program or quit when do so. Thus, cognitive behavioral therapy works to change the misconceptions that make humans following diet programs reluctant to accept positive ideas. In this study, 19 obese or overweight people were randomly selected from those attending the Kuwait Center for Nutrition, the State of Kuwait. Twelve cognitive behavioral group therapy sessions were carried out to change their thoughts and lifestyles linked to their food habits. The results of the study show that significant changes were found with the experimental group in their thoughts and lifestyles. The results of this study emphasize that changing people's thoughts and lifestyles plays an important role in tackling their overweight and obesity. They learned how to keep positive thoughts and lifestyles about their diet program to reduce and maintain their weight.*

### Introduction

Despite the great efforts made by specialized physicians in the field of obesity, we cannot imagine a change in their behavior without an amendment to their ideas and beliefs. The relationships among person's thoughts, feelings and behavior are important to understand in order to control and create positive eating behavior. According to Beck human behavior is based mainly on the cognitive model in which people's emotions and actions are subject to the interpretations of the events surrounding them [1]. In other words, the cognitive model shows that what people pay for a particular feelings (e.g. anger, sadness, fear) are not necessarily similar instead of their interpretations to these situations.

Many studies show that the rate of overweight and obese people has increased rapidly globally during the past few decades [2]. Obesity is known as a risk factor for chronic diseases including heart disease, diabetes, high blood pressure, stroke and some forms of cancer [2,3]. In addition, obesity is a major cause of many psychological disturbances such as depression and anxiety [4,5].

For different reasons, obese people either do not follow a diet program or do so and then quit [6]. For example, Al-Qaoud, Prakash and Jacob found that the major reasons that obese people stop attempting to lose weight are the inability to resist sweets and traditional foods and dissatisfaction with the dietary outcome [7]. In addition, body dissatisfaction has been found to be related to different psychological problems such as low self-esteem and depression [8].

The present study attempts to build a new program to help overweight and obese people reduce and maintain their weight by applying the concepts, principles, rules and techniques of cognitive behavioral therapy (CBT). For some obese and overweight people, the idea of reducing their weight might be impossible. However, through CBT, these people might change their beliefs and behavior.

### CBT and Obesity

According to the cognitive model, people's emotions and actions are subject to the interpretations of the events surrounding them. The basic premise underlying CBT is that people themselves are the problem because of the way in which they interpret the events and situations they face. Hence, the cognitive process of re-regulation and modification of knowledge results in a re-regulation of behavior. The model is based mainly on the cognitive interpretation of thinking and trying to find a relationship between feelings and behaviors that come from both the individual and the situation being experienced.

According to Beck this idea is based on the premise that CBT is a form of psychotherapy that can help participants successfully remove excess weight in the long-term [9]. The way in which humans think about food and eating affects their behavior and emotions; thus, some thoughts make a person have negative feelings toward diet, making the weight loss process difficult. According to Huisman et al. CBT can be effective at reducing obesity and increasing health-related quality of life [10]. The CBT

process can amend the negative thoughts and misconceptions that make humans who suffer from excess weight more optimistic about commitment to the diet program. For obesity, family-based behavioral treatment programs are the most effective, and the incorporation of targeted cognitive skills is a useful addition. These lifestyle interventions are enhanced when applied through a socio-ecological framework [11]. Moreover, some studies have shown that CBT plays an important role in changing the dysfunctional thoughts and lifestyles related to eating habits [12,13].

In this sense, Beck asserted that the essential elements of a CBT relationship with obesity are [9]:

- CBT is psychiatric treatment program that helps participants diet to reduce and maintain weight.
- Human thoughts about food and how to eat affect behaviors and feelings.
- The adoption rights for a certain way of thinking makes the wrong diet difficult to implement and a successful reduction in weight hard to achieve.
- CBT aims to change the misconceptions that make humans on diet programs reluctant to accept positive ideas to succeed in the application of such programs.

## Methods

This study is part of a project fully funded by the Kuwait Foundation for the Advancement of Science in coordination with Kuwait University and with the cooperation of the Ministry of Health in Kuwait under project number 6371. This project consists of two phases.

The first phase involved selecting a sample of 728 overweight or obese individuals through the distribution of a questionnaire at health and sports clubs and various work centers. Four goals were identified for the first phase: (1) studying the effect of demographic characteristics (sex, age, marital status, occupation) related to being overweight or obese, (2) determining the psychological, social and behavioral reasons behind overweight or obesity, (3) determining the psychological, social and behavioral causes that limit or prevent people who are overweight or obese from following diet programs and (4) determining the psychological, social and behavioral causes that limit or prevent people who are overweight or obesity from the continued application of diet program.

The second phase was a pilot study. Two goals were identified for this phase: (1) Using behavioral cognitive group therapy to help overweight or obese people lose and maintain weight and (2) finding out the effectiveness of such group therapy for changing the thoughts, feelings and behaviors of overweight and obese people.

In total, 42 women were selected randomly from the Central Medical Nutrition Clinical the Ministry of Health (the State of Kuwait), and divided to two groups: 19 in the experimental group and 23 in the control group. Collective extension program consisted of 12sessions spread over five stages as follows:

**Stage One:** This stage consisted of one session to familiarize

participants with each other and with the team work as well as with the goals of the program.

**Stage Two:** Provide this stage consisted of two sessions. They were run by the nutrition advisory service to offer nutrition and psychological assistance to educate participants on nutrition, feeding and diet.

**Stage Three:** This stage consisted of two sessions. Those two sessions were leaded by the therapist. Participants were taught the relationships between thoughts, feelings and behavior.

**Stage Four:** This stage consisted of six sessions Apply CBT concepts and methods to remove negative concepts, beliefs and behaviors that hinder weight loss and work to acquire the concepts, beliefs, values and positive skills to facilitate weight loss and its maintenance.

**Stage Five:** This stage consisted of one session. Evaluate and identify the opinions of participants and ideas that have changed and their impact on mental and physical condition. In addition, develop a follow-up to make sure that what has been achieved meets the targets.

## Results and Discussion

Categories	Type of Group	N	M	SD	T	Sig.
Reasons for weight gain	Experimental	19	35.2632	6.682	1.068	Non-significance
	Control	21	37.1935	5.33804		
Reasons for not following diet	Experimental	19	2.6099	0.72316	3.351	Significance
	Control	21	3.2258	0.44048		
Reasons for not continuing diet	Experimental	19	2.5614	0.89574	3.278	Significance
	Control	21	3.3118	0.56189		
Body Mass Index (BMI)	Experimental	19	35.9365	5.94296	1.14	Non-significance
	Control	21	34.0483	5.24133		

**Table 1:** T-test of the significance differences between the experimental and control groups after the sessions.

### Reasons for weight gain

Table 1 shows the absence of significant differences at 0.05 between the experimental and control groups with respect to the reasons for the weight gain. This study sought not to change the causes of being overweight, but rather change the thoughts that control weight in addition to providing new life skills to deal with diets. Further, there are some differences between the control and experimental groups in this part, but they did not reach a significant degree.

### Reasons for not following the diet program

Table 1 indicates the existence of significant differences between the experimental and control groups at 0.01 for the control group. The average for members of the control group was 3.2258 with a standard deviation of 0.44048, while the average for members of the experimental group was 2.6099 with a standard deviation of

0.72316. This finding indicates that members of the control group most affected by negative thoughts failed to follow diet programs. Moreover, the experimental groups were affected positively by their thoughts about diet and programs. This result means that the experimental group changed their thoughts in a positive direction in the application of the diet. In other words, the evidence from this result indicates that members of the experimental group developed their motivation towards the application of diet programs as well as became more committed to diet programs compared with the control group. This result agrees with the study of Gade et al. which confirms the correctness of the philosophy and principles of CBT in terms of the impact of thoughts on human feelings and behavior [12].

### Reasons for not continuing the diet program

Table 1 indicates the existence of significant differences between the experimental and control groups at 0.01 for the control group. The average for members of the control group was 3.3118 with a standard deviation of 0.56189, while the average for members of the experimental group was 2.5614 with a standard deviation of 0.89574. This result indicates that the control group's negative thoughts make them stop continuing diet programs, while the experimental group were affected positively by the collective therapy sessions, which influenced their thoughts positively in this area. This result is consistent with the result above in terms of the impact of thoughts on human orientation or against a particular subject [9,14].

### BMI

Table 1 shows the absence of significant differences at 0.05 between the experimental and control groups with respect to BMI after the completion of the trial sessions. This result indicates that the weight of the experimental and control participants change little, although there were significant differences in favor of the experimental group with respect to thoughts about diet programs. This result is surprising; however, the therapy program in this study was not designed primarily to reduce weight but rather to adjust and acquire life skills associated with thoughts on diet and food. This result confirms that the main role of CBT is to change the life skills of obese people [10,13].

### Follow-up Evaluation after Three Months

Categories	Type of Group	N	M	SD	T	Sig.
Reasons for the weight gain	Experimental	19	3.06	557	146	Non-significance
	Control	21	3.03	649		
Reasons for not following diet	Experimental	19	3.39	723	2.386*	Significance
	Control	21	2.83	694		
Reasons for not continuing diet	Experimental	19	3.44	896	2.202*	Significance
	Control	21	2.82	810		
BMI	Experimental	19	35.94	5.943	167	Non-significance
	Control	21	5.603	6.46		

**Table 2:** T-test of the significance differences between the mean experimental and control groups after the sessions.

### Reasons for weight gain

Table 2 shows the absence of significant differences at 0.05 between the experimental and control groups at end of the counseling sessions (after three months) with respect to the reasons behind weight gain.

### Reasons for not following the diet program

Table 2 shows the presence of significant differences between the two applications at 0.05 for the second application. The average for direct application members was 3.39 with a standard deviation of 0.723, while the average for application members after three months was 2.83 with a standard deviation of 0.694, which was significantly reduced among the members of the experimental group after three months. In other words, Table 2 confirms that the thoughts and beliefs of the experimental group continued to improve with respect to the reasons for not following diet programs after three months. This result is consistent with research on the impact of thoughts on the pattern of food behavior [11].

### Reasons for not continuing the diet program

Table 2 shows the presence of significant differences between the two applications at 0.05 for the second application. The average for direct application members was 3.44 with a standard deviation of 0.869, while the average for application members after three months was 2.82 with a standard deviation of 0.810. This result indicates that the therapy affected the experimental group's thoughts positively after three months. In other words, Table 2 confirms that the thoughts and beliefs of the experimental group continued to improve with respect to the reasons for not continuing to follow the diet program, but also reflected positively on their food habits three months later. The members of the experimental group invested the positive thoughts they gained in therapy to adopt and keep a proper diet. Hence, learning life skills has more influence on food habits when overweight or obese than the application of a traditional diet program only.

### BMI

Table 2 shows the absence of significant differences at 0.05 between the two applications after the end of the direct therapy sessions with respect to BMI. This result indicates that the weight of experimental group members changed little compared with the weight after the end of the therapy sessions. Although this result seems to be negative, it is in fact positive because the experimental group maintained their weight increase after three months. Hence, they benefitted from the program by adjusting their ideas, food and behavior.

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