The Effectiveness of Cognitive-Behavioral Group Psycho-education in the Treatment of Obesity

Beril Yardımcı

108629002

Istanbul Bilgi University

Graduate School of Social Sciences

MA Thesis in Clinical Psychology

Advisors:

Assoc. Prof. Levent Küey, MD

Assoc. Prof. Hale Bolak Boratav

Prof. Dr. Mine Özmen

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Obezite Tedavisinde Bilişsel-Davranışçı Grup Psiko-Eğitiminin Etkinlik Çalışması

Beril Yardımcı

108629002

Advisors:

Assoc. Prof. Levent Küey, MD _____

Assoc. Prof. Hale Bolak Boratav _____

Prof. Dr. Mine Özmen _____

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Abstract

Obesity is a pervasive public health problem and cost-effective treatment modalities are needed. In this study, the aim is to evaluate the effects of cognitive behavioral psycho-education on weight loss and on general psychopathology, self-esteem and body image. Weight loss is operationalized through BMI and the psychological parameters through SCL-90, Rosenberg Self-Esteem Scale and Body Image Inventory. The patients from the Endocrinology Clinics in the Cerrahpaşa and Şişli Etfal Hospitals were referred to psycho-education. The sample consisted of 29 people and there were 2 groups. While the 14 participants in the intervention group attended weekly psycho-education meetings for 2 months and got a food plan, the participants in the control group only got a food plan. At the beginning and at the end of eight weeks all participants filled out the inventories and got weighted. Repeated measures ANOVA is used for testing the hypotheses. The BMI loss and the decrease in the general psychopathology were found to be significant in the intervention group, while there were no changes observed in the control group. The verbal feedback of participants offered valuable information to moderate the psycho-education. Further research is needed to investigate the effect of the variables that moderate the treatment success in different segments of society.

Keywords: body image, cognitive-behavioral group psycho-education, obesity, psychopathology, self-esteem,

Özet

Obezite yaygınlığı giderek artan bir halk sağlığı sorunudur ve tedavisinin önemli bir parçası olan psikolojik müdahalelerde hem ekonomik hem de etkinliği kanıtlanmış yöntemler gereklidir. Araştırmanın hedefi, obezite tedavisinde bilişsel–davranışçı psikoeğitimin kilo kaybı, genel psikopatoloji, benlik saygısı ve beden algısına olan etkisini ölçmektir. Araştırmada kilo kaybını değerlendirmek için Beden Kitli İndexi (BKİ), psikolojik parametreler için SCL-90, Rosenberg Benlik Saygısı Envanteri ve Beden Algısı Ölçeği kullanılmıştır. Cerrahpaşa Tıp Fakültesi ve Şişli Etfal Eğitim ve Araştırma Hastanesi'nin Endokrinoloji Kliniği'ne ilk kez başvuran obezite tanısı konmuş kişiler psiko-eğitime yönlendirilmiştir. Örneklem grubu 29 kişiden oluşmaktadır, psikoeğitim grubu ve kontrol grubu olmak üzere 2 gruba ayrılmıştır. 14 katılımcıdan oluşan psikoeğitim grubu 8 hafta boyunca 2 saat süren psiko-eğitime katılmıştır ve diyetisyen tarafından yazılan yeme planını uygulamaları beklenmiştir. Kontrol grubundan sadece yeme planı verilmiştir. Tüm katılımcılar 8 haftanın başında ve sonunda ölçekleri doldurmuştur. Hipotezler, tekrarlayan ölçümlerde ANOVA ile test edilmiştir. Psiko-eğitim grubununda BKİ ve genel psikopatolojide anlamlı derecede düşüş gözlemlenirken, kontrol grubunda hiçbir ölçekte fark görülmemiştir. Katılımcıların sözel geribildirimleri psiko-eğitimin etkisini anlamak ve geliştirmek adına önemli bilgiler teşkil etmektedir. Obezite tedavisinde uzun dönemli davranış değişikliği ve kilo kaybına destek olan tedavi etkenlerinin araştırılması önemlidir.

Anahtar kelimeler: beden algısı, benlik saygısı, bilişsel-davranışçı grup psiko-eğitimi, obezite, psikopatoloji

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1 Introduction

1.1 Obesity: Definition and Etiology

"Overweight and obesity are defined as abnormal or excessive fat accumulation that presents a risk to health" (World Health Organization, 2011). The definition of obesity might vary according to country and ethnic group and there are diverse techniques to pick out the obese, ranging from visual inspection to autopsy where the body constitutes are analyzed (Lebow, 1989). Body Mass Index (BMI) is the most widely used objective measurement to estimate obesity. BMI is calculated through dividing weight in kilograms by height in meters squared. A person with a BMI ranging from 25 to 29 is considered "overweight", from 30 to 39 "obese" and with a BMI equal to or more than 40 "morbid obese".

The etiology of obesity is regarded as multi-factorial, the main factors being genetic, endocrinological, neurological, psychological and environmental (Kurtuluş, 2007). These factors can affect the individual singularly as well as interacting with each other so that obesity is regarded as a complex picture.

Understanding etiology for the relevant obese person is important, since the choice of treatment might vary accordingly. But before moving on to treatment, the various health hazards that are linked to obesity are described below.

1.2 Obesity as a Risk Factor

Overweight and obesity are associated with increased risk of morbidity and mortality. WHO declares that overweight and obesity are major risk factors for a number of chronic diseases, including cardiovascular diseases, cholesterol, hypertension, type 2 diabetes, musculoskeletal disorders like osteoarthritis and some cancers such as endometrial, breast and colon.

Medical consequences of obesity are well-documented, whereas there are few consistent results about the psychological correlates of obesity. The results of diverse meta-analysis indicate that the obese population is psychologically heterogeneous and there is inconsistent evidence about how people with obesity differ psychologically from non-obese people. (Friedman and Brownell, 1995; Shaw, O'Rourke, Del Mar and Kenardy, 2009). Other research data indicates that increased weight might be associated with higher rates of depression and have a negative impact on the quality of life. Many people with obesity suffer from negative body image, lowered self-esteem and depression. Because of the societal judgments, they might have problems with finding a job, getting married and education (Pınar, 2002).

Results of studies indicate that people with the diagnosis of obesity benefit from weight loss physically and psychologically. National Institutes of Health (NIH, 1998) suggests that weight reductions of 5 % to 15 % may reduce risk factors for obesity-related conditions. Reduction in cardiovascular risk factors, improvement in blood glucose and triglycerides, improved physical performance and psychological outcomes are examples of positive changes people reach through weight loss (Shaw et al., 2009). In most of the studies, these benefits are connected to a 10 % reduction in body weight.

Studies also demonstrate how weight loss leads to improved self-esteem, social functioning and sense of wellness (Kushner & Foster, 2000). While generalization should be avoided this data indicates that obesity might be a psychological risk factor.

Regarding the cultural evaluation of obesity, there is consistent literature that speaks for a strong cultural bias and negative attitudes towards people with obesity. Research indicates that adults, doctors and medical students as well as boys between the ages of six and ten have negative views of people who are overweight and obese. People with obesity tend to find their state undesirable and would prefer to be deaf, dyslexic, diabetic or blind or suffer

from heart disease rather than be morbidly obese (Schwartz & Brownell, 2002). Since the pervasive cultural belief is that weight loss is just a matter of self-control, there is a powerful societal stigma against people with obesity (Leach, 2007).

All this data underlines how obesity might physically, socially and psychologically influence a person's quality of life.

1.3 Prevalence

Different resources indicate different prevalence data of obesity; however, the increase in obesity is ascertained by all of them. Obesity is not only a problem in high-income countries anymore and there is a dramatic increase of overweight and obesity in low- and middle-income countries, particularly in urban settings. According to the WHO's (2011) estimation, every third person is expected to be overweight, while every tenth person of the world's adult population is obese. Child obesity is also increasing globally; there are 20 million obese children under the age of five. This data depicts obesity as a public health problem across all generations and racial or ethnic groups. In this research, the obese population in Turkey will be the main focus.

1.4 Obesity in Turkey

The first population based study in Turkey, Turkish Adult Risk Factor Study (TEKHARF, 2009), was carried out for the first time in 1990 and repeated 6 times since then by the Turkish Society of Cardiology. In TEKHARF, 59 cities were randomly selected in seven geographical regions in Turkey (Yumuk, 2005). The results show an increase of 90 % in obesity rates from 1990 to 2002. The prevalence of obesity in Turkish women over the age of 30 has increased from % 32 to % 44.2, while the increase for Turkish men has been % 12.5 to 25.3. It has been observed that obesity rates increase with age: 30 % of the age group between 40-45 years is obese, while the obesity rate in the age group between 55-59 years is

about 35 %. There is a decrease in obesity in the age group after 70. In 2005, it was estimated that 3.2 million men and 5.5 million women were obese. This increasing trend of obesity is an alarming health problem and primary and secondary health care issues concerning the prevention and treatment of obesity should be discussed.

The gender difference in the prevalence shows that women are more likely to become obese than men. Metabolic parameters and activity levels lessen the possibility of men becoming obese, while binge eating and compulsive overeating are more common in women. (French, Jeffery & Wing, 1994).

1.5 Treatment of Obesity

There are no universally effective remedies for obesity, while successes, partial successes, failures in its treatment coexist (Lebow, 1989). There are different treatment possibilities that could be classified as pharmacologic, surgical and non-pharmacologic. Those are adopted as treatment modality based on the severity of obesity, personal components and environmental facts.

In their review about the treatment of obesity, Wadden and Osei (2001) report that weight loss medications are regarded as an option for people with BMI > 30. Research results indicate that pharmacotherapy is especially useful in facilitating the maintenance rather than the induction of weight loss. Bariatric surgery, on the other hand, is suggested for people with BMI > 40, and for people with lower BMI if they have serious obesity-related health complications. Surgical intervention is also needed if the problem has persisted for a long time, where people's weight loss efforts with traditional options of diet, exercise and weight loss medication have failed (Çakır & Pınar, 2006).

Because of fewer risks of health complications and costs of those indications, treatment that refers to changes in diet and activity is the first choice of intervention in most

cases. Consequently, the optimization of the non-pharmacologic intervention is crucial for individual and societal needs. The change in diet and physical activity is an indispensable mode of treatment that completes pharmacologic and surgical treatment in the long-term anyway. Phelan, Wyatt, Hill and Wing (2006) describe in their longitudinal study across 8 years that people who maintain weight loss continue caloric restriction and high levels of exercise. Svetkey et al. (2008) accentuate that "continued intervention contacts, self-monitoring of dietary intake, regular physical activity, and accountability;" (p. 1140) are important components of treatment.

Today, there are alternative psychological explanations and therapeutic approaches[1] on obesity, ranging from psychodynamic to purely behavioral approaches. In the comprehensive review about the psychological interventions for overweight or obesity (Shaw et al., 2009), 36 studies are selected out of 3607 studies and the roles of diet, exercise, and diverse psychological therapies for weight reduction are compared. Results indicate that behavioral and cognitive-behavioral strategies help to enhance weight reduction the most, especially when they are combined with dietary and exercise strategies and they are more effective than diet and exercise alone. It is underlined that the efficiency of other psychological treatments is not evaluated sufficiently and systematic reviews are lacking.

Cognitive behavioral therapy is a psycho-educative and goal-oriented form of psychotherapy that is practicable for weight loss and weight maintenance purposes. The focus in this study will be on this form of psychotherapy that will be discussed in more detail in the next section.

[1] In this study, alternative psychological explanations and therapeutic approaches on obesity will not be elaborated on and the focus will remain on behavioral-cognitive therapies.

1.6 Weight Loss Treatments: Short-term or Long-term Efficacy

Obesity is probably the easiest illness to diagnose, yet very difficult to treat. High rates of relapse are encountered after treatment. In a longitudinal concept of treatment it is important to manage a multifaceted treatment that not only targets weight loss, but also establishes a new lifestyle and creates a new self image (Deveci, 2005).

Studies in the last decades indicate that long-term treatment success should be distinguished from the short-term treatment efficacy. While the short-term treatment efficacy can be improved due to choice of treatment, studies with long term follow up indicate that patients return to their original weight within a few years of treatment (Swinburn, Caterson, Seidell, & James, 2004). Jeffery et al. (2000) show that the onset time of the intervention, the treatment length and emphasis on energy expenditure have modestly improved long-term weight loss in adults.

The other question regarding the efficiency of the weight loss treatment is the parameters that are expected to change with weight loss. Alıcı and Pınar (2008) show that health education alone can increase the metabolic and psychological well-being of people with obesity. In their study, the participants who received 6 sessions of psycho-education about the illnesses linked to obesity and weight management possibilities, lost 6,7 kg on average while their cholesterol levels and systolic blood pressure dropped. Their depression level decreased while their self-esteem increased significantly. In another study, Sertöz and Mete (2005) investigated a year long efficacy of cognitive behavioral group therapy which included 10 follow-up group sessions after 8 weekly group sessions. The results showed that participants benefited not only from weight loss but also from alleviation in psychiatric symptoms and pain after eight sessions. Those results indicate that the treatments might be efficient for physical parameters as well as for psychological parameters that will be discussed in part 2.3.

1.7 Relevance of this study

As described above, the prevalence of obesity and the difficulty of its sustainable treatment increase the necessity of efficient treatment modalities. As WHO reported in 2000, obesity is not an individual problem but a population problem that is largely preventable through lifestyle changes.

Regarding this picture, the intention in this thesis is to develop and apply a cost-efficient and useful psycho-therapeutic model that supports the weight loss and the well-being of individuals who suffer from obesity. The effectiveness of this model is investigated in this research via biological and psychological parameters. The results have been already discussed in the European Congress on Obesity this May (ECO 2011). Before moving to the hypothesis, the theoretical background about the intervention modality and psychological factors that are connected to weight loss are discussed in the next section.

2 Background

The theoretical background of this study will be presented in this section. After the main therapeutic elements of cognitive behavioral approach in obesity is discussed, the group format as a psycho-educative process will be the focus. Specific psychological parameters that are connected to weight loss are illustrated in the last part.

2.1 Cognitive Behavioral Therapy for Weight Loss

The cognitive behavioral model offers a way of explanation about how individuals think, feel and behave. The core idea of the cognitive principle is that people's emotional reactions and behavior are strongly influenced by cognitions that include thoughts, beliefs and interpretations about themselves and situations in which they find themselves. By helping people change their cognitions, they might change the way they feel and act. The behavioral principle implies that behavior can have a strong impact on thought and emotion and changing behaviors might be a way of changing thoughts and emotions (Westbrook, Kennerley & Kirk, 2007).

In case of eating and dieting, if the person has difficulties in changing eating habits, he or she is *not* regarded as lacking willpower but lacking in knowledge: knowledge regarding how to work on his or her cognitions and behaviors (Beck, 2007). Accordingly, the psycho-education helps develop deeper awareness about the relationship between triggers, thoughts, decisions, feelings and actions, so that the person can consciously modify his or her patterns. This is a goal-oriented approach, while the person actively tries to replace eating and physical activity habits with more functional and healthier ones. The intention is to empower the obese patient to modify the lifestyle and ensure a slow but stable weight loss.

In this framework, loosing weight and sustaining it is regarded as a consequence of certain behavioral and motivational factors. Those are the long-term modification of food

intake and food type, discouragement of maladaptive eating habits, change in activity level, the motivation to maintain adherence to a healthier lifestyle and the skill to deal with relapses (Wing & Hill, 2001). The intervention principles like stimulus control, reinforcement, self-monitoring, goal-setting, problem solving strategies, identification and modification of aversive thinking patterns and mood states, and relapse prevention help initiate and sustain the desired change (Wadden & Osei, 2001). The main psychotherapeutic principles that are supported by research findings are discussed below:

Contracting: Contracting can be regarded as setting the foundation; it is the initial step of the intervention. The contract helps to clarify and to state the intention of the intervention. Such a task-oriented collaboration elaborates the conscious determination of the therapist and patient to ally in working towards a common goal. The contracting is the gateway of the therapeutic alliance that is considered critical for success in all types of psychotherapy (Horvath & Greenberg, 1994). There might be many forms of making a contract in case of the goal-oriented treatment of obesity. A clearly written agreement that includes the time and cost aspects is found to be a useful way of contracting. Another version of agreement is that patients make payments and receive those in regard of their effort such as keeping food records and losing weight (Lebow, 1989).

Self-Monitoring: Everyone is born with the potential to know when she or he is hungry and when she or he has had enough. However, as the infant adapts to schedules and meal times, it might lose something of the natural sense of hunger and satiation. As an obese adult, it is very probable that people eat when they are not hungry and stop when overfull. This implicates that not the true sense of hunger leads to eating, but the conditioning of the person. The monitoring in regard of eating behavior might lead to realization of this conditioning (Leach, 2006).

Self-monitoring seems to always be a part of the overall treatment plan (Lebow, 1989). This can be applied via eating-monitoring sheets so that the person observes and notices when, what and how she or he eats and also the accompanying thoughts and emotions. That way the person might explore the eating habits in detail and uncover the connections between psychological, social and environmental factors. Lebow (1989, p.28) states that "Monitoring can itself change what is monitored", since it enables the person to make a baseline assessment and might have a confrontative effect. This helps the person feel responsible about food intake and exercise and eventually modify them (Beck, 2007).

Tracking the weight is another application of self-monitoring while the person learns to use the scale as an information tool that gives objective feedback to guide the eating. It is generally suggested that the person should not weigh himself or herself very often, since short-term weight fluctuations might be confusing and therefore probably imperfectly related to the exercise of behavioral control of eating (Penick, Filion & Stunkard, 1971). NIH (1998) suggests that the goal to lose 10% of one's weight should spread to a period about 6 months and the person should be educated about realistic goal-setting.

Setting Objectives: Objectives are necessary to attain feedback and depending on the type of treatment plan people can "designate daily calorie intake levels, exercise goals, food-intake goals and more" (Lebow, 1989, p.32). If the goals are realistic and achievable, a high level of motivation to continue the weight management can be sustained more easily. Also, the participants should not see themselves as being too deprived and also too far behind their goals. Metaphorically, dividing any distant goal into small steps helps to perceive small hurdles instead of a distant mountain. Not the 'ideal' weight but goals of weekly weight loss should be aimed so that signs of progress increase the feelings of self-efficacy.

In case of obesity, the improvement of physical appearance might be the major drive of the people who seek the treatment. However, since it may not change dramatically as the

person hopes it to change, the focus should lie on more achievable goals regarding the eating habits, weight and health rather than cosmetic considerations (Agras, 1987).

Stimulus-Control: "Learning theory assumes that overweight patients have learned to overeat and to underexercise. Their environments are presumed to maintain these lifestyles." (Hovel et al., 1988, p.665). Stimulus control refers to the re-arrangement of the environment in regard of the food stimuli and is one of the oldest and most widely used therapeutic techniques derived from behavioral psychology (Shaw et al., 2009). Beck (2007) accentuates that the sight of snacks as well as the knowledge of snacks being in the cupboard might be tempting and increase the stress level as the person tries to resist to them. Also, in terms of eating healthy food, research results support the importance of stimulus control. Hearn, Baranowski & Baranowski (1998) show that the availability, accessibility and exposure to fruits and vegetables in the home was correlated with their consumption.

Positive Reinforcement: Positive reinforcement is applied to strengthen the behavior and to affect the event's future likelihood. In the treatment of obesity, healthy eating and exercising behaviors can be supported with conscious application of positive self-talks, praise and non-food awards.

The development of a positive attitude towards self is crucial since people who struggle with their weight tend to be harsh on themselves and easily become self-critical the moment they stray (Leach, 2006). Their relation to food and body is likely to be occupied with negative emotions. Many have regrets after eating and have a negative body image. Those negative self remarks might be rooted from early childhood.

The positive reinforcement targets to break this vicious cycle of eating and punishing, while the person is inspired to find other alternative ways of evaluating the same situation and actively focuses on functional behaviors. The person might award him- or herself with self-talks as well as with creative ways of rewards and not with food as they might have had

learned it. The therapist not only teaches but also role-models this positive and all-inclusive attitude. The accepting and supportive atmosphere in the therapeutic setting helps the person internalize this 'probably' new relational attitude (Yalom, 1995).

Cognitive Restructuring: "Many of the overweight begin treatment desperate to solve what for them seems to be an unsolvable condition" (Lebow, 1989, p.33). They tend to feel overwhelming pressure and their cognitive patterns are likely to support this vicious cycle. Cognitive patterns such as perfectionistic standards ("*I must be thin*"), unhelpful rules ("*I can't waste food*"), all-or-none thinking ("*Either I'am completely on my diet or I 'm off my diet*") or exaggerated thinking ("*I can't stand this craving*") challenge the person in the struggle for weight management (Beck, 2007).

In the frame of CBT, the thoughts and beliefs are central to the control of external actions, and certain thought patterns lead to overeating, cheating, excuses, and other dieting downfalls. Since people who want to lose weight often count calories, think about their weight, and about food they can't have, the method of cognitive restructuring empowers the patient to question those monologues. That way, the patient is encouraged to identify the thinking that inevitably contributes to diet failure, and build skills to motivate her- or himself and to resist temptations.

Diet or Food Plan: Diet –diaeta- means in greek 'way of life'. In modern usage, diet is applied as an (temporary) alteration in the food intake and it is a part of almost every weight management program. The result indicates that 90 % of dieters go through weight cycling (Shaw et al., 2004). Apparently, this understanding of diet itself does not lead to a change in 'the way of life' and to a sustainable weight loss.

Different studies suggest that people with obesity lack a healthy cycle of eating habits. Swibburn (2004) reports that binge eating disorders are significantly more common in obesity in cross-sectional studies, while Agars (1988) mention that about 25% of overweight

individuals report frequent binge eating. Swinburn et al. (2004) also accentuates the risk of dieting-overeating cycles in obesity, since individuals, who restrain their eating highly, may also exhibit periods of disinhibited eating and gain weight. In terms of meal skipping, Rashidi et al. (2007) showed that obese adolescents skip breakfast more than their non-obese peers, which indicates the association between becoming overweight and skipping breakfast. The increasing snacking prevalence of energy-dense snack foods might also play a role in the development of obesity, although there is little evidence that a higher frequency of eating per se is a potential cause of obesity (Swinburn et al., 2004).

All these results indicate that not a temporary change in dieting but the long-term application of an individually suitable food plan might be transformative for the person who wants to lose weight. Accordingly, the patient should be encouraged to apply a food plan that requires a strict boundary setting to the inside and outside world, namely, to habits and wishes of others.

Boundary Setting to Food and Others: Having a food plan means to eat specific foods at specified times and at specified places and not to eat anything, anywhere and anytime. Within this picture the person is expected to make the act of eating a singular event, and not eating when doing something else such as watching television or reading. This attitude towards eating might be challenging since it requires a very strict boundary setting. Kearney-Cooke (2003) interprets overeating as loosing boundaries and mentions the importance of boundary setting with food as well as with others. Accordingly, learning how to say “no” is an essential part of losing weight.

However, food is celebrated in many ways in social life and there are many norms and values around food. This perceived pressure about eating in social settings challenges the boundary setting for many people. As Leach (2006) states, “partaking in cultural rituals is a way of belonging” and eating plays an important role in those rituals as “cultural introjects”

(p.23). In terms of boundary setting, the person learns to focus on self and own needs and not on others' wish, may it be friends, coworkers, hosts or spouses. With this intention, learning the assertive responding is an important part of the work with people with obesity, while assertive communication is distinguished from non-assertive and aggressive communication. Since the utilization of the social support is another important aspect of the treatment, the patients are encouraged to communicate their needs and seek collaboration in social settings.

Exercise: Sedentary lifestyle is regarded as a risk factor for obesity and physical exercise is an indispensable part of any intervention that targets weight loss. It is at least "as important as energy intake in the genesis of weight gain and obesity and there are likely to be many interactions between the two sides of the equation in terms of aetiology and prevention" (Swinburn et al., 2004, p.124). Among many other benefits, doing a regular exercise has many diet-related benefits such as to increase the metabolic rate and to burn calories, to preserve muscle tissue in weight loss, to stick with the food plan, to improve health and to control appetite (Beck, 2007). Besides, exercise is a behavioral activation that also increases the well-being and self-efficacy of the person.

The findings indicate that high levels of regular physical activity are a common behavioral strategy of long-term weight loss maintainers (Wing and Hill, 2001). The report published by Ministry of Health of Turkey (2009) indicates that only 3,5 % of Turkish population does regular exercise. So the patients are encouraged to do planned exercise as well as to increase their daily activities.

Body Awareness, Mindfulness and Relaxation: Eating, hunger, fullness, craving are sensational events that can only be *experienced*. The only way to experience those sensations is to connect to the body and to become aware of what is happening, in a mindful way. The unjudgmental awareness of momentary sensations is conceptualized as mindfulness training and its popularity as a treatment element is increasing in various disorders as well as in eating

disorders and obesity (Kristeller, Baer, & Quillian-Wolever, 2006). This practice refers to differentiating the sensations of hunger, fullness and craving and to be mindful of food consumption. It is very often that weight gain goes along with eating quickly in an unconscious manner and mindfulness offers a new way of eating, namely, eating with full attention. Accordingly, the patient is expected to slow down the eating and to make eating a pure experience unaccompanied by any other activity (Penick et al., 1971). This way of eating not only helps the development of fullness in stomach but also in senses.

Relaxation exercises are also a way of mindfulness and a somatic technique that helps the individual reconnect to the body and to let go of tension. It is an opportunity for the individual to experience the body as a source of relaxation and comfort (Rabinor & Bilich, 2002). Relaxation, as a skill, can help the person deal with stress and negative emotions in a more functional way.

Coping with Emotional Eating: Emotional eating refers to turning to food to compensate the unmet emotional needs. Need for love, social contact, communication and belonging are part of the human condition and absence of adequate responses to those needs will lead to a desire to meet them in other ways; while food is used for this purpose by emotional eaters (Leach, 2006). Geliebter and Aversa (2003) found in their study how emotional states and situations can affect food intake both for under-eaters and overeaters: the underweight group showed relative under-eating and overweight group relative overeating during negative emotional states and situations. Ganley (1989) also found that people with obesity eat more than normal-weight individuals in certain emotional situations especially in negative emotions such as anger, loneliness, boredom, and depression. However, he also advises against a simplistic anxiety-reduction model regarding the ‘mood and food’ and emphasizes the individual variability, since the function of turning to food can only be explored individually.

These findings indicate the importance of awareness concerning the type of hunger one experiences, whether it is biological or emotional. Kearney-Cooke (2003) emphasizes in her video 'on weight loss and control' that the person should pay attention to what or he is hungry for, so that she or he can respond properly to the primary need. Hereby, the person might be in need of affection, of pleasure, of a break and turn to eating instead of acting in response to his or her own needs. This might cause a vicious cycle, since the person does not recognize the actual need and turns unconsciously to food as a temporary solution to overcome the emotions and regrets the eating afterwards.

In case of emotional eating, once the patient becomes aware of the relationship between emotions and eating, she or he might learn to contain those emotions and develop more functional coping strategies.

Relapse Prevention: Quitting smoking is easy. I've done it hundreds of times. The famous quote of Mark Twain accentuates that change is not as difficult as the maintenance of change. As in quitting smoking, people trying to lose weight make an attempt to change and "experience set-backs or slips (lapses) that will sometimes worsen and become relapses" (Marlatt, Parks, and Witkiewitz, 2002, p.2). In the weight loss treatment, it is emphasized that slips are a natural part of the weight loss process, while people learn to plan strategies for coping with situations that might cause them to lapse (Wing, 2004). The relapse prevention aims to keep lapses from becoming relapses.

Especially when under stress people tend to go back to their old habits. In the relapse prevention the patient's potential risk factors and situations will be identified. CBT techniques are used to develop strategies of managing the high-risk situations and to deal with cognitive distortions efficiently. This prevention perspective is a longitudinal concept of treatment that indirectly alters the self-image and self-efficacy feelings of the person (Deveci et al., 2005).

All these described techniques above can become important parts of an intervention program as they can be varied due to the stage of the intervention process and the need of the patients. Depending on the format of the therapeutic frame, they can be applied in the individual format as well as in group format.

2.2 Group Format in Psycho-education for Weight Loss and the Role of Group Leader

The psychotherapeutic intervention of obesity might be followed in individual or group formats. In both, therapy and psycho-education are combined; however, both formats might have different advantages and disadvantages. In group format, participants have the possibility to witness the universality of their problem as well as to inform, support, encourage and model each other as described by Yalom (1995) and by Hayaki and Brownell (1996). Group members' acceptance and contributions to each other are especially valuable since they go through similar difficulties and can show great understanding.

There are different research findings about the efficiency of group format compared with individual format. While Hayaki and Brownell (1996) mention that there is limited research to really prefer one treatment modality, Renjilian et al. (2001) observed that patients in group treatment achieved significantly greater weight losses than the patients in individual treatment independent of the treatment preference. They accentuate that a healthy dose of competition also helped participants to push themselves to keep up with the group norm besides the group support. Another advantage of group setting is its being cost-effective. Considering its higher prevalence in low socioeconomic milieu, costly effective intervention models for obesity are needed. Group formats would enable to reach a broader sprectrum of people; however, it does enable a deep exploration of personal issues (Hayaki & Brownell, 1996)

Wadden and Ossei (2001) mention that group size mostly range from 10 to 20 when people get behavioral treatment of obesity. It is important that same patients begin and end the process together so the group remains closed, as group cohesiveness might become impaired if new members join the group. Additionally, since sessions build upon another, it would be difficult to establish a curriculum for open groups. For instilling the group alliance, the importance of regular attendance of every member for the whole group should be accentuated in the relevant time.

The relational field between group members and group leader is the basis, where participants can be hold and motivated. Since participants are expected to build a new relationship to food and to their body, the group leader has the mission to role-model this attitude with verbal and non-verbal cues. They are not only supported via information but also emotionally. Yalom (1995) accentuates the importance of being supportive and all-inclusive as a group leader. This helps the participants to disclose themselves regardless of their 'performance'. This relational attitude can function as a corrective emotional experience that could motivate the participants to continue the program. The group members should be empowered for all changes they make, so that their locus of change is directed internally (Lebow, 1989).

As hinted in the next part, the obese condition might have negative psychological correlates and a positive group atmosphere is necessary so that people feel supported and can support each other. It is the relationship between group members and group leader that sets the foundation for the motivation to change.

2.3 Psychological Parameters and Obesity

According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), obesity itself is not a psychiatric disorder; while DSM-V Eating Disorders Work Group is

asked to consider the inclusion of obesity in DSM-V and there are ongoing debates around this topic (Walsh, 2008). Among the eating disorders, Binge Eating Disorder (BED) is regarded as linked to obesity and is in the DSM-IV appendix. In literature, the recurrent episodes of binge eating are viewed as a factor that might lead to obesity, whereas not all people with obesity binge eat. Binge eating is also regarded as moderating the relationship between obesity and psychological distress. The results indicate a strong evidence that obese binge eaters also exhibit more psychiatric symptomatology such as distortion of body image, low self-esteem, low self-efficacy, high impulsivity, a high level of depression, eating disorders, subjective distress, and impairments in quality of life than do obese non-BED subjects. (Wonderlich et al., 2009; Kodama & Noda, 2001)

The relationship between obesity and psychopathology has been intriguing many researchers for decades. The first generations of studies were searching a more direct relationship between obesity and psychopathology; however, "studies of nonclinical samples of obese persons have consistently shown that obese individuals do not differ from their non-obese counterparts in psychological symptoms, psychopathology, or personality overall" (Friedman et al, p.33). Due to those results, the second generation of studies offers 'a risk factor model', which suggests the identification of variables that mediate the relationship between obesity and symptoms of psychological distress.

Fitzgibbon, Stolley and Kirschenbaum (1993) showed that seeking-treatment for weight loss is an indication for elevation of psychopathology. Accordingly, individuals with obesity who seek treatment have higher levels of affective disorders, particularly depressive symptomatology (Goldsmith et al., 1992) and psychiatric symptoms, more frequent binge-eating and body-image distress (Cash, 1993). Besides treatment status and binge-eating, also other risk factors such as degree of obesity and body-image dissatisfaction are considered to moderate the psychopathology in people with obesity (Friedman & Brownwell, 1995).

Since obesity is a multifaceted condition that is related to physiological, psychological and social factors, the intervention for weight loss targets not only the decrease of body weight but also an improvement in psychological wellbeing. The effects of weight management on different psychological parameters will be discussed below.

2.3.1 Psychopathology and Obesity

There is a big amount of research that examines the relationship between obesity and psychopathology. Research findings generally support that the prevalence of psychiatric disorders is higher in people with obesity compared with general population. The common psychiatric symptomatology among obese patients refers to a high level of depression and social phobia (Eren & Erdi, 2003; Kodama and Noda, 2001; Deveci et al., 2005). Also distortion of body image, low self-esteem, low self-efficacy, strong perfectionism and high impulsivity are observed by obese binge eaters (Kodama & Noda, 2001). Britz et al. (2000) found that the clinical sample of obese adolescents, who are extremely obese, have higher rates of mood, anxiety, somatoform and eating disorders than population-controls and population-based obese adolescents. In this obese group, eating binges with lack of control are also reported. Fitzgibbon, Stolley and Kirschenbaum (1993) mention that "… obese groups […] endorsed more symptoms of distress, negative emotional eating, overeating, difficulty resisting temptation, and less exercise than did normal-weight controls" (p.342). All this symptoms influence the health-related quality in a negative way as Marchesini et al. (2003) state and the relationship between obesity and psychiatric symptoms can be regarded as a mutual relationship. In a longitudinal study, Pine, Cohen, Brook and Coplan (1997) indicate that basal depression level in adolescence may signal high BMI in adulthood, while Roberts, Cohen, Kaplan, Shema and Strawbridge (2000) show that a basal obesity level might be a predictor for depression in future.

In this picture, the importance of a comprehensive treatment is accentuated, while not only the alteration of eating behavior but also psychological distress should be addressed.

Different studies show that weight loss is linked with a decrease of psychiatric symptomatology. There are a number of studies that show a decrease of depressiveness through weight loss (Foster et al., 2004; Hession et al., 2006). Mete and Sertöz (2005) observed a decrease of general psychopathology (assessed via SCL-90-R) as well as depressiveness and anxiety as the BMI of participants dropped. Foster et al. (2004) implemented a 40 week multi-faceted intervention model and showed significant improvements in body image, self-esteem, even when the targeted weight loss did not took place. All those results indicate that behavioral group therapy helps the obese patient to increase the well-being.

2.3.2 Self-Esteem and Obesity

Self-esteem is a hypothetical construct that refers to the evaluative component of self-concept, namely, to the "overall affective evaluation of one's own worth, value, or importance" (Blascovich & Tomaka, 1993, p.115). Higher levels of self-esteem are linked with feeling precious and likeable in society and with accepting the self (Özkan, 1994). Low self-esteem, on the other hand, is linked with loneliness, depression, social anxiety and alienation, according to the research findings.

In terms of the evaluation of physical appearance, the findings indicate that overweight and obesity is linked with lower self-esteem (Deveci et al., 2005; Kodama & Noda, 2001). French, Perry, Leon & Fulkerson (1996) screened the global self-esteem level of 1278 adolescents in relation to their weight and found modest associations about the inverse relationship of BMI with self-esteem in females as well as in males. In males, a lower 'athletic and romantic appeal self-esteem' was connected with higher BMI. Özmen et al.

(2007) also found that the body dissatisfaction and perceived overweight is related to low self-esteem in adolescents.

These findings bring forth the question of whether weight loss may improve the self-esteem level of a person who has weight problems. In the Cochrane review (Shaw et al., 2004), it is mentioned that "the effects of weight loss appear to be psychologically favorable with improved self-esteem, social functioning and sense of wellness" (p.5). Pınar and Alıcı (2008) observed a significant increase in self-esteem of the participants in the intervention group who joined six psycho-education meetings in an interval of three months. Also Sertöz and Mete (2005) found that there is a slight increase in self-esteem level at the end of 8 weeks of the CBT group meetings with obese patients. Those results indicate that self-esteem is a construct that might be influenced positively while the person actively changes the eating habits in a healthier way and loose weight.

2.3.3 Body Image and Obesity

Body image can be defined as a person's mental image and evaluation of appearance of her or his body (Foster & Matz, 2002). The way the person estimates his or her body size refers to the perceptual body image, while this perception goes along with affective, cognitive and behavioral consequences that compose the attitudinal body image. In this picture, negative body image refers to a concern about appearance, which is today very common due to strict societal values about youth, beauty and slenderness. Positive body image, on the other hand, can be interpreted as a sign of acceptance of body-self and as Foster, Wadden and Vogt (1997) show positive body image is correlated with higher levels of self-esteem and lower levels of dysphoria.

Research findings indicate that overweight and obese persons have less favorably body-image experiences relative to persons of average weight (Cash, 1993). Although not all

people with obesity are affected, obesity leads to a more disparaging view of the look, particularly by women. Also in childhood and adolescence, BMI is positively related to the body dissatisfaction in girls and boys (Schwartz and Brownell, 2002; Paxton et al., 1991). Collins, Beumont, Touyz and Krass (1990) show that individuals with obesity were less accurate in their judgments of body shape and tend to overestimate of body size, again especially women. In this picture, the people with obesity are more dissatisfied and preoccupied with the physical appearance and also tend to avoid more social interactions than non-obese counterparts (Friedman et al., 2002; Afridi, Safdar, Khattak &Khan, 2003).

Sarwer, Thompson and Cash (2005), state that "the treatment of body image concerns of obese people is still in the developmental stages" (p.80). Through diverse interventions, body image of people with obesity improves as they lose weight as well as without weight reduction. Interventions such as promoting weight acceptance, decreasing overeating and dietary restraint, or more directly cognitive behavioral body image therapy programs seem to help the obese patients to improve the body image without even weight loss.

There are several studies that report significant improvements in body image during weight loss (Sarwer, Thompson and Cash, 2005). It is also shown that changes in body image did not correlate with the amount of weight loss and "weight losses ranging from 9 kg to 25 kg resulted in similar body image improvements" (Foster & Matz, 2002, p. 406). Those results indicate that body image is alterable, and weight loss as well as the development of an attitude of acceptance may be beneficial to improve the body image.

3 Aims & Hypotheses

The aim of this study is to investigate the efficiency of a structured weight loss group psycho-education on weight loss and well-being of the participants. In respect of this aim, the hypothesis focus on weight loss and on well-being that is investigated through general psychopathology, self-esteem and body image.

Hypothesis 1 refers to the change in weight loss that is operationalized as BMI.

- **1a** BMI of the experimental group will be significantly lower at the end of 8 weeks.
- **1b** BMI of the control group will to be significantly lower at the end of 8 weeks.
- **1c** BMI loss within the experimental group will be greater than the BMI loss in the control group.

Hypothesis 2 refers to the change in general psychopathology. The greater weight loss and group support in the psycho-education group are expected to increase the wellbeing of the participants. This difference is expected to be significantly greater in the intervention group compared with the control group.

- **2a** There will be a significant decrease in general psychopathology in the experimental group at the end of 8 weeks.
- **2b** The general psychopathology difference within the experimental group will be greater than the difference in the control group.

Hypothesis 3 refers to the change in self-esteem. The greater weight loss, group support and psycho-education are expected to influence the self-esteem of the participants positively. This

difference is expected to be significantly greater in the intervention group compared with the control group.

3a There will be a significant increase in self-esteem in the experimental group at the end of 8 weeks.

3b The self-esteem difference within the experimental group will be greater than the difference in the control group.

Hypothesis 4 refers to the change in body image. The greater weight loss, group support and psycho-education are expected to influence the body image of the participants positively. This difference is expected to be significantly greater in the intervention group compared with the control group.

4a There will be a significant increase in body image in the experimental group at the end of 8 weeks.

4b The body image difference within the experimental group will be greater than the difference in the control group.

4 Method

4.1 Subjects

The recruitment of the participants was provided by the Endocrinology Department of the Cerrahpaşa Medical Faculty Hospital and by the Endocrinology Department of the Şişli Etfal Training and Research Hospital. The endocrinologists of both hospitals informed the patients -whom they were seing for the first time and who met the inclusion criteria- about the psycho-education for weight loss and suggested them to consult the psychologist. Accordingly, the population of this research refers to people who seek public health service because of their weight and health problem.

The basic inclusion criteria of the study were the BMI level that ranged from 30 to 40 and the age that ranges from 18 to 65. A minimum age of 18 was expected, since the participation was regarded as the participant's own responsibility and the intervention was designed for adult people. Additionally, the participants were expected to be literate, to live in Istanbul to be able to come to sessions weekly, not to use any anti-obesity drugs and not to suffer an extra medical condition than could hinder the commitment to the intervention.

The first interview has been on individual basis and the psychological wellbeing of the participants was checked by the clinical psychologist. In recognition of severe depression, suicide risk, psychosis, mental retardation and dementia, the potential participants were to be excluded from the study and guided to Psychiatry Department of the Cerrahpaşa Medical Faculty Hospital if they were not already in treatment. Due to information gathered in the first telephone call, the participants were assigned into experimental group and control group. The subjects were matched on a particular set of characteristics such as gender, age, education level and BMI to ensure that the groups do not differ prior to treatment (Kazdin, 2003, p.157).

The estimated sample size was about 30, 15 being the intervention group and 15 the control group. The expected drop-out rate was about 20-25 %.

4.1.1 Demographic Variables

The endocrinologists suggested 53 patients to participate in the study and about 40 patients contacted the researcher psychologist. From 40 patients, 29 patients came to the initial interview and underwrote the consent form. This indicates an initial selection in the pool of all potential participants, while 55 % decided to participate at the study.

Demographic characteristics of the study sample are presented in Table 1. The total sample size is 29, 14 being in the experimental group and 15 in the control group. Regarding the age, 41 % of the sample is between 50 and 60, 34 % between 40 and 50 and 25 % between 20 and 40. Those age ratios indicate that the majority of the sample is in stage of middle adulthood in their life cycle. About 80 % of participants were females and 20 % males. Except one person being divorced, all participants were married. About 60 % of the participants have been housewives and 30 % working in private sector or in public services. The majority of participants, about 70 %, have reported that they come from a middle socioeconomic status and about 20 % stated it as middle-low. There was a diversity in the education level of the sample, while all being literate, about 28 % graduated only primary school (5 years of schooling), 14 % the middle school (8 years of schooling), 31 % the high school (11 years of schooling), and 20 % the university. The participants were matched into groups regarding their age, gender, occupation and educational level. In the analyses, due to low sample sizes per cell, the sociodemographic variables could not be included in the analyses.

Table 1

Percentage and Frequency Rates of the Sociodemographic Characteristics of the Sample

	All		Experimental		Control	
	%	n	%	n	%	n
Sample (N)	100	29	48 %	14	52%	15
Age						
20-30 years	14 %	4	6,9 %	2	6,9 %	2
30-40 years	11 %	3	6,9 %	2	3,5%	1
40-50 years	34 %	10	17,2%	5	17,2%	5
50-60 years	41 %	12	17,2%	5	24,1%	7
Mean Age		44,31		44,07		44,53
Gender						
Male	21 %	6		3		3
Female	79 %	23		11		12
Marital status						
Single	-	-				
Married	96,6 %	28	44,8 %	13	51,7%	15
Divorced	3,4 %	1	3,4%	1	-	-
Widowed	-	-				
Occupation						
Housewife**	62,1 %	18		8		10
Retired	6,9 %	2		1		1
White collar	13,8 %	4		2		2
Private sector	17,2 %	5		3		2
Student	-	-				

Unemployed	-	-		
Socioeconomic status				
Low	3,6 %	1	1	-
Middle-low	17,9%	5	3	2
Middle	71,4%	20	10	10
Middle-high	7,1%	2	-	2
High	-	-		
Educational level				
Literate yet not finished p.s.	6,9	2	1	1
Primary school	27,6	8	3	5
Middle school	13,8	4	3	1
High school	31,0	9	4	5
University	20,7	6	3	3
M.Sc. / Phd.			-	

*The percentages are rounded.

** Being housewife is regarded as an occupation.

In the initial interview, participants were also asked about their health status, medications they use, weight story and eating habits. The examples of frequently reported diseases are: diabetes, hypertonia, cholesterol, hernia, thyroid nodules, ulcer, sjogren's syndrome, reactive hypoglycemia, constipation, rheumatism, calcification e.g. Depending on their diseases, almost all the participants were using different medications. Regarding their age and health conditions, many participants were interested in losing weight for health purposes.

The sample is heterogeneous about the age of obesity onset; while some participants define themselves overweight since they know themselves, others became obese in relation to significant life events such as marriage, childbirth, death of a parent or a sibling. There was diversity in their weight history; whereas the big proportion of the sample reported previous weight loss through a diet, that they could not sustain it.

All participants that came to the initial interview are regarded as belonging to the sample; however, because of drop-out not all data could be used for testing hypothesis. Before moving on with the analytic results, the drop-out rates are discussed below.

4.1.2 Drop-out Rates

The drop-out rate in the experimental group is about 21 %. Those group participants came to the group meetings one or two times and did not show up again. They also did not respond when they were contacted via telephone.

The drop-out rate in the control group is about 53 %, meaning that about half of the group did not come to the second interview, as they contracted. They had different excuses like working, being out of town and being busy. In the table below the drop-out rates of both groups are shown.

Table 2

Drop-out Rates in the Experimental Group and in the Control Group

	Drop-out rates	
	%	n
Experimental	21,4	3
Control	53,3	8

In the experimental group among the 3 people who dropped out, 2 of them were working in the private sector. Such a relation between drop-out and occupation is not observed in the control group. In both groups, one of the drop-out participants were male. The data of the participants who dropped out were excluded in the analytic analysis part.

Because of this variation in the drop-out rates the significance of this difference is tested. Chi-square test is applied to test the frequency difference in drop-outs. The Pearson Chi-Square value is 3,131 (df=1; $p > .05$) and this result is insignificant.

4.1.3 Participation Rates

Mean Participation rate is 6,5, and participation frequency of single participants ranges between 4 to 8. The participant frequency in the weekly meetings is shown in the table below.

Table 3

Number of Participants Attending Weekly Sessions

Week	1	2	3	4	5	6	7	8
Number of Participants	12	10	9	8	8	8	7	9

4.2 Design

This clinical trial is carried out as a stratified randomization. As listed in the table 4, the dependent variables are the weight-loss that is operationalized as BMI and the psychological parameters that are general psychopathology, body-image and self-esteem.

Table 4

The List of Independent and Dependent Variables

Independent Variables		**Dependent Variables**
Experimental Group	Control Group	
Food Plan + Psycho-education	Food Plan	Physical • BMI Psychological • General psychiatric symptomatology • Self-esteem • Body Image

The independent variables are food plan and the psycho-education. The experimental group gets 8-week psycho-education and food plan, while the control group only gets food plan at the beginning of the intervention. The control variables are the attendance of the participants at the sessions, their participation frequency and their active involvement with the given homework. There was a short survey about their involvement with the homework at the beginning of every session. In addition to the measured variables, observational data were gathered that might have explorative potential and give way to new research questions.

4.3 Instruments

The measures of this study included interviews, inventories, written feedback and observational data. The initial face-to-face contact was an individual interview with the

participant, where she or he was informed about the study and was supposed to fill the demographic form[2] and the informed consent form[3]. The interview had a semi-structured format and lasted about half an hour, while the participant was asked about his or her lifestyle, eating habits, weight story and motivation to participate in the psycho-education. After the initial interview and in the last session of the program, the participants were expected to fill the inventories that are described below in this section.

The physical measures were gathered in the Endocrinology Department. The assessment of BMI was done via Tanita Body Composition Analyzer. For psychological parameters different scales were used:

Symptom Checklist-90[4] *(SCL- 90):* SCL-90 is a psychiatric self-report symptom inventory, as it focuses on the great relevance of psychiatric symptoms. The development and revision of the SCL-90 is made by Derogatis (1977). It consists of 90 items that describe psychiatric symptoms and the person rates the items between 0 and 4 (5-point likert scale). In the instruction, the person is asked whether she or he is concerned about the described symptom in the last 3 months. The values between 0-1.50 indicate low symptomatology, between 1.50-2.50 high symptomatology and between 2.50-4.0 very high symptomatology. General symptomatic index (GSI) includes all subscales and gives an overall measure of general psychopathology of the person. SCL-90 helps to evaluate psychological distress and identify symptoms and also to monitor the patient's progress or treatment outcome since it is sensitive to change over time (Holi, 2003). However, psychiatric diagnosis cannot be made via SCL-90 and it is used as a screening instrument.

There are 9 subscales in SCL-90. The reliability coefficients for those subscales are listed as: .86 for somatization, .86 for obsessive-compulsive, .86 for interpersonal sensitivity, .90 for depression, .85 for anxiety, .84 for hostility, .82 for phobic anxiety, .80 for paranoid

[2] See Appendix A (All the following appendices are attached in their original language, Turkish.)
[3] See Appendix B for the informed consent form of experimental group and the Appendix C of the control group.
[4] See Appendix D

ideation and .77 for psychoticism (Derogatis, Rickels & Roch, 1976). For validity assessment, the results of SCL-90 were correlated with the results of Minnesota Multiphasic Personality Inventory (MMPI) and the correlation coefficients of subscales range from .41 to .64.

The reliability and validity study of SCL-90 in Turkish version was done by Kılıç (1987). In the sample of university students, the reliability coefficients for subscales are as following: .82 for somatization, .84 for obsessive-compulsive, .79 for interpersonal sensitivity, .78 for depression, .73 for anxiety, .79 for hostility, .78 for phobic anxiety, .63 for paranoid ideation and .73 for psychoticism. Also in Turkey, the results were correlated with the results of MMPI and the correlation coefficients range from .40 to .59.

The SCL-90-R is used for diverse screening purposes mainly by adolescents and also in clinical research for psychosomatic patients. Dağ (1991) shows that the discriminative validity of subscales as different psychological symptom entities could not be obtained and the general psychopatology index is regarded as the overall distress measure in this study. This finding is supported by the Finnish study (Holi, 2003) as they also show that scores on different subscales cannot be interpreted as symptom profile and there is inadequate evidence for the dimensionality of SCL-90.

Body Image Inventory[5]*:* Body Image Inventory was developed by Secord and Jourard (1953), with the purpose to find a method of appraising the feelings of an individual towards his or her body. There are 40 items, through which the person evaluates his or her satisfaction about several body parts and bodily functions on a 5-point likert scale. The results range from 40 to 200 points and higher points indicate higher body image satisfaction. There is no cutting point in the evaluation.

The reliability and validity study of Body Image Inventory in Turkish is done by Hovardalıoğlu (1993) who found a reliability coefficient of 0.76. Since then, body image

[5] See Appendix E

inventory is used in many studies that mainly question the effect of diverse diseases on body image.

Rosenberg Self-Esteem Scale (RSES)[6]: The scale was developed by Rosenberg in 1965 and translated into 28 languages since then. The RSES consists of 63 items and 12 subscales. The first 10 items in the scale refer to the Self Esteem subscale, which is one of the most commonly used measures of self-esteem. The items in this subscale are scored on a 4-point likert scale that is anchored by 'strongly agree' and 'strongly disagree'. Higher scores indicate lower self-esteem and there are no discrete cut-off points to delineate high and low self-esteem. In the other subscales, there are different, 2-point, 4-point and 5-point-scale answering possibilities.

The reliability coefficient for various samples range from .77 to .88 and test-retest correlations are typically in the range of .82 to .88. The reliability and validity study of RSES in Turkish version was done by Çuhadaroğlu (1986). In the sample of high school students, the test-retest correlations range from .46 to .89 and the validity coefficient is .71. The reliability coefficients for subscales are as following, .75 for self-esteem, .75 for continuity of the concept of self, .55 for interpersonal trust, .48 for sensitivity to criticism, .70 for depressiveness, .75 for daydreaming, .89 for psychosomatic symptoms, .46 for threat expectancy in relationships, .51 for participation in discussions, .51 for parental care, .79 for relationship with father and .60 for psychological isolation. In Turkey, the scale is used mainly to assess the self-esteem of adolescents and university students.

Besides the main inventories, the participants were expected to fill '*the evaluation form of the week*'[7] at the beginning of every session. Via this form they gave feedback about their involvement with the exercises; namely, whether they have read the working sheets and have applied the exercises, what they found useful and what not and whether they demand to

[6] See Appendix F
[7] See Appendix G

talk the group leader in private. This helped the group leader to keep track in the participants' involvement in an objective way and the participants had the opportunity to increase their self-monitoring. Also, the participation frequency of every participant was recorded during the psycho-education.

4.4 Analysis

Data analysis in this study is carried out via Statistical Package for the Social Sciences, SPSS (version 18.0 for Windows). Descriptive statistics is used to provide the socio-demographic picture of the participants. Since the participants filled out the questionnaires before and after the intervention, the General Linear Model (GLM) Repeated Measures ANOVA was used to test the study hypotheses. All analyses are conducted at an alpha level of .05. To investigate the correlations between the variables, the values are z-transformed and Pearson's correlations were checked.

4.5 Implementation

After the permission of the ethics commission of the Cerrahpaşa Medical Faculty Hospital, the endocrinologists of the Endocrinology Department in Cerrahpaşa and Şişli Etfal Hospital became informed about this study. The endocrinologists informed the obese patients who meet the inclusion criteria about the possibility to consult the psychologist for weight loss purposes. The interested people contacted the psychologist via cell-phone to schedule the initial interview. In this phone call, they were asked about their age, education level and BMI to secure the stratified randomization. In the initial interview, the experimental group became informed about the intention and the process of the psycho-education program. Two participants could not to join the program since they had to work in the psycho-education meeting time at 5 pm, Mondays. The control group were also interviewed and asked to

continue the food plan for eight weeks. Both groups filled out the forms and scales after the initial interview and they were asked to visit the Endocrinology Department to get the BMI measured.

The psycho-education group gathered every week at the same time in the meeting room of the Consultation-Liaison Psychiatry Department in Cerrahpaşa. The meetings lasted about 1,5 to 2 hours.

Cognitive Behavioral Therapy (CBT) is the referred paradigm of this structured psycho-education and the book “The Beck Diet Solution” (Beck, 2007) is used as the basic source. Dr. Judith Beck was contacted to get the permission to base this study on her program. Her program is translated into Turkish language and the 6-week self-help program is developed into a 8-week psycho-education. The content of the first and the last week is added for warm-up and evaluation purposes. There is a variety of cognitive and behavioral techniques that are briefly listed in the table below.

Table 5

The Content of the 8-Week Program based on Beck Diet Solution

Week 1: "Introduction to the Program"	Getting to know each other with diverse icebreakers Discussion of the expectations Introduction of the content in the program Mechanisms of behavioral change Home assignment: Self-monitoring of eating
Week 2: "Different Habits Possible?"	Recording the Advantages of Losing Weight Eating sitting down Self appreciation Eating slowly and mindfully Sharing the experiences with others Arranging the environment Setting a realistic goal
Week 3: "A New Relation to Eating"	Picking two reasonable food plans Creating time and energy Selecting an exercise plan Differentiating between hunger, desire and cravings Practicing hunger tolerance Overcoming cravings Planning for tomorrow
Week 4: "Starting Your Food Plan"	Monitoring the eating Preventing unplanned eating Ending overeating Changing the definition of full

	Getting back on track
	Getting ready to weigh in
Week 5:	Possible to say "*I don't have to eat*"
"Respond to	Attention: Justice trap
Sabotaging	Dealing with discouragement
Thoughts"	Identifying sabotaging thoughts
	Recognizing thinking mistakes
	Using the Seven Question Technique
Week 6:	Resisting food pushers
"Challenging	Staying in control in special occasions
Situations"	Deciding about drinking
	Preparing for travel
	Getting aware of the emotional eating
	Coping with your emotional eating
Week 7:	Believing it
"Sustainment	Stress-management and relaxation
of change"	Dealing with a plateau
	Keeping up with exercise
	Enriching the life
	Making a new to-do list
	Continuing practicing
Week 8:	Evaluation of the program and the own involvement
"Final	Discussion of the future plans and further group meetings
evaluation"	Psycho-education about relapse prevention
	- Filling the inventories

As listed above, the psycho-education was quite structured and certain topics were to be discussed every week. From the 2nd week to the 7th week, the topics were illustrated every week with about 30 power-point slides that contained intriguing pictures as well as information. At the beginning of each meeting, participants were asked to look back at the last week and examine their application of the program steps in their daily life. They were also given work sheets after the second week, so that they can revise what were talked in psycho-education and remember the weekly assignments.

The first week had a warm-up function so that the participants got accustomed to the group and to the rationale of the program while they were supposed to begin to monitor their eating habits. This intervention was supposed to enable the participants to make a baseline assessment, so that eating habits could be defined.

The second week began with the experiential mindfulness training; while the participants ate a raisin as eating meditation was guided. The awareness about habits was supposed to increase, as self-talks, goal setting and environment arrangement were investigated. The participants were expected to determine their goals individually.

The participants were guided to choose an individually appropriate and realistic food plan with the third week. Because of the restrictive association and probably negative connotation around the word ‘diet’, the phrase ‘food plan’ is chosen in this program. Every participant was expected to consult the dietitian of the hospital and to have a food plan customized for him or her. Since remaining hungry and overeating is a frequent phenomenon in the struggle for weight loss, the meanings of hunger, desire and cravings were explored and the participants had home assignments accordingly. The importance of exersize is also discussed this week.

The commitment to the food plan, the unplanned eating and overeating were discussed in the fourth week. Since slips to older eating habits are very frequent, coping with lapses and

strategies about getting back to track were worked through. The relation to the scale and importance of using the scale as an objective guidance were discussed.

In the fifth week, the focus was on the cognitive training, while participants were expected to work on their sabotaging thoughts and on thinking mistakes. They generated phrases that can be helpful to them in high-risk situations as well as after lapses.

The boundary setting in challenging situations like celebrations, special family events, traveling and drinking is gone through in the sixth week. The topic of emotional eating was introduced with different experiential group exercises.

With the seventh week, the relevant topics for future were discussed: the way they can deal with plateau regarding weight, manage their stress and enrich their life. Those topics were part of relapse prevention.

The last week gave space for final evaluation of the content of the program. Every person had the opportunity to evaluate his or her own involvement, the group atmosphere as well as the group leader. The inventories are also filled in the last week.

It should be noted that some participants hardly replied to the questionnaires. Though they were literate, some had difficulties in relating to the questions and in answering with understanding. The results should be interpreted in this frame.

5 Results

5.1 Analyses

Hypothesis 1: Weight Loss

It is hypothesized that BMI level in both groups will drop significantly and the BMI loss within the experimental group will be greater than the BMI loss in the control group.

The results of within-subject repeated measures ANOVA indicate that there is a significant difference in weight loss in the treatment group, with F(1,10)=9,25, p=.012, η^2=,480. This result supports hypothesis 1a. The difference is not significant in the control group, with F(1,6)=1,38, p > .05, and hypothesis 1b is not supported.

Table 6

Results of the Hypothesis Testing concerning BMI

Group	BMI- Pre	BMI- Post	Mean-Dif	F	Sig./p	η^2
	Mean - SD	Mean - SD				
E	35,41 ± 3,50	33,52 ± 3,33	1,89	9,248	,012	,480
C	35,17 ± 2,99	35,12 ± 2,83	0,29	1,378	,285	,187
Dif E * Dif C				5,54	,031*	,246

* The F-value is in the level of 0.05 significant.

E=11, C=8

As shown in Table 6, the BMI-difference in the experimental group is 1,89 while it is 0,29 in the control group. The differences in the BMI are significantly different between the groups, with F(1,16)=5,54, p < .05, η^2=.246. This result supports hypothesis 1c.

Hypothesis 2: General Psychopathology

The results of within-subject repeated measures ANOVA indicate that there is a significant difference in general psychopathology in the treatment group, with F(1,10)=10,79, $p < .01$, η^2=,519. Hypothesis 2a is supported.

It is hypothesized that the general psychopathology difference in the experimental group will be greater than the difference in the control group. The results show that the difference of SCL-90 results in the experimental group is -,47 and in the control group -,01. The F-value about the difference of the groups is 3,92 with a $p > .05$. This result is not significant and fails to support hypothesis 2b.

Table 7

Results of the Hypothesis Testing concerning General Symptomatic Index (GSI) in SCL-90

Group	SCL 90 - Pre	SCL 90 - Post	Mean-Dif	F	Sig./p	η^2
	Mean - SD	Mean - SD				
E	1,48 ± 0,49	1,01 ± 0,39	-,47	10,79	,008	,519
C	1,03 ± 0,44	1,02 ± 0,75	-,01			
Dif E*DifC				3,92	,065	,197

E=11, C=7

Hypothesis 3: Self-esteem

For hypothesis testing of self-esteem, Rosenberg self-esteem global scale as well as the Rosenberg self-esteem subscale is used.

The results of within-subject repeated measures ANOVA indicate that there is not a significant difference in the global self-esteem scale F(1,10)=,663, $p > .05$, in the treatment

group. Also in the self-esteem subscale there is no difference, F(1,10)=1,103, p > .05. Hypothesis 4a is not supported by these results.

Table 8

Results of the Hypothesis Testing on Self-Esteem

	Group	RSES Pre	RSES Post	Mean -Dif	F	Sig./p	η^2
		Mean - SD	Mean - SD				
Global Scale	E	,39 ± ,09	,37 ± ,08	,02	,663	,434	,062
	C	,38 ± ,06	,37 ± ,12	,01			
	Dif E * Dif C				,032	,861	,002
Self-Esteem subscale	E	,14 ± ,06	,12 ± ,07	,02	1,103	,318	,099
	C	,09 ± 03	,08 ± ,05	,01			
	Dif E * Dif C				,211	,652	,013

E=11, C=7

It is hypothesized that the self-esteem difference in the experimental group will be greater than the difference in the control group. The difference of global self-esteem results in the experimental group is ,02 and in the control group ,01. The F-value about the difference of the groups is ,032 with a p > .05. The result is not significant and hypothesis 4b is not supported. The self-esteem subscale differences are also compared and the result is not significant, with F(1,16)=,211, p > .05. Additionally, the differences in the other subscales of self-esteem scale are tested. As shown in Appendix H, there are no significant differences between the groups.

Hypothesis 4: Body Image

The results of within-subject repeated measures ANOVA indicate that there is not a significant difference in body image in the treatment group at the end of 8 weeks, with F(1,10)=2,92, p > .05. This result is not significant and fails to support hypothesis 4a.

Table 9

Results of the Hypothesis Testing concerning Body Image

Group	Body I. - Pre	Body I. - Post	Mean-Dif	F	Sig./p	η^2
	Mean - SD	Mean - SD				
E	2,92 ± ,20	3,15 ± ,19	,24	2,922	,118	,226
C	3,39 ± ,25	3,30 ± ,24	-,09			
Dif E*DifC				1,95	,181	,109

E=11, C=7

It is hypothesized that the body image difference within the experimental group will be greater than the difference in the control group. The difference of body image results in the experimental group is 0,24 and in the control group -0.09. The F-value about the difference of the groups is 1,95 with a p > .05. This result is not significant and fails to support hypothesis 4b.

5.3 Qualitative Observations

Coming here was motivating all of us...

A participant

In this part, feedback of participants and the behavioral observations, which are not evaluated quantitatively, will be discussed. The reports of participants about their weekly evaluation and their verbal reports in the sessions form the database in this part. The exercises

that the participants found useful are listed in the table below. Since the first meeting had a more cohesiveness-building function, the structured psycho-education began the second week and the weekly evaluation the 3rd week.

Table 11

Summary of the Written Feedback of Participants about the Exercises They found Useful

Week 3	Eating mindfully and tasting the food, Eating slowly, Eating sitting down
Week 4	Defining and overcoming craving, Getting used to exercise, Walking twice a week
Week 5	Making the food plan and eating on a regular basis, Monitoring the eating
Week 6	Weighing, Continuing the food plan and the exercise, Saying "it is ok not to eat"
Week 7	Not losing control at events, Resisting food pushers, Weighing
Final Evaluation	Reading regularly the advantage cards, Monitoring the eating, Being mindful about every bite of food, Getting aware of self-talks, Exercising, Saying "it is ok not to eat"

Participants supported their feedback with verbal sharing during the meetings. After mindfulness exercise, one participant said that "*one raisin has not been so tasty before*". The week after the exercise, when the participants were expected to eat mindfully and to monitor their eating, another participant said that she did not know she was snacking so much without even noticing it. Another participant declared how his awareness about the pacing influenced him: "*I was eating very fast. I learned to slow down*". Some participants also recognized that they eat very fast if they have a "crazy hunger" and first when they quiet this hunger they can eat mindfully. This awareness leads them to eat more regularly and not to hunger themselves too much.

From the second week on, some participants reported that they remembered the discussions every time they ate something. They were eager to report not only to the leader but also to the group which exercises worked for them and asked each other questions. Regarding the group dynamics, it is observed that the participants supported and gave each other advices. They motivated each other about doing exercise, quitting coke and setting boundaries. The group leader had to show from time to time extra effort, to convert the talk back to the psycho-educative topics of the week.

The emotional eating was another subject, where people discovered important connections. Participants mentioned that they do not want to eat because of anger and they want to be more in charge. They tried alternate ways to deal with different emotions, were eager to learn the 'relaxation methods' and demanded relaxation cd's from the group leader. One participant declared that "*I was getting angry very fast and eating then. Now, I feel much relaxed.*" The participants reported more positive emotions as they continued with the program.

In terms of commitment to exercises, the group showed high diversity, while some were like hardworking students trying to do every step and reporting it, others were more critical about the exercises. One participant declared that he made a plateau with his weight when he stopped his walking exercise. This declaration can be regarded a sign of self-monitoring.

One participant, who joined every session, mentioned at the end: "*I have not applied the tools. I should feel ready for that. Yet many things were useful. All the things we talked, all this helped not to ignore myself.*" With those words, the participant underlines that the function of such a meeting can have deeper meanings and she accentuates the readiness to initiate change. She also declared how her mother criticized her by saying "*you go every week*

to this meeting, did you lose weight?" These sharing can be regarded as an indication of the group-acceptance so that the participants can make sincere self-disclosures.

In general, different participants seem to profit from different exercises. General impression was that behavioral exercises were remembered more often than the cognitive exercises. However, among all different cognitive strategies the participants accentuated the usefulness of being able to say "*It is ok if I don't eat*" (Yemesem de olur). It is observed that the participants adopted the strategies independent of their educational level. A participant, who was hardly literate, was one of the most committed group members.

At the last two meetings, the participants declared their wish to continue the meetings and as one said "*You motivated us and did not leave us. I am very happy*". They accentuated how their motivation remained high through the meetings and had the wish to continue the meetings on a monthly basis. In this case, the arrangement of further meetings was not possible; however, this wish indicates the importance of a continuous support in terms of lifestyle change, as shown in various studies.

This feedback might convey valuable information since they reflect first hand experience and might give cues for future directions as they will be interpreted in the next part, the discussion.

6 Discussion

Interpretations of the results and alternative explanations -with support from previous research findings- will be discussed in this section. Furthermore, practical implications that are derived from these results will be another focus. The strengths, limitations and suggestions for future research will be the last topic of this discussion.

6. 1 Interpretation of the Results

The results of descriptive and inferential statistics will be discussed in this part.

6.1.1 Sample and Selection

Regarding the sample characteristics, the age, gender and occupation set a certain frame for the interpretations of the results. Namely, about 4/5 of the sample was women, about 3/4 of the sample above 40 years old and about 2/3 of the sample housewife or retired. So the results should be interpreted in this context, while the generalization to the whole population – males as gender, ages like childhood, adolescence and early adulthood, and people with higher levels of occupation – should be avoided.

This inequality regarding the gender reflects the higher obesity frequency in females compared with males in Turkey (Yumuk, 2005). This ratio might also be connected with the less frequent health-seeking behavior by men (Tudiver & Talbot, 1999). Turkish men might be less willing to go to a psychologist and join a psycho-education group for weight loss purposes. Also the timing of hospital visits and psycho-education makes the participation of employed people difficult who are mostly males in this segment of people.

The educational level of the sample is very mixed. While about 1/3 of the sample did only finish primary school, 1/5 of the sample consisted of university graduates. This divergence in education and very different intellectual levels of participants did not create a

conflict in the meetings and the participants were very supportive and interested regardless of this difference. However, among the three participants who dropped out, two of them were high-school and one of them was a university graduate. This raises a question whether the loss of interest is connected with the difference of educational and supposedly intellectual level with the majority of the group. It should also be mentioned that two of the three drop-out participants were working in the private sector and mentioned that they cannot leave work. Among the control group, such a relation is not observed.

The difference in drop-out can be interpreted that people loose their interest if they are not supported at regular intervals. It is known that the treatment length as well as the frequency of contact with the health-care staff effects the anticipation positively (Wadden & Ossei, 2001). The higher drop-out in control group indicates that patients' commitment might fade away – even if they have contracted – when the relationship is not nourished in time.

6.1.2 Weight loss

The BMI difference in the treatment group is about two points, while there is almost no change in BMI in the control group. These results support the hypothesis that the psycho-education was effective to help the participants to loose weight, while the subjects who only got food plan did not profited from this intervention in regard of weight loss. The significant difference between the groups shows that the continuous care for participants help them progress. This result objectifies what people told in the meetings, namely that they benefited from meetings in regard of their motivation and weight loss.

These results also support the findings of the two studies carried out in Turkey. In the study of Sertöz and Mete (2005) the participants in the intervention group had a BMI difference about two points at the end of 8 weeks. In the study of Alıcı and Pınar (2008) the participants in the psycho-education group have a BMI difference about three points at the

end of 12 weeks while there is no difference in the BMI of the control group that was consisted of 80 subjects.

The individual BMI changes within the intervention group ranges from 5 points decrease to 0,5 points increase. Those differences might be moderated by many variables such as motivation and readiness to change, family/social support and psychological wellbeing as well as biological factors. The elaboration of the moderating factors will be discussed below, where the suggestions for future research are made.

6.1.3 General Psychopathology

The results support the hypothesis about the decrease in psychological distress and psychological symptoms in the intervention group. However, if compared with the control group there is not a significant difference between the groups.

Participants gave very often the feedback how much they felt supported and how they valued the sharing in the group. None of them had psychotherapy experience before and two of them required after session-meeting to reveal some personal issues that were discussed briefly in a supportive way. Those observations indicate that such a psychological supportive environment and the initiation towards a healthier lifestyle might have contributed to a decrease in psychological distress in the intervention group.

In both groups, the mean values of General Symptomatic Index (GSI) before and after the intervention are between 1 and 1,50, which indicate low symptomatology. This result supports the research findings underlining that a generalization about the higher psychopathology in obese people cannot be made (Shaw et al., 2004).

The subscales of SCL-90 measure very different psychopathologies, which are somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation and psychoticism. Since the discriminative validity of those

subscales are questionable, they were not compared (Dağ, 1991). As discussed in the background section, previous research findings report significant decreases in particular psychopatologies such as depression, anxiety as well as in general psychopathology (Foster et al., 2004; Hession et al., 2006; Sertöz & Mete, 2005). In this case, the assessment might have been too heterogenous to evaluate specific changes in psychopathology. However, there is also no significant difference in the 'depressiveness' scale of RSES between the groups (See Appendix H).

6.1.4 Self-esteem

The results show that the self-esteem level of the participants is relatively high and did not change along the psycho-education. The hypothesis that the intervention influences the self-esteem of the participants positively is not supported accordingly. There might be different explanations for this result.

In this measurement, self-esteem is regarded as a global and one-dimensional construct (Rosenberg, 1965). However, as Lowry, Sallinen & Janicke (2007) mention self-esteem measurement can be widely discrepant across measures and it can contain multiple dimensions like "academic, physical, social, athletic, and behavioral" (p.1180). In their study carried out with children and adolescents, they show that multidimensional measures of self-esteem allow a more in-depth analysis about the relationship between self-esteem and weight status. It can be argumented that it could be more meaningful to examine specific dimensions of self-esteem.

Another explanation can regard the characteristics of the sample. All participants were referred by endocrinologists and most of them wanted to lose weight primarily because of doctors' advice and not because they were threatened by their outlook. It can be hypothesized

that obesity doesn't necessarily influence the self-esteem in a negative way in this segment of people. Accordingly, a change in self-esteem has also not developed due to treatment.

There are studies that show how self-esteem increases as people loose weight and change their eating habits. However, these interventions usually extend to longer periods. As an example, Foster et al. (2004) show significant improvements in self-esteem, quality of life and body image, while their intervention spreads to 40 weeks. Their program contains four phases and one phase is totally committed to improvements in self-esteem and body image. Again, this intervention might have been too short to evoke a meaningful difference in self-esteem.

6.1.5 Body Image

The results in body image show that there is no significant change either in the intervention group or in the control group at the end of 8 weeks. The mean value in both groups is about three points (meaning being *undetermined*), between one (meaning *I don't like it at all*) and five (meaning *I like it very much*). This result implicates that the participants evaluated their appearance neither positive nor negative in a constant fashion. This evaluation remained also constant in the intervention group, whose participants showed significant weight loss. One argument can concern the nature of the assessment tool, since the body image inventory refers to the evaluation of single body parts and functions and not to a coherent feeling about the body.

Another explanation could regard the nature of body image. An older study from the 60's, Stunkard and Mendelson (1967) mention that patients who had emotional difficult lives and whose obesity began prior to adult life need long-term psychotherapy. In this frame, the body image dissatisfaction is regarded as a manifestation of deeper conflicts and the negative view of body is not necessarily improved by those patients through weight reduction.

Foster, Wadden and Vogt (1997) show that the improvements in body image took place after 24 weeks of weight loss treatment, when a mean weight loss of about 19 kg was observed. In another shorter intervention study, Pınar and Alıcı (2008) observed a positive change in body image but not a significant change at the end of three months. So also in this parameter, the length of the intervention might have been too short for evoking a deeper change in body image. Also, the direct focus of the manipulation was not body image intervention and the body image of the participants was supposed to be influenced indirectly.

Foster et al. (2004) shows that increasing patients' satisfaction with the body weight helps improve the weight maintenance. So it can be meaningful to extend the program in that sense. Addressing and revealing body image concerns also help to promote the acceptance of a realistic body size and more reasonable expectations about weight loss (Foster & Matz, 2002, p. 411). Although there are no significant results concerning the body image in this study, body image seems to be a construct worth to consider as a treatment variable.

6.2 Practical Implications and Suggestions

The quantitative and qualitative results of this program indicate that such a psycho-education might have positive influence on the lives of people, may it be weight loss and other psychological profits. In this section, the results and the feedback of participants will be evaluated to derive practical implications and suggestions for future implementations of such group and individual meetings. The subjective experience of the group leader is also considered. The intervention modalities that could be used as they are, revised and new modalities that can be added will be discussed.

6.2.1 Exercises that are found useful

When the participants were asked about the exercises they found most useful, they mentioned that eating mindfully, slowly and in sitting position; exercising; having a food plan and tracking the food; resisting to food pushers and setting boundaries were the most important practices to them.

Participants also found to work on cognitions interesting. Getting aware of the sabotaging thoughts like "*Everyone is eating*", "*I am stressed*", "*I can begin tomorrow*" or "*It is a special occasion*" and replacing them with more functional ones helped them to actively change their thinking habits while trying to change their eating habits. Self-critical thoughts like "*I ate too much poğaça this morning. Why did I do this*?" were immediately recognized by the group leader and alternative approaches to the same event are generated in the group. It is observed that many participants tend to feel guilty about themselves and the vicious circle of negative emotions, negative self-image and un-controlled eating is frequently triggered. This fact shows the importance of acceptance and encouragement in the group atmosphere so that the participants can experience new interpersonal dynamics and internalize them. They meant that self-appraisals like "*Well done*", "*How beautiful to exercise*", "*I can resist so well*" or "*I am proud of myself*" have been useful to them. These sharing indicate that self-appreciation can be learned if wanted.

One participant mentioned her appreciation as she told "*It was like a journey to hope"* at the end of the intervention. Beyond all techniques and contextual discussions, a humanistic and non-judgmental group atmosphere helped to instill hope, a very precious trace.

6.2.2 Exercises that can be reconsidered

In the written feedbacks and at the end, the participants were asked what they found less useful and how they would improve the program. They found some exercises redundant.

In one exercise, they were supposed to leave food on the plate to get aware of their possible conditioning -to finish what is on plate- and to break it. However, they said that either they did not want to try it or they were disturbed by doing it. The Turkish saying "*Do not leave your food behind, then it cries*" is fitting in this picture, since the difficulty in this exercise might be due to the strong cultural conditioning about not wasting food. Another exercise was 'skipping once a lunch'. In this practice, the participants were expected to watch their hunger and stress level and to increase their tolerance for hunger. Many of participants avoided to skip the meal that might be connected with fear of hunger.

The other exercise that was problematic for many participants was to keep daily records of the amount and time of their eating. It is clear that it is a time-consuming and inconvenient procedure and many of participants told that they did this self-monitoring in their mind, and did not need to write it down. On the other hand, the ones who did this monitoring mentioned how helpful it was to confront the eating process. As Penick et al. (1971) describe it could have been useful to let each participant acknowledge and to convince them to keep those records. This exercise lies at the core of almost every behavioral program with the purpose of weight loss (Shaw et al., 2004) and the participants could have been motivated to do so. They might have been given empty books for self-monitoring; they could have been expected to share their records in the meetings and awarded in some creative ways.

6.2.3 What can be added?

Regarding the change in behaviors and attitudes of the participants, it can be hypothesized that they have been at the different stages of change (Prochaska & DiClemente, 1984). Some participants have been ambivalent about the exercises and were critical about trying new behaviors. They experimented with small changes without making the full commitment to the food plan and self-monitoring. Due to the transtheoretical approach of

Prochaska & DiClemente (1984), they can be regarded as being in the contemplation stage. On the other hand, about 3 to 4 participants were fully motivated to apply the interventions and these were also 'firing' less motivated ones. Considering the motivation and the readiness to change, the group was heterogeneous that enabled also fruitful discussions. This observation might lead to the conclusion that during the selection of participants for such groups, people with mixed motivational levels can be gathered into one group. However, it might be functional to have some very committed participants that could become role-models for others.

One participant, who was almost morbid obese and was referred by an endocrinologist, told in the first meeting that her weight does not disturb her. In the ongoing meetings, she also mentioned that she won't apply the exercises because she is not ready; however, she came to all meetings except for one. In the meetings, she shared emotional difficulties and relationship problems while she resisted many of the exercises. It can be concluded that she needed a more intense psychological support and loosing weight was secondary to her. At the very end, although her weight and other parameters did not change in the treatment, she mentioned that she gained many insights. In this case, although it is not observed that her resistance influenced the group atmosphere negatively, it could have been more efficient for her to work on other issues at first hand. This case sets forth the question if the interested people should be examined carefully and the 'ready' ones should be admitted to the group. The model about stages of change (Prochaska & DiClemente, 1984) can be used to examine the readiness of potential participants.

The psycho-education was led only by the psychologist who focused on the behavioral, cognitive and emotional aspects in lifestyle change. The participants, however, mentioned in-between their wish to get nutrition education and that their food plan could have been prescribed in terms of grams instead of spoons. Indeed, the program can be expanded

with nutritionists who could inform participants and revise their food plan. They can get different receipts and more coaching about food. Such collaboration would add value to this program.

Towards the end of the program, about half of the participants asked if it is not possible to arrange further meetings. They meant that it would help them to keep themselves in track. The end of the psycho-education might also have triggered worries about dealing with this issue alone and comments like "*I am afraid of becoming stressed and gaining weight*", "*I fear of going back to my old habits*" or "*I am worried about not losing weight and having further health problems*" were shared. The research findings from other studies also indicate the link of the treatment length with long-term treatment success (Wadden & Osei, 2001; Shaw & O'Rourke, 2004). Unfortunately, it was not possible to continue the meetings in this research design, although continuing the group meetings could have a relapse preventive function as the participants made it clear. These can be open to all people who went through this psycho-education.

As described in the background, there are many techniques and exercises derived from the CBT paradigm that compose the content of the program. However, the schedule can be expanded with different creative and insight-oriented activities to explore the relation to food, body and movement. For example, smooth physical exercises such as gentle yoga and regular relaxation practices can be a part of the meetings, through which participants can experience their body as a source of positive feelings. Also various exercises to work on body image can be added. Cash and Hrabosky (2003) show that CBT also offers efficacious treatment for body-image difficulties and the program can be extended with certain exercises. The individual function of food and weight can be explored in more detail so that participants see their deeper needs concealed as hunger. As Leach (2006) states "If the patient understands that her eating and weight gain are indications that something needs to be addressed in her

life, food and size become a useful indicator rather than the enemy"(p.22). He mentions that as long as food and fat are regarded as enemy, the patient will feel in the battle. In this picture, the participants can be encouraged to look beyond symptom-level. Also, the relational field between the participants can also be a stronger focus, where the participants' self-disclosures and feedbacks to each other can be encouraged. In future, those aspects can be added to utilize more resources in participants.

The strengths and the limitations of this study will be discussed in the next part.

6.3 Strengths & Limitations

The implementation of this group psycho-education was a valuable example of an interdisciplinary collaboration between the disciplines. It was an integrative process as the endocrinologists screened the patients first and referred them to the psycho-education after their medical evaluation. The researcher psychologist was active in the psychiatry department and collaborated with the endocrinology departments of two hospitals. In this context, the participants were in contact with the psychologist as well as with the dietician and endocrinologist, which might have had a positive effect on their commitment to the treatment and relationship with the hospital. This process can be regarded as a modest example of possible interdisciplinary work in hospitals. Such psycho-education can be applied in diverse problem areas, especially when patients need to change their behavior to cope better with the illnesses. The other strength of this study is the group approach, since it is cost-efficient and the participants get support from the group leader as well as from other group members. This psycho-education in this group format is applied for the first time in Turkey and has the potential to be implemented as a regular procedure in the treatment of obesity.

For a sound interpretation of the results, also the limitations and possible biases of the study should be acknowledged.

This is a goal-oriented group program and the purpose of the study is transparent to the participants and therapists. Thereby, it is not possible to eliminate the *social desirability bias* that might confluence the self-report answers of the participants. Since they are supposed to come to the sessions, to get involved with the program and eventually to lose weight, these expectations might lead them to over-report 'good' behavior and underreport 'bad' behavior. The physical measures, as objective criteria, are useful; however, the disclosures of behavioral, cognitive and emotional issues are of crucial importance to evaluate the program. Denial and shame are considered as underlying emotional issues in obesity, which can hinder the participants' true feedback and the level of compliance with treatment directives cannot ensured.

There was only one main clinical psychologist, who accompanied the participants during the whole intervention, made the observations, gathered the results and evaluated those because of the limitations in the resources. This may lead to *detection bias*, as the outcome assessor will not be blind to the intervention and will be part of every step of the process. Additionally, this was the therapist's first group experience regarding the program that might have influenced the quality of the management of group dynamics.

The sample of the study represents a certain population that restricts the external validity. The participants have been mainly women; they were from a relatively low socioeconomic level and most of them had a low educational level. Those characteristics of the sample group refer to a *selection bias* that will restrict the external validity of the results. Also, from all the obese patients that were invited to the study, about 3/5 joined the program. This subgroup may be at another 'stage of change' (Prochaska & DiClemente, 1984) in regard of the treatment which might have effected outcome variables yet remained un-assessed.

Another restriction for external validity is that such a service has a certain price in real-life settings that usually increases motivation. In this research frame, there was no cost

for participants except the time they took. This might have had an effect on the commitment of participants to meetings and exercises and restrict the generalization of the results to the other populations.

Additionally, the internal validity should be questioned. The participants' just involvement, the group variables, participant-therapist relationship might be examples of other factors that influence the results independent of the content of the program. Therefore, causality cannot be referred from the outcomes.

The sample size was already limited and the high drop-out rate, especially in control group, made the statistical comparisons questionable. One of the reasons of drop-out might be the length of the tests, since the accomplishment of all tests took very long by some participants. This might have led to boredom so participants did not want to come back to the second meeting.

This study continued 8 weeks. To be realistic, this is a very limited period of time for a ground evaluation of such a psycho-educative program and only short-term effects can be examined via this design. Relapse prevention, further group meetings and follow-up studies are necessary to initiate and test if there is a sustained change in weight loss and diverse parameters. 8 weeks can only be the beginning of adopting new habits. As Shaw et al. (1989) state, more frequent clinical contact or longer duration of intervention increases the effectiveness of the treatment. The importance about the intensity of the intervention should not be disregarded in the interpretation of the results.

Moreover, the CBT-approach, as the chosen paradigm of intervention, can be viewed as a limitation of this study. The main intention in this intervention was to support the participants to create alternative ways in thinking, talking, eating and exercising. In this picture, the program targets the symptom cure, not leading every participant to explore deeper conflicts about themselves. It can be argued that this symptom cannot be resolved through

such a packaged program in the long term and even if the symptom goes away another symptom would pop up unless the person becomes really transformed. In that sense, the psychological depth of this approach might be limited for working at deeper layers and reaching a sustained solution for weight loss, as the whole literature about this topic indicates.

6.4 Suggestions for future research

In this study, participants profited from the intervention at different levels. The variables that are expected to moderate this difference can be included into the research design. The participants' basic motivations, social support, stage of change, binge eating habits, personality variables, intellectual level are examples of potential moderating variables. That way, better procedure for matching client to treatment can be applied.

The evaluation of self-efficacy could be another important moderating factor as well as a dependent variable. Self-efficacy refers to the person's belief about her or his capability to achieve the desired change and the participants reported many events indicating the change in their self-efficacy along the intervention. Level of self-efficacy as well as the positive change in self-efficacy could have a predictive value in such interventions.

The sharing of participants gives the general impression that the effect of such a group psycho-education can hardly be evaluated via scales. The immediate experiences and expressions could be of great explorative value to generate more effective interventions. Accordingly, qualitative data analysis such as content analysis can be used in further evaluations.

Longitudinal studies that expand not only to months but to years are necessary to examine the sustained effect of such interventions.

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Appendix A

GENEL BİLGİLER

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1. **Adınız:** _____ **Soyadınız:** _____

2. **Yaşınız:** _____

3. **Cinsiyetiniz**: Kadın ☐ Erkek ☐

4. **Medeni durumunuz:** Bekâr ☐ Evli ☐ Boşanmış ☐ Dul ☐

5. **Aşağıdakilerden hangisi mesleğinizi /uğraşınızı en iyi şekilde tanımlar?**

   Ev hanımı ☐ Emekli ☐ Memur ☐ Özel Sektör ☐ Öğrenci ☐ İşsiz ☐

6. **Aşağıdakilerden hangisi sosyoekonomik statünüzü en iyi şekilde tanımlar?**

   Alt ☐ Alt-orta ☐ Orta ☐ Üst-orta ☐ Üst ☐

7. **Aşağıdakilerden hangisi eğitim düzeyinizi en iyi şekilde tanımlar?**

   ☐ Okuryazar ama okul bitirmedi

   ☐ İlkokul

   ☐ Ortaokul

   ☐ Lise

   ☐ Üniversite

   ☐ Yüksek lisans/doktora

<u>İletişim Bilgileri</u>

Telefon – ev: _____ **cep**: _____

E-mail: _____

Adres: _____

Acil durumlarda aranabilecek kişi ve telefonu:_____

Appendix B

BİLGİLENDİRİLMİŞ ONAY FORMU - A

Sayın Katılımcı,

İstanbul Bilgi Üniversitesi Klinik Psikoloji Yüksek Lisans Programı kapsamında yürütmekte olduğum "Beslenme Davranışını Düzenleme Hedefli Grup Psikoeğitiminin Etkinlik Çalışması" konusundaki yüksek lisans tezime ilgi gösterdiğiniz için teşekkür ederim. Bu çalışma, beslenme davranışları konusunda farkındalık geliştirme, farklı düşünme ve yeni davranışlar edinmeniz amacıyla uygulanmaktadır.

Bugün yaptığımız bireysel görüşmenin ardından 8 hafta boyunca, haftada bir kez 90 dakika olmak üzere grup toplantılarında size eşlik edeceğim. 8 haftanın başında ve sonunda, günlük yaşantınız ve kendinizle ilişkinizle ilgili farklı soruların bulunduğu ölçekleri doldurmanızı rica edeceğim. Bununla beraber haftalık toplantılarımızın başında size değerlendirme soruları yöneltilecektir. Size sorulan tüm sorulara samimi olarak cevap vermeniz değerlendirmeyi daha geçerli kılacaktır. Çalışmada kimlik bilgileriniz hiçbir şekilde açıklanmayacaktır. Çalışmaya 8 hafta boyunca devam etmeniz önemlidir, ancak zorunlu değildir. Bu çalışmaya katılım ücretsizdir.

Çalışmaya yönelik ayrıntılı bilgi almak isterseniz, berilyardimci@student.bilgi.edu.tr adresine e-posta yoluyla sorularınızı ulaştırabilirsiniz veya 0533 938 36 38 numarasını arayabilirsiniz. Çalışmaya göstermiş olduğunuz ilgi için teşekkür ederim.

Psikolog Beril Yardımcı

Çalışmaya katılmayı kabul ediyorum.

Ad - Soyad: _____

…… / …… / 2010

İmza

Appendix C

BİLGİLENDİRİLMİŞ ONAY FORMU - B

Sayın Katılımcı,

İstanbul Bilgi Üniversitesi Klinik Psikoloji Yüksek Lisans Programı kapsamında yürütmekte olduğum "Beslenme Davranışını Düzenleme Hedefli Grup Psikoeğitiminin Etkinlik Çalışması" konusundaki yüksek lisans tezime ilgi gösterdiğiniz için teşekkür ederim. Bu çalışma, beslenme davranışları konusunda farkındalık geliştirme, farklı düşünme ve yeni davranışlar edinmeniz amacıyla uygulanmaktadır.

Bugün yaptığımız bireysel görüşmenin ardından 8 hafta boyunca size verilen diyet listesini uyguladıktan sonra sizi 2. görüşmeye davet edeceğim. Bu görüşmenin ardından 8 hafta boyunca haftada bir kez 90 dakika olmak üzere grup toplantılarında size eşlik edeceğim. 8 haftanın başında ve sonunda, günlük yaşantınız ve kendinizle ilişkinizle ilgili farklı soruların bulunduğu ölçekleri doldurmanızı rica edeceğim. Bununla beraber haftalık toplantılarımızın başında size değerlendirme soruları yöneltilecektir. Size sorulan tüm sorulara samimi olarak cevap vermeniz değerlendirmeyi daha geçerli kılacaktır. Çalışmada kimlik bilgileriniz hiçbir şekilde açıklanmayacaktır. Çalışmaya devamlılık önemlidir, ancak zorunlu değildir. Bu çalışmaya katılım ücretsizdir.

Çalışmaya yönelik ayrıntılı bilgi almak isterseniz, berilyardimci@student.bilgi.edu.tr adresine e-posta yoluyla sorularınızı ulaştırabilirsiniz veya 0533 938 36 38 numarasını arayabilirsiniz. Çalışmaya göstermiş olduğunuz ilgi için teşekkür ederim.

Psikolog Beril Yardımcı

Çalışmaya katılmayı kabul ediyorum.

Ad - Soyad: _____

…… / …… / 2010

İmza

Appendix D

SCL 90-R PSİKOLOJİK BELİRTİ TARAMA LİSTESİ

Aşağıda zaman zaman herkeste olabilecek yakınmaların ve sorunların bir listesi vardır. Lütfen her birini dikkatle okuyunuz. Sonra bu durumun bu gün de dâhil olmak üzere **son üç ay** içerisinde sizi **ne ölçüde** huzursuz ve tedirgin ettiğini gösterilen şekilde numaralandırarak boşluk bırakılan yere yazınız.

Hiç: 0 Çok az: 1 Orta derecede: 2 Oldukça fazla: 3 İleri derecede: 4

1. ____Baş ağrısı
2. ____Sinirlilik ya da içinin titremesi
3. ____Zihinden atamadığınız tekrarlayan, hoşa gitmeyen düşünceler
4. ____Baygınlık ya da baş dönmesi
5. ____Cinsel arzu ve ilginin kaybı
6. ____Başkaları tarafından eleştirilme duygusu
7. ____Herhangi bir kimsenin düşüncelerinizi kontrol edebileceği fikri
8. ____Sorunlarınızdan pek çoğu için başkalarının suçlanması gerektiği duygusu
9. ____Olayları anımsamada güçlük
10. ___Dikkatsizlik ya da sakarlıkla ilgili düşünceler
11. ___Kolayca gücenme, rahatsız olma hissi
12. ___Göğüs ya da kalp bölgesinde ağrılar
13. ___Caddelerde veya açık alanlarda korku hissi
14. ___Enerjinizde azalma veya yavaşlama hali
15. ___Yaşamınızın sonlanması düşünceleri
16. ___Başka kişilerin duymadıkları sesleri duyma
17. ___Titreme

18. ___Çoğu kişiye güvenilmemesi gerektiği hissi

19. ___İştah azalması

20. ___Kolayca ağlama

21. ___Karşı cinsten kişilerle utangaçlık ve rahatsızlık hissi

22. ___Tuzağa düşürülmüş veya yakalanmış olma hissi

23. ___Bir neden olmaksızın aniden korkuya kapılma

24. ___Kontrol edilemeyen öfke patlamaları

25. ___Evden dışarı yalnız çıkma korkusu

26. ___Olanlar için kendisini suçlama

27. ___Belin alt kısmında ağrılar

28. ___İşlerin yapılmasında erteleme duygusu

29. ___Yalnızlık hissi

30. ___Karamsarlık hissi

31. ___Her şey için çok fazla endişe duyma

32. ___Her şeye karşı ilgisizlik hali

33. ___Korku hissi

34. ___Duygularınızın kolayca incitilebilmesi hali

35. ___Diğer insanların sizin özel düşüncelerinizi bilmesi

36. ___Başkalarının sizi anlamadığı veya hissedemeyeceği duygusu

37. ___Başkalarının sizi sevmediği ya da dostça olmayan davranışlar gösterdiği hissi

38. ___İşlerin doğru yapıldığından emin olmak için çok yavaş yapmak

39. ___Kalbin çok hızlı çarpması

40. ___Bulantı ve midede rahatsızlık hissi

41. ___Kendini başkalarından aşağı görme

42. ___Adale (kas) ağrıları

43. ___Başkalarının sizi gözlediği veya hakkınızda konuştuğu hissi

44. ___Uykuya dalmada güçlük

45. ___Yaptığınız işleri bir ya da birkaç kez kontrol etme

46. ___Karar vermede güçlük

47. ___Otobüs, tren, metro gibi araçlarla yolculuk etme korkusu

48. ___Nefes almada güçlük

49. ___Soğuk veya sıcak basması

50. ___Sizi korkutan belirli uğraş, yer veya nesnelerden kaçınma durumu

51. ___Hiç bir şey düşünmeme hali

52. ___Bedeninizin bazı kısımlarında uyuşma, karıncalanma olması

53. ___Boğazınıza bir yumru takınmış hissi

54. ___Gelecek konusunda ümitsizlik

55. ___Düşüncelerinizi bir konuya yoğunlaştırmada güçlük

56. ___Bedeninizin çeşitli kısımlarında zayıflık hissi

57. ___Gerginlik veya coşku hissi

58. ___Kol ve bacaklarda ağırlık hissi. Aşırı yemek yeme

59. ___Ölüm ya da ölme düşünceleri

60. ___Aşırı yemek yeme

61. ___İnsanlar size baktığı veya hakkınızda konuştuğu zaman rahatsızlık duyma

62. ___Size ait olmayan düşüncelere sahip olma

63. ___Bir başkasına vurmak, zarar vermek, yaralamak dürtülerinin olması

64. ___Sabahın erken saatlerinde uyanma

65. ___Yıkanma, sayma, dokunma, gibi bazı hareketleri yineleme hali

66. ___Uykuda huzursuzluk, rahat uyuyamama

67. ___Bazı şeyleri kırıp dökme hissi

68. ___Başkalarının paylaşıp kabul etmediği inanç ve düşüncelerin olması

69. ___Başkalarının yanında kendini çok sıkılgan hissetme

70. ___Çarşı, sinema gibi kalabalık yerlerde rahatsızlık hissi

71. ___Her şeyin bir yük gibi görünmesi

72. ___Dehşet ve panik nöbetleri

73. ___Toplum içinde yer, içerken huzursuzluk hissi

74. ___Sık sık tartışmaya girme

75. ___Yalnız bırakıldığınızda sinirlilik hali

76. ___Başkalarının sizi başarılarınız için yeterince takdir etmediği duygusu

77. ___Başkalarıyla birlikte olunan durumlarda bile yalnızlık hissetme

78. ___Yerinizde duramayacak ölçüde rahatsızlık hissetme

79. ___Değersizlik duygusu

80. ___Size kötü bir şey olacakmış hissi

81. ___Bağırma ya da eşyaları fırlatma

82. ___Topluluk içinde bayılacağınız korkusu

83. ___Eğer izin verirseniz insanların sizi sömüreceği duygusu

84. ___Cinsiyet konusunda sizi çok rahatsız eden düşüncelerin olması

85. ___Günahlarınızdan dolayı cezalandırılmanız gerektiği düşüncesi

86. ___Korkutucu türden düşünce ve hayaller

87. ___Bedeninizde ciddi bir rahatsızlık olduğu düşüncesi

88. ___Başka bir kişiye karşı asla yakınlık duymama

89. ___Suçluluk duygusu

90. ___Aklınızda bir bozukluğun olduğu düşüncesi

TEST BURADA BİTMİŞTİR. CEVAPLADIĞINIZ İÇİN TEŞEKKÜR EDERİZ.

Appendix E

BEDEN ALGISI ÖLÇEĞİ

Bedeninizin aşağıda adı geçen yerlerini nasıl bulduğunuzu samimi bir şekilde cevaplayınız.

	Hiç Beğenmiyorum	Pek Beğenmiyorum	Kararsızım	Oldukça Beğeniyorum	Çok Beğeniyorum
Saçlarım					
Yüzümün rengi					
İştahım					
Ellerim					
Vücudumdaki kıl dağılımı					
Burnum					
Fiziksel gücüm					
İdrar – dışkı düzenim					
Kas kuvvetim					
Belim					
Enerji düzeyim					
Sırtım					
Kulaklarım					
Yaşım					
Çenem					
Vücut yapım					

Profilim					
Boyum					
Duyularımın keskinliği					
Ağrıya dayanıklılığım					
Omuzlarımın genişliği					
Kollarım					
Göğüslerim					
Gözlerinim şekli					
Sindirim sistemim					
Kalçalarım					
Bacaklarım					
Dişlerimin şekli					
Cinsel gücüm					
Ayaklarım					
Uyku düzenim					
Sesim					
Sağlığım					
Cinsel faaliyetlerim					
Dizlerim					

Vücudumun duruş şekli					
Yüzümün şekli					
Kilom					
Cinsel organlarım					
Hastalığa direncim					

Appendix F

ROSENBERG ÖLÇEĞİ

Aşağıdaki yorumların size uygunluğunu samimi bir şekilde değerlendiriniz.

1. Kendimi en az diğer insanlar kadar değerli buluyorum.

a. ÇOK DOĞRU b. DOĞRU c. YANLIŞ d. ÇOK YANLIŞ

2. Bazı olumlu özelliklerim olduğunu düşünüyorum.

a. ÇOK DOĞRU b. DOĞRU c. YANLIŞ d. ÇOK YANLIŞ

3. Genelde kendimi başarısız bir kişi olarak görme eğilimindeyim.

a. ÇOK DOĞRU b. DOĞRU c. YANLIŞ d. ÇOK YANLIŞ

4. Ben de diğer insanların birçoğunun yapabildiği kadar birşeyler yapabilirim.

a. ÇOK DOĞRU b. DOĞRU c. YANLIŞ d. ÇOK YANLIŞ

5. Kendimde gurur duyacak fazla birşey bulamıyorum.

a. ÇOK DOĞRU b. DOĞRU c. YANLIŞ d. ÇOK YANLIŞ

6. Kendime karşı olumlu bir tutum içindeyim.

a. ÇOK DOĞRU b. DOĞRU c. YANLIŞ d. ÇOK YANLIŞ

7. Genel olarak kendimden memnunum.

a. ÇOK DOĞRU b. DOĞRU c. YANLIŞ d. ÇOK YANLIŞ

8. Kendime karşı daha fazla saygı duyabilmeyi isterdim.

a. ÇOK DOĞRU b. DOĞRU c. YANLIŞ d. ÇOK YANLIŞ

9. Bazen kesinlikle kendimin bir işe yaramadığını düşünüyorum.

a. ÇOK DOĞRU b. DOĞRU c. YANLIŞ d. ÇOK YANLIŞ

10. Bazen kendimin hiç de yeterli bir insan olmadığımı düşünüyorum.

a. ÇOK DOĞRU b. DOĞRU c. YANLIŞ d. ÇOK YANLIŞ

11. Kendiniz hakkındaki düşünceleriniz değişkenlik gösterir mi, yoksa her zaman aynı mıdır ?

a.ÇOK DEĞİŞİR b.ZAMAN ZAMAN DEĞİŞİR c.ÇOK AZ DEĞİŞİR d.HİÇ DEĞİŞMEZ

12. Hiç kendiniz hakkında bir gün bir görüşe, başka bir gün farklı bir görüşe sahip olduğunuzu farkettiğiniz olur mu **?**

a. Evet, sık sık olur b. Evet, bazen olur c. Evet, nadiren olur d. Hayır, hiç olmaz

13. Kendim hakkındaki görüşlerimin **çok çabuk** değiştiğini farkettim.

a. DOĞRU b. YANLIŞ

14. Kendim hakkında bazı günler olumlu bazı günlerse olumsuz düşüncelere sahip oluyorum.

a. DOĞRU b. YANLIŞ

15. Şu günlerde kendim hakkındaki görüşlerimi hiç birşeyin değiştiremeyeceğini düşünüyorum.

a. DOĞRU b. YANLIŞ

16. Başınıza gerçekten bir şey geldiğinde kimse sizin durumunuzla pek ilgilenmeyecektir.

a. DOĞRU b. YANLIŞ

17. İnsan doğasında yardımlaşma gerçekten vardır.

a. DOĞRU b. YANLIŞ

18. Dikkatli davranmazsanız insanlar sizi kullanacaklardır.

a. DOĞRU b. YANLIŞ

19. Bazı kişiler, insanların büyük çoğunluğunun güvenilebilir olduğunu, bazıları ise insanlarla ilişkilerinde çok güvenilemeyeceğini söylerler. Siz bu konuda ne düşünüyorsunuz ?

a. İnsanların çoğuna güvenilebilir.

b. İnsanlarla ilişkilerde çok güvenilemez.

20. İnsanlar daha çok başkalarına yardım etmeye mi, yoksa kendi çıkarlarını düşünmeye mi eğilimlidirler ?

a. Başkalarına yardım etmeye

b. Kendi çıkarlarını düşünmeye

21. Eleştiriye karşı ne kadar hassassınızdır ?

a. Çok fazla hassas b. Oldukça hassas c. Az hassas d. Hassas değil

22. Eleştiri ya da azarlama beni çok fazla incitir.

a. DOĞRU b. YANLIŞ

23. Yanlış yaptığınız bir şey için biri size güldüğünde veya suçladığında ne kadar rahatsız olursunuz ?

a. Çok fazla b. Oldukça c. Rahatsız olmam

24. Genelde ne kadar mutlusunuzdur ?

a. Çok mutlu b. Mutlu c. Pek mutlu değil d. Çok mutsuz

25. Genelde oldukça mutlu bir kişi olduğumu düşünüyorum.

a. DOĞRU b. YANLIŞ

26. Genel olarak kendinizi neşeli bir ruh hali içinde mi, yoksa neşesiz bir ruh hali içinde mi hissedersiniz ?

a. Çok neşeli bir ruh hali içinde b. Oldukça neşeli bir ruh hali içinde

c. Ne neşeli ne de neşesiz ruh halinde d. Oldukça neşesiz ruh halinde

27. Hayattan çok zevk alıyorum.

a. DOĞRU b. YANLIŞ

28. Ben de mutlu gördüğüm diğer kişiler kadar mutlu olabilmeyi isterdim.

a. DOĞRU b. YANLIŞ

29. Kendinizi kederli ve karamsar hissettiğiniz olur mu ?

a. Çok sık b. Sık c. Ara sıra d. Nadiren e. Hiçbir zaman

30. Çoğu zaman başka bir şey yapmaktansa oturup hayal kurmayı tercih ediyorum.

a. DOĞRU b. YANLIŞ

31. Bana hayalperest denilebilir.

a. DOĞRU b. YANLIŞ

32. Zamanımın büyük bir kısmını hayal kurmakla geçiririm.

a. DOĞRU b. YANLIŞ

33. Gelecekte nasıl bir insan olacağınız konusunda hayal kurar mısınız ?

a. Çok sık b. Bazen c. Nadiren d. Hiçbir zaman

34. Hiç uykuya dalma ya da uykunun sürekliliği açısından sorununuz oldu mu ?

a. Sık sık b. Bazen c. Nadiren d. Hiçbir zaman

35. Hiç ellerinizin sizi rahatsız edecek kadar titrediği olur mu ?

a. Sık sık b. Bazen c. Nadiren d. Hiçbir zaman

36. Hiç sizi rahatsız edecek kadar sinirlendiğiniz olur mu ?

a. Sık sık b. Bazen c. Nadiren d. Hiçbir zaman

37. Hiç sizi rahatsız edecek kadar çarpıntı hissettiğiniz olur mu ?

a. Sık sık b. Bazen c. Nadiren d. Hiçbir zaman

38. Hiç sizi rahatsız edecek kadar başınızın içinde basınç hissettiğiniz olur mu ?

a. Sık sık b. Bazen c. Nadiren d. Hiçbir zaman

39. Şu sıralarda hiç tırnak yiyor musunuz ?

a. Sık sık b. Bazen c. Nadiren d. Hiçbir zaman

40. Egzersiz veya çalışma zamanları dışında hiç sizi rahatsız edecek kadar nefes darlığı hissettiğiniz olur mu ?

a. Sık sık b. Bazen c. Nadiren d. Hiçbir zaman

41. Hiç sizi rahatsız edecek kadar ellerinizde terleme olur mu ?

a. Sık sık b. Bazen c. Nadiren d. Hiçbir zaman

42. Hiç rahatsız edici baş ağrıları çeker misiniz ?

a. Sık sık b. Bazen c. Nadiren d. Hiçbir zaman

43. Hiç rahatsız edici kabuslar görür müsünüz ?

a. Sık sık b. Bazen c. Nadiren d. Hiçbir zaman

44. Ulusal veya uluslar arası önemli bir konuda görüşünüzü belirttiğinizde birisi size gülerse ne hissedersiniz ?

a. Çok incinirim ve rahatsız olurum. b. Biraz incinirim ve rahatsız olurum.

c. Beni pek fazla etkilemez.

45. Ulusal veya uluslar arası sorunlar tartışıldığında genellikle kötü izlenim bırakacak bir şey söylemektense hiçbir şey söylememeyi tercih ederim.

a. DOĞRU b. YANLIŞ

46. Toplumsal konularla ilgili tartışmalarda insanları kızdıracak bir şey söylemektense hiçbir şey söylememeyi tercih ederim.

a. DOĞRU b. YANLIŞ

47. Uluslar arası konuları tartışır mısınız ?

a. Pek çok b. Oldukça c. Çok az d. Hiçbir zaman

48. Arkadaşlarınızla birlikte uluslar arası konuları tartıştığınız zaman tutumunuz nasıl olur ?

a. Sadece dinlerim b. Arada bir görüş bildiririm

c. Konuşmaya eşit oranda katılırım d. Diğerlerini ikna etmeye çalışırım

49. Siz 10 – 11 yaşlarınızdayken **anneniz** arkadaşlarınızı tanır mıydı ?

a. Hepsini tanırdı b. Çoğunu tanırdı

c. Bazılarını tanırdı d. Hemen hemen hiçbirini tanımazdı

50. Bu dönemde **babanız** arkadaşlarınızı tanır mıydı ?

a. Hepsini tanırdı b. Çoğunu tanırdı

c. Bazılarını tanırdı d. Hemen hemen hiçbirini tanımazdı

51. 5. – 6. sınıflardayken karneniz **iyi** olduğunda **anneniz** çoğu zaman ilgilenmezdi.

a. DOĞRU b. YANLIŞ

52. 5. – 6. sınıflardayken karneniz **iyi** olduğunda **babanız** çoğu zaman ilgilenmezdi.

a. DOĞRU b. YANLIŞ

53. 5. – 6. sınıflardayken karneniz **kötü** olduğunda **anneniz** çoğu zaman ilgilenmezdi.

a. DOĞRU b. YANLIŞ

54. 5. – 6. sınıflardayken karneniz **kötü** olduğunda **babanız** çoğu zaman ilgilenmezdi.

a. DOĞRU b. YANLIŞ

55. Sizce diğer aile bireyleri sizin söylediğiniz şeylerle ne kadar ilgilenirler ?

a. Çok ilgilenirler b. Oldukça ilgilenirler c. İlgilenmezler

56. Büyümekte olduğunuz dönemde babanızın en çok tuttuğu çocuğu kimdi ?

a. Ben b. Ağabeyim c. Ablam d. Erkek kardeşim

e. Kız kardeşim f. Bildiğim kadarıyla çok tuttuğu birisi yoktu

57. Bu dönemde babanız arkadaşlarınızı tanır mıydı ?

a. Hepsini tanırdı b. Çoğunu tanırdı

c. Bazılarını tanırdı d. Hiçbirini tanımazdı

58. Anne ve babanızın hangisi ile daha rahat konuşabiliyorsunuz ?

a. Babamla çok daha fazla b. Babamla biraz daha fazla

c. Her ikisi ile eşit oranda d. Annemle biraz daha fazla

e. Annemle çok daha fazla

59. Anne ve babanızın hangisi sizi daha çok över ?

a. Babam çok daha fazla b. Babam biraz daha fazla

c. Her ikisi eşit oranda d. Annem biraz daha fazla

e. Annem çok daha fazla

60. Anne ve babanızın hangisi size daha çok şefkat gösterir ?

a. Babam çok daha fazla b. Babam biraz daha fazla

c. Her ikisi eşit oranda d. Annem biraz daha fazla

e. Annem çok daha fazla

61. Anne ve babanız anlaşamadıkları zaman siz genellikle hangisinden yana olursunuz ?

a. Çok daha fazla olarak babamdan yana b. Biraz fazla olarak babamdan yana

c. Eşit oranda her ikisinden yana d. Biraz fazla olarak annemden yana

e. Çok daha fazla olarak annemden yana

62. Yalnız bir insan olmaya eğilimli misinizdir ?

a. Evet b. Hayır

63. İnsanların çoğu sizin nasıl bir kişi olduğunuzu bilirler mi, yoksa çoğunun sizi gerçekten tanımadıklarını mı düşünürsünüz ?

a. Çoğu benim nasıl biri olduğumu bilir.

b. Çoğu gerçekten beni tanımaz.

Appendix G

Haftalık Değerlendirme Formu

Merhaba,

Toplantıya başlamadan önce geçtiğimiz haftanın uygulamalarına yönelik birkaç soru sormak istiyorum. Lütfen samimi bir şekilde cevaplayın.

Çalışma kâğıtlarını **okudunuz** mu?

□ Evet □ Hayır □ Kısmen (en az 3 gün)

Cevabınız 'evet' ise, **her gün** mü yoksa **toplu** bir şekilde mi okudunuz?

□ Bir defada okudum. □ Her gün okudum. □ Birkaç defada okudum.

Çalışma kâğıtlarını **doldurdunuz** mu?

□ Hayır □ Evet □ Kısmen (en az 3 gün)

Cevabınız 'evet' ise, **her gün** mü yoksa **toplu** bir şekilde mi doldurdunuz?

□ Her gün doldurdum. □ Bir defada doldurdum. □ Birkaç defada doldurdum

Uygulamaları gerçekleştirdiniz mi?

□ Kısmen (en az 3 gün) □ Evet □ Hayır

Haftanın en önemli bulduğunuz uygulaması neydi? Sebebini açıklar mısınız?

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Haftanın gereksiz bulduğunuz uygulaması oldu mu? Neden gereksiz bulduğunuzu açıklar mısınız?_____

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Sorunuz, yorumunuz veya benimle görüşme isteğiniz var mı?

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Appendix H

Results about the Intergroup Differences in the Rosenberg Self-Esteem Subscales

Rosenberg Subscales	Group	Mean of differences ± SD	F	Sig./p	eta^2
1 Self-esteem	E	,0247 ± ,07807	,211	,652	,013
	C	,0089 ± ,05855			
2 Continuity of the concept of self	E	-,0545 ± ,18091	2,830	,112	,150
	C	,0857 ± ,15736			
3 Interpersonal Trust	E	,0182 ± ,0000	,052	,823	,003
	C	,18878 ± ,11547			
4 Sensitivity to criticism	E	,1212 ± ,37335	,162	,693	,010
	C	,1905 ± ,32530			
5 Depressivenes	E	,0303 ± ,17979	,005	,947	,000
	C	,0238 ± ,22420			
6 Daydreaming	E	,0303 ± ,40530	,002	,968	,000
	C	,0238 ± ,15749			
7 Psychosomatic Symptoms	E	,1455 ± ,29787	1,125	,305	,066
	C	,0000 ± ,25820			
8 Threat expectancy in relationships	E	,0000± ,47140	1,771	,203	,106
	C	-,2778 ± ,25092			
9 Participation in discussions	E	,0000 ± ,22361	,335	,571	,022
	C	-,0833 ± ,37639			
10 Parental Care	E	,0260 ± ,21963	,654	,431	,042

	C	,1429 ± ,38333			
11 Relationship with father	E	-,0455 ± ,15076	,050	,826	,003
	C	-,0278 ± ,16387			
12 Psychological isolation	E	-,0455 ± ,26968	,673	,425	,043
	C	,0833 ± ,37639			