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**OBESITY AND ITS PSYCHOLOGICAL CORRELATES:
APPEARANCE-ESTEEM, SELF-ESTEEM AND LONELINESS**

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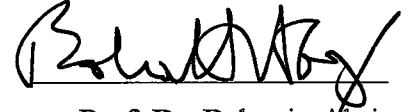
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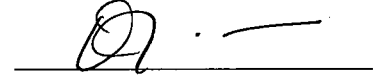
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ABSTRACT

OBESITY AND ITS PSYCHOLOGICAL CORRELATES: APPEARANCE-ESTEEM, SELF-ESTEEM AND LONELINESS

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The relationship of obesity with self-esteem, appearance-esteem and loneliness were examined in an accidentally selected sample of 482 users of different parks. Rosenberg Self-esteem Scale, Appearance-esteem Scale and UCLA Loneliness Scale were used as data collection instruments. Obesity was assessed by Body Mass Index (BMI) developed from reported weights and heights. All the predicting variables of the study were found to be moderately correlated with each other. Obese individuals got significantly lower scores than the individuals in other weight categories on the appearance-esteem and self-esteem scales, whereas they got significantly higher scores than the individuals in other weight categories on the loneliness scale. Obese females got lower appearance-esteem scores than obese males, whereas for the underweight category, males got lower appearance-esteem scores than females. Moreover, hierarchical regression analysis indicated that there is a linear relationship between all the variables of the study; (a) loneliness was partially explained by appearance-esteem and self-esteem (b) self-esteem was partially explained by appearance-esteem and BMI category (c) appearance-esteem was partially explained by BMI category and sex.

Keywords: Obesity, Appearance-esteem, Self-esteem, Loneliness

ÖZ

ŞİŞMANLIK VE İLİŞKİLİ OLDUĞU PSİKOLOJİK DEĞİŞKENLER: GÖRÜNÜŞE İLİŞKİN ÖZ DEĞER, ÖZ DEĞER VE YALNIZLIK

Şebnem Kartal

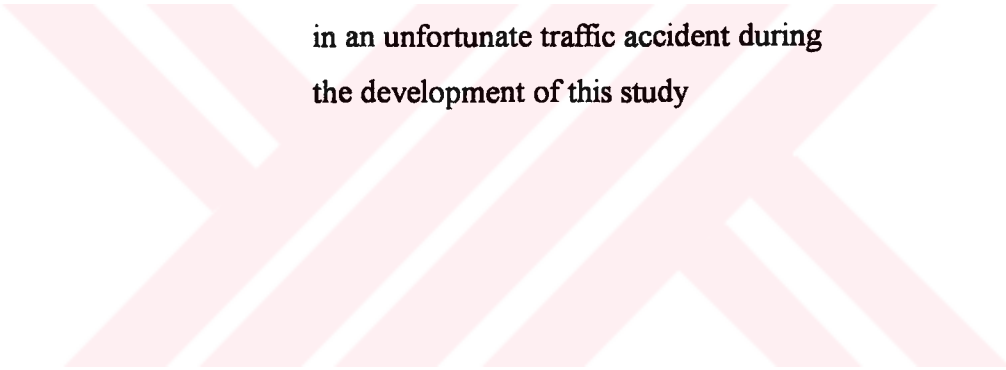
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Şişmanlığın öz değer, görünüşe ilişkin öz değer ve yalnızlıkla ilişkisi farklı parklardan rastgele seçilen 482 kişi üzerinde incelenmiştir. Rosenberg Öz Değer Ölçeği, Görünüşe İlişkin Öz Değer Ölçeği ve UCLA Yalnızlık Ölçeği veri toplama araçları olarak kullanılmıştır. Şişmanlık deneklerden elde edilen kilo ve boy tanımlamalarına göre geliştirilmiş olan Beden Kitle İndeksi (BKİ) ile değerlendirilmiştir. Çalışmanın bütün yordayıcı değişkenleri birbirleriyle ilişkili bulunmuştur. Şişmanlar görünüşe ilişkin öz değer ve öz değer ölçeklerinden diğer kilo kategorilerindeki kişilerden anlamlı olarak daha düşük puanlar almışlar, yalnızlık ölçeğinden ise diğer kilo kategorilerindeki kişilerden anlamlı olarak daha yüksek puanlar almışlardır. Şişman kadınlar şişman erkeklerden daha düşük görünüşe ilişkin öz değer puanı almalarına rağmen, zayıf kategoride erkekler kadınlardan daha düşük görünüşe ilişkin öz değer puanı almışlardır. Bunun yanında, hiyerarşik regresyon analizi çalışmanın bütün değişkenleri arasında doğrusal bir ilişki olduğunu göstermektedir; (a) yalnızlık, görünüşe ilişkin öz değer ve öz değer ile (b) öz değer, görünüşe ilişkin öz değer ve BKİ ile (c) görünüşe ilişkin öz değer ise, BKİ ve cinsiyet ile kısmen açıklanmıştır.

Anahtar Kelimeler: Şişmanlık, Görünüşe İlişkin Öz değer, Öz değer, Yalnızlık



To the memory of my father whom I've lost
in an unfortunate traffic accident during
the development of this study

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CHAPTER 1

INTRODUCTION

Research suggested that obesity associates with various psychological problems as well physical ones (Brownell, 1982; Smith & Cogswell, 1994; Baysal, 1983; Stewart & Brook, 1983; Koray & Pekcan, 1985). The psychological problems seem to originate from negative attitudes and beliefs prevalent in societies about obesity (e.g. Harris, Waschull, & Walters, 1990, 1991; Jasper & Klassen, 1990; Bagley et al., 1989; Pauley, 1988; Karris, 1977). Although obesity and its psychological correlates have received considerable attention in western literature, research on the issue in Turkish society has been very rare and limited in scope. The objective of the present study is to investigate the relationship of obesity with self-esteem, appearance-esteem and loneliness. In the following sections, these concepts and related research are discussed in some detail. Hypotheses of the study are delayed till the end of the chapter.

1.1 DEFINITION OF OBESITY

Obesity is a “bodily condition marked by excessive generalized deposition and storage of fat” (Foreyt, 1977; page 19) that emerges as a result of a permanent lack of energy homeostasis. The energy imbalance may originate from four main reasons a) overeating b) insufficient amount of physical activity c) psychological problems d) hormonal problems (Baysal, 1983). Permanent treatment of this condition has a poor long-term success rate; almost any overweight person can lose weight, but few can keep it off (Foreyt, 1977; Harris, Waschull, & Walters, 1990; Rodin, 1981). Rodin (1981) identified a variety of factors that serve to maintain and

enhance obesity once it has developed. One of these factors is the change in fat cells and body chemistry; the larger a fat cell gets, the greater its capacity to store fat and become still larger (Baysal et al., 1988; Rodin, 1981). Another factor is the effect of obesity in altering the level of energy expenditure by affecting the basal metabolism of the body; as the amount of fat tissue increases in the body, rate of the basal metabolism decreases, thus the level of energy expenditure decreases. Basal metabolism also decreases during food deprivation, so dieting itself decreases the basal metabolism and thus slows down the overall level of energy expenditure (Rodin, 1981).

The literature on obesity employs another term "overweight". These two terms are usually used interchangeably, although they're not interchangeable. Body weight is made up of a number of components; fat, muscle and bone. Weight is "relative heaviness" and is made up of the three components above, so one may be overweight or underweight as a result of his or her musculature or body structure as well as the amount of fat stored in his or her body (Foreyt, 1977). Overweight is simply overheaviness and does not only imply fatness, whereas obesity directly implies overfatness or excessive storage of fat (Foreyt, 1977; page 19-20; Baysal et al., 1988; page 128; Simopoulos, 1985).

The inability to make a difference between these two terms may pose problems in assessing obesity. One of the most commonly used assessment device is standard height-weight tables based either on the average weight per height, age and sex or on the ideal, desirable weights; both of these standards are indexes of overweight and underweight but not of obesity and fatness (Leon & Roth, 1977; Foreyt, 1977; Baysal et al., 1988). Nevertheless, there is no universal agreement on the degree of overweight which constitutes a criterion of obesity. In respect to this issue, Leon & Roth (1977) have reported that most of the studies they reviewed used the criterion as the weight which is 15 % above the ideal weight. Some others defined obesity as weight that is at least 20 % above standard "ideal" weights (Rothblum, 1989), whereas another group considered 10 % excess weight as the limit of normality (Foreyt, 1977).

1.1.1 Assessment of Obesity

Although there are a variety of ways to assess obesity, the most commonly used measures are; a) Standard height-weight tables, b) Body-Mass Index, c) Skinfold thickness measures. These measures are discussed in the following paragraphs.

1.1.1.1 Standard Height-Weight Tables

Standard height-weight tables measure actual weight in relation to a selected average or desirable weight for age, sex and height, and are usually employed by life insurance companies (Foreyt, 1977; Baysal et al., 1988; Leon & Roth, 1977). The most frequently used standard height-weight table in the United States is the “Desirable Weights for Men & Women” published by the Metropolitan Life Insurance Company (Rothblum, 1989). They are based on the concept that when one ceases the maximum growth in height there is no biological need to gain weight anymore (Foreyt, 1977). The table has been highly criticized since it was prepared by taking life insurance applicants as reference (in 1959) who were predominantly white men living in the Eastern United States and who were members of the middle and upper socioeconomic classes (Rothblum, 1989; Drewnowski & Garn, 1987).

Another well-known standard height-weight table is the “Average Weight Tables” for men and women between the ages of 15 and 69 which was used in the 1959 Build and Blood Pressure Study of the Society of Actuaries; it describes the adolescent and adult population in the United States and includes individuals in all weight categories, even those who are markedly overweight (Foreyt, 1977). However, the use of height-weight tables as a measure of obesity may not be appropriate since they employ overall weight rather than only fat (Leon & Roth, 1977; Foreyt, 1977; Baysal et al., 1988).

1.1.1.2 Body-Mass Index (BMI)

Body-Mass Index (Powers, 1980) has been accepted as the most valid index to measure obesity by means of height and weight values (Baysal et al., 1988). The origin of BMI goes back to Adolph Quetelet's (1833) observation on the dimensional relationship between body mass and stature in adults (Ross et al. 1988). Body-Mass Index is the most preferred assessment device of obesity since it is easy to use and highly correlated with body weight and lowly correlated with height (Baysal et al., 1988; Rothblum, 1989). In Ross et al.'s (1988) study which consisted a sample of 12282 men and 6593 women aged between 20 and 70 years, the BMI was found to be highly correlated with weight (0.81-0.87) and minimally correlated with height (0.01 - 0.19), satisfying the conditions for its use as a stature-dissociated index in accordance with the expectation from Quetelet's observation.

The Body-Mass Index is calculated as weight divided by square of height (w/h^2). The normal average value of BMI is 22 for men and 21 for women and the range for "normal" is between 20 and 25. Values below 20 are classified as "underweight" and values above 25 are classified as "overweight" (Baysal et al., 1988).

1.1.1.3 Skinfold Thickness Measures

Skinfold thickness is measured by pressing a skinfold clipper on certain selected areas on the body. It can be measured either by the triceps skinfold measure which is measured midway at the back of the upper right arm flexed at 90° or by the subscapular skinfold measure which measured just below the angle of the right scapula (shoulder and arm relaxed), with the fold picked up in a line slightly inclined in the natural cleavage of the skin (Foreyt, 1977). If skinfold is thicker than one inch (2,54 cm), it implies excessive body fatness, but if it is thinner than one-half inch, it indicates abnormal thinness, indicating that the skinfold is of double thickness, one-

half to one inch (Jolliffe, 1963; cited in Foreyt, 1977). Both triceps skinfold measures and subscapular skinfold measures are recommended by the Nutritional Anthropometry Committee as good indexes to measure body fatness (Baysal et al., 1988).

Skinfold measures are not very commonly used since they seem to be complicated and time-consuming, although they are thought to be the most accurate measures which directly assess body fat rather than body weight (Foreyt, 1977; Rothblum, 1989; Leon & Roth, 1977). Opposing views were also voiced arguing that skinfold thickness measures are not able to assess total body fat, since only certain parts of the body are measured by these devices and there is much individual variation in the pattern of fat distribution among individuals (Keys et al., 1973; cited in Leon & Roth, 1977).

1.2 PHYSICAL, SOCIAL AND PSYCHOLOGICAL CONSEQUENCES OF OBESITY

Obesity has been found to be associated with various problems of physical health as well as important psychological and social consequences (Brownell, 1982; Smith & Cogswell, 1994; Baysal, 1983; Stewart & Brook, 1983; Koray & Pekcan, 1985). Most societies seem to have strong biases against obesity, preparing the way for psychological and social problems for obese people. In the next sections, first medical research related to obesity will be presented very briefly, and then negative attitudes toward obesity and psychological consequences originating from these negative attitudes will be discussed.

1.2.1 Physical Consequences of Obesity

Medical research has focused on the relationship between obesity and the prevalence of various chronic diseases and health conditions such as diabetismellitus,

hypertension, chronic heart disease, carbohydrate intolerance, hyperlipidemia, cholesterol metabolic and endocrinological complications, dermatological infections and functional disturbances in blood vessels, kidneys and pancreas (Baysal, 1983; Koray & Pekcan, 1985; Stewart & Brook, 1983; Tekok, 1988). For example, data from Framingham Heart Study indicated that obesity was a significant independent predictor of cardiovascular disease (Simopoulos, 1985). Also, a publication of American Cancer Society emphasized the link between obesity and the risks of cancers of the uterus, gallbladder, breast and colon.

Stewart & Brook (1983), in their review of 21 studies have found that being severely overweight is clearly associated with premature mortality, although being moderately overweight may not be an important risk factor for this outcome. Also, in their study based on cross sectional data from a general population of 5817 people aged 14 to 61, Stewart and Brook (1983) found that being overweight is associated with poorer functional status which refers to the performance (or the capacity to perform) of a variety of physical activities and with considerable pain, worry and restricted activity because of this bodily condition. General Health Perception has also found to become poorer as weight increased.

1.2.2 Social Consequences of Obesity

The social and psychological consequences of obesity are no less important than the physical ones. Research indicates that obese people are perceived negatively. The negativity of attitudes toward obesity has well been documented (Harris, Waschull, & Walters, 1990, 1991; Belizzi, Klassen, & Bellonax, 1989; Karris, 1977; Jasper & Klassen, 1990, 1990*; Bagley et al., 1989; Pauley, 1988; Brink, 1988; Lawson, 1980). For example, obese people were less preferred as renters (Karris, 1977) and experienced longer response latencies from salespersons than their thinner counterparts (Pauley, 1988). Discrimination against obese takes place even in health care settings; Bagley et al.'s (1989) and Maroney & Golub's (1992) studies revealed that nurses had negative attitudes toward obese patients.

Research indicates that there is also discrimination against obese in work life. Obese are discriminated against in hiring, payment, and acceptability for certain positions. Brink (1988), for example, asked subjects to evaluate six candidates on a 1-to-10 job acceptability scale for a position as psychology professor. No significant discrimination has been found as to sex, age, race, marital status and number of children, whereas significant discrimination has been found as to weight. Obese candidates were evaluated as less acceptable for such a position. In a second experiment, subjects were asked to evaluate a sales worker for promotion on a 1-to-10-point scale. Similarly, the worker thought to be obese was rated with much lower promotion prospects as compared to the worker thought to be nonobese.

Another study indicating job discrimination against obese was conducted by Belizzi, Klassen, & Bellonax (1989). Research participants were given a personnel record of a sales trainee and asked to make a sales territory assignment decision. Participants were described the three vacant territories and were told to assign the trainee to one of the territories. The results revealed that a sales recruit described as extremely overweight was less likely to be assigned to an important or desirable sales territory and more likely to be assigned to an undesirable territory or not selected at all for an assignment within a sales region. Furthermore, the researchers also found that overweight sales women were discriminated against more than overweight salesmen.

In a recent study, Jasper and Klassen (1990)^a examined the attitudes toward obese and nonobese salespersons. In this study, subjects were instructed to read an "employee's summary sheet" including the information of body sizes. Then, subjects were asked two questions concerning the salesperson (employee) about whom they read. First, they were asked how much they desired to work with the salesperson, then they were asked how effective they thought the salesperson would be in selling them a product they desired to buy. Data suggested that subjects were less enthusiastic to work with obese salespersons and that they thought obese salespersons would be less effective in selling products than nonobese salespersons.

Using the same research procedure as mentioned above, similar results were reported in another study by Jasper & Klassen (1990)^b. Subjects were found to be less eager to work with an obese salesperson than with a nonobese one. After responding to the first question, subjects were informed about the purpose of the study and were asked to give “free descriptions” of what they believe are typical characteristics of obese people. The researchers then calculated the frequency with which a single trait was freely offered as descriptive of obese people. The researchers categorized the various traits that were similar to each other. The 7 traits representative of a group of traits are unkempt, lazy, lack of self-discipline, lack of self-care, insecure, unhealthy and jolly. Among these traits, the trait “unkempt” was most frequently cited as typical of obese men whereas “insecure” was most frequently cited as a characteristic of obese women. Another study by Harris, Walters, and Waschull (1991) exemplified the traits stereotypically associated with obese. In this study overweight men and women were described as lazy, sexless, ugly, self-indulgent, sloppy, less admirable, less attractive, less energetic, less neat.

The stigma of being obese may be the most debilitating among all the conditions for which a person may be stigmatized including religious affiliation, physical handicaps, sexual preference and racial and ethnic group membership (Allon, 1982; cited in Crocker, Cornwell, & Major, 1993). This stigma of being obese may be a result of the belief that obese are personally responsible for their condition (Jasper & Klassen, 1990^b; Clayson & Klassen, 1989; Harris & Smith, 1982), although evidence suggests that people have a biological set point determining their weight regardless of what they eat (Nisbett, 1972; cited in Rodin, 1981) and that metabolic, endocrine and genetic factors are the causes of obesity (Hamburger, 1951; cited in Rothblum, 1989). Rothblum (1989) shares the idea that there are a lot of misbeliefs about obesity and argues that several beliefs about weight are myths, including the beliefs that obese people consume more calories than nonobese and that dieting is an effective way to reduce weight.

The perception of obesity as being under a person's own control was exemplified by several studies. For example, Harris & Smith (1982) asked 447 subjects if they knew anyone fat, what the causes of obesity are and whose fault it is if a person is fat? Results indicated that older subjects as compared to younger ones were more likely to know people who are fat and to give complex causal explanations for obesity. Moreover, adults were less likely than children to see the fat individual as responsible for his/her obesity. Responses to the second question "What are the causes of obesity " were classified into four general categories; Physical/Medical Reasons (8%), Eating Habits (54%), Emotional/Psychological Reasons including lack of will power (6%), and Other Reasons (33%). For the third question, a majority of the respondents said it was the fat person's Own Fault (55%), followed by Nobody's Fault (15%). Other responses and their percentages to this question were "It depends" (10%), "Don't know" (9%), "Own & parent's fault" (4%), "Parent's fault" (3%), "Other reasons" (2%), "Cultural and environmental reasons"(1%), "God's fault" (0.7%), "Other people's fault" (0.7%), and "Medical/biological causes" (0.5%).

In another study, Clayson & Klassen (1989) were interested if obesity stereotype related to hair color stereotype and if people held similar beliefs about the cause of obesity and having a certain hair color. Results indicated that nonobese persons were seen as significantly more attractive than obese persons, regardless of sex and/or hair color. No significant interaction was found between the two stereotypes, implying that obesity stereotype which is perceived as being under a person's own control may be evaluated differently than hair color stereotype which is not accepted as a matter of personal choice.

Gender and socio-cultural differences play an important role in mediating obesity-related effects. Thus, in the following paragraphs related literature on these concepts is presented and the literature on psychological consequences of obesity will be delayed after this section.

1.2.2.1 Gender Differences

Research findings demonstrate that obese women are more negatively viewed than obese men by the society (Belizzi, Klassen, & Bellonax, 1989; Jasper & Klassen, 1990^a, 1990^b; Harris, Walters, & Waschull, 1991). Therefore, women indicate greater concern of obesity and weight (Harris, Walters, & Waschull, 1991; Pliner, Chaiken, & Flett, 1990; Wendel & Lester, 1988) and greater desire for thinness than men (Harris, Waschull, & Walters, 1990; Brodie, Slade and Riley, 1991; Jasper & Klassen, 1990^a, 1990^b; Zellner, Harner, & Adler, 1989; Thompson & Thompson, 1986; Fallon & Rozin, 1985). The higher degree of concern over weight and body by females may be the reasons why “the diets for being thin” mostly take place in the pages of newspapers and magazines designed predominantly for women readers (Koray & Pekcan, 1985).

1.2.2.2 Social, Cultural and Economical Factors

Throughout history, societal preference of the human body shape varied and the current fashion of the thin physique has not a very long history; in the former times endomorphy was valued and fat was considered fashionable (Polivy & Herman, 1987; Rothblum, 1989), but in 1960s and 1970s a shift has appeared in the idealized body shape from the thickness toward thinness at least in most western societies (Garner et al., 1980; Polivy & Herman, 1987). Garner et al. (1980), for example, reported a significant decrease in weight over 20 years (1959-1978) in Playboy Centerfolds and Miss America Pageant Contestants.

What accounts for this historical shift? A variety of reasons may account for this shift in body weight and shape. First of all, fatness has begun to be associated with poor health and premature mortality whereas thinness has become associated with health and long life (Tekok, 1988; Stewart & Brook, 1983; Rothblum, 1989; Koray & Pekcan, 1985; Simopoulos, 1985). Secondly, thinness became associated

with various desired traits as power, self-control (Polivy & Herman, 1987 & Garner et al., 1980), competency, worth (Staffieri, 1967) and attractiveness (Harris, Walters, & Waschull, 1991). Third and as a last reason, thinness has become a standard of beauty (Pliner, Chaiken & Flett, 1990; Polivy & Herman, 1987; Rothblum, 1989).

“The ideal body shape” and the stigmatization associated with obesity varies according to social, cultural and economical factors; upper class women value thinness more than their lower class counterparts (Garner et al., 1980), blacks value thinness less than whites and they characterize obese people with less many negative attributes than whites (Thomas, 1988; Harris, Walters, & Waschull, 1991) and thinness is valued and preferred more in Western and developed countries than in developing ones (Rothblum, 1989).

Harris, Walters, & Waschull (1991) indicated that both gender and culture should be considered in discussing people’s attitudes toward obesity. Their findings suggested that although blacks were heavier than whites, they were more satisfied with their body shape, black males personally considered overweight women to be more attractive, sexier, less ugly and less sloppy than did white males and black males were less likely than white males to have refused to date fat women of their weight. The data in Harris, Walters & Waschull (1991) study also suggested that black females are less likely to suffer from the psychological stigmatization associated with being overweight than white women. Other findings of this study indicated that compared with female subjects, males were more concerned about a date’s weight and white women’s weight was negatively related to their likelihood and frequency of dating.

Not only the attitudes toward obesity, but also the prevalence of it depends upon societal and cultural factors and socioeconomic status. Drewnowski & Garn (1987) analyzed the NHANES I data (National Health & Nutrition Examination Surveys; 1971-1974) which had been published by NCHS (National Center for Health Statistics). Results of these analyses suggested that black women were demonstrably much heavier than white women at all ages and socioeconomic status

had effects on body weight; low-income women were heavier than high-income women and this discrepancy became more pronounced as the age of the subjects increased.

Another study by Rand & Kuldau (1990) resulted in similar findings. Both white women and men were less overweight than black women and men, and the prevalence rates of obesity were generally lowest among the youngest age group (18-24) with an increase in the prevalence of obesity in the age groups from 25 to 64 and a decreased prevalence in the oldest two age groups (65-74 and 75+). Also, an inverse relationship between obesity and SES was observed among women which was stronger among white women than it was among black women, whereas the prevalence rates of obesity for white and black men were not related to SES.

The inverse relationship between SES and obesity was also investigated in the Turkish society (Kocaoğlu and Köksal, 1985). The data of this study yielded results confirming the ones in western literature. The researchers assessed various factors such as socioeconomic status, pattern of nutrition, age and sex. Two adolescent groups from two different SES populations were employed. One group (high SES group) of subjects were from the “Ankara College” which is a private high school and the second group (low SES group) of subjects were from “Çubuk Junior High School” which is a public junior high school in a semi-urban area. Major differences between the two groups of adolescents were observed in respect to parental education and income levels of the families. Results of this study demonstrated that children of high SES were found to be more active physically than children from low SES. This finding supported other research findings reported by Arslan (1985) and Sağlam (1989). Kocaoğlu and Köksal (1985) also reported differences between the two SES groups on the type of diet practiced. Children from high SES were found to be consuming a varied diet rich in animal proteins and fats, whereas children from low SES were found to be consuming mainly cereals, sugar and vegetables with insignificant amounts of dairy products. The subjects in the high SES group were significantly taller than the lower SES group. Finally, in this study, about 16 percent of the subjects in the high SES group were classified as overweight employing

Baldwin-Wood weight for height tables whereas this percentage was 22.5 in the low SES group. Insufficient protein intake and high levels of carbohydrate and sugar consumption among the low SES group might have resulted in shortness and overweight in this group.

In a more recent study, Açıktürk & Wetherill (1991) obtained results implying that SES has impact upon physical development and growth rates of Turkish children. For the assessment of socio-economic status several factors were used, such as parent's education, occupation and family size. Results indicated that the mean height measurements and the means for arm circumferences and triceps skinfold thickness of Turkish children were below the NCHS (National Center for Health Statistics) standards. However, weights of children were found to be normal in respect to their heights. Also, positive correlations between SES and physical development and growth indexes were found.

1.2.3 Psychological Consequences of Obesity

As it has been reviewed in "Social Consequences of Obesity" section, research suggests considerable amounts of stigmatization against obese (Harris, Waschull, & Walters, 1990, 1991; Belizzi, Klassen, & Bellonax, 1989; Karris, 1977; Jasper & Klassen, 1990^a, 1990^b; Bagley et al., 1989; Pauley, 1988; Brink, 1988; Lawson, 1980). Interestingly, obese share the negative stereotypes and wrong beliefs of the general population and blame themselves for their condition and feel responsible and guilty (Harris, Waschull, & Walters, 1990; Harris, Walters, & Waschull, 1991). Research suggests that negative attitudes toward obese prevalent in the society and the negative feelings about self resulting from these attitudes may interfere with the maintenance of psychological health (Crocker, Cornwell & Major, 1993; Schumaker et al., 1985; Miller et al., 1990; Lawson, 1980; Martin et al., 1988; Staffieri, 1967; Brownell, 1982; Smith & Cogswell, 1994). In the following sections, literature on self-esteem, appearance-esteem and loneliness will be discussed in relation to obesity.

1.2.3.1 Obesity, Self-esteem and Body-esteem

Psychologists generally define self-esteem as an evaluative judgment of one's own worth (Fleming & Watts, 1980; Fleming & Courtney, 1984; Sweeney & Zions, 1989; Battle, 1978; Melnick & Mookerjee, 1991; Ziller et al., 1969). It is difficult to distinguish self-esteem from other related constructs such as self-love, self-confidence, self-respect, self-acceptance, self-satisfaction, self-regard & self-concept. These terms are so intertwined and overlapping in literature that they are sometimes used interchangeably (Wylie, 1961; Fleming & Courtney, 1984). Although the definitions of these self-constructs and the distinction between them is beyond the scope of this paper, it seems important to emphasize the difference between self-esteem and self-concept. Self-concept is a general concept which includes pure self-descriptions and subsumes self-esteem, whereas self-esteem is the construct implying judgment and evaluation of the self (Wylie, 1961; Fleming & Watts, 1980; Fleming & Courtney, 1984; Sweeney & Zions, 1989; Battle, 1978; Melnick Mookerjee, 1991; Ziller et al., 1969).

The distinction between self-esteem and self-concept is also apparent in the measurement of these two concepts. Most self-concept scales do seem to measure self-identity including mere self-descriptions (e.g. Fitt's [1965] Tennessee Self-Concept Scale and Piers-Harris Children's Self-Concept Scale), whereas self-esteem scales contain items that are concerned primarily with the evaluation of self-worth (e.g. Coopersmith's [1967] Self-Esteem Inventory and Rosenberg's [1965] Self-Esteem Scale) (Fleming & Courtney, 1984).

According to self-theorists self-evaluation emerges largely within a social frame of reference (James, 1948, cited in Wylie, 1961; Ziller et al., 1969; Glauser, 1984). According to this definition of self-esteem, if the social environment changes, a corresponding change in self-esteem may be anticipated. Also, the person's response to the social environment is a function of self-esteem. Self-esteem mediates social stimuli and response (Social Stimuli - Self-esteem - Response).

Thus, self is conceptualized as both a cause and effect of social behavior; a) self-evaluation is a product of social interaction and b) self-evaluation forms the basis for social behavior. Self-esteem changes in accordance to the changes in social environment and the response to social stimulus takes place on the basis of its relevance and meaning to self-esteem (Glauser, 1984; Ziller et al., 1969). High self-esteem is associated with social acceptance, individuals who had positive experiences with others develop positive self-impressions and evaluate themselves positively. On the other hand, individuals who have negative communications with and are rejected or ignored by others evaluate themselves negatively (Glauser, 1984; Ziller et al., 1969).

Shavelson, Hubner & Stanton (1976) brought a somewhat different perspective and stated that self-esteem is a multidimensional hierarchical construct that organizes specific components which are related to each other in a complex way. The global self-esteem which refers to an overall evaluation of self is at the apex of this hierarchy and depends on several secondary dimensions that refer to several self-evaluations in narrowly defined domains (Pliner, Chaiken, & Flett, 1990; Fleming & Courtney, 1984; Fleming & Watts, 1980; Melnick & Mookerjee, 1991; O'Brien, 1985). The components of global self-esteem can differ in their centrality across individuals, and a dimension's centrality determines its impact on global self-esteem; those dimensions that are central to the individual have more weight in determining overall self-esteem (Rosenberg, 1979; cited in Pliner, Chaiken & Flett, 1990). For example, if it is assumed that physical appearance is a domain of central importance to women, the relation between physical attractiveness and global self-esteem should be greater for females than for males.

If self-esteem is a multidimensional construct, then one of the specific domains that contributes to its valuation is body-esteem (i.e. physical self-esteem) (Melnick & Mookerjee, 1991; Pliner, Chaiken, & Flett, 1990; Lerner et al., 1980; Staffieri, 1967; Sweeney & Zions, 1989; Silberstein et al., 1988; Mendelson & White, 1985). Allport (1965) stated that the first aspect of self-evaluation to emerge was a sense of physical self which would continue to have a significant

developmental influence throughout life (Thornton & Ryckman, 1991). Physical self-esteem defined as an individual's attitude, evaluation and feeling about his/her body (Fisher & Cleveland, 1968; cited in Mendelson & White, 1985) is divided into two specific components; physical effectiveness (i.e. physical abilities) and physical attractiveness (i.e. physical appearance) (Fleming & Courtney, 1984; Pliner, Chaiken, & Flett, 1990).

Erikson (1968) and McCandless (1970) suggested that the female's evaluations about herself should relate to her attitudes about her body as a physically attractive interpersonal stimulus, whereas a male's self-esteem should be related to his attitudes about his body as a physically effective instrumental stimulus (Lerner, Orlos & Knapp, 1976; Thornton & Ryckman, 1991; Lerner et al., 1980).

Lerner, Orlos, & Knapp (1976) have investigated the role of various body attitudes in predicting the self-concepts of late adolescents. Subjects rated four body characteristics and were asked to report how physically attractive and effective they assumed these parts of their bodies were. Another scale was used to assess self-concept, comprised of 16 bipolar dimensions. The results indicated that the females' self-concepts were based more on "interpersonal" physical attractiveness than "individual" physical effectiveness, while male's self-concepts were based more on "individual" physical effectiveness than "interpersonal" physical attractiveness.

Using the same 16-item self-concept and 24-item attractiveness and effectiveness scales as Lerner, Orlos, & Knapp (1976) did, Lerner et al. (1980) found a positive relationship between self-esteem and physical attractiveness and physical effectiveness for both sex groups, but as opposed to Lerner, Orlos, & Knapp's (1976) findings no sex differences were reported between physical attractiveness and physical effectiveness in relation to self-esteems of subjects who were Japanese adolescents.

Consistent with the finding of Lerner et al. (1980), in a more recent study Thornton & Ryckman (1991) found that attractiveness and effectiveness did not

appear to be differentially important to self-esteem of male and female adolescents. The authors suggested that this result reflects the changes occurring in sex-role expectations and socialization. According to the authors, the traditional sex-role socialization which fosters the development of personal strength and physical efficacy among males whereas the interpersonal and social abilities based on physical attractiveness among females (McCandless, 1970 & Erikson, 1968 cited in Lerner, Orlos, & Knapp, 1976, Lerner et al., 1980; Thornton & Ryckman, 1991) is altered and social and educational changes have occurred to increase the focus on physical fitness for females.

Research studying the influence of attractiveness and effectiveness on self-esteem of males and females has been restricted to late adolescence (e.g. Lerner, Karabenick, & Stuart, 1973; Lerner Orlos, & Knapp, 1976; Lerner et al., 1980; Thornton & Ryckman, 1991), few researchers have examined these relationships at other ages. One of these few researchers is Pliner, Chaiken, & Flett, (1990) who examined a set of variables including concern with eating, body-weight, physical attractiveness, physical self-esteem and global self-esteem in a sample of subjects consisting of 639 visitors to a participatory science museum. The subjects' ages ranged from 10 to 79 years. Results indicated that a) females were more concerned about eating, body-weight and physical attractiveness than males, b) males scored higher on physical self-esteem than females, and c) global self-esteem and physical self-esteem were strongly related for both sexes. Since this relationship was of particular interest for these researchers, they examined the data more closely to see whether there were gender differences for various age groups. They performed a moderated multiple regression predicting global self-esteem from physical self-esteem, gender, age and their product. The results revealed that gender and age did not moderate the relationship between the two self-esteem measures. Another multiple regression analysis was done to determine whether the relation between physical self-esteem and global self-esteem is moderated by physical attractiveness. The results indicated that the importance of physical attractiveness moderates the relation between global self-esteem and physical self-esteem in women whereas it has no effect in men. As opposed to Thornton & Ryckman's (1991) and Lerner et al.

(1980)'s findings, the last finding of Pliner, Chaiken, & Flett, (1990) confirmed the traditional sex-role expectations as did Lerner, Orlos, & Knapp (1976) and Lerner, Karabenick, & Stuart (1973)'s data; physical attractiveness appeared to be more important to self-esteem of females than of males.

In addition to these findings, physically attractive persons of both sexes were rated as having more positive self-concepts than unattractive persons by raters (Hobfoll & Penner, 1978), physical attractiveness correlated significantly with happiness for both males and females, but the correlation was higher for women than it was for men, and satisfaction with the body was a moderate predictor of self-esteem for both groups, but this positive relationship was more pronounced for females than it was for males (Feingold, 1984).

McCauley, Mintz, & Glenn (1988) examined the relationship between body-satisfaction and self-esteem. The researchers hypothesized that there would be a relationship between body satisfaction and self-esteem and that this relationship would be stronger for women than it would be for men. Body Cathexis Scale (BCS) consisting of a list of 16 body parts was used to assess body-satisfaction and Janis-Field Feeling of Inadequacy Scale (JPIS) was used to assess self-esteem. A positive relationship between body-satisfaction and self-esteem was found for both women and men, and the correlation's of the two sex groups were not significantly different from each other. The second hypotheses of the researchers was that there would be a sex difference with regard to body satisfaction, with women expressing greater dissatisfaction. According to the results, women expressed greater dissatisfaction than men within every weight category except for the slightly underweight group, where men expressed more dissatisfaction. The third hypotheses was that there would be a sex difference with regard to body perception. It was hypothesized that women would be more likely to have distorted body perception, seeing themselves as larger than their actual size. Results revealed that both groups had body distortions with regard to their perceived size, however the patterns of distortion for men and women differed. Women perceived themselves more overweight than they were actually, whereas men perceived themselves more underweight than they were

actually. Another measure of body perception was the difference between actual body weight and ideal body weight. Men in underweight and normal weight groups wanted to gain weight, whereas women in both groups wanted to lose weight. And within the slightly overweight category, men wanted to lose an average of 5.5 lbs, and women wanted to lose an average of 24 lbs.

Another study which noted a positive relation between body satisfaction and self-esteem was conducted by Silberstein et al. (1988). Forty-five female and 47 male undergraduate students participated in this study for course credit. Three different measures were used to assess body-esteem which were Body Size Drawings (Fallon & Rozin, 1985), Body Esteem Scale (Franzoi & Shields, 1984) and the discrepancy between actual and desired body weight. Rosenberg Self-esteem Scale was used to assess self-esteem. Consistent with the findings of McCauley, Mintz, & Glenn (1988), a) overall body-esteem was correlated with self-esteem for both men and women, b) men and women exhibited comparable degrees of body dissatisfaction but in different directions; no women wished to be heavier than they were, whereas men were as likely to want to be heavier as thinner. Also, the sources of body dissatisfaction differed for the two genders; women showed greater satisfaction than men with facial components, whereas men displayed more satisfaction than women with aspects of their bodies.

Similarly, Thompson & Thompson (1986) and Brodie, Slade, & Riley (1991) found no significant differences between males and females for body perception, but different than McCauley, Mintz, & Glenn (1988) and Silberstein et al. (1988)'s findings, both studies revealed that females and males overestimated their sizes, but females overestimated to a larger degree than males (Thompson & Thompson, 1986) and men preferred to be broader than they were, whereas women preferred to be slimmer (Brodie, Slade, & Riley, 1991).

In addition to these findings, in an early study, Kurtz (1969) found that women have a more clearly differentiated notion of what they like and dislike about their bodies, men on the other hand judge their bodies as more potent and more

active than women. Kurtz (1969) suggests that this differentiation may stem from the fact that it is part of the females' role prescription to focus attention on the details of their bodies, whereas men are expected to be more subdued in the interest they take in the appearance of their bodies.

In another study, Fallon & Rozin (1985) asked subjects to indicate figures, among 9 figure drawings arranged from very thin to very heavy, that best represented their current figure, ideal figure, the figure they felt would be most attractive to the opposite sex, and the opposite-sex figure that subjects found most attractive. Men showed no significant differences in the ratings of their current figure, ideal figure and the figure they thought most attractive to women. Women, on the other hand rated what they thought was attractive to men as thinner than their current figure and also rated their ideal figure as thinner than what they thought was attractive to men. This implies that for women, the desire to be thinner is not simply the result of a wish to be more attractive to men. The researchers suggested two possible reasons in explaining this finding; a) the function of thinness and weight loss as a means of establishing control over one's life, and b) the belief that others consider thinness in females as a very positive personal feature. Another finding of the study was that both men and women made a mistake in estimating what the opposite sex would find attractive. Men think women like a heavier stature than females report they like, whereas women think men like women thinner than men report they like. This finding is consistent with women's preference to be thinner and men's preference to be heavier (e.g. Brodie, Slade, & Riley, 1991; McCauley, Mintz, & Glenn, 1988; Silberstein et al., 1988). These perceptions serve to keep men satisfied with their figures, whereas it places pressure on women to lose weight (Fallon & Rozin, 1985).

Zellner, Harner, & Adler (1989) thought that the results of Fallon & Rozin (1985) might be influenced by women with eating disorders and not representative of normal women, since their population was composed of northeastern college students. Thus they replicated Fallon & Rozin (1985)'s study separating the women who report symptoms of eating disorders (anorexia & bulimia) from those who do

not. They used Eating Attitude Test (EAT) to indicate abnormal eating patterns. The results revealed that all women rated their ideal figure and the figure they thought was most attractive to men as thinner than their current figure, whereas men rated all three nearly identically. Women who scored high on EAT rated their ideal figure as thinner than what they thought was attractive to men. Low EAT women on the other hand, did not rate their ideal figure as significantly different from what they thought was most attractive to men. Therefore, the high EAT women showed a pattern of responses similar to those of the female subjects in the study by Fallon & Rozin (1985). On their ratings of the figure they think is most attractive to the opposite sex, high and low EAT women did not differ significantly. All women think men like women thinner than men report they like and all men think women like men heavier than women report they like, although what men think women like was not too far from what women actually find attractive in men.

Body-image satisfaction has also been studied by Richards et al. (1990) who examined community and gender differences in body-image in a randomly selected sample of 284 adolescent boys and girls from 2 middle-class communities. Results indicated that pubertal development was significantly related to actual increases in weight both for girls and boys. In addition, as weight increased, satisfaction with weight decreased and perception of being overweight increased among girls whereas no such relationship was found among boys. Also, for girls, community differences were found in relation to body-image and weight satisfaction, whereas no community differences were demonstrated for boys. Hence, body-satisfaction does not appear to be uniquely determined by sex, but by an interaction of sex with social-environmental context. According to the researchers the community differences in body-image satisfaction of girls reflect community values that are transmitted through school policies as well as through the attitudes of the youngsters, families and peer groups. In general, boys reported more positive body-image and satisfaction with weight and perceived themselves to be more average in weight than did the girls. The girls perceptions appear to be associated with the contrast between current cultural ideals of thinness and physical changes of puberty that result in an increase in body weight (Richards et al, 1990). For both sex groups,

a significant positive relationship between weight satisfaction and body-image satisfaction was found.

Evidence suggests that the relationship between body-satisfaction and self-concept for girls exists before the onset of puberty (Folk, Pedersen, & Cullari, 1993). In their recent study, Folk, Pedersen, & Cullari (1993) aimed to examine the relationship between self-concept and body-image satisfaction and the age this relationship develops. Subjects were elementary school students from grade 3 and grade 6. The 3rd graders were considered to be prepubertal and 6th graders as early pubertal. The 6th grade boys scored lower on body-satisfaction than 3rd grade boys whereas, no significant differences were found between grades for girls. Also, negative correlation between actual body weight and body-satisfaction emerged for 6th grade girls. In addition, significant correlation's between body-satisfaction and total self-concept scores were found at both grades for girls, whereas it was found only at 6th grade for boys, implying that the relationship between self-concept and body-satisfaction develops at different ages for girls and boys. Researchers suggested two possibilities to explain the results; a) the linkage between self-concept and body satisfaction is not necessarily brought on by pubertal development but rather because of social importance placed on the "perfect body" which is acquired early in preschool years. b) the age at which puberty occurs may also be a factor; physical changes correlated with puberty in girls start earlier than boys and are largely completed within two and a two and a half years of age.

Similarly, Mendelson & White (1985) examined the development of self-esteem and body-esteem in children and their relationship between them. The Coopersmith Self-Esteem Inventory (Coopersmith, 1967) and 24-item self-report measure of body-esteem (Mendelson & White, 1982) were used to assess self-esteem and body-esteem, respectively. Each child's relative weight was assessed with Baldwin-Wood sex appropriate weight-for height-for age norms. Children were divided into 3 age groups ranged in age from 8.5 to 11.4, 11.5 to 14.4 and 14.5 to 17.4 years. No difference was found between self-esteems of overweight and normal weight children at the youngest age. This finding replicates earlier research

(Lawson, 1980), and it lends credibility to the fact that being overweight has not yet eroded the self-esteem of young children. At the middle age, self-esteem was adversely affected in overweight boys but not in overweight girls. At the oldest age, self-esteem was affected in overweight girls but not in overweight boys. According to Mendelson & White (1985), overweight boys who find sports difficult are rejected by their peers which would damage their self-esteem at the middle age. In contrast, overweight girls, unrelated to sports could still participate in the activities of same-sex peer groups. Thus, being overweight might not damage girls' self-esteem at middle age. In later adolescence, overweight girls' self-esteem suffered since being overweight runs counter to the desirable slender stereotype of womanhood and because of this they may be left out of social activities involving boys. Overweight boys' self-esteem is not affected at this age since the popular stereotypes for older males emphasize strength and bulk, so boys who are hefty are considered attractive and desirable. The overweight children at all ages had lower body-esteem than did normal weight children. Independent of weight, children with low self-esteem tended to have low body-esteem in the two older groups. Thus, self-esteem and body-esteem was correlated at middle and old age, whereas it was not correlated at the youngest age. Although self-esteem and body-esteem were correlated, relative weight was the best predictor of body-esteem.

Using Piers-Harris Children's Self-Concept Scale (Piers & Harris, 1969), Wadden et al. (1984) found no significant difference in self-esteem between obese and normal weight children, but the self-concept scores for the obese and normal weight children were 55.0 & 58.1 respectively. The researchers suggested that the psychological consequences of childhood obesity are not as negative as feared, but the small non-significant differences in self-concept identified in their study might increase with age as the liabilities associated with obesity increase.

The relationship between self-esteem and body-weight was also investigated in a study by Martin et al. (1988). The subjects of this study were adolescent girls between the ages of 14-20 who voluntarily participated in the study. The subjects were recruited through the junior and senior high school home economics teachers.

Self-esteem was assessed by Rosenberg Self-esteem Scale (1965) and obesity was assessed by Body-Mass Index (w/h^2). The results indicated a negative correlation between esteem scores and weights of the subjects. The researchers interpreted the results as indicative of internalization of societal attitudes and values about weight by girls.

The relationship of body weight to body-image satisfaction and self-esteem was explored among 102 black adult women (Thomas, 1988). A significant negative correlation was found between body weight and body-image satisfaction and body-weight and self-esteem. The data indicated a modest yet significant relationship between self-esteem and body-image satisfaction. As the researchers suggested the lack of a stronger relationship may be due to the racial background of the subjects who did not internalize American society's standard of beauty and fashion and thus did not relate their overall self-worth with various aspects of their physical appearance. Thomas (1988) also examined the relation between body image satisfaction and perceptions of significant others by asking subjects how their mother, father, close female friends and close male friends would rate their body shape and size. Subjects were also asked to indicate their spouse's or boy friend's overall happiness with their body. The results revealed that the perceptions of significant others played a role in influencing body image satisfaction and self-esteem of women, because of the greater cultural pressure placed upon them to conform to certain standards of physical attractiveness (Thomas, 1988).

Rosen, Gross & Vara (1987) reported consistent findings in that females were less positively adjusted than males on psychological measures as body-satisfaction, body-cathexis, self-esteem and depression as a result of this social pressure on women to conform to ideal physical types. Rosen, Gross & Vara (1987) examined the psychological adjustment of high-school boys and girls who were trying to reduce or gain weight. Overweight boys and girls who were trying to reduce weight and underweight boys who were trying to gain weight exhibited lower physical self-esteem. Girls who were trying to change weight in either direction showed depression and lower global self-esteem, but male reducers and gainers did not differ on these measures.

Nir & Neumann (1991) brought a somewhat different perspective on the relationship between self-esteem and weight reduction. They hypothesized that subjects participating in a weight reduction program lose less weight when they have low self-esteem than when they have high self-esteem. One hundred sixteen women participated in a weight reduction program. Self-esteem was assessed by Rosenberg's Self-esteem scale. Subjects were classified into three self-esteem groups on the basis of their scores. The results of the study confirmed their hypotheses; the weight reduction of low self-esteem individuals was significantly lower than that of medium and high self-esteem individuals. Nir & Neumann (1991) explained the results by Self-Care Deficit Theory of Orem (1985);

"Low self-esteem tends to be correlated with other negative views of oneself. Thus, such a person expresses pessimism with respect to success in achieving goals in many areas of life, including that of weight reduction. In addition, low self-esteem seems to be correlated with guilt feelings and negative thoughts about oneself that are compensated for via enjoyment in the act of eating. As low self-esteem goes together with a low ability of adaptation to changes, subjects with low self-esteem would be expected not to be consistent in their weight loss. Persons with high self-esteem have, as a rule, more positive views of themselves; they are more optimistic and possess the ability to adapt more readily to new situations. Hence, when they experience guilt feelings, they do not have to compensate for them by eating, but tend to deal with them directly. Failure does not worry these people as much as it does those with low self-esteem, and therefore, occasional setbacks do not lead to feelings of either helplessness or worthlessness."

Depending upon the theory, Nir & Neumann (1991) hypothesized that subjects who were made aware of the principles of Orem's Self-Care Deficit Theory (1985) would succeed in losing between one-half and one kilogram of weight per week. With regard to the hypotheses, after a 10-week weight reduction program based on Orem's Self-Care Deficit Theory the subjects' average weight loss per week was 710 grams.

1.2.3.2 Obesity, Self-esteem, Body-esteem and Loneliness

Loneliness is "an unpleasant experience that occurs when a person's network of social relationships is significantly deficient in either quality (e.g. lack of intimacy

with others) or quantity (e.g. not enough friends) (Perlman & Peplau, 1984; page 15; Russell, Cutrona, Rose & Yurko, 1984; Vaux, 1988). Weiss (1973) suggested that there are two kinds of loneliness; social loneliness and emotional loneliness. The former involves belonging to a group or social network, whereas the latter refers to a lack of intense, meaningful, and relatively enduring relationship with another person. There has been empirical support for the notion of two kinds of loneliness (Vaux, 1988; Russell et al., 1984).

Among the most well-established findings in research on loneliness is an association between loneliness and self-esteem (Vaux, 1988; Schultz & Moore, 1984; Joshi, Garon & Lechasseur, 1984; Goswick & Jones, 1981; Quellet & Joshi, 1986; Jones, Freemon & Goswick, 1981; Hojat, 1982; Joubert, 1990; Jackson & Cochran, 1990). Goswick & Jones (1981) conducted a study with 68 college students. Subjects completed the UCLA Loneliness Scale and Tennessee Self-concept Scale which partitions self-descriptions into a number of separate domains. An inverse association between loneliness and self-concept was found. Also, loneliness was significantly related to evaluation of Social Self, Personal Self and Physical Self. The findings indicated that loneliness is associated with tendencies to negatively evaluate one's body, sexuality, health and appearance; derogation of one's personality and adequacy as a person; and a lowered sense of adequacy in social situations. The researchers suggested that feelings of loneliness may have their roots in negative evaluations of self.

The association between loneliness and self esteem is further evidenced by a recent research. In this study, Joubert (1990) reported that loneliness scores correlated positively with psychological reactance scores and negatively with self-esteem and happiness both for males and females. A negative correlation between loneliness and self-esteem was also reported both for employed and unemployed women (Joshi, Garon & Lechasseur, 1984). In addition to negative correlation of loneliness to self-esteem, there has also been reports of negative correlation between loneliness and happiness and life-satisfaction (Schultz and Moore, 1984).

Jones, Freeman & Goswick (1980) conducted a series of studies to examine the correlates of loneliness. Two hundred and ten undergraduates participated in the study. They were asked to complete UCLA Loneliness Scale and other scales designed to measure psychological dimensions related to interpersonal behaviours such as interpersonal relations, self-esteem, self-disclosure public and private self-consciousness. The results indicated that lonely students had deficits in social skills and evaluated themselves negatively, expected negative evaluations from others and rated others more negatively.

Literature emphasizes the role of deficient social skills in determining loneliness. For example, Jones, Hobbs, & Hockenbury (1982) examined the relationship between social skill deficits and loneliness in two studies. Study 1 compared high-lonely and low-lonely subjects in respect to their heterosexual interactions. Results provide evidence that high-lonely subjects a) made fewer partner references b) continued the topic discussed by the partner less c) asked fewer questions of the partner and, d) emitted fewer partner attention statements. In their, second study, Jones, Hobbs, & Hockenbury (1982) examined the causal relationship between social skill and loneliness by directly manipulating the use of partner attention in a group of high-lonely subjects. Increasing the frequency of partner attention statements (comments or questions referring to the partner in the conversation) of lonely males resulted in significant reductions in self-reported loneliness. The researchers suggested that, individuals who manifest social skill problems such as less partner attention would appear to provide fewer social rewards to their conversational partners, and this may lead to rejection or at least disinterest by others, thereby resulting in the experience of loneliness. According to them, another possibility is that individuals who exhibit such deficits recognize them, and therefore expect to be rejected by others, regardless of whether rejection actually occurs. Believing that others will be less interested in and accepting of them, these persons express less interest in and acceptance of others, thereby experiencing loneliness as a result.

Similarly, Horowitz & French (1979) hypothesized that people who describe themselves as lonely would more often report specific interpersonal problems concerned with socializing. Seventy subjects participated in this study. The researchers grouped the major interpersonal problems that were identified in an earlier study by Horowitz (1979). The UCLA Loneliness Scale was used to identify lonely subjects who described their major interpersonal problems by performing a Q sort with a standardized set of problems. The results confirmed the hypotheses of the researchers; lonely people consistently reported problems of inhibited sociability and reflected difficulties in being friendly and influencing others.

Solano, Batten & Parish (1982) on the other hand suggested that self-perceived lack of self-disclosure to significant others is related to loneliness. Thirty-seven male and 38 female undergraduates were given the UCLA Loneliness Scale and the Jourard Self-Disclosure Questionnaire. Jourard Self-Disclosure Questionnaire asks the subject to rate past self-disclosure to his/her mother, father, a close male friend and a close female friend. The results of the study indicated that for males, loneliness was significantly and linearly related to perceived lack of intimate disclosure to opposite-sex friends. For women, however, loneliness was both associated with a perceived lack of self-disclosure to friends of the opposite and same-sex.

Loneliness has been reported to be associated positively with other concepts such as depression, anxiety, neuroticism, psychoticism, and misanthropy, also (Hojat, 1982). Joshi (1986) suggested that lonely subjects were relatively depressed and their self-esteem was significantly low. Jackson & Cochran (1990) on the other hand examined the relation between several psychological symptoms and loneliness, using UCLA Loneliness Scale (Russell, Peplau & Cutrona, 1980) and The Symptom Check List (SCL-90; Derogatis, Lipman and Covi, 1973). Results indicated that among the 9 dimensions of distress, only depression and low self-esteem showed positive association with loneliness and the findings supported the notion that self-blame and self-devaluation are strong correlates of loneliness. Based on his content analysis of reports of 526 subjects Rokach (1988^a & 1988^b) subsumed 8 factors

under 3 clusters which were differentiated into 20 components. Two of these 20 components were found to be the lack of self-esteem and social skill deficits, thus supporting the literature on the relationship between self-esteem and social skills and loneliness.

The existence of stigma associated with obesity (e.g. Brink, 1988; Lawson, 1980; & Pauley, 1988) poses difficulties for obese people to develop social skills and form social relationships. This hypothesis was tested by Miller et al. (1990) by a study employing 37 obese and nonobese women. Subjects had telephone conversations with college students who were unaware of the women's weights. Ratings made by the judges indicated that obese women were rated as less likable, less socially skilled and less physically attractive than nonobese women. Also, compared to telephone partners of nonobese women, telephone partners of obese women liked the women less, said they made a less positive impression, were less friendly, and less comfortable. Moreover, the more obese the women were, the less positively they were evaluated by their telephone partners. The results suggested that there are real differences in the social behavior of obese and nonobese women and that these differences affect the impressions formed by those with whom they interact. Miller et al. (1990) discussed the several potential processes that could have created the differences observed between ratings of obese and nonobese women. These processes are as follows; a) Because of the stigma associated with obesity, obese women may have a history of being ignored and/or treated in a negative fashion. This may limit their opportunity to acquire social skills, and this in turn, produce behavioral differences between obese and nonobese women. b) The obese women may expect negative reactions from others in social situations, and thus reduce their expression of positive social skills. As a result, their expectation affects their behavior and they're evaluated as having less social skills. As Jones, Freemon & Goswick (1981, page 45) stated "How a person is perceived by others is, in part a reflection of what that person expresses toward others". And, inability to relate to others may eventuate loneliness.

Schumaker et al. (1985) hypothesized that obese individuals report experiencing more loneliness than nonobese as a consequence of negativity of others toward them. These researchers reasoned that in a social and cultural climate where one of the strongest and most pervasive messages to people is that they should be thin and attractive, one might expect that some obese people feel like outsiders, since they fail to meet at least one of the important culturally determined standards of acceptability. Schumaker et al. (1985) had measures of loneliness and obesity employing the Revised UCLA Loneliness Scale (Russell, Peplau & Cutrona, 1980) and Metropolitan Life Insurance Tables (1959), respectively, from a sample of 68 obese and 64 nonobese individuals. The results indicated that obese women had significantly higher loneliness scores than nonobese women. Also, a significant correlation was found between body-weight and reported loneliness within the obese female sample, suggesting women with greater weight problems are more prone to the experience of loneliness than women who are less overweight. Although obese men also had higher loneliness scores than nonobese men, the difference between the two groups failed to reach acceptable statistical significance. Moreover, the extent of obesity had no significant influence on loneliness ratings for obese men. As the researchers suggested, the social relations of men are thought to be less closely tied to appearance than it is for women, thus causing the reported sex difference, but this may not remain the case as socially defined sex roles continue to change.

In summary, the present study aimed to investigate the relationship of obesity to appearance-esteem, self-esteem and loneliness. The research reviewed in the previous paragraphs enables us to suggest a social model linking obesity to loneliness. Findings of earlier studies indicated a negative relationship between obesity and appearance-esteem which in turn is associated with overall self-esteem positively. Due to prevalent stigmatization in societies, obese individuals tend to evaluate their physical outlook negatively. The negative evaluations one has of his/her body relates to a higher degree of negativity in that person's overall evaluation of self. Research also suggests that low self-esteem individuals are more susceptible to loneliness. Therefore, the present research aims to test the causal chain between obesity and loneliness depicted in the diagram below. According to

this model, BMI affects people's feelings of their appearance which in turn affects their self-evaluation; and feelings of self at the end affects people's feelings of loneliness.



Given the model above, the hypotheses of the present study can be stated as follows;

1. Obese individuals would have lower appearance-esteem and self-esteem scores and higher loneliness scores than individuals in normal and underweight categories.
2. Self-esteem and appearance-esteem would be correlated positively and both of these measures would be correlated negatively with loneliness.
3. The relationship stated in hypotheses 1 will be higher for females than for males.

To test the above hypotheses, Rosenberg Self-Esteem Scale (1965), Appearance-esteem Scale (1993) and the Revised UCLA Loneliness Scale (1980) were employed. In order to avoid redundancy, nature and psychometric properties of these instruments are presented in the method section.

CHAPTER 2

METHOD

In order to investigate the relationship of obesity to self-esteem, appearance-esteem and loneliness, instruments were needed to measure these concepts. Rosenberg Self-esteem Scale (Rosenberg, 1965), The Revised UCLA Loneliness Scale (Russell, Peplau & Cutrona, 1980) and an Appearance-esteem Scale modeled from the items of Appearance Self-Esteem Scale (Pliner, Chaiken and Flett, 1990) and items of Self Rating Scale (Fleming and Courtney, 1984) were employed in the study. Although Rosenberg's Self-esteem Scale (1965) has already been translated into Turkish and employed in research by Çuhadaroğlu (1985), it seemed that some items of this translation were not comparable to original items. The whole set of 10 items were therefore translated into Turkish by the researcher. Similarly, in order to measure Appearance-esteem six items of the already mentioned Appearance Self-esteem Scale (Pliner, Chaiken & Flett, 1990) and five items of the Self-Rating Scale (Fleming and Courtney, 1984) were also translated into Turkish to be combined into an Appearance-esteem questionnaire. The Turkish version of the Revised UCLA Loneliness Scale (1980), which was translated by Demir (1990) was used to assess loneliness. Therefore, the Revised UCLA Loneliness Scale (1980) was not employed in the pilot studies which are described in the following paragraphs.

2.1 First Pilot Study

In order to provide evidence that the items of the translated version of the Rosenberg Self-esteem Scale and the modeled Appearance-esteem Scale reliably measure self-esteem and appearance-esteem, two pilot studies were conducted. In the first pilot work, a number of hypotheses were formulated in the light of earlier

research. Earlier studies indicated that self-esteem related to academic performance and expectations of success (Battle, 1978; Purkey, 1989; Scaalvick & Hagtvet, 1990; Morrison & Morrison, 1978; Bohrnstedt & Felson, 1983; Morrison et al., 1973), both self and appearance-esteem related to the number and nature of social contacts and satisfaction drawn from these contacts (Hobfoll et al., 1982; Glauser, 1984; Russell, Peplau & Cutrona, 1980; Jackson & Cochran, 1990; Horowitz & French, 1979; Jones, Hobbs & Hockenbury, 1982), physical attractiveness and popularity (Miller et al., 1990; Reis et al., 1982; Feingold, 1990; Brislin & Lewis, 1968; Walster et al., 1966). High self-esteem people are more successful and anticipate success more than low self-esteem people. High self and appearance-esteem people have more friends and are more satisfied with their social contacts, they appear to be more attractive and popular than low self and appearance-esteem people. Therefore, the first pilot study was conducted to test the hypotheses that self and appearance-esteem relates positively to actual and anticipated academic success, social contacts, popularity and dating frequency. Positive relationships of self-esteem and appearance-esteem with physical fitness and exercise frequency were also expected.

Subjects

Undergraduates from Middle East Technical University (n= 102), Hacettepe University (n=138), and Gazi University (n=69) participated in this study. These students were taken accidentally from different departments and classes at these universities. Of the 309 subjects, 160 were females, and 149 were males. Ages of these subjects varied between 13 and 43 with a mean of 21.82 (Sd=2.199).

Instrument

A questionnaire including the translated self-esteem and modeled appearance-esteem items were prepared. Other parts of the questionnaire included questions about the school and the department the subject attended, age and sex of the subject. Academic performance was assessed by perceived success in academic abilities and studies, grade point average achieved in previous year/semester, anticipated

achievement was measured by expected grade point average at the end of the present semester/year and at graduation from the school. The nature and the number of social relations were assessed by questions asking the number of friends a subject has, satisfaction with relations with friends, frequency of party attendance, frequency of social activities attendance, perceived social likability, and perceived success in forming relationships and sociability. In addition, subjects were also asked to report their perceptions of own popularity, current status of dating, the frequency of dating, perceived physical fitness and whether they make physical exercise or not (see Appendix A for the questionnaire).

Rosenberg Self-esteem Scale

The Rosenberg Self-esteem Scale (Rosenberg, 1965) composed of 10 attitudinal statements about self and are responded employing a 4-point scale running from "completely agree" (a score of 4) to "completely disagree" (a score of 1). The original version of these items can be seen in Appendix D. As will be seen in the appendix, five of the ten self-esteem items are worded negatively and the other five were worded positively. Negatively worded items were reversed in scoring so that all items were keyed in a positive direction.

Rosenberg Self-esteem Scale (1965) used to assess self-esteem is a widely used measure (e.g. Silberstein et al., 1988; Sweeney & Zionts, 1989; O'Brien, 1985; Melnick & Mookerjee, 1991; Hojat, 1982; Nir & Neumann, 1991; Fleming & Courtney, 1984; Çuhadaroglu, 1985) which the reliability and validity of one well evidenced. The test-retest reliability of the scale was found to be .88 (Rosenberg, 1979; cited from Melnick & Mookerjee, 1991) and .82 (Fleming & Courtney, 1984). The alpha reliability was found to be .82 by Vaux (1988), .74 by Thomas (1988) and .88 by Fleming & Courtney (1984). The scale has also been found to be correlated with other self-esteem measures such as Eagly's version of the Janis-Field Feelings of Inadequacy Scale ($r = .75$), Diggory's version of the Cutick's Self-description Inventory ($r = .64$) and Rosenberg's Self-esteem Scale, scored as a Guttman scale ($r = .64$) (Kahle, 1976). Rosenberg Self-esteem Scale (scored as a Guttman scale) has

been first used by Çuhadaroğlu (1985) in Turkey. Thus, the first reliability and validity studies have been conducted by her. The correlation between psychiatric interviews and the self-esteem scale was found to be .71. The three subscales of SCL-90 (Symptom Check List) (Lipman & Derogatis, 1969) were also used for criterion validity. Rosenberg Self-esteem Scale (1965) correlated .66 with depressive affect, .70 with psychosomatic symptoms and .45 with interpersonal threat. The test-retest reliability of the Turkish version of the scale was found to be .75 by Çuhadaroğlu (1985).

Appearance-esteem Scale

As the Rosenberg self-esteem scale, appearance-esteem items are also attitudinal statements about self, but this time the items are specific and relate to one's evaluations of his/her physical outlook. Some appearance-esteem items are "I feel physically attractive", "I feel ashamed of my physical appearance", "I wish I looked better". Subjects indicated their degree of endorsements of each item employing the response scale used for self-esteem items. In order to develop the modeled Appearance-esteem Scale (1993) which was used to assess appearance-esteem, six items which were used by Pliner, Chaiken & Flett (1990) to assess Appearance Self-esteem and 5 items about physical appearance from the Self-rating Scale (Fleming & Courtney, 1984) were taken as basis. After selecting the relevant statements among these items, necessary changes were made, new statements were added and this modeled version was translated into Turkish. The original items of both scales and their modeled version are presented in Appendix D. Indeed, both groups of researchers (Pliner, Chaiken & Flett; Fleming & Courtney, 1984) modeled these items after the original Janis-Field Feeling of Social Inadequacy Scale (Janis & Field, 1959). In addition, Pliner, Chaiken & Flett (1990) added one more item which taps information about weight. The coherence of the Appearance Self-esteem items of Pliner, Chaiken & Flett (1990) and Physical Appearance items of Fleming & Courtney (1984) were substantiated by factor analysis. The coefficient alpha for Appearance Self-esteem Scale (Pliner, Chaiken & Flett, 1990) was found to be .66.

Both Rosenberg Self-esteem Scale items (1965) and Appearance-esteem Scale items were given on the same page with the same instruction, Appearance-esteem Scale following the Rosenberg Self-esteem Scale. The reason why these scales are chosen over other self-esteem and body-esteem scales are described later in the “Main Study” section.

Procedure

Participation in the study was voluntary. Anonymity of responses was guaranteed. The questionnaires were administered during regular class hours of subjects within the first two weeks in May 1993. The questionnaire took approximately 15 minutes to complete.

Results and Discussion

Reliability

Cronbach Alpha Reliabilities were computed both for the self-esteem scale and appearance-esteem scale. Table 1 shows the item-total correlations for items of both scales. As can be seen on this table, these correlations ranged between .40 and .70 for the self-esteem items, and varied between .43 and .69 for the appearance self-esteem items. The Cronbach Alpha Reliability Coefficient for self-esteem and appearance-esteem scales were .85 and .86 respectively. Both reliability coefficients were high and acceptable for the present purpose.

Validity

Total scores of self-esteem and appearance-esteem scales were computed for each subject. Pearson Product Moment Correlations of self-esteem and appearance-esteem scores with academical performance, the nature and the number of social relations, perceptions of own popularity, the frequency of dating and perceived physical fitness were calculated. These correlations are presented in Table 2.

Table 1

Item-Total Correlation Coefficients for the Items of Self-esteem Scale

(Cronbach Alpha = .85)	<u>Item-total correlation</u>
1. I feel that I'm a person of worth, at least on an equal basis with others.	.43
2. I feel that I have a number of good qualities.	.40
3. All in all, I am inclined to feel that I am a failure.	.64
4. I am able to do things as well as most people.	.54
5. I feel I do not have much to be proud of.	.59
6. I take a positive attitude toward myself.	.65
7. On the whole I am satisfied with myself.	.70
8. I wish I could have more respect for myself.	.45
9. I certainly feel useless at times.	.60
10. At times I think I am no good at all.	.54

Item-Total Correlation Coefficients for the Items of Appearance-esteem Scale

(Cronbach Alpha = .86)	<u>Item-total correlation</u>
1. I'm pleased with my appearance.	.69
2. I feel physically attractive.	.69
3. I worry about my weight.	.51
4. I wish I looked better.	.54
5. I feel as attractive as most of the people I know.	.58
6. I feel as if I am more overweight than most of the people I know.	.43
7. I feel ashamed of my physical appearance.	.54
8. I think members of the opposite sex find me attractive.	.59
9. I worry about my undressed appearance.	.51
10. I feel I am not as attractive as my friends.	.65

As shown on Table 2, self-esteem scores correlated positively with all of the variables as predicted. Of special importance to note about these correlations is that the measures on social relations, such as frequencies with which parties and social activities are attended, satisfaction from such activities, perceived sociability and popularity had higher correlations than performance measures. These may reflect the social aspect of the self-esteem as a concept and the efficiency of items in tapping at this dimension.

Similarly, appearance-esteem scores also correlated significantly with most of the measures except actual, anticipated grade point averages and number of friends. The significant correlation coefficients indicated that subjects who are satisfied with their physical appearances perceive more success in academic abilities and studies, are more efficient and satisfied with their social relations, perceive themselves more physically fit, and experience dating more frequently than subjects with lower levels of satisfaction with their physical outlooks.

In summary, the results of this study confirmed previous research suggesting that there's a relationship of self and appearance-esteem with these concepts (e.g. Battle, 1978; Scaalvick & Hagtvvet, 1990; Bohrnstedt & Felson, 1983; Hobfoll et al., 1982; Glauser, 1984; Horowitz & French, 1979; Miller et al., 1990; Reis et al., 1982; Feingold, 1990). A high positive correlation was also found between the Self-esteem and Appearance-esteem scales ($r = .63$; $p < .001$). Data from the first pilot study suggested that the Turkish versions of both the self-esteem scale and appearance-esteem scales are reliable and valid instruments to measure one's overall and appearance evaluations of himself/herself.

2.2 Second Pilot Study

In order to provide further evidence for the validity and reliability of the Self-esteem scale and Appearance-esteem scale, a second study was performed. In this study, 47 female and 34 male university graduates and students responded to Rosenberg Self-esteem and Appearance-esteem Scales together with the Semantic Differential Self-esteem Scale (Frank and Morolla, 1976) which has two subscales;

Table 2

Pearson Moment Correlations of Self-esteem and Appearance-esteem with Academic Performance, Nature and Number of Social Relations, Perceptions of Own Popularity, Frequency of Dating and Perceived Physical Fitness

	Self-esteem Items	Appearance-esteem Items
1. Academic Performance		
GPA achieved in previous semester	.1553*	.0792
Expected GPA at the end of present semester	.1666*	.0953
Expected GPA at graduation	.1952**	.1182
Perceived success in academic abilities and studies	.4124**	.2641**
2. Nature and Number of Social Relations		
Number of friends	.1862*	.0918
Satisfaction with relations with friends	.4257**	.2719**
Frequency of party attendance	.3975**	.3039**
Frequency of social activities attendance	.4242**	.3883**
Perceived social likability	.2378**	.2635**
Perceived success in forming relations	.4276**	.4000**
Sociability	.4480**	.4320**
3. Popularity		
Perceptions of own popularity	.4176**	.4285**
4. Dating		
Current status of dating	.1695*	.2983**
Frequency of dating	.2664**	.2186**
5. Physical Fitness		
Current status of making physical exercise	.2173**	.1554*
Perceived physical fitness	.2734**	.3326**

Outer Self-esteem Scale and Inner Self-esteem Scale. The original form of the scale consists of 18 adjective pairs. Semantic Differential Self-Esteem Scale (Frank and Morolla, 1976) has been adapted into Turkish by Rugancı (1988). This Turkish version of the scale consisted of 20 adjective pairs with each subscale consisting of 10 adjective pairs. Rugancı (1988) provided evidence that Semantic-Differential Self-Esteem Scale has reliability coefficients ranging in .80s and has internal construct validity.

The Turkish versions of Rosenberg's Self-esteem Scale, Semantic Differential Self-esteem Scale and the modeled Appearance-esteem Scale (see Appendix B for the questionnaire) were administered to 81 subjects, consisting of undergraduates from Middle East Technical University and graduates from different universities and departments who were attending to a 1-year-course to specialize in banking. The questionnaire took approximately 10 minutes to complete. After four weeks, the same test was administered to the same group. At this second administration, the subjects were not given the Turkish version of the Semantic Differential Self-esteem Scale.

The data from these administrations were used to compute test-retest reliability coefficients and criterion related validities for the Self-esteem and Appearance-esteem scales. The data resulted a test-retest reliability of .82 for the Self-esteem scale and a reliability of .77 for the Appearance-esteem scale. The Pearson Correlation Coefficient between Rosenberg Self-esteem Scale and the Semantic Differential Self-esteem scale was .56 and it was .44 for the Appearance-esteem scale. These results indicate that Self-esteem and Appearance-esteem Scales can be used to measure people's self-esteem and appearance-esteem in the Turkish society.

2.3 Main Study

Subjects

In order to achieve a sample of subjects of different ages, sexes, SES levels, etc. park users were chosen. Therefore, the subjects of this study were users of 10 different parks in Ankara. Among 599 persons who were contacted and requested to participate in the study, 482 (80.1 %) accepted. Two-hundred-forty-three of the subjects were females (50.4 %) and the remaining 239 were males (49.6). Ages of the subjects ranged from 14 to 69 with a mean of 30 (SD= 10.09). The mean Body Mass Index (BMI) of the total population is 23.45 (SD= 4.48), ranging from 15.00 to 37.50.

Instruments

A questionnaire including the Turkish version of Rosenberg Self-esteem Scale (1965), Appearance-esteem Scale (1993), The Revised UCLA Loneliness Scale (1980) and a set of questions was prepared (see Appendix C for the questionnaire). The first page of the questionnaire consisted of a paragraph of instructions and explanations to subjects and questions about background information. Background information included questions about sex, age, height, weight, education, occupation, marital status and income of subjects. Subjects were also asked about their parent's and spouse's occupation and education if they are married and the neighborhood they live in.

Rosenberg Self-esteem Scale (1965) and Appearance-esteem Scale (1993)

Both the Self-esteem Scale and the Appearance-esteem Scale consisted of 10 statements each and these statements appeared on the same page. The subjects were asked to indicate the degree of endorsement for each item employing a four-point response scale as in the pilot studies. The response categories ran from "strongly disagree" (a score of 1) to "strongly agree" (a score of 4). Pilot studies indicated that

the Turkish versions of these two instruments are reliable and valid to measure self-esteem and appearance-esteem. It is necessary to explain why these scales were chosen over other scales. First of all, Rosenberg Self-esteem Scale is a widely used measure (e.g. Silberstein et al., 1988; Sweeney & Zionts, 1989; Nir & Neumann, 1991; Fleming & Courtney, 1984; Çuhadaroglu, 1985) with acceptable psychometric properties; the scale has reliability and validity (Melnick & Mookerjee, 1991; Vaux, 1988; Thomas, 1988; Sweeney & Zionts, 1989). Second, it measures global self-esteem as a unidimensional trait (O'Brien, 1985). It assumes that self-esteem is a personality trait characterized by considerable stability from one situation to the next; it does not take into consideration situational variability (Sweeney & Zionts, 1989). The reason for developing the modeled Appearance-esteem scale is that it is more relevant than the other body-esteem or body satisfaction scales (e.g. Body-Self Relations Questionnaire, Winstead & Cash, 1983; Body-Cathexis Scale, Jourard & Secord, 1955; Body-Satisfaction Scale, Lerner et al., 1980) for the purpose of this study. In this study, only one component of body-esteem is taken into consideration which is general physical appearance. Other body-esteem scales on the other hand involve items both about physical appearance and physical effectiveness.

The Revised UCLA Loneliness Scale (1980)

The Revised UCLA Loneliness Scale (1980) was used to assess loneliness. The UCLA Loneliness Scale is a 20-item instrument designed to measure experiences and behaviors theoretically related to loneliness. It consists of 10 negatively worded items and 10 positively worded items, the possible score range is from 20 to 80. The respondents were asked to rate each statement on how often they feel that way. The answer choices are "often", "sometimes", "rarely" and "never". These response categories were assigned scores running from 4 to 1. The revised scale correlated .91 with the original scale developed by Russell, Peplau & Ferguson (1978) and .70 with self-reported loneliness (Russell, Peplau & Cutrona; 1980). The coefficient alpha of the scale was found to be .89 by Solano (1980) and .94 by Russell, Peplau & Cutrona (1980). Schmidt & Sermat (1983) found the concurrent validity of the UCLA Loneliness Scale .70 by examining the relation

between UCLA Loneliness Scale and Differential Loneliness Scale. To assess the concurrent validity of the scale, Rusell, Peplau & Cutrona (1980) examined the correlation between the UCLA scores and Beck Depression Inventory ($r = .62$) and Costello-Comrey Anxiety ($r = .62$). Also, Solano (1980) found that UCLA scale correlates highly with the Belcher Multi-item General Loneliness Scale ($r = .74$).

The revised version of UCLA Loneliness Scale was translated into Turkish by Demir (1990), and the initial studies of reliability and validity were conducted by Yaparel (1984). Yaparel obtained a correlation coefficient of .50 between the scores on Turkish version of UCLA and scores on Beck Depression Inventory. Demir (1990) reported a Cronbach alpha reliability of .96 and a test-retest reliability of .94 with a five week interval between the two administrations of the scale. In regards with the validity of the scale, Demir (1990) found that the Turkish version of the UCLA Loneliness Scale differentiated between normal individuals and psychiatry patients with reports of intense levels of loneliness feelings. Demir (1990) also reported a correlation coefficient of .77 between scores on the loneliness scale and scores on Beck Depression Scale. These findings suggest that the Turkish version of the UCLA Loneliness Scale yields a reliable and valid measure of loneliness in the Turkish society. The original items of this scale are presented in Appendix D.

Body-Mass Index (BMI) (1980)

Body-Mass Index (Powers, 1980) which is accepted as the most valid index to measure obesity by means of height and weight values is used to assess obesity (Baysal et al., 1988, page 129). It is calculated as weight divided by square of height (w/h^2). The normal average value of BMI ranges from 20 to 25; values over 25 imply obesity, whereas below 20 imply underweight (Baysal et al., 1988, page 129).

Procedure

As noted earlier, the subjects were users of public parks in Ankara. In order to obtain a sample representative of the general population public parks were chosen

as research sites. Any park user whose age is estimated to be older than 15 was a potential subject for this study. Subjects were picked from the selected park areas on different days at different hours of the day. The sampling went on for 8 days in 1993. The name of the parks where the data collection took place is presented on Table 3 including the dates. The data were gathered by 4 females and 2 males. Answering the questions took approximately 15 minutes.

Table 3

Place and date of data collection

Name of the Park	Date	Number of subjects
Keçiören Parkı	17.07.1993 (Saturday)	15 (% 3.1)
Altınpark	17.07.1993 (Saturday)	58 (% 12.1)
Demetevler Parkı	18.07.1993 (Sunday)	9 (% 1.9)
Yenimahalle Parkı	18.07.1993 (Sunday)	54 (% 11.3)
Kuğulu Park	19.07.1993 (Monday)	192 (% 40.2)
	24.07.1993 (Saturday)	
Etlik Parkı	20.07.1993 (Tuesday)	20 (% 4.2)
Anıtpark	21.07.1993 (Wednesday)	40 (% 8.4)
Adnan Ötüken Parkı	22.07.1993 (Thursday)	16 (% 3.3)
Botanik Parkı ve Seğmenler Parkı	25.07.1993 (Sunday)	74 (% 15.5)

CHAPTER 3

RESULTS

Self-esteem, appearance-esteem, and loneliness scores were computed by summing up the weights assigned to response categories. Cronbach Alpha coefficients were computed for the three measurement instruments. The results indicated that the Cronbach Alpha coefficients for the self-esteem, appearance-esteem, and the loneliness scales were .76, .85, and .64, respectively. In order to enable comparisons among the scale scores, total scores were divided by the number of items that contributed to each one. Higher scores indicated higher standings on the attributes. A body-mass index (BMI) was also computed for each subject by dividing the weight by the square of height in meters. The subjects were then classified into obese, normal, and underweight categories employing BMIs. A BMI greater than 25 was classified into "obese", and a BMI smaller than 20 was classified into "underweight" categories. The "normal" category ranged between BMIs of 20 and 25. According to this classification, 18.7 % of the sample was underweight, 49.0 % normal weight, and the remaining 32.0 % was obese. In the following paragraphs, analyses conducted on these scores are presented.

3.1 Correlational Analysis

Correlations between self-esteem, appearance-esteem and loneliness were computed by Pearson Product Moment Correlations for males, females and the total sample, separately. Table 4 presents the correlation coefficients between these measures. As shown on the table, self-esteem correlated positively with appearance-esteem ($r = .52$, $p < .001$) and negatively with loneliness ($r = -.41$, $p < .001$); and

appearance-esteem correlated negatively with loneliness ($r = -.38, p < .001$) for the total sample and for both sexes. The results suggest that high self-esteem subjects have high appearance-esteem scores and low loneliness scores, and that high appearance-esteem subjects have low loneliness scores. Correlations for male and female subsamples were similar except for correlation between appearance-esteem and loneliness. The correlation coefficient between these two measures was quite higher for males ($r = .43, p < .001$) than for females ($r = .33, p < .001$).

Table 4 Correlation Coefficients among Scale Scores and Age

	Appearance-esteem			Loneliness			Age		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Self-esteem	.5331**	.5097**	.5201**	-.4061**	-.4093**	-.4080**	.0662	.0366	.0500
Appearance-esteem				-.4314**	-.3254**	-.3739**	-.0941	-.1864*	-.1409*
Loneliness							.0702	.0518	.0609

* $p < .01$ ** $p < .001$

Other correlational analysis were conducted to check if age is correlated with scale scores of the study and with subjects' height, weight and BMI scores. Among the dependent variables, age was correlated only with appearance-esteem significantly ($r = -.14, p < .01$), for the total sample (see Table 4). As is evident from Table 5, age was found to be significantly and positively correlated with BMI (w/h^2) scores of both males and females ($r = .39, p < .001, r = .48, p < .001$, respectively). As age increased, BMI scores of both sex groups increased. A positive significant correlation was found between age and weight for females ($r = .39, p < .001$), whereas no significant correlation was found between the two measures for males, indicating

that females put on more weight as they get older. No such relationship exists for males. Also, age correlated significantly and negatively with height of subjects ($r = -.22$, $p < .001$ for males, $r = -.23$, $p < .001$ for females). Consistent with previous literature, a high correlation was found between weight and BMI ($r = .80$, $p < .001$), whereas no significant correlation was found between height and BMI for the total sample.

Table 5 Correlation Coefficients among Age, BMI, Height and Weight

	Height			Weight			BMI		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Age	-.2201**	-.2320**	-.1093**	-.0072	.3858**	.0479	.3903**	.4799**	.4428**
Height				.0296	.1525	.1674**	-.0954	-.2829**	.0406
Weight							.8732**	.9029**	.7948**

* $p < .01$

** $p < .001$

3.2 Comparison of BMI Categories

To determine the effects of sex and BMI, as well as their interaction on each of the variables, 2x3 (Sex by BMI Category) Multivariate Analysis of Covariance (MANCOVA) was applied with the effects of age controlled. The reason why the scores were subjected to MANCOVA is that the three dependent variables were found to be correlated with each other and age was found to be significantly correlated with one of the dependent variables (appearance-esteem) ($r = .14$, $p < .01$) of the study.

No significant effects of covariant age was found for self-esteem, appearance-esteem and loneliness scores. The analysis indicated a multivariate effect for BMI category ($F(2, 433) = 22.85, p < .001$). The Univariate effects of BMI were significant for self-esteem ($F(2, 433) = 8.93, p < .000$), appearance-esteem ($F(2, 433) = 74.94, p < .000$) and loneliness ($F(2, 433) = 6.95, p < .001$), indicating that self-esteem, appearance-esteem and loneliness scores of subjects were significantly different for the three categories. One-way ANOVAs followed by Scheffe tests were then computed for comparing differences among categories on self-esteem, appearance-esteem and loneliness scale scores. The results of these ANOVAs and the means of the 3 categories for self-esteem, appearance-esteem and loneliness scores are shown in Table 6. As shown in the table, normal individuals had a mean self-esteem score of 3.12 which was significantly larger than the means self-esteem scores of underweight and obese categories (means of 3.01 and 2.99, respectively). The mean appearance-esteem scores of underweight (2.96) and normal individuals (3.12) were significantly greater than the mean appearance-esteem scores of obese individuals (2.52). The mean loneliness scores of underweight and normal BMI categories were almost the same (1.79 and 1.78, respectively), both of which were significantly lower than the loneliness scores of obese category (1.96).

No main effect was found for sex ($F(1, 435) = .35, p < .39$), but an interaction effect was found between sex and BMI category ($F(2, 431) = 6.17, p < .001$). The Univariate effects indicated that interaction was significant for appearance-esteem only ($F(2, 433) = 16.93, p < .001$). One-way ANOVAs indicated significant differences in means of appearance-esteem scores for males and females. As shown on Table 6, appearance-esteem scores of normal males and females did not differ significantly. For the underweight category, females were significantly happier with their appearances than males. For the obese category, the difference between females and males reversed; males were significantly happier with their appearances than females. Moreover, females and males in different weight categories differed in self-esteem, appearance-esteem and loneliness scores.

Table 6 Mean Scores for self-esteem, appearance-esteem and loneliness according to sex and BMI categories

	Underweight		Normal weight		Obese		Total Mean		F	P
	Female	Male	Female	Male	Female	Male	Female	Male		
	Total	Total	Total	Total	Total	Total	Total	Total		
	N=54	N=27	N=98	N=113	N=70	N=78	N=222	N=218		
Self-esteem	3.05 _{ab} 3.01 _b	2.94 _a	3.13 _a 3.12 _a	3.10 _b	2.97 _b 2.99 _b	3.01 _{ab}	3.06	3.05	8.93	.000
Appearance-esteem	3.11 _{al} 2.96 _b	2.66 _{a2}	3.10 _a 3.12 _b	3.14 _b	2.36 _{bl} 2.52 _a	2.66 _{a2}	2.87	2.91	74.94	.000
Loneliness	1.75 _a 1.79 _b	1.87 _{ab}	1.80 _{ab} 1.78 _b	1.77 _a	1.96 _b 1.96 _a	1.97 _b	1.84	1.85	6.95	.001

^a Higher scores indicate greater self-esteem, appearance-esteem and loneliness

Means on the same line and denoting measures for the same sex not sharing the same subscripts

differ significantly at $p < .05$ by Scheffe

Means on the same line and denoting measures for the same category not sharing the same

numbers differ significantly at $p < .05$ by Scheffe

Females in the normal BMI category had significantly higher self-esteem scores than females in the obese category, whereas underweight females' self-esteem scores did not differ significantly from the females' scores in normal and obese categories. On the other hand, males in the underweight category had significantly lower self-esteem scores than males in the normal category. Obese males' self-esteem scores did not differ significantly from the males' scores in normal and underweight categories. Females in the underweight and normal categories had significantly higher appearance-esteem scores than the females in the obese category. The mean appearance-esteem scores of underweight and normal females did not differ significantly. Males in the underweight and obese categories had the same appearance-esteem scores, both of which were significantly lower than the appearance-esteem scores of males in the normal category. The mean loneliness scores of underweight females were significantly lower than the mean loneliness scores of obese females, whereas normal females' loneliness scores did not differ significantly from the loneliness scores of underweight and obese females. On the contrary, the mean loneliness scores of normal males were significantly lower than the mean loneliness scores of obese males, whereas underweight males' loneliness scores did not differ significantly from the loneliness scores of normal and obese males.

3.3 Regression Analyses

The last set of analyses were conducted to evaluate the model mentioned in the "Introduction" section. It was predicted that BMI has an effect upon appearance-esteem of individuals which subsequently affects self-esteem and in turn affects loneliness. Three hierarchical regression analyses were conducted to examine the relation between the variables. As shown in Table 7, the first regression analyses employed appearance-esteem as dependent, and BMI, age and sex as predictors.

Table 7 Results of Regression Equation predicting self-esteem, appearance-esteem and loneliness

Total Sample

DEPENDENT	PREDICTOR	BETA	R ² CHANGE	F CHANGE	SIGN OF F	MULTIPLE R
Appear.-esteem	(1. step) BMI	-.4259	.1814	97.076	.0000	.4259
	(2. step) Age	.0779	.0049	2.602	.1074	.4316
	(3. step) Sex	.0858	.0073	3.924	.0482	.4399
Self-esteem	(1. step) Appear.-esteem	.5292	.2801	170.378	.0000	.5536
	(2. step) BMI	.1797	.0264	16.658	.0001	.5561
	(3. step) Age	.0593	.0028	1.762	.1851	.5561
	(4. step) Sex	-.0545	.0029	1.833	.1764	.5587
Loneliness	(1. step) Self-esteem	-.4053	.1642	86.068	.0000	.4053
	(2. step) Appear.-esteem	-.2169	.0339	18.464	.0000	.4451
	(3. step) BMI	.0788	.0049	2.681	.1022	.4506
	(4. step) Age	.0220	.0004	.208	.6484	.4510
	(5. step) Sex	.0108	.0001	.061	.8037	.4511

Table 7 (continued)

Males

<u>DEPENDENT</u>	<u>PREDICTOR</u>	<u>BETA</u>	<u>R² CHANGE</u>	<u>F CHANGE</u>	<u>SIGN OF F</u>	<u>MULTIPLE R</u>
Appear.-esteem	(1. step) BMI	-.2351	.0553	12.634	.0005	.2351
	(2. step) Age	.0121	.0001	.027	.8676	.2353
Self-esteem	(1. step) Appear.-esteem	.5314	.2824	85.001	.0000	.5314
	(2. step) BMI	.1018	.0098	2.973	.0861	.5405
	(3. step) Age	.1069	.0095	2.909	.0895	.5493
Loneliness	(1. step) Self-esteem	-.4024	.1619	41.738	.0000	.4024
	(2. step) Appear.-esteem	-.2974	.0635	17.619	.0000	.4748
	(3. step) BMI	.0593	.0033	.908	.3415	.4782
	(4. step) Age	.0523	.0022	.622	.4314	.4806

Females

<u>DEPENDENT</u>	<u>PREDICTOR</u>	<u>BETA</u>	<u>R² CHANGE</u>	<u>F CHANGE</u>	<u>SIGN OF F</u>	<u>MULTIPLE R</u>
Appear.-esteem	(1. step) BMI	-.5858	.3432	114.938	.0000	.5858
	(2. step) Age	.1460	.0165	5.624	.0186	.5997
Self-esteem	(1. step) Appear.-esteem	.5289	.2797	85.439	.0000	.5289
	(2. step) BMI	.2981	.0584	19.317	.0000	.5815
	(3. step) Age	-.0024	.0000	.001	.9697	.5815
Loneliness	(1. step) Self-esteem	-.4075	.1660	43.799	.0000	.4075
	(2. step) Appear.-esteem	-.1497	.0161	4.321	.0388	.4268
	(3. step) BMI	.1428	.0123	3.330	.0694	.4410
	(4. step) Age	-.0228	.0004	.105	.7456	.4414

In the second regression analysis, self-esteem was employed as dependent and appearance-esteem, BMI, age and sex were employed as predictors which were entered sequentially. The third and last regression analyses employed loneliness as dependent and self-esteem, appearance-esteem, BMI, age and sex as predictors. Independent variables entered into equation separately and in the same order indicated in the table. The first regression analysis revealed that BMI entered in the first order and sex entered in the third order accounted for significant contributions to appearance-esteem, whereas age entered in the second order was not a significant predictor of appearance-esteem. Obese individuals and females tend to have lower appearance-esteem. The second regression analysis indicated that both appearance-esteem entered in the first order and BMI entered in the second order accounted for significant contributions to self-esteem. Individuals who are obese and who have low appearance-esteem tend to have low self-esteem. The results of the third regression analysis revealed that self-esteem and appearance-esteem which were entered in the equation in the first and second orders respectively proved to be significant predictors of loneliness, whereas BMI entered in the third order did not account for additional variance in loneliness. That is, only feelings about self and appearance were correlated with feelings of loneliness, but BMI was not correlated with it. The findings support the model suggesting that BMI affects people's feelings of their appearance which in turn affects their self-evaluation; and feelings of self at the end affects people's feelings of loneliness. In summary, as is evident in Figure 1, appearance-esteem is predicted by BMI. Also, BMI has both a direct and indirect effect on self-esteem. Similarly, appearance-esteem contributes to loneliness directly and has effects on loneliness via self-esteem.

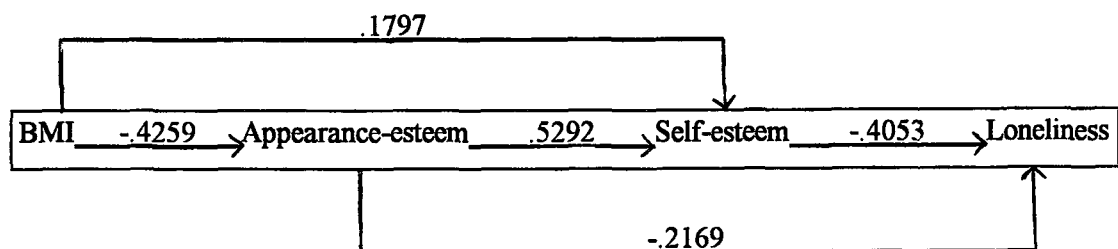


Figure 1

Hierarchical regression analyses were also performed for females and males separately in order to examine the differences between the two sex groups. The first regression analysis revealed that BMI entered in the first order accounted for significant contributions to appearance-esteem both for females and males, whereas age entered in the second order accounted for significant contributions to appearance-esteem only for females. The second regression analysis indicated that both appearance-esteem entered in the first order and BMI entered in the second order accounted for significant contributions to self-esteem for females, whereas for males only appearance-esteem entered in the first order accounted for significant contributions to self-esteem. BMI was not a significant predictor of self-esteem for males. The third regression analysis revealed that self-esteem and appearance-esteem entered in the first and second orders respectively accounted for significant contributions to loneliness both for males and females, whereas BMI entered in the third order did not account for additional variance in loneliness for both sex groups.

As shown in Table 7, some of the Betas indicated differences between males and females. These sex differences can be summarized as follows; (a) BMI accounts for more contributions to appearance-esteem in females than in males (b) age did not account for significant contributions to appearance-esteem in males, whereas it accounts for significant contributions to appearance-esteem in females (c) BMI did not account for significant contributions to self-esteem in males, whereas it was significantly correlated with self-esteem in females (d) appearance-esteem accounted for more contributions to loneliness in males than in females (e) BMI accounted for more contributions to loneliness in females than in males. In order to check if these differences are significant or not, an F test conducted (see Appendix E for the formula of the F test).

The results of the F test indicated that (a) the difference between betas of females and males in predicting appearance-esteem from BMI is significant ($F(2, 434) = 8.147, p < .01$). BMI accounts for significantly more contributions to appearance-esteem in females than in males (b) the difference between the sexes is significant in predicting appearance-esteem from age ($F(2, 434) = 9.389, p < .01$).

Age accounts for significantly more contributions to appearance-esteem in females than in males (c) the difference between the sexes is significant in predicting self-esteem from BMI ($F(2, 434) = 3.473, p < .05$). BMI accounts for significantly more contributions to self-esteem in females than in males (d) the difference between males and females in predicting loneliness from appearance-esteem is not significant ($F(2, 432) = 1.194, p > .05$) (e) the difference between betas of females and males in predicting loneliness from BMI is not significant ($F(2, 434) = 2.335, p > .05$). Appearance-esteem did not account for significantly more contributions to loneliness in males than in females.



CHAPTER 4

DISCUSSION

This study examined the relationship of obesity with self-esteem, appearance-esteem and loneliness. As it was hypothesized, the results indicated that obese individuals have lower self-esteem, lower appearance-esteem and higher loneliness scores than individuals in other weight categories. Only for the self-esteem measure, obese did not significantly get lower scores than the underweight group. Normal weight individuals have higher self-esteem than both underweight and obese individuals. For the appearance-esteem and loneliness measures, normal weight and underweight individuals did not score significantly different from each other, both of which scored higher than the obese. These findings replicates results of previous research stating that obese have lower self and appearance-esteem (e.g., Mendelson & White, 1985; Thomas, 1988; Martin et al., 1988) and are lonelier (e.g., Schumaker et al., 1985) than individuals in other weight categories.

Results indicated that men and women in different weight categories differ in self-esteem, appearance-esteem and loneliness. Obese females are less satisfied with their appearances than normal and underweight females. The latter two groups got approximately the same appearance-esteem scores. On the other hand, males in underweight and obese categories got exactly the same appearance-esteem scores, both groups are less satisfied with their appearances than normal males. Although, a main effect was not found for sex, indicating that males and females did not get significantly different scores from the three scales, the results indicated an interaction effect of sex by BMI category for appearance-esteem. For the obese category, females were less satisfied with their appearances than males. For the normal weight category females had lower appearance-esteem scores than males, but the difference

between two groups failed to reach statistical significance. For the underweight category, males were less satisfied with their appearances than females. This result replicates earlier findings of McCauley, Mintz & Glenn (1988) who found that women expressed greater dissatisfaction with their bodies than men within every weight category except for the slightly underweight group, where men expressed more dissatisfaction. One interpretation of this gender difference may be that the cultural pressure placed upon females to conform to ideal slender physical type is stronger than it is for males. As a result of this social pressure, females internalize the attitudes of society about body size which result in lowered appearance-esteem for obese females. The finding that underweight males had significantly lower appearance-esteem than underweight females is of particular interest. The popular stereotypes for males emphasize strength and bulk, so males who are hefty are considered attractive and desirable (Hammer et al., 1972, cited in Mendelson & White, 1985). Consistent with the above finding, earlier research indicated that men preferred to be broader than they were, whereas women preferred to be slimmer (Brodie, Slade & Riley, 1991; Silberstein et al., 1988). In addition, McCauley, Mintz & Glenn (1988) found that men in underweight and normal weight groups wanted to gain weight, whereas women in both groups wanted to lose weight.

Similarly, men and women in different weight categories differ in their self-esteem scores. Obese women have the poorest self-esteem among the three weight categories, although underweight females' self-esteem scores did not differ significantly from the normal and obese females' self-esteem scores. For males, underweight group have the poorest self-esteem scores among the three weight categories, but obese males' self-esteem scores did not differ significantly from the underweight and normal weight males. Normal weight individuals got the highest self-esteem scores in both sex groups.

Obese females got the highest loneliness scores, underweight females got the lowest, while normal females' loneliness scores were in between. But normal females did not differ significantly from obese and underweight females in their loneliness scores. As is the case in females, obese males got the highest loneliness

scores, whereas in males normal weight males got the lowest. Underweight males' loneliness scores were in between, although they did not differ significantly from obese and normal males in their loneliness scores. In sum, obese suffer from loneliness more than the other two weight categories in both sex groups.

As hypothesized, the data clearly demonstrated that self-esteem and appearance-esteem are correlated positively and both of these measures are correlated negatively with loneliness. The relationship between self-esteem and appearance-esteem appeared to be a little bit stronger for males than for females, but the results indicated that the two groups were not significantly different from each other in respect to the relationship between self and appearance-esteem; a finding that replicates previous research (Pliner, Chaiken & Flett, 1990; McCauley, Mintz & Glenn, 1988; Silberstein et al., 1988). Similarly, the correlation between appearance-esteem and loneliness appeared to be stronger for males than for females, but the difference between the two groups was not significant.

The results of the study provide support for the model suggesting that the psychological measures of the study are partially explained by BMI category directly or indirectly. Hierarchical regression analysis proved that there is a linear relationship between all the variables of the study. It has been found that (a) loneliness was partially explained by feelings about self. Also, feelings about appearance are related to loneliness. In other terms, people who have negative feelings about their appearance and self feel themselves lonelier than people who have positive feelings about their appearance and self (b) self-esteem was predicted by both appearance-esteem and BMI category. People who are obese and who have negative feelings about their appearance have lower self-esteem than nonobese and high appearance-esteem people (c) appearance-esteem was partially explained by BMI category and sex. Being obese is related to negative feelings about appearance and males had more positive feelings about their appearance than females. Given that the social pressure on women is to be physically attractive and good-looking, it is not surprising to find that women, more than men suffered from poorer appearance-esteem (Pliner, Chaiken & Flett, 1990). Moreover, age did not account

for significant contributions to any of the variables in any of the regression analyses performed for males and the total sample whereas, it accounted for significant contributions to appearance-esteem in females. Also, as mentioned above, sex accounted for significant contributions to appearance-esteem.

The findings of the regression analysis mentioned above suggests that obesity may really cause serious psycho-social consequences. The negative attitudes toward obesity prevalent in society (e.g. Belizzi, Klassen & Bellonax, 1989; Pauley, 1988; Brink, 1988; Lawson, 1980; Harris, Waschull & Walters, 1990,1991; Jasper & Klassen, 1990^a,1990^b) may lead obese to dislike their appearances (e.g. Thomas, 1988; Mendelson & White, 1985). Dissatisfaction with physical appearance in turn is probably generalized to satisfaction with the overall self (McCauley, Mintz & Glenn, 1988; Silberstein et al., 1988). Thus, being obese is also related to negative feelings about self other than negative feelings of appearance (Martin et al., 1988; Thomas, 1988). People whose appearance-esteem and self-esteem suffer feel themselves lonely (e.g. Jones, Freemon & Goswick, 1980; Quellet & Joshi, 1986; Joubert, 1990; Goswick & Jones, 1981). As it was mentioned before, the results of this study indicated that although BMI did not account for significant contributions to loneliness, obese subjects were found to be experiencing loneliness more than underweight and normal weight subjects. Two potential processes may create these results; (1) as a consequence of negative attitudes toward obese prevalent in the society, obese suffer from poor appearance and self-esteem, which in turn prevents them joining social activities, social gatherings and/or form an emotional relationship, (2) being ignored or negatively treated by others, obese have less opportunity to acquire social skills or believing that others will be less interested in and accepting of them, they'll reduce their expression of positive social skills (Miller et al., 1990). Deficits in social skills may in turn prevent them forming good and satisfactory relationships with others which leads to experiencing loneliness. The finding that obese experience more loneliness than nonobese is not something unexpected in a social and cultural climate where one of the strongest and most pervasive messages to people is that they should be thin (Schumaker et al., 1985).

Hierarchical regression analysis were also performed separately for males and females to examine the gender differences. Results suggested that the same model is applicable for both sexes but with different weights. Betas indicating differences were subjected to an F-test to check if the differences were significant or not. It was found that BMI accounted for significantly more contributions to both appearance and self-esteem for females than for males. This finding supports the notion that psychological consequences of being obese may be more severe for females than males (Belizzi, Klassen & Bellonax, 1989; Jasper & Klassen, 1990^a, 1990^b; Harris, Walters & Waschull, 1991). Therefore, women indicate greater concern of obesity and weight (Pliner, Chaiken & Flett, 1990; Wendel & Lester, 1988) and greater desire for thinness than men (Harris, Waschull & Walters, 1990, Brodie, Slade & Riley, 1991; Zellner, Harner & Adler, 1989; Thompson & Thompson, 1986; Fallon & Rozin, 1985). Given this consideration, they have a greater motivation for attempting to improve their appearance. One of these improvements is to attempt to achieve the slender body valued by the society. Another indication of the F-test was that age accounts for significantly more contributions to appearance-esteem for females than for males. Females have poorer appearance-esteems as they get older, and getting older may mean more weight for females than males (see Table 5 for the correlation between BMI and age).

The study may be subject to some criticism in that the BMI (w/h^2) which assessed obesity was based on self-reported weight and height. Although self-report measures are often employed by researchers, the validity of these devices is questionable. With the same perplexity in mind, previous studies conducted on this issue were scanned. Evidence suggests that subjects accurately reported their own height and weight (Richards et al., 1990; Schachter, 1968; Rzenwnicki & Forgay, 1987). Cash et al. (1989) found a very strong correlation between self-reported weight and actual weight ($r = .94$; $p < .01$). A more recent study by Smith & Cogswell (1994) indicated a significant association between actual and self-reported weights ($X^2 = 31.41$, $p < .001$).

One of the findings of this study suggests that BMI (w/h^2) -accepted as one of the most valid assessment device of obesity- has a relatively high correlation with body fat, particularly when age is taken into consideration, and a relatively low correlation with height (Baysal et al., 1988; Simopoulos, 1985; Ross et al., 1988). A high positive correlation between weight and BMI ($r=.80$; $p<.001$) was found, whereas no significant correlation was found between BMI and height for the total sample (see Table 4). A low but significant correlation between BMI and height was found only for females ($r= -.28$; $p<.001$), whereas the correlation between weight and BMI for females was very strong ($r=.90$; $p<.001$). This finding may constitute a piece of evidence that BMI is a valid assessment device of obesity which is also easy to use especially in these kinds of surveys.

One of the important findings of the study is the moderate correlation between psychological variables which indicates a relatively high convergent validity of the scales used as they all measured different concepts. However, correlation's were not too high, indicating that the three scales measured three different dimensions. Thus, one of the contributions of this study is that the modeled Appearance-esteem scale (1993), the translated version of the Rosenberg Self-esteem scale (1965) and the translated version of the revised UCLA Loneliness Scale (1980) are proved to be valid and reliable indexes to assess appearance-esteem, self-esteem and loneliness, respectively in other research studies.

Another contribution of this study is that the results supported the multidimensionality of the self-esteem concept (Shavelson, Hubner & Stanton, 1976; cited in Pliner, Chaiken & Flett, 1990; Fleming & Courtney, 1984; Fleming & Watts, 1980). A positive relation between global self-esteem -which refers to an overall evaluation of self- and appearance-esteem -which refers to self-evaluation in the domain of physical appearance- was found ($r= .52$, $p<.001$). Moreover, in all hierarchical regression analysis performed for males, females and the total sample, separately, appearance-esteem explained .28 of the variance in self-esteem.

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APPENDIX A

QUESTIONNAIRE FOR THE FIRST PILOT STUDY

Üniversite öğrencilerinin akademik ve sosyal durumları ve bu alanlardaki etkinlikleri ile ilgili bir araştırma yapmaktayım. Siz de bu amaçla görüşlerine başvurulacak biri olarak tesadüfen seçilmiş bulunuyorsunuz. Araştırmada toplanacak veriler toplu halde değerlendirileceği için sizden açık kimliğinizle ilgili bilgi istemiyorum. Ancak görüşlerinize yeniden gereksinim duyabileceğim düşüncesiyle ya adınızı yazmanızı ya da daha sonra anımsayacağınız bir şifre kullanmanızı rica ediyorum. Anketi cevaplamak yaklaşık 15 dakikanızı alacaktır. Araştırmaya katılmakla yaptığınız katkıdan dolayı teşekkür ederim.

Şebnem Kartal
ODTÜ Psikoloji Bölümü

Okulunuz : _____

Bölümünüz: _____

Sınıfınız: _____ Yaşınız: _____ Cinsiyetiniz: _____

- Şimdiye kadarki genel akademik ortalamanız nedir?
(tam olarak hatırlamıyorsanız yaklaşık olarak yazınız) _____
- Bu dönem (yarıyıl) not ortalamanızın kaç olmasını bekliyorsunuz? _____
- Okulu ne derecede bitireceğinizi düşünüyorsunuz? _____
- Kendinizi akademik yetenekleriniz açısından aşağıdaki kategorilerden hangisine koyarsınız?
 - a. Çok yetenekli
 - b. Yetenekli
 - c. Ne yetenekli ne yeteneksiz
 - d. Yeteneksiz
 - e. Çok yeteneksiz

- Şimdiye kadarki akademik çalışmalarınızdan ne derece memnunsunuz?
 - a. Çok memnunum
 - b. Memnunum
 - c. Ne memnunum ne de değilim
 - d. Memnun değilim
 - e. Hiç memnun değilim
- Ailenizin ortalama aylık geliri (tüm girdileri dahil) nedir? _____
- Türkiye standartlarını düşünerek ailenizin ekonomik durumunu nasıl değerlendirirsiniz?
Çok iyi İyi Orta Kötü Çok kötü

- Anne/babanızın eğitim durumlarını (aldığı son diplomaya göre) belirtiniz.
Anne _____
Baba _____
- Anne/babanızın yaptığı işi yazınız.
Anne _____
Baba _____
- Ailenizin oturduğu evin türünü işaretleyiniz.
Apartman dairesi ____
Müstakil ev ____
Gecekondu ____
Diğer (belirtiniz) ____
- Ailenizin oturduğu evin büyüklüğünü m² olarak belirtiniz. ____
- Ailenizin oturduğu evin oda sayısını belirtiniz.
(salon dahil, mutfak hariç) _____
- Kardeşiniz var mı?
Evet ____
Hayır ____
Cevabınız evet ise;
-Kaç kardeşiniz? ____
- Siz ailenin kaçınıcı çocuğusunuz? ____

- Ailenizin oturduğu semti aşağıdaki kategorilerden hangisine koyarsınız?
 - a. Üst sınıftan insanların oturduğu bir semt
 - b. Orta sınıftan insanların oturduğu bir semt
 - c. Alt sınıftan insanların oturduğu bir semt
- Kendinize yakın bulduğunuz kaç arkadaşınız var? _____
- Genel olarak arkadaşlarınızla olan ilişkilerinizden memnun musunuz?
 - a. Çok memnunum
 - b. Memnunum
 - c. Ne memnunum ne de değilim
 - d. Memnun değilim
 - e. Hiç memnun değilim
- Çaylara, partilere, arkadaş toplantılarına katılır mısınız?
Çok sık Sık Bazen Nadiren Hiç

- Sosyal, kültürel aktivitelere (sinema, tiyatro, gezi, dernek vb.) katılır mısınız?
Çok sık Sık Bazen Nadiren Hiç

- Sizce çevrenizdeki insanlar sizden ne derece hoşlanıyorlar?
 - a. Pek çok hoşlanıyorlar
 - b. Çok hoşlanıyorlar
 - c. Ne hoşlanıyorlar, ne de hoşlanmıyorlar
 - d. Hoşlanmıyorlar
 - e. Hiç hoşlanmıyorlar
- Başkalarıyla ilişki kurmak konusunda kendimi
 - a. Çok başarılı buluyorum
 - b. Başarılı buluyorum
 - c. Ne başarılı, ne de başarısız buluyorum
 - d. Başarısız buluyorum
 - e. Çok başarısız buluyorum

- Kendimi sosyal yönden
 - a. Çok yeterli buluyorum
 - b. Yeterli buluyorum
 - c. Ne yeterli, ne de yetersiz buluyorum
 - d. Yetersiz buluyorum
 - e. Çok yetersiz buluyorum
- Popüler bir insan mısınız?
 - a. Çok popülerim
 - b. Popülerim
 - c. Ne popülerim, ne de değilim
 - d. Popüler değilim
 - e. Hiç popüler değilim
- Bu günlerde karşı cinsten bir arkadaşınız var mı?
Evet ____ Hayır ____
- Şimdiye kadar karşı cinsten kaç kişiyle çıktınız? _____
- Halen karşı cinsten biriyle
 - a. Çok sık çıkıyorum
 - b. Sık çıkıyorum
 - c. Bazen çıkıyorum
 - d. Çıkıyorum
- Spor yapıyor musunuz?
Evet ____ Hayır ____
- Kendinizi fizik yönden formda hissediyor musunuz?
Evet ____ Hayır ____

Aşağıda kişilerin kendileriyle ilgili duygu ve düşüncelerini anlatan bazı cümleler verilmiştir. Lütfen her cümleyi dikkatle okuyunuz ve her cümlenin başına o cümledeki anlatıma ne derece katıldığınızı belirtecek şekilde aşağıdaki cevap kategorilerinden uygun olanının altındaki numarayı yazınız.

Tamamen katılıyorum	Katılıyorum	Katılmıyorum	Hiç katılmıyorum
1	2	3	4

- ___ 1. Kendimi değerli biri olarak görüyorum; en az diğer insanlar kadar.
- ___ 2. Bazı iyi niteliklerim olduğunu sanıyorum.
- ___ 3. Genelde kendimi başarısız bir kişi olarak görme eğilimindeyim.
- ___ 4. Ben de birtakım şeyleri çoğu insan kadar iyi yapabilirim.
- ___ 5. Gurur duyacak fazla birşeyim olmadığını hissediyorum.
- ___ 6. Kendime karşı olumlu bir tutum içindeyim.
- ___ 7. Genel olarak kendimden memnunum.
- ___ 8. Kendime karşı daha fazla saygı duyabilmeyi isterdim.
- ___ 9. Bazen hiç bir işe yaramadığımı hissine kapılıyorum.
- ___ 10. Zaman zaman hiç de hayırlı bir insan olmadığımı düşünüyorum.
- ___ 11. Dış görünüşümden memnunum.
- ___ 12. Kendimi fizik yönden çekici buluyorum.
- ___ 13. Kilomdan şikayetçiyim.
- ___ 14. Görünüşümün daha iyi olmasını isterim.
- ___ 15. Çevremdeki insanların pek çoğu kadar çekici olduğumu düşünüyorum.
- ___ 16. Çevremdeki insanların pek çoğundan daha kilolu olduğumu düşünüyorum.
- ___ 17. Fizik görünüşümden dolayı utanıyorum.
- ___ 18. Karşı cinsten kişilerin beni fizik yönden çekici bulduğunu sanıyorum.
- ___ 19. Giysisiz görünüşüm beni kaygılandırıyor.
- ___ 20. Arkadaşlarım kadar çekici olmadığımı düşünüyorum.

APPENDIX B

QUESTIONNAIRE FOR THE SECOND PILOT STUDY

Üniversite öğrencilerinin kendileriyle ilgili görüşlerini araştıran bir çalışma yapmaktayım. Siz de bu amaçla görüşlerine başvurulacak biri olarak tesadüfen seçilmiş bulunuyorsunuz. Araştırmada toplanacak veriler toplu halde değerlendirileceği için sizden açık kimliğinizle ilgili bilgi istemiyorum. Ancak görüşlerinize yeniden gereksinim duyabileceğim düşüncesiyle ya adınızı yazmanızı ya da daha sonra anımsayacağınız bir şifre kullanmanızı rica ediyorum. Anketi cevaplamak yaklaşık 10 dakikanızı alacaktır. Araştırmaya katılmakla yaptığınız katkıdan dolayı teşekkür ederim.

Şebnem Kartal
ODTÜ Psikoloji Bölümü

Okulunuz : _____
Bölümünüz: _____
Sınıfınız: _____
Yaşınız: _____
Cinsiyetiniz: _____

Aşağıda kişilerin kendileriyle ilgili duygu ve düşüncelerini anlatan bazı cümleler verilmiştir. Lütfen her cümleyi dikkatle okuyunuz ve her cümle başına o cümledeki anlatıma ne derece katıldığınızı belirtecek şekilde aşağıdaki cevap kategorilerinden uygun olanının altındaki numarayı yazınız.

Tamamen katılıyorum	Katılıyorum	Katılmıyorum	Hiç katılmıyorum
1	2	3	4

- ___ 1. Kendimi değerli biri olarak görüyorum; en az diğer insanlar kadar.
- ___ 2. Bazı iyi niteliklerim olduğunu sanıyorum.
- ___ 3. Genelde kendimi başarısız bir kişi olarak görme eğilimindeyim.
- ___ 4. Ben de birtakım şeyleri çoğu insan kadar iyi yapabilirim.
- ___ 5. Gurur duyacak fazla birşeyim olmadığını hissediyorum.
- ___ 6. Kendime karşı olumlu bir tutum içindeyim.
- ___ 7. Genel olarak kendimden memnunum.
- ___ 8. Kendime karşı daha fazla saygı duyabilmeyi isterdim.
- ___ 9. Bazen hiç bir işe yaramadığım hissine kapılıyorum.
- ___ 10. Zaman zaman hiç de hayırlı bir insan olmadığımı düşünüyorum.
- ___ 11. Dış görünüşümden memnunum.
- ___ 12. Kendimi fizik yönden çekici buluyorum.
- ___ 13. Kilomdan şikayetçiyim.
- ___ 14. Görünüşümün daha iyi olmasını isterim.
- ___ 15. Çevremdeki insanların pek çoğu kadar çekici olduğumu düşünüyorum.
- ___ 16. Çevremdeki insanların pek çoğundan daha kilolu olduğumu düşünüyorum.
- ___ 17. Fizik görünüşümden dolayı utanıyorum.
- ___ 18. Karşı cinsten kişilerin beni fizik yönden çekici bulduğunu sanıyorum.
- ___ 19. Giysisiz görünüşüm beni kaygılandırıyor.
- ___ 20. Arkadaşlarım kadar çekici olmadığımı düşünüyorum.

Aşağıdaki her maddede aralarında boşluklar bulunan iki sıfat verilmiştir. Her maddedeki sıfatları dikkatlice okuyunuz ve sizi hangi sıfatın ne derece tanımladığını belirtecek şekilde sıfatlar arasında verilen boşluklardan bir tanesine işaret koyunuz.

Dayanıklı	_____	Dayanıksız
Lider	_____	İzleyici
Başarılı	_____	Başarısız
Değerli	_____	Değersiz
Güvenli	_____	Güvensiz
Kapasiteli	_____	Kapasitesiz
Özgür	_____	Bağımlı
Yetenekli	_____	Yeteneksiz
İradeli	_____	İradesiz
Güçlü	_____	Güçsüz
Kararlı	_____	Kararsız
Sorumlu	_____	Sorumsuz
İlgili	_____	İlgisiz
Umutlu	_____	Umutsuz
Fedakar	_____	Bencil
Şefkatli	_____	Şefkatsiz
Sempatik	_____	Antipatik
Hoş	_____	Berbat
Cömert	_____	Açgözlü
Dürüst	_____	Dürüst değil
Sevimli	_____	Sevimsiz
İyi	_____	Kötü
Güvenilir	_____	Güvenilmez
Dengeli	_____	Dengesiz

APPENDIX C

QUESTIONNAIRE FOR THE MAIN STUDY

Kişilerin kendileriyle ilgili görüşlerini, yaşam biçimlerini ve beslenme alışkanlıklarını araştıran bir çalışma yapmaktayım. Siz de bu amaçla görüşlerine başvurulacak biri olarak tesadüfen seçilmiş bulunuyorsunuz. Araştırmada toplanacak veriler toplu halde değerlendirileceği için sizden açık kimliğinizle ilgili bilgi istemiyorum. Anket 9 sayfadan oluşmaktadır ve anketi cevaplamak yaklaşık 15 dakikanızı alacaktır. Araştırmaya katılmakla yaptığınız katkıdan dolayı teşekkür ederim.

Şebnem Kartal
ODTÜ Psikoloji Bölümü

Cinsiyetiniz: _____

Yaşınız: _____

Boyunuz (tam olarak bilmiyorsanız yaklaşık olarak yazınız): _____

Kilonuz (tam olarak bilmiyorsanız yaklaşık olarak yazınız): _____

Eğitim durumunuz (aldığınız son diplomaya göre): _____

Mesleğiniz (işiniz): _____

Medeni Durumunuz: _____

Ailenizin aylık geliri (tüm girdiler dahil): _____

Evliyseniz eşinizin mesleği (iş): _____

Evliyseniz eşinizin eğitimi: _____

Annenizin ve babanızın mesleği (iş): Anne _____ Baba _____

Annenizin ve babanızın eğitimi: Anne _____ Baba _____

Oturduğunuz semtin adı: _____

Aşağıda kişilerin kendileriyle ilgili duygu ve düşüncelerini anlatan bazı cümleler verilmiştir. Lütfen her cümleyi dikkatle okuyunuz ve her cümle başına o cümledeki anlatıma ne derece katıldığınızı belirtecek şekilde aşağıdaki cevap kategorilerinden uygun olanının altındaki numarayı yazınız.

Tamamen katılıyorum	Katılıyorum	Katılmıyorum	Hiç katılmıyorum
1	2	3	4

- ___ 1. Kendimi değerli biri olarak görüyorum; en az diğer insanlar kadar.
- ___ 2. Bazı iyi niteliklerim olduğunu sanıyorum.
- ___ 3. Genelde kendimi başarısız bir kişi olarak görme eğilimindeyim.
- ___ 4. Ben de birtakım şeyleri çoğu insan kadar iyi yapabilirim.
- ___ 5. Gurur duyacak fazla birşeyim olmadığını hissediyorum.
- ___ 6. Kendime karşı olumlu bir tutum içindeyim.
- ___ 7. Genel olarak kendimden memnunum.
- ___ 8. Kendime karşı daha fazla saygı duyabilmeyi isterdim.
- ___ 9. Bazen hiç bir işe yaramadığım hissine kapılıyorum.
- ___ 10. Zaman zaman hiç de hayırlı bir insan olmadığımı düşünüyorum.
- ___ 11. Dış görünüşümden memnunum.
- ___ 12. Kendimi fizik yönden çekici buluyorum.
- ___ 13. Kilomdan şikayetçiyim.
- ___ 14. Görünüşümün daha iyi olmasını isterim.
- ___ 15. Çevremdeki insanların pek çoğu kadar çekici olduğumu düşünüyorum.
- ___ 16. Çevremdeki insanların pek çoğundan daha kilolu olduğumu düşünüyorum.
- ___ 17. Fizik görünüşümden dolayı utanıyorum.
- ___ 18. Karşı cinsten kişilerin beni fizik yönden çekici bulduğunu sanıyorum.
- ___ 19. Giysisiz görünüşüm beni kaygılandırıyor.
- ___ 20. Arkadaşlarım kadar çekici olmadığımı düşünüyorum.

Aşağıda çeşitli duygu ve düşünceleri içeren cümleler verilmiştir. Lütfen her cümleyi dikkatle okuyunuz ve her cümlenin başına o cümledeki anlatımı ne sıklıkta hissettiğinizi aşağıdaki cevap kategorilerinden sizin için uygun olanının altındaki numarayı yazarak belirtiniz.

SIK SIK	BAZEN	NADİREN	HİÇ
Hissediyorum	Hissediyorum	Hissediyorum	Hissetmiyorum
1	2	3	4

- ___ 1. Kendimi çevremdeki insanlarla uyum içinde hissediyorum.
- ___ 2. Arkadaşım yok.
- ___ 3. Başvuracağım kimse yok.
- ___ 4. Kendimi tek başıyım gibi hissetmiyorum.
- ___ 5. Kendimi bir arkadaş grubunun bir parçası olarak hissediyorum.
- ___ 6. Çevremdeki insanlarla bir çok ortak yönüm var.
- ___ 7. Artık hiç kimseyle samimi değilim.
- ___ 8. İlgilerim ve fikirlerim çevremdekilerce paylaşılmıyor.
- ___ 9. Dışa dönük bir insanım.
- ___ 10. Kendimi yakın hissettiğim insanlar var.
- ___ 11. Kendimi grup dışına itilmiş hissediyorum.
- ___ 12. Sosyal ilişkilerim yüzeyseldir.
- ___ 13. Hiç kimse beni gerçekten iyi tanımıyor.
- ___ 14. Kendimi diğer insanlardan soyutlanmış hissediyorum.
- ___ 15. İstedigim zaman arkadaş bulabilirim.
- ___ 16. Beni gerçekten anlayan insanlar var.
- ___ 17. Bu derece içime kapanmış olmaktan dolayı mutsuzum.
- ___ 18. Çevremde insanlar var ama benimle değiller.
- ___ 19. Konuşabileceğim insanlar var.
- ___ 20. Derdimi anlatabileceğim insanlar var.

- Türkiye standartlarını düşünerek ailenizin ekonomik durumunu nasıl değerlendirirsiniz?
Çok iyi İyi Orta Kötü Çok kötü

- Çaylara, partilere, arkadaş toplantılarına katılır mısınız?
Çok sık Sık Bazen Nadiren Hiç

- Sosyal, kültürel aktivitelere (sinema, tiyatro, gezi, dernek vb.) katılır mısınız?
Çok sık Sık Bazen Nadiren Hiç

- Kendinize çok yakın bulduğunuz kaç arkadaşınız var? _____
- Sizce çevrenizdeki insanlar sizden ne derece hoşlanıyorlar?
a. Çok hoşlanıyorlar
b. Hoşlanıyorlar
c. Ne hoşlanıyorlar, ne de hoşlanmıyorlar
d. Hoşlanmıyorlar
e. Hiç hoşlanmıyorlar
- Popüler bir insan mısınız?
a. Çok popülerim
b. Popülerim
c. Ne popülerim, ne de değilim
d. Popüler değilim
e. Hiç popüler değilim
- Kendinizi sosyal yönden nasıl buluyorsunuz?
a. Çok yetenekli buluyorum
b. Yetenekli buluyorum
c. Ne yetenekli, ne de yeteneksiz buluyorum
d. Yeteneksiz buluyorum
e. Çok yeteneksiz buluyorum
- İlk defa bulunduğunuz bir sosyal ortamda kendinizi nasıl hissedersiniz?
a. Çok rahat hissedirim
b. Rahat hissedirim
c. Ne rahat ne de rahatsız hissedirim
d. Rahatsız hissedirim
e. Çok rahatsız hissedirim
- Kendinizi ne derece hareketli bir insan olarak tanımlarsınız?
a. Çok hareketli
b. Hareketli
c. Ne hareketli ne de hareketsiz
d. Hareketsiz
e. Çok hareketsiz

- Spor yapıyor musunuz?
Çok sık Sık Bazen Nadiren Hiç

- Kendinizi fizik yönden formda hissediyor musunuz?
___ Evet ___ Hayır

- İçki içiyor musunuz?
___ Hayır
___ Evet "Evet" ise

* Ne sıklıkta?
Çok sık Sık Bazen Nadiren

* Ne zamandan beri? _____

- Sigara içiyor musunuz?
___ Hayır
___ Evet "Evet" ise

* Ne sıklıkta?
Çok sık Sık Bazen Nadiren

* Ne zamandan beri? _____

- Kronik bir rahatsızlığınız var mı (Hipertansiyon, kalp-damar rahatsızlığı, şeker hastalığı, astım gibi)?
___ Hayır
___ Evet "Evet" ise adını/ adlarını yazınız

- Kendinizi ne dereceye kadar sağlıklı bir insan olarak tanımlarsınız?
a. Çok sağlıklıyım
b. Sağlıklıyım
c. Ne sağlıklıyım ne de sağlıksızım
d. Sağlıksızım
e. Çok sağlıksızım

- Küçük öğünler de dahil olmak üzere günde toplam kaç öğün yemek yiyorsunuz? _____

- Yemek öğünleriniz düzenli mi (hergün yaklaşık aynı saatlerde mi yemek yersiniz)?
___ Evet ___ Hayır

- Öğün aralarında atıştırır mısınız?
Çok sık Sık Bazen Nadiren Hiç

- Beslenme alışkanlığınızı nasıl değerlendiriyorsunuz?
Çok iyi İyi Ne iyi ne kötü Kötü Çok kötü

- Çevrenizdeki insanlara kıyasla ne kadar yiyorsunuz?
a. Çevremdekilerden daha az yiyorum
b. Çevremdekilerle aynı miktarda yiyorum
c. Çevremdekilerden daha çok yiyorum
- Kendinizi kilonuz açısından nasıl değerlendiriyorsunuz?
a. Kendimi çok zayıf buluyorum
b. Kendimi zayıf buluyorum
c. Kendimi normal buluyorum
d. Kendimi kilolu buluyorum
e. Kendimi çok kilolu buluyorum
- Çocukluğunuzda kilonuz nasıldı?
a. Çok zayıftım
b. Zayıftım
c. Kilom normaldi
d. Kiloluydum
e. Çok kiloluydum
- Ergenlik döneminde kilonuz nasıldı?
a. Çok zayıftım
b. Zayıftım
c. Kilom normaldi
d. Kiloluydum
e. Çok kiloluydum
- Şu andaki kilonuzdan memnun musunuz?
a. Çok memnunum
b. Memnunum
c. Ne memnunum ne de değilim
d. Memnun değilim
e. Hiç memnun değilim
- Kilonuz ne sıklıkta değişiyor?
Çok sık Sık Bazen Nadiren Hiç

- Ne zamandan beri şu anki kilonuzdasınız? _____

- Ailenizde kilolu olan biri var mı?

___ Hayır

___ Evet "Evet" ise kim/ kimler? (Birden fazla seçeneği işaretleyebilirsiniz)

a. Anne b. Baba c. Kardeş d. Eş e. Çocuk f. Akraba

- Bugüne kadar kilonuzu değiştirmek amacıyla herhangi bir yola başvurduğunuz mu?

___ Hayır "Hayır" ise bir sonraki sayfaya geçiniz.

___ Evet "Evet" ise

* Hangi yollara başvurduğunuzu yazınız (rejim, akapunktur, yürüyüş, jimnastik gibi) _____

* Ne amaçla?

a) Kilo almak amacıyla

b) Kilo vermek amacıyla

c) Kilomu (formumu) korumak amacıyla

* Ne sıklıkta bu yollara başvurduğunuz?

Çok sık Sık Bazen Nadiren

* Kilonuzu değiştirmek amacıyla başvurduğunuz bu yollar olumlu sonuç verdi mi?

___ Hayır

___ Evet "Evet" ise

* Hangisi/ hangileri olumlu sonuç verdi?

* Bu yöntem/ yöntemler sonunda

ulaştığınız yu daha sonra da koruyabildiniz mi?

___ Evet ___ Hayır

- Sizce bir insan neden kilo alır?

a. Yanlış beslenme alışkanlıkları yüzünden

b. Hareketsizlik yüzünden

c. Metabolizma (bünye) ve genetik (fizik) sebepler yüzünden

d. Diğer _____

- Sizce kilo almak veya vermek insanın kendi elinde midir?

___ Evet ___ Hayır ___ Kısmen

- Aşağıda yazılı cümlelerin sizin için doğru olup olmadığını belirtiniz. Cümledeki anlatım sizin için doğru ise karşısına "Doğru" sütununun altına gelecek şekilde bir X işareti koyunuz, eğer cümledeki anlatım sizin için doğru değilse karşısına "Yanlış" sütununun altına gelecek şekilde bir X işareti koyunuz.

	Doğru	Yanlış
. Yalnızca acıktığım zaman yerim	_____	_____
. Karnım tok olsa bile sevdiğim bir yiyecek veya çok güzel bir yemek görürsem yerim	_____	_____
. Endişeli ve sinirli olduğum zamanlarda birşeyler atıştırırım	_____	_____
. Sevinçli ve mutlu olduğum zamanlarda normalde yediğimden daha fazla yerim	_____	_____
. Morali bozuk olduğunda normalde yediğimden daha fazla yerim	_____	_____
. Rejim yaptığım zamanlarda üzüldüğüm veya sinirlendiğim bir olay olursa çoğunlukla rejimi bozarım (daha önce hiç rejim yapmadıysanız bu soruyu boş bırakın)	_____	_____
. Az yemeye dikkat ettiğim dönemlerde dayanamayıp yüksek kalorili yiyeceklerden yersem nasıl olsa rejimim bozuldu diyerek normalde yediğimden daha fazla yerim (daha önce hiç rejim yapmadıysanız bu soruyu boş bırakın)	_____	_____

- Aşağıdaki sıfatlardan zayıf veya şişman insanları nitelediğini düşündüklerinizin karşısına bir X işareti koyarak belirtiniz, eğer bu sıfatların içinde ne zayıf ne de şişman insanları nitelemeyi diye düşündükleriniz varsa karşılarındaki boşluklara hiçbir işaret koymadan bir sonraki sığata geçiniz.

	Zayıf	Şişman
. Çalışkan	_____	_____
. Disiplinli	_____	_____
. Güvenilir	_____	_____
. Çekici	_____	_____
. Özverili	_____	_____
. Düzenli	_____	_____
. Aktif	_____	_____
. Güzel	_____	_____
. Güçlü	_____	_____
. İşinin ehli	_____	_____
. Cömert	_____	_____
. Yetenekli	_____	_____
. Tezcanlı	_____	_____
. Neşeli	_____	_____
. Mert	_____	_____
. Hırslı	_____	_____
. Dengeli	_____	_____
. Kaprisli	_____	_____
. Mutlu	_____	_____
. İradeli	_____	_____
. Kararlı	_____	_____
. Şefkatli	_____	_____
. Sempatik	_____	_____
. Başarılı	_____	_____
. Sorumlu	_____	_____
. Dürüst	_____	_____

APPENDIX D

ORIGINAL VERSIONS OF THE SCALES

Rosenberg Self-esteem Scale

1. I feel that I'm a person of worth, at least on an equal basis with others.
2. I feel that I have a number of good qualities.
3. All in all, I am inclined to feel that I am a failure.
4. I am able to do things as well as most people.
5. I feel I do not have much to be proud of.
6. I take a positive attitude toward myself.
7. On the whole I am satisfied with myself.
8. I wish I could have more respect for myself.
9. I certainly feel useless at times.
10. At times I think I am no good at all.

Appearance Self-esteem Scale (Pliner, Chaiken & Flett, 1990)

1. How often do you have the feeling you are unattractive?
2. After you have dressed for the day, how pleased are you with your appearance?
3. How often are you dissatisfied with the way you look?
4. How often do you feel as attractive as most of the people you know?
5. How much do you worry about your appearance?
6. How much do you worry about your weight?

Physical Appearance Subscale of Self-Rating Scale (Fleming & Courtney, 1984)

1. Have you ever felt ashamed of your physique or figure?
2. Do you often feel that most of your friends or peers are more physically attractive than yourself?
3. Do you often wish or fantasize that you were better looking?
4. Have you ever been concerned or worried about your ability to attract members of the opposite sex?
5. How confident are you that others see you as being physically appealing?

Appearance-esteem Scale (Modeled)

1. I'm pleased with my appearance.
2. I feel physically attractive.
3. I worry about my weight.
4. I wish I looked better.
5. I feel as attractive as most of the people I know.
6. I feel as if I am more overweight than most of the people I know.
7. I feel ashamed of my physical appearance.
8. I think members of the opposite sex find me attractive.
9. I worry about my undressed appearance.
10. I feel I am not as attractive as my friends

The Revised UCLA Loneliness Scale (Russell, Peplau, & Cutrona, 1980)

1. I feel in tune with the people around me.
2. I lack companionship.
3. There's no one I can turn to.
4. I do not feel alone.
5. I feel part of a group of friends.
6. I have a lot in common with the people around me.
7. I'm no longer close to anyone.
8. My interests and ideas are not shared by those around me.
9. I'm an outgoing person.
10. There're people I feel close to.
11. I feel left out.
12. My social relationships are superficial.
13. No one really knows me well.
14. I feel isolated from others.
15. I can find companionship when I want it.
16. There're people who really understand me.
17. I'm unhappy being so withdrawn.
18. People are around me but not with me.
19. There're people I can talk to.
20. There're people I can turn to.

APPENDIX E

FORMULA FOR THE F-TEST

$$F = \frac{\text{SSE (R)} - \text{SSE (F)}}{2} : \frac{\text{SSE (F)}}{n_1 + n_2 - 4}$$

$$\text{SSE (F)} = \text{SSE 1} + \text{SSE 2}$$