



**NEAR EAST UNIVERSITY**  
**INSTITUTE OF APPLIED AND SOCIAL SCIENCES**  
**APPLIED PSYCHOLOGY MASTER PROGRAM**

**MASTER THESIS**

**THE RELATIONSHIP BETWEEN OBESITY, DEPRESSION, ANXIETY**  
**AND**  
**ADULT ATTACHMENT**

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**NICOSIA**

**2014**



**NEAR EAST UNIVERSITY**  
**GRADUATE SCHOOL OF SOCIAL SCIENCES**  
**APPLIED (CLINICAL) PSYCHOLOGY MASTER PROGRAM**

**MASTER THESIS**

The Relationship between Obesity, Depression, Anxiety and Adult Attachment

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## ÖZET

**Obezitenin, Depresyon, Kaygı ve Yetişkin Bağlanma Stilleri ile Arasındaki İlişki**

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**Eylül, 2014**

Obezite ve aşırı şişmanlık kavramları içerisinde depresyon, kaygı ve bağlanma biçimleri günden güne büyüyen bir ilgiye sebep olmaktadır. Bu çalışmanın amacı, obez ve aşırı kilolu bireylerin yaşadığı depresyon, kaygı ve bağlanma biçimlerinin beden kitle indeksi ile arasındaki ilişkinin araştırılmasıdır. Bu araştırma 131 katılımcıdan oluşmaktadır. Katılımcıların 86'sı obez ve aşırı kilolu olarak belirlenirken, geriye kalan 35 kişi ise normal kiloda olan bireyler arasından seçilmiş ve kontrol grubunu oluşturmuştur. Anket formu, kişisel bilgi formu, Beck Depresyon Envanteri, Beck Kaygı Envanteri ve Yakın İlişkilerdeki Tecrübeler Envanterlerinden oluşmaktadır.

Bu çalışmanın sonucunda, kontrol grubu ve kilo gruplarının depresyon ve kaygı seviyeleri arasında anlamlı bir fark bulunamamıştır. Obez bireylerin demografik özelliklerine bakıldığında, kadınların erkeklere oranla daha depresif oldukları istatistiksel olarak anlamlı bulunmuştur. Ayrıca yetişkin bağlanma biçimleri ve kilo grupları karşılaştırıldığında istatistiksel olarak anlamlı fark bulunamamıştır.

Sonuç olarak, yapılan çalışmalarda depresyon ve kilo arasında elde edilen sonuçlar henüz bir netliğe sahip değildir. Özellikle depresyonun yapısında genetik ve çevresel etmenleri de barındırması, kilodan dolayı değil kadın cinsiyetinden olma nedeniyle depresyon bulgusuna rastlanmıştır.

**Anahtar Kelimeler:** depresyon, kaygı, yetişkinlerde bağlanma, obezite ve aşırı şişman

## **ABSTRACT**

### **The Relationship between Obesity, Depression, Anxiety and Adult Attachment**

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**September, 2014**

Depression, attachment and anxiety paradigms have shown an enormous growth in the notions of obesity and overweight. The aim of the present study is to investigate the relationship between depression, anxiety and adult's attachment style while considering obesity and overweight. The present study includes 131 participants. 86 of the participants were overweight with obesity problems while 35 of them were normal weight individuals that were used as a control group. A questionnaire has been prepared. The questionnaire includes personal information form, Beck Depression Scale, Beck Anxiety Scale and Experiences in Close Relationship Inventory.

As a result of this study, it could be stated that there is no significant differences between the depression-anxiety levels of control group and weight groups. However, gender related statistical results shows that women are more depressed than men. Also, when the adult attachment styles and weight groups are compared, any significant differences were not figured out.

As a conclusion remark, research activities show that the correlation between depression and weight is not clear. However, the presence of depression in women can be related with the environment and genetic factor.

**Key words: Depression, Anxiety, Adult attachment, obesity and overweight.**



## ACKNOWLEDGEMENT

Uzmanlık eğitimimi aldığım süre içerisinde klinik becerileri ve tecrübelerini esirgemeyen, deneyimlerinden yararlanma fırsatı tanıyan, eğitimim boyunca her türlü desteğini hissettiğim, tez çalışmamda fikir ve değerlendirme aşamalarında yönlendirici katkılarından dolayı tez danışmanım Dr. Deniz Ergün hocama,

Klinik psikoloji eğitimimin ilk yıllarında hayata yaklaşımıyla bana örnek olan, bilgi ve becerilerini cömertçe bizlerle paylaşan ve mesleki deneyimlerinden yararlanma şansına sahip olduğum Yakın Doğu Üniversitesi Psikoloji Bölümü Ana bilimdalı başkanımız Assoc. Prof. Dr. Ebru T. Çakıcı,

Engin tecrübelerini heran bizlere sunarak derslerinden büyük keyif aldığım hocalarımdan Prof. Dr. Mehmet Çakıcı, eğitime katkıda bulunup bir psikolog olarak ilerlediğim bu yolda cesaretimi artıran Yard. Doç. Dr. Zihniye Okray ve desteğini her zaman hissettiğim Yard. Doç. Dr. İrem E. Atak'a,

Uzmanlık eğitimim ve tez sürecim boyunca en sıkıntılı ve mutlu olduğum anlarımı paylaşma fırsatı yakaladığım sevgili ailem ve dostlarıma, birlikte çalışmayı keyifli bir deneyim olarak yaşadığım meslektaşlarımdan Psk. Anjelika H. Şimşek, Psk. Necla Atilaoğulları, Psk. Ayşe Genç, Psk. Zehra Yürür Uzm.Psk.Meryem Karaaziz ve Uzm.Psk.Başak Bağlama ve her koşulda yanımda bulunan Asiye Arslan'a,

Bana bu gün ki başarılarımı yakalamam ve mutlu olmam için hiçbir emekten kaçınmayan annem Figen Köroğlu ve bu fırsatları değerlendirme şansı veren sevgili babam Dt. Teksen Köroğlu'na,

Her konuda desteğini bir an bile benden esirgemeyen, hayatıma sevinç ve aynı zamanda anlam katan, varlığı ile güç bulduğum nişanlım Ali Ilgar'a

Sonsuz minnet ve teşekkürlerimi iletirim.

Psk. Beliz Köroğlu

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## **ABBREVIATIONS**

BMI: BODY MASS INDEX

WHO: WORLD HEALTH ORGANISATION

TOÇBİ: TÜRKİYE’DE OKUL ÇAĞI ÇOCUKLARINDA BÜYÜMENİN  
İZLENMESİ

## 1. INTRODUCTION

Obesity, commonly known as being overweight, is considered as one of the biggest health problems all around the world and in our country as well. According to World Health Organization (WHO), obesity and overweight are defined as abnormal adiposity or excessive fat deposit in the body which may harm individual's health. The differential diagnosis of obesity and overweight, by World Health Organization, is given in BMI measurements; 30% and above represents obesity while 25% and above represents overweight (WHO, 2014).

In addition, worldwide obesity frequency is thought to be over 400 million and over 1.6 billion individuals are overweight. For the assessments prepared according to the age groups, it is reported that 35% of individuals aged 20 and above are overweight and 1 of every 10 individual is obese (WHO, [23.9.2014]). According to World Health Organization reports, overweight (62%) and obesity (26%) prevalence is mostly common in United States of America. On the other hand, for the assessments prepared according to genders, it is indicated that obesity prevalence in women than men is higher in America, Eastern Mediterranean, Europe, Africa, Eastern Pacific and Southern East Asia respectively. (World Health Statistic, 2012, 110-117)

In-depth investigations on obesity are increasing day by day. One of main reason is the relationship between obesity and overweight on depression. Recent studies have shown that there is a significant relationship between depression and weight groups (Luppino and et al., 2010, 224-225; Gillman, Poston, 2012, 74). These studies state that factors related to gender (Onyike et al., 2003, 1142-1143), Socio economic status (Carpenter and et al, 2000, 253-254), education levels (Rossen, Rossen, 2012) etc. effect the level of depression. In contrast to these studies, there is no relationship discovered between depression and obesity for some of the studies. (Deveci and et al., 2005a, 87).

Furthermore, it is observed that anxiety disorders show similar results to depression symptoms. The result from numerous studies identify that obese and overweight individuals have higher anxiety levels when compared to normal population (Simon, Korff, Kessler, 2006b, 5). Gender related differences in sociodemographic features play an important role in anxiety level (Zhao and et al., 2009b, 259). However, in some studies it was found out that anxiety level of obese individuals are less than expected levels (Crisp, McGuiness, 1976a, 7-8).

As a result of the studies completed in a low level for both disorders, the “Jolly Fat” Hypothesis has come forward. According to this hypothesis, obese and overweight individuals have less depression and anxiety levels when compared to normal population (Crisp, McGuiness, 1976b, 8). When obese and overweight individuals are studied in details, it was observed that especially women have less anxiety levels when compared to normal population whereas men have less depression and anxiety levels (Crisp, McGuiness, 1976b, 8; Crisp and et al., 1980c, 239).

Depression and anxiety levels of obese and overweight individuals and how they have developed their eating behaviours have become an important attention grabbing issue among the researchers. Attachment styles of individuals in early periods become prominent in influencing development of eating disorders (Boone, 2013, 933). It is seen that individuals who have insecure attachment style show more non-functional eating attitudes than the individuals with secure attachment styles (Ward, Ramsey, Treasure, 2000, 45).

A critique of how people with weight problems have high depression, anxiety and their attachment styles affect the eating disorders. This study aims to investigate the relationship between depression, anxiety and attachment by considering obese and overweight people in Northern Cyprus Population.



### 1.1 Definition of Obesity and Overweight

Obesity is a condition which describes a person who is overweight. It is one of the most common health problems of this century. The origin of obesity comes from Latin word "obesus". The dictionary defines obesity as "someone who is fat or extremely overweight" (Turkce Bilgi, [14.12.13]; Dil Derneği, [14.12.13]). In the past, being overweight was a symbol of intellectuals, wealthy and high society whereas being thin was a symbol of slaves and working class. Some researches argued that these perceptions vary according to the cultures. For example, in the Western culture there is a negative impact on obesity, while in Africa thinness is sometimes accepted as a symbol of poverty (Boskind-White, 1991 as cited Lemberg, Cohn, 1999, 8). However, in the 20th century obesity was seen as serious health problem. The Turkish Language Association defines obesity as; "the body storing excess body fat under the skin, causing a fatty appearance" (Dil Derneği, [14.12.13]). Many factors such as eating habits, lifestyle and physical activities are thought to influence obesity which is increasing worldwide. Obesity has a negative effect to the system of the human body in a direct or indirect way (Furuncuoğlu, 2006b, 19-23).

According to World Health Organization, body mass index, for obesity and the overweight diagnosis, is calculated by dividing the body weight to the square of the body height (WHO, 2014). If an individual is about 25.00-29.99% above their ideal weight size they are classified as overweight and if they are over 30.00% they are classified as obese (Baysal and et al., 2008c, 45). Excessive fat storage in the body can lead to physical or mental problems of an energy metabolism disorder. Obesity is an illness which includes energy entering the body during the day more than the energy that is burnt (Furuncuoğlu, 2006a, 9). The energy expenditure plays an important part to maintain the vitality of the basal metabolism in the human body. Even when the body is at rest, the work taking place by the internal organs is already consuming energy. In addition to this, the presence of physical activity is important. A single press of basal metabolism in the consumption of food energy is not enough. Therefore, the body weight increases and trends obesity. (Baysal, 2013, 121-122). Obesity is a complex production of both genetics and environmental factors. Eating



habits and physical activities of an individual may affect the degree of obesity or overweight (Balcioglu, Başer, 2008b, 343). In addition to physical activities of individuals, lack of excess energy intake and genetic predisposition are also important factors. Therefore, treatment and diagnosis are required to see the degree of obesity and a lifestyle to determine a loss of weight. (Baysal, and et al., 2008e, 48-49).

In terms of obesity, it is possible to face with many complication and comorbidity. These two diseases can mainly be divided into 9 categories. These are as follow; cardiovascular, pulmonary, psychological, gastrointestinal, orthopedic, reproductive, metabolic, dermatological and cancer (Balcioglu, Başer, 2008a, 342). It is possible to state that developing countries are spending seriously on health throughout the world for this prevalent risk. The costs associated with this problem are often related to an individual's physical and psychological health (Borgart, 2013, 42). Factors such as age, gender and the level of education in epidemiological studies reveal the affects of obesity. Along with these biological factors, the use of alcohol and smoking or the the lifestyle could also be associated with obesity (Arslan, Dağ, Türkmen, 2012, 72-76).

The World Health Organization is doing the largest scale prevalence of obesity related research and publications. According to the report which was published in 2014 by WHO, 10% of the adult population in the world are obese individuals (WHO, 2014). Day by day this health problem which carries a risk of death is not only seen in adults, but also it is a disease that is come across in childhood. In 2012, about 40 million children around the world are described to be obese or overweight, especially those who are under 5 years of age (WHO, 2014). In 2009, TOÇBİ constructed a study in Turkey by highlighting that 6.5% of the children between 6-10 years of age were overweight and 14.3% were slightly overweight (TOÇBİ, 2011 as cited Arslan et al., 2012, 14).

A study which has been carried out in our country showed that 11.7% of the children between the age range of 7-17 were found to be obese and 16.1% overweight (Yılmaz, and et al., 2005). There are more than half a million individuals 20 years and older worldwide who are known to be obese. For example, America has the highest overweight and obesity prevalence. According to the findings, 62% of the population are overweight individuals, while 26% are marginal obese. (WHO, [23.9.2014])

In 2012; Andreou et al (2012, 258) have make an investigation on 1001 Cypriot adults and calculated that the overweight prevalence showed 46.9% while the obesity rate was 28.8%. Comparison of obesity and gender based studies show that men rate 21.1% as women rate 43% (Furuncuoğlu, 2006a, 9). Researches which were performed in the USA (1999-2002) Denmark (2001), England (2003), and Germany (2002) indicated that women have a higher obesity prevalence rather than men (Acs, Stanton 2010, 82-83). In Turkey, Özgül and colleagues (2011) constructed a survey which has showed the obesity prevalence of women was 35% (Özgül and et al., 2011, 2402)

Obesity and weight gain also varies within the socio-economic status. The WHO report showed that in high-income countries there was a higher increase in the BMI compared to middle-income countries. However, Großschädl (2014, 111-113) performed a study on Australian adults, where he reported that when the socio-economic status increased, obesity declined. In addition, the disparity between education and income stands out as an important factor in the prevalence of obesity (Großschözl, 2005, 111-113).

Important risk factors of obesity arise day by day. According to the World Health Organization, there are over 400 million obese individuals worldwide and this rate is estimated to reach about 700 million by the year 2015 (WHO, 2014).

In many sources, obesity is regarded as a disorder, while in others as a disease. These days under the The Diagnostic and Statistical Manual of Mental Disorders (DSM) diagnostic criteria for eating disorders obesity does not take place, although the symptoms of this disorder are included in eating disorders. However, some sources agree that over-eating is considered as a behavioral disorder (Koptagel-İlal, 2000a, 99). Some psychological disorders, such as weight loss, can also cause weight gain. Studies show that overweight and obese individuals who experience mood disorders may have permanent weight problems because of the disorder (Simon, Korff, Kessler, 2006a, 3-7). In a similar way, there is controversy in anxiety disorders. However, to deal with the individual's concerns 'eating' is used as a method for the findings to be observed (Kaplan, Kaplan, 1957, 303-314 as cited Shepherd, Raats, 2006, 381-382).

There has been an increasing interest on psychosocial aspects on obesity studies within developed countries day by day, including our country. As a result, the Turkish Cypriot association found at the end of their research that fostered overweight and obese children were all faced with the same situation. The results show that children, who have normal weight or under weight family, %2 are obese and %3,9 are overweight. (Yılmaz and et al., 2005). For overweight and obese individuals to be affected by mental health, their role in social relations is as important as their weight. For example, parents' with excessive indulgence, unconscious feelings of guilt in terms of overfeeding their infants or wrong eating attitudes contributes to the development of the matter (Koptagel-İlal, 2000b, 100).

#### **1.1.1. Body Mass Index**

There are many methods used for the detection of obesity. Heymsfield and colleagues (1989, 1282-1288) argued that over 30 body compositions can be investigated under five main headings. These are divided to atomic organisms, moleculars, cellulars, the tissue systems and the body as a whole (Arslan, Dag, Türkmen, 2012c, 72-76). The most commonly used and the easiest calculation is



known as the body mass index. This is calculated by dividing the individuals body weight in kilograms and height in centimeters.(BMI kg / m<sup>2</sup>)

According to the classification of the UK adult World Health Organization adults  $\geq 25$  -  $< 30$  kg / m<sup>2</sup> is described as slightly overweight. If this value is  $\geq 30$  kg / m<sup>2</sup> then the individual is considered as fat / obese. If this value is over 40% then the individuals is classified as extremely obese (WHO, [27.9.2014])

### **Body Mass Index Definition to World Health Assosiation**

| WHO classification | BMI                                    |
|--------------------|--|
| Underweight        | $< 18.50$ kg/m <sup>2</sup>            |
| Normal range       | $18.50 - 24.99$ kg/m <sup>2</sup>      |
| Overweight         | $\geq 25.00 - 29.99$ kg/m <sup>2</sup> |
| Obese              | $\geq 30.00$ kg/m <sup>2</sup>         |
| Obese class I      | $30.00 - 34.99$ kg/m <sup>2</sup>      |
| Obese class II     | $35.00 - 39.99$ kg/m <sup>2</sup>      |
| Obese class III    | $\geq 40.00$ kg/m <sup>2</sup>         |

#### **1.1.2. Etiology**

It is not possible to examine obesity without considering the effecting segments. As it has been mentioned above obesity is a serious health problem. So, it is possible to examine obesity by considering its segments. Obesity is affected by many etiologic factors such as genetic, metabolic, hormonal, hypothalamic, psychological, lack of physical activity, environmental factors and socio-economic status etc. (Türkiye Sağlıklı Beslenme ve Hareketli Hayat Programı, 2011, 19; WHO 2014).

##### **1.1.2.1. Lack of Physical Activities, and Environmental Factors**

Firstly the family's eating habits are the basis of an individual's eating attitude. A child's family is the first role model for their socialization skills. Therefore, the family's socio-economic status, employment status, eating habits and physical



activity habits directly affect the child (Parlak, Çetinkaya, 2008, 60). Also, it is important to know that if a mother is obese or diabetic and gains weight during pregnancy this also increases the risk of the child becoming obese (Köksal, Özel, 2012, 9).

Futhermore, modern lifestyle plays an effective role in weight problems to individual's eating habits in both childhood and adulthood. For example, fast food products, especially in children, youth and adults, by the excessive consumption of fats, carbohydrates, ready meals, fizzy drink consumptions, eating behavior disorders and additive food consumption causes weight gain and obesity to the growing food technology (Köksal, Özel, 2008, 7-9). In addition, lack of physical activites by children and adults due to TV and computer games and more similar behavioral factors leads to the development of unbalanced eating habits (Arslan, Dağ, Türkmen, 2012c, 72-76).

In Western societies, weight control and physical activities aimed towards health was found to be insuffiecient at 70%. Yet another study in Finland revealed that individuals with low physical activity gained an average weight of 5kg within 5.7 years (Baysal, Baş, 2008c, 140). Studies carried out in Turkey showed that 50% of women between the age range of 20-29 had a low or very low physical activity rate with only 5% having a moderate one (Baysal, Baş, 2008a, 9).

#### **1.1.2.2. Hormonal, Metabolic and Hypothalamic Factors**

Controlling the energy metabolism, the hypothalamus within the central region, appears to provide control for the food intake mechanisms (Baysal, Baş, 2008b, 20). Orexigenic (appetite enhancer) and anaroksijenik (appetite-reducing) are factors that affect food intake and control mechanisms (Wass, Steward, 2011, 1653).

The hormone leptin reaches the hypothalamus, with its main functions being the energy balance and mediating satiety. In other words, the hypothalamus sends a signal that there is sufficient energy stored and the appetite is suppression. Sometimes, in parallel to the increased fat mass these hormones may increase.

Insulin hormone and the leptin hormone have common characteristics. They give a saturation signal to stop food intake (Baysal, and et al., 2008b, 43). As the weight decreases the leptin signal which goes to the hypothalamus also decreases and the leptin hormone loses its function (Baysal, and et al., 2008a, 42). By activation through a catabolic processes within the hypothalamus the leptin and insulin provides food intake (Kastin, Kastin, 2006, 994).

Adiponectin hormone insulins sensitivity acts effectively as a hormone enhancer. However, the blood adiponectin concentration in fat people is low. For this reason the outgoing alerts that reach the insulin can not support the satiety signal, for this reason it increases the body fat (Solomon, Berg, Martin, 2008, 1045).

The ghrelin hormone shows anti-effectiveness towards leptin, in other words while leptin reduces appetite, ghrelin encourages it. During fasting activity, ghrelin increases and the feeling of satiety decreases. However, in obesity the ghrelin signal deteriorates and the energy intake continues to increase (Baysal, and et al., 2008b, 43). As a summary, these 4 hormones are the hormones that regulate the appetite in the central neural region.

### **1.1.2.3. Genetic Factors**

Obesity is a condition that may be encountered in all age groups. Environmental factors are important in the formation of obesity such as genetic factors. It may start with the mother's dieting process that reveals a risk for their child in the future (Arslan, Dağ, Türkmen, 2012a, 71-72).

In terms of a genetic predisposition, if the parents are both obese the likelihood of their child to be obese is as high as 80 %. If one of the parents are obese then the value of their child to be obese is around 40% (Arslan, Dağ, Türkmen, 2012b, 73).

In a similar manner if a twin is obese, then there is the possibility that the other will have the same result (Yilmaz, 1995a, 10). In addition, the children of overweight families will adopt similar results. The results show the parents eating attitudes effect

on newly grown children (Stunkard, et al., 1986, 193-198 as cited Beales, Farooqi, O'Rahilly, 2009, 14). Hormonal and nervous factors play a role in the formation of body weight. Inheritance factors include fat cells, the metabolic rate and fat dispersion around the body. Some sources note that up to 33% of individuals get obesity by inheritance (Baysal and et al., 2008d, 48).

Genetic studies show that excessive weight gain in obesity regarding the body's energy use, the accumulation of fat and appetite within specific sections of the body and the size of the body fat cells and their relationship with the cells are all related (Xia, Grant, 2013, 178-186).

#### **1.1.2.4. Psychological Factors**

Obesity is seen as a behavioral disorder in some sources (Yilmaz, 1995b, 11). Individuals, who are overweight or obese, are observed to have psychological distress or social problems. The detection in the relationship between psychological problems and weight gain has given a right for treatment. In literature, it can be seen that the relationship between obesity and psychiatric disorders has opened a new chapter for research.

For example, on their research done on obese and severely obese adolescents Britz and colleagues (2010, 1710-1711) found that the participants with anxiety disorders, somatoform disorders and eating disorders particularly stood out. While 40% of participants according to DSM-IV diagnostic criterias had mood disorders, 29.8% had anxiety disorders as well as mood disorders (Britz, Siegfried, et al., 2010, 1710-1711).

Deveci and colleagues (2005c, 89) found in their study on adults that in 42% of the obese individuals at least one had psychiatric disorder. 18% of the participants suffered with specific phobia and the rest had 10% anxiety disorder (Deveci, et al., 2005c, 89). In addition, Eren and Erdi (2003, 154) found in their study that 81.3% of obese individuals were subject to symptoms of major depression and 22.6% to social phobia.



Obese individuals are widely perceived as sickening or degraded by the society (Balcıoğlu, Başer, 2008b, 343). Such negative social attitudes about the appearance or the weight of these individuals leads them to have negative feelings and to struggle mentally. As a result, obese individuals have low self-esteem and self-conception and this is thought to lead to negative developments (Satma, Yumuk, et al., 2014, 27).

In contrast to above claims, some researchers such as Crisp and McGuiness (1976b, 8), and Kuriyama et al. (2006, 232-233) investigated the presence of psychiatric disorders in obese individuals in their studies and have achieved to find that there is no symptoms of depression and anxiety in obese individuals. For instance, For instance, Hällström and Noppe (1981, 75-78) has found no significant correlation between obesity, present and past illness which includes anxiety depression etc... . All this findings has been described by a study which is conducted on obese women between 38-54 years old.

As a result, psychological problems sometimes cause both poor appetite and over eating. For this reason, psychological problems not only cause to obesity but also can be seen as a factor of obesity.

### **1.1.3. Overweight, Obesity and Depression**

Nowadays studies of psychological dimensions of obesity have started to coming up frequently. While studies in the past show the physiological factors of obesity, recent studies reveal the importance of those psychological factors. The relationship between the body mass index and psychiatric disorders is an issue which is still being investigated. Therefore, both obesity complications and comorbid are both aspects being investigated and discussed.

Today, it can be seen that a lot of work on psychiatric aspects about obesity emerges in many countries around the world. However, studies examining the relationship between BMI and depression seem to show inconsistent results. For example, Balcıoğlu and Başar (2008c, 344) from Turkey showed in his study that major



depression, bipolar disorder or agoraphobia prevalence indicates the increase of obesity.

Using the Hamilton depression and anxiety rating scales, the Beck Depression Inventory, the hospital anxiety depression scale and comparing them with body mass index Deveci and colleagues (2005b, 88) study have shown no significant relationship.

When examining psychiatric disorders in obese individuals in more detail, major depression and depressive symptoms seem to be one of the most common diagnostic criteria. Simon and colleagues (2006a, 3-7) found in their study that the psychiatric relationship between 6795 non-obese patients and 2330 obese patients showed 25% higher mood disorders in the adult population in the. In addition, a study done on the Korean community identified that the weight of an individual and depression is directly proportional their BMI (Kim and et al., 2010, 1561-1563). Eren and Erdi (2003, 154) study revealed that the most common findings in obese patients were major depressive disorder and social phobia. 81.3% of the patients were diagnosed with major depressive disorders and 71.7% were in their last one month period criteria of major depressive episodes (Eren, Erdi, 2003, 154).

Crips and Guinness (1975, 8) findings showed lower depression in middle-aged men and women and the "jolly fat" hypothesis was put forward. According to this hypothesis, signs of depression middle-aged obese individuals are equal to almost the entire population levels (Crips, McGuinness, 1975, 8). However, later studies show exactly the reverse of these findings.

More psychological symptoms and more common symptoms of depression are encountered from obese individuals compared to that of non-obese individuals. (Onyike and et al., 2003, 1142-1143; Fabricatore, Wadden, 2004, 332-337; Simon, Korff, Kessler, 2006a, 3-7). In 2008, Blaine confirms in his 16 meta-analytical study that individuals that are stuck with symptoms of depression carry a greater risk to develop obesity. According to the results obtained individuals that are at risk of

depression in their youth increase the probability of obesity at their adulthood (Blaine, 2008, 1192-1195). In addition, Villegas and colleagues (2010, 1443-1447) in their study wanted to determine whether being overweight and obese was a risk factor for depression in people at childhood and in their young adult years. The study which took place at the University of Navarra was performed on 11,825 Spanish students. In their study, it has been found that obesity and being overweight was high in males during their childhood and young adult period. Also depression a major risk factor in adulthood leading from their childhood body shape (Sánchez-Villegas and et al., 2010, 1443-1447).

When examining the relationship between depression and obesity more closely, outstanding factors can be seen from the mediators involved between them. These can be categorized as severity of depression, severity of obesity, gender and socio-economic status. In addition, Bray and Bouchard (2003, 26-27) supports the idea that the BMI and possible disease risks may vary from individuals of society. Stunkard and colleagues (2003, 331-332), claims that the relationship between depression and obesity may be the primary effect of depression itself. Some studies claim that clinical depression causes the development of obesity. Özdel and colleagues (2011b, 213) proved that obese women have more of a psychiatric history.

On the other hand, in their third national health and nutrition examination survey, Onyike and colleagues (2003, 1142-1143) came to a conclusion that depression in women is due to an increasing severity of obesity.

However, Carpenter and colleagues (2000, 253-254) show that obesity and depression is seen as an effective factor between white and African American women socio-economic status. For example, in this study it was mentioned that obese women, who have high socio economic status, have greter depression risk whereas women, who have low socio economic status, reduce depression risk (Carpenter and et al., 2000, 253-254).

Gender related researches show that higher rates of women more often than men appear to indicate psychological symptoms. What Özdel and colleagues (2011a, 211-213) found in their study in Turkey titled 'frequent psychiatric diagnosis of obese women' was that obese women admitted for psychiatric diagnosis treatment had a higher rate compared to women with normal weight. Another study showed that obese women compared to obese men suffered a greater risk of depression (Bray, Bouchard, 2003, 26-27). Many studies conclude the relationship between the similarities of overweight and obesity with depressive symptoms, especially in women (Carpenter and et al., 2000, 253-254; Onyike and et al., 2003, 1142-1143; Simon, Korff, Kessler, 2006a, 3-7).

In addition to this, it is an on going debate whether depression leads to obesity or obesity to depression. Recently Luppino and colleagues (2010b, 225) found in their meta-analytic study on overweight, obesity and depression that there is a 55% risk factor of obesity leading to depression. At the same time they found that obesity leading to depression is one of the most important predictions with a risk factor by 58% (Luppino and et al., 2010b, 225). Balcioğlu and Başer (2008c, 344) argue that obesity might be caused in individuals with psychopathological problem like depression and in others depression can be a result of obesity. In addition, again Luppino and colleagues (2010b, 225) argued that like individuals with obesity, individuals who are overweight are likely to have an increased risk factor of depression and this finding seems to be higher in individuals who are in their 20s.

However, Gariépy and colleagues in 2010 carried out in a study that was a contrast to Luppino and colleagues, claiming that depression was not a risk factor for obese individuals and in further studies have not found any signs of any evidence of depression (Gariépy, and et al., 2010, 1033-1038 as cited Bray, Bouchard, 2014, 636). In another study similar results were seen in Bangladesh' where there is a rural population. Asghar and colleagues (2010, 1143-1144) used the Montgomery-Asberg Depression Rating Scale to measure participants' degree of depression with 955 people participating in the study. When looking at the participants' scale scores



individuals with BMI measurements with  $25 \leq$  nonoverweight having lower depression scores, but the age and social class to the BMI's degrees MADRS scores making an impact to both genders (Asghar and et al., 2010, 1143-1144).

To summarise, according to some studies, depression can be evident in patients with a BMI of over 30%, but the findings in these individuals may not have any relationship with their obesity.

#### **1.1.4. Overweight, Obesity and Anxiety**

Nowadays, the percentage of lifetime prevalence of psychological disorder has excessive importance to be expected. According to WHO, every 2 in every 5 people may experience anxiety disorders (WHO, [30.9.2014]). Anxiety disorders might relate the other disorders because of its excessive percentage. Based on the recent studies, it is possible to say that obesity is one of the most important these disease.

In obesity related studies, anxiety disorders appear to be secondary to psychiatric aspects. Simon and colleagues (2006a, 3-7) proved in their study during a 12 month period that individuals with over 30% BMI levels had higher anxiety compared to ones who had BMI levels below 30%. Also, If stigmatization of overweight and obesity causes or contributes to mood and anxiety disorders, the effects of stigma might be more powerful in sociodemographic groups with lower obesity rates (Simon, Korff, Kessler, 2006c, 6). In a similar study of Generalized Anxiety Disorders, Oyekcin and colleagues (2011, 122-123) found that obese individuals had higher scores compared to their control groups. The anxiety obesity study had attracted the interest of women who attended, but there was no mention of men. In addition, it is believed that somatic anxiety leads to psychiatric disorders in obese individuals (Oyekcin and et al., 2011, 122-123). Zhao and colleagues (2009a, 258-260) created a large-scale three different obesity group study of the US adult population ( $BMI > 30$ ,  $BMI > 35$ ,  $BMI \geq 40$ ) and between these groups throughout the different stages of life detected the presence of anxiety. In addition, there was a positive relation between obesity and anxiety of women with BMI of 30 and above,



but for men the significant relationship of obesity and anxiety was  $BMI \geq 40$  (Zhao and et al., 2009a, 258-260).

In obesity, when studying the presence of anxiety disorders, there was a relationship found between anxiety and BMI in women (Anderson and et al., 2006, 287-288; Crisp, McGuiness, 1976b, 8), but this finding was less common in men (Crisp, McGuiness, 1976b, 8). Grundy et al (2014, 2-4) found a strong bond between women concerned with weight gain, ranging between the ages of 19-30, but could not find a significant relationship between obesity and anxiety. Therefore, in their study Grundy argued that weight gain may be associated with anxiety over time for overweight and obese individuals (Grundy and et al., 2014, 2-4).

In contrast of these findings, Crisp and McGuiness (1976b, 8) have determined that elderly obese individuals have less time anxiety levels than expected when compared to normal population. On the basis of findings, the researchers supporting the “jolly fat” hypothesis have found in a more detailed study that obese individuals have lower anxiety levels than non-obese individuals in both genders (Crisp and 1980a, 234). Moreover, it is identified that especially elderly women in low social class have lower anxiety levels when compared to non-obese individuals (Crisp, 1980b, 238).

In addition to this, some researchers such as Kaplan and Kaplan (1957) highlighted the notion of anxiety in obesity. The researchers, argues that according to the psychosomatic theory, obese individuals tend to increase their eating levels to cope with anxiety (Kaplan, Kaplan, 1957, 181-201 as cited Ruderman, 1983, 235). Similarly to Kaplan and Kaplan (1957), Leon and Chamberlain (1973, 476-479) supports the psychosomatic study's hypothesis that obese individuals eat more when they are anxious. However, Ruderman's (1983, 238-239) findings rejects this hypothesis in their research. The evidence that supports the relationship between obesity and anxiety disorder is not clear plus obesity alone is seen as a significant risk factor (Ruderman, 1983, 238-239). For example Oyekcin and colleagues (2011, 122-123) findings suggest that anxiety may be a result of psychosocial obesity effects in obese patients.

In addition, Simon and colleagues (2006a, 3-7) state that the relationship between overweight, obesity and anxiety needs to be unleashed into society for more extensive studies within the community's social and cultural status, taking into consideration the individuals' income, education level and race. For example, Bodenlos and colleagues (2011, 320-321) examined the risk of obesity and anxiety within different racial groups (Caucasians, African Americans, Latino) with 17,445 participants. They were looking at the current and past of anxiety and obesity, determining that the relationship between them is due to their racial differences (Bodenlos, Lemon, 2011, 320-321).

In another study, to avoid weight gain and psychological problems, Alici and Pinar (2008, 38-39) describes the effectiveness of educating obese patients on drug treatments, surgical procedures and weight control. Anxiety was found in 61.6% of the 80 obese patients who participated ranging from 18 to 65 years of age before the eight weeks of training. At the end of training the degree of anxiety was reduced (Alici, Pinar, 2008, 38-39). Likewise Sertöz and Mete (2005, 123) suggests the decrease in anxiety with obese individuals who lose weight.

#### **1.1.5. Jolly Fat Hypothesis**

Studies indicate that obese and overweight individuals might have mental disorders. Obtained findings have led mental disorders to be studied more in detail. When mental disorders are studied especially on obese individuals, depression and anxiety disorders become prominent. Some studies have found a result that obese and overweight individuals have high depression and anxiety disorder levels (Dong, Sanchez, Price, 2004, 792; Simon, Korff, Kessler, 2006, 3-7). However there are some studies which obtained opposite findings to these (Dong and et al., 2013, 229; Kuriyama and et al., 2006, 232-233; Li and et al., 2004a, 69-70). One of these studies which had similar findings in the recent past was done by Crips and McGuinness (1976b, 8). This study has been conducted on middle age obese individuals and both genders were found to have low level of anxiety. However when depression findings



are examined, the result obtained is that obese men have low depression levels (Crips, McGuinness, 1976b, 8).

While there are ongoing arguments about depression and anxiety being a result or a reason to start of obesity on individuals having weight problems, Crips and McGuinness (1976a, 7-8) have found a different definition for these findings. Researchers, who study the relationship between being overweight and psychological state, have observed that overweight people are “Jolly” and founded the “Jolly Fat” Hypothesis. According to this hypothesis, it is thought that weight of overweight and obese individuals does not effect their depression or anxiety levels (Crips, McGuinness, 1976a, 7-8).

For this reason it is asserted that obese and overweight individuals can be happy or carefree as other individuals in society. For instance in a study which has been conducted in 1976 with 739 individuals between the ages of 40-65 on depression and anxiety levels, it is seen that obese men have lower findings. However these findings are different in women. When obese women participated in the study are compared to the women in normal population it is seen that they only have low levels in anxiety (Crips, McGuinness, 1976a, 7-8). In other words, it has been highlighted that obese women have lower anxiety than the non obese or overweight women in population.

In the forthcoming years, Crips et al. (1980, 238) have reviewed their “Jolly Fat” hypothesis and focused more on the effects of demographic features. Here as it can be understood, the effects of demographic features are also important in terms of “Jolly Fat” Hypothesis. Statistically significant results are obtained especially between obese women and social class. It is observed that obese women in low social class have less anxiety then women with normal weight. As mentioned in the previous study, no difference is mentioned in depression findings of obese women in this study. In this study, only significant result obtained on depression findings of obese women was that 3 women in high social class had lower scores in their period of menopause (Crips and et al., 1980, 238). Briefly, when Crips et al. (1980, 238)



reviewed the previous findings and more focused on the demographic features of obese women and their social class, it is obvious that their level of anxiety is lower than normal weight women. However, on the other hand recent studies which were also conducted by Crips and et al., significant results only gained from high social class women, when they were in menopause.

Hormonal changes which women face in their period of menopause cause them to have weight problems and instant mood changes (Lobo, Kelsey, Marcus, 2000, 249). It is seen that women start depression treatment especially in that period (Miller, Rogers, 2007, 84-85). However these findings are not counted valid for every woman. In a study done by Jasienska et al. (2005, 147-149) in Poland, women were observed under two groups; pre and post menopausal groups. It was found that there is a relationship between depressive symptoms and education levels of women. It is determined that women with advanced education have less depression findings than the women with lower education. In this study, it is identified that there is a statistically significant relationship between BMI and women in depression of postmenopausal period (Jasienska and et al., 2005, 147-149).

In this project, hypothesis researchers think that gender, age, race and cultural background might be effective on the findings to be obtained. For instance; the women observed by Crips et al. (1980, 238) in a rural population in London between the ages of 17-70 show that they have sharper fluctuation in their anxiety level in comparison to those of men. In addition to these findings, it draws attention in the findings that not only obese individuals have low anxiety level but also the overweight individuals (Crips and et al., 1980, 238).

Another study supporting the “Jolly Fat” Hypothesis is completed by Li et al. (2004). In addition to biological factors focused on the “Jolly Fat” Hypothesis by Crips and colleagues (1980); Li and et al. (2004b, 69-72) have emphasized the effects of cultural differences in their studies. Especially in old Chinese population, it is seen that as the BMI levels of obese individuals increase, the level of depression decreases. As a reason for this, Li et al. have defined this positively via ancestry and

stories by bringing a relation between obesity and happiness from past to the present in Chinese society (Li and et al., 2004b, 69-72).

#### **1.1.6. Overweight, Obesity and Attachment**

In order for human beings to survive after birth, they need the care of their parents. In early 1930, Bowlby has started to examine behavior patterns and intense emotions during infancy which is the process of attachment (Harris, Butterworth, 2012a, 31). Especially, a secure relationship established between mother and child is thought to provide a healthy psychological development to the child. Many observers argue that the mutual bond affection established between mother and child helps the child to develop a sense of trust in all relationships with other humans in later years. (Green-Hernandez, Singleton, Aronzon, 2001, 74) In addition, Bowlby suggests that insecure relationship between a child and his/her caregiver can lead to personality problems and mental illnesses (Harris, Butterworth, 2012b, 33).

Tüzün and Sayar (2006, 28), supported the idea that continuity is ensured by the development in children's attachment styles, their characteristic features and traces of this style can be observed during the adult years in one of their study which is titled as Attachment theory and psychopathology. Theorists dealing with the attachment process acknowledge that the relationship of an individual established during adulthood is generally linked with the early relationship they have with their mother (Tüzün, Sayar, 2006, 28).

Adult attachment styles have been investigated for about 20 years. During this period, hundred of studies have been published on adult attachment styles. (Mikulincer, Goodman, 2006, 47). During this period, adult attachment can be seen in various models (George, West, 2012, 6). The most common and well known researchs has been done in this area by Bowlby (Feeney 2001, 23). By following this, Hazan and Shaver (1987a, 512) explored and identified an individual's attachment style in close and romantic relationships. Hazan and Shaver used Ainsworth attachment theory and Bowlby's explanations based on "safe, anxious/ ambivalent and anxious/avoidant" putting them into attachment format classes (Hazan, Shaver,



1987a, 512). According to these three dimensions, a "secure" attachment style individual is confident, sociable and can form close relationships. "Anxious/avoidant" attachment style individuals stay away from building close relationships, are socially repressed and feel uncomfortable to open themselves in a social way. "Anxious/ambivalent" is the final dimension of the theory, which includes an individual who has a lack of self-confidence, has a fear of rejection and abandonment (Hazan, Shaver, 1987b, 522).

On the other hand, Bartholomew and Horowitz (1991) have described Bowlby's theory as the beginning of attachments, in a similar manner. According to the binding quartet model Bartholomew and Horowitz had created, they suggested attachment styles which included "secure, preoccupied, dismissing and fearful" (Bartholomew, Horowitz, 1991, 227). A positive or negative effects which include self (self-models) and others (other's model) have been created as a perception of the four binding models. According to Bartholomew and Horowitz's (1991, 227) four-binding model the "secure" attached individuals perceive themselves as valued, loved, due to the developed self and positive model of themselves and others. "Obsessed" individuals under the title 'insecure attachment' develop a self negative and positive-others model. The obsessed adult sees him or herself worthless and evaluates others positively. For this reason, they seek approval and acceptance from others and try to become engaged in an ongoing relationship. Dismissing attached individuals develop a positive self-worthiness and develop negative views towards other self finding models. Fearful attached adults perceive themselves worthless while also negatively evaluate others. As these individuals develop a 'Negative-self and negative-other' model they avoid relationships (Bartholomew, Horowitz, 1991, 227).

The relationship between attachment styles and eating behaviours has been investigated. For example, a research has been performed on eating behavior and individual attachment types by Keskingöz in 2002 where it has been evaluated that people with dismissive attachments had more dysfunctional eating attitudes compared to people who had fearful and secure attachment styles. Similarly, people



who have obsessive attachment styles are assessed to have more dysfunctional eating attitudes than those who fearful attachment styles (Keskingöz, 2002 as cited Oral, Şahin, 2008, 38). Batur and colleagues found during their study in 2005 that individuals with eating problem attitudes, had a higher rate of fear and preoccupied attachment style (Batur and et al., 2005, 21-31 as cited Oral, Şahin, 2008, 38).

While researching the subject of eating disorders, Ward et all (2000) investigated the ways of attachment and found that the population had frequent attachment problems connected with eating disorders (Ward, Ramsay, Treasure, 2000, 45).

Researchers emphasize that individuals insecure attachment styles, abandonment anxiety and autonomy-related difficulties seem to be more prominent than securely attached individuals (Craighead, Nemeroff, 2004, 91).

## **2. METHOD**

### **2.1. Participants**

The research had started in June 2014, and ended by September 2014, which is held through private clinics registered within Northern Cyprus Dietetic Association. Total of 121 individuals were seek the treatment that meet the criteria of the BMI and being diagnosed for overweight and obesity. 35 people whose weights were normal and not overweight or obese were put into a control group. At the beginning of the study, 130 questionnaire has been received from the dieticians, but 9 of the total number of questionnaire have not been used due to the age and BMI criteria. Questionnaires were sent to the work groups through the dietitians as inventories of a sociodemographic questionnaire, Beck Depression Inventory, Beck Anxiety Inventory, interpersonal problem solving and experiences in close relationships. Written consent letters were obtained from each of the participants'.

The criteria for selection obese individuals age needed to be 18 and over, the treatment applied for from the dietitian needed to be new, the BMI measurements needed to be 25 and 30 points or more and they needed to voluntarily participate in the research.

### **2.2. Instruments**

First of all, a demographic information form was given to participant in order to to obtain their personal information (see Appendix B). Secondly, a Turkish version of the Beck Depression Inventory was used in order to assess the individual's depression levels (see Appendix C). Thirdly, a Turkish version of the Beck Anxiety Inventory was used in order to measure the anxiety levels of the individuals (see appendix D). Lastly, Turkish version of the Experiance in close relationships inventory was used in order to examine adult attachment skills (see Appendix E).

### **2.2.1. Socio-Demographic Information Form**

A sociodemographic information form had been prepared to receive personal information about the participants'. The content of these questions respectively were the participants' age, gender, height and weight, education level, occupation, marital status, number of children, and their economic situation. In addition, they were asked whether they were on any kind of medication or connected to medical condition due to their obesity.

### **2.2.2. Beck Depression Inventory**

In 1961, the original scale was developed by Beck et al. While measuring inventory, deprosyo somatic, emotional, cognitive and motivational symptoms, objectively it determines the severity of depressive symptoms too. Without time limitations, this scale can be answered in a short time and be applied to young people over the age of 15 and adults.

With 21 symptom categories and 4 options included, the participating individual including 1-week and daily, evaluates themselves. Each item score ranges between 0 and 3. By summing up the obtained depression score, the highest score that can be achieved is 63 points. By obtaining a high total score from the inventory, the level of severity or depression can be determined.

In Turkey, the first reliability and validity of the scale was conducted in 1981 by Teğin in 1981. Later, in Turkey between the years of 1988-1989 the Beck Depression Inventory was conducted by Nesrin H. Şahin as well as reliability and validity studies (Savaşır, Şahin, 1997a, 23).

### **2.2.3. Beck Anxiety Inventory**

The original inventory form, developed in 1988 by Beck and colleagues. Turkish adaptation of the form has completed in 1996 by Ulusoy and colleagues, which was also used in the validity and inventory reliability study in 1993 again by Ulusoy. The aim of the inventory is to measure how often anxiety symptoms are experienced by individuals. The Turkish translation of the scale was translated separately by three



psychologists who worked with the English language, literature as well as Turkish, with a participant using a reverse flasher. Consequently, what was believed to be the best phrases were selected into the Turkish scale form.

The inventory consists of 21 items with a scale of 0-3 points. For each item in the Likert-type scale "nothing" is considered as 0 points, "at a severe level" is 3 points and the highest score that can be obtained is 63. Therefore a high total score obtained from the scale indicates the severity of the individual's anxiety. In addition, with no time limitations the inventory can be applied to teenagers and adults (Savaşır, Şahin, 1997b, 27).

#### **2.2.4. Experiences in Close Relationships Inventory**

In 1998, the Experiences in Close Relationships Inventory (ECRI), which is developed by Brennan and colleagues (1998), have used to measure the binding in romantic adult relationships. Two sub-scales are obtained of what is thought to measure the binding of 60 items in the romantic adult relationships giving analysis factors of "avoidant attachment" and "disconcerting".

For two of the dimensions 18 items were selected with the highest factor load and a 36 item scale was obtained. Sumer (1999) had translated the Experiences in Close Relationships inventory into Turkish and the Turkish version of reliability and trust was also translated by Sumer and Gungor (1999) and Gungor (2000).

Looking at the items on the scale of close relationships they were evaluated as either "strongly disagree" or "totally agree". Between the agents there are 10 oppositely charged questions. An avoidant individual binding score would be a single number and an anxious individual would be double digits (Ergin, 2009, 33).

### **2.3. Statistical Procedures**

In this study, statistical evaluations were performed using IBM SPSS Statistics version 20. Some of demographic data as an average  $\pm$  is given as a standard deviation. In the analysis data, the number, percentage, Chi-square, One-way ANOVA, Independent Sample T-tests were used and a significance level of  $p < 0.05$  taken.

### 3. RESULTS

The present study included 121 participants. The mean age of the sample was  $38.28 \pm 13.55$  (19-75). The mean weight of sample was  $80.90 \pm 19.26$  (45-135). The mean weight of normal weight group was  $65.12 \pm 9.82$ , overweight group  $78.00 \pm 9.31$ , obes group  $97.53 \pm 16.15$ . The demographic characteristics of the samples are illustrated in Table 1.

**Table 1. Demographic Characteristics of the Sample**

|                    |                  | n (%)     |
|--------------------|------------------|-----------|
| Sex                | Female           | 61 (50.4) |
|                    | Male             | 60 (49.6) |
| Education          | Primary school   | 2 (1.7)   |
|                    | secondary school | 6 (5.0)   |
|                    | Highschool       | 39 (32.2) |
|                    | University       | 74 (61.2) |
| Proffesion/job     | Working          | 90 (74.4) |
|                    | Not Working      | 19 (15.7) |
|                    | Housewife        | 12 (9.9)  |
| Marital Status     | Single           | 57 (47.1) |
|                    | Married          | 62 (51.2) |
| Economic Condition | Low              | 15 (12.4) |
|                    | Middle           | 89 (73.6) |
|                    | High             | 17 (14.0) |
| Q 10               | Yes              | 16(13.2)  |
|                    | No               | 103(85.1) |
| Child Number       | None             | 55 (45.5) |
|                    | One child        | 28 (23.1) |
|                    | Two Child        | 32 (26.4) |
|                    | Three Child      | 6 (5.0)   |



The present study included sixty-one female participants (50.4%) and sixty male (49.6%) participants. Firstly, the education level of two of the participants were graduated from primary school (1.7%), six of the participants were graduated from secondary school (5.0%), thirty-three of the participant were graduated high school (32.2%) and seventy-four of the participant were graduated from at least university. Secondly, the proffesion level of the participants is observed; ninty of participants are working (74.4%), nineteen of the participants are not working at the moment and twelve of the participants are housewives. Thirdly, the marital status of the participants are observed; fifty-seven of the participants are single (47.1%) and sixty-two of the participants are married (51.2%). After that, when it has been closely looked at the economic condition, fifteen of the participants have low income (12.4%), eighty-nine of the participants have middle income (73.6%) and seventeen of the participants have high income (14.0%). As next, when it has been closely focused on the question 10 sixteen of the participants have chosen the option “a” (yes) (13.2%) an done hundred-three of the participants have chosen option “b”(no) (85.2%). Last but not least, when it has been closely looked at the number of children, fifty-five of the participants have no children(45.5%), twenty-eight of the participants have only one children (23.1%), thirty-two ot the participants have two children (26.4%) and six of the participants have three children (5.0%). The frequency of weight groups is depicted in Table 2.

**Table 2. The Frequency of Weight Groups**

|            | n (%)     |
|------------|-----------|
| Normal     | 47 (38.8) |
| Overweight | 25 (20.7) |
| Obese      | 49 (40.5) |

The present study included forty-seven normal weight (38.8%), twenty-five overweight (20.7%) and forty-nine obese (40.5%) participants. The comparison of weight groups according to sex is shown in Table 3.

**Table 3. The Comparison of Weight Groups According to Sex**

|            | Male n (%) | Female (%) |
|------------|------------|------------|
| Normal     | 18 (38.3)  | 29 (61.4)  |
| Overweight | 15 (60.0)  | 10 (40.0)  |
| Obese      | 27 (55.1)  | 22 (44.9)  |

$\chi^2 = 4.077$        $p = 0.130$

In the present study weight groups and sex was compared with Chi-square. It was found that there was not any significant differences between weight groups and sex ( $p=0.130$ ). The comparison of weight groups and the mean of age is depicted in Table 4.

**Table 4. The Comparison of Weight Groups and the Mean of Age**

|            | m±sd        | f (p)          |
|------------|-------------|----------------|
| Normal     | 34.49±9.88  | 3.491 (0.034)* |
| Overweight | 42.52±15.04 |                |
| Obese      | 38.28±15.07 |                |

\*p&lt;0.05 level

In the present study weight groups and the mean of age was compared with One-way ANOVA. It was found that there was significant differences between weight groups and the mean of age ( $p=0.034$ ). In advance analysis with Tukey it was found that the differences was between normal weight group and overweight group ( $p=0.042$ ). The mean age of the overweight group was higher than normal weight group. The comparison of weight groups according to education level is depicted in Table 5.

**Table 5. The Comparison of Weight Groups According to Education Level**

|            | Primary school<br>n(%) | Intermediate<br>school n(%) | Highschool<br>n(%) | University<br>n(%) |
|------------|------------------------|-----------------------------|--------------------|--------------------|
| Normal     | 1 (2.1)                | 4 (8.5)                     | 13 (27.7)          | 29 (61.7)          |
| Overweight | 0 (0)                  | 0 (0)                       | 11 (44.0)          | 14 (56.0)          |
| Obese      | 1 (2.0)                | 2 (4.1)                     | 15 (30.6)          | 31 (63.3)          |

 $X^2= 4.599$  $P= 0.596$ 

In the present study weight groups and education level was compared with Chi-square. It was found that there was not any significant differences between weight groups and education level ( $p=0.596$ ). The comparison of weight groups according to proffesion is depicted in Table 6.



**Table 6. The Comparison of Weight Groups According to Profession**

|            | Working<br>n(%) | Not Working<br>n(%) | Housewife<br>n(%) |
|------------|-----------------|---------------------|-------------------|
| Normal     | 38 (80.9)       | 5 (12.7)            | 3 (6.4)           |
| Overweight | 16 (64.0)       | 5 (20.0)            | 4 (16.0)          |
| Obese      | 36 (73.5)       | 7 (14.3)            | 5 (10.2)          |

$X^2= 3.704$        $p=0.717$

In the present study weight groups and profession was compared with Chi-square. It was found that there was not any significant differences between weight groups and profession ( $p=0.717$ ). The comparison of weight groups according to marital status is depicted in Table 7.

**Table 7. The Comparison of Weight Groups According to Marital Status**

|            | Single n(%) | Married n(%) |
|------------|-------------|--------------|
| Normal     | 29 (61.6)   | 18 (38.3)    |
| Overweight | 8 (32.0)    | 17 (68.0)    |
| Obese      | 22 (44.9)   | 27 (55.1)    |

$X^2=4.077$        $p=0,130$

In the present study weight groups and marital status was compared with Chi-square. It was found that there was not any significant differences between weight groups and marital status ( $p=0.130$ ). The comparison of weight groups according to economic status is depicted in Table 8.

**Table 8. The Comparison of Weight Groups According to Economic Status**

|            | Low n(%) | Middle n(%) | High n(%) |
|------------|----------|-------------|-----------|
| Normal     | 5 (10.6) | 38 (80.9)   | 4 (8.5)   |
| Overweight | 4 (16.0) | 17 (68.0)   | 4 (16.0)  |
| Obese      | 6 (12.2) | 34 (69.4)   | 9 (18.4)  |

$$X^2 = 4.010 \quad p=0.675$$

In the present study weight groups and economic status was compared with Chi-square. It was found that there was not any significant differences between weight groups and economic status ( $p=0.675$ ). The comparison of weight groups according to any medical condition is depicted in Table 9.

**Table 9. The Comparison of Weight Groups According to Any Medical Condition**

|            | Yes n(%) | No n(%)   |
|------------|----------|-----------|
| Normal     | 4 (8.5)  | 43 (91.5) |
| Overweight | 4 (16.0) | 21 (84.0) |
| Obese      | 8 (16.3) | 41 (83.6) |

$$X^2=1.987 \quad p=0.738$$

In the present study weight groups and any medical condition was compared with Chi-square. It was found that there was not any significant differences between weight groups and Q.10 ( $p=0.738$ ). The comparison of the mean score of Beck Depression scales and weight groups is depicted in Table 10.

**Tablo 10. The Comparison of the Mean Score of Beck Depression Scales and Weight Groups**

|            | m±sd       | f (p)            |
|------------|------------|------------------|
| Normal     | 9.23±8.73  | 1.124<br>(0.328) |
| Overweight | 8.92±9.71  |                  |
| Obese      | 11.37±6.48 |                  |

\*p<0.05 level

In the present study, the mean score of Beck Depression scale and weight groups was compared with One-way ANOVA. It was found that there was no significant difference between the mean score of beck Depressionscale and weight groups (p=0.328). The comparison of the mean score of Beck Anxiety scales and weight groups is depicted in Table 11.

**Tablo 11. The Comparison of the Mean Score of Beck Anxiety Scales and Weight Groups**

|            | m±sd        | f (p)            |
|------------|-------------|------------------|
| Normal     | 10.32±10.87 | 1.307<br>(0.275) |
| Overweight | 8.40±9.38   |                  |
| Obese      | 12.37±10.06 |                  |

\*p<0.05 level

In the present study, the mean score of beck anxiety scale and weight groups was compared with One-way ANOVA. It was found that there was no significant difference between the mean score of beck anxiety scale and weight groups (p=0.275). The comparison of the mean score of Attachment Avondiance subscale is depicted in Table 12.





**Tablo 12. The Comparison of the Mean Score of Attachment Avoidance Subscale and Weight Groups**

|            | m±sd       | f (p)            |
|------------|------------|------------------|
| Normal     | 36.64±9.59 | 0.245<br>(0.783) |
| Overweight | 36.04±7.27 |                  |
| Obese      | 35.51±6.21 |                  |

\*p<0.05 level

In the present study, the mean score of avoidance scales and weight groups were compared with One-way ANOVA. It was found that there was no significant difference between the mean score of avoidance scale and weight groups ( $p=0.783$ ). The comparison of the mean score of Attachment Anxiety subscale is depicted in Table 13.

**Tablo 13. The Comparison of the Mean Score of Attachment Anxiety Subscale and Weight Groups**

|            | m±sd       | f (p)            |
|------------|------------|------------------|
| Normal     | 38.32±8.38 | 0.248<br>(0.781) |
| Overweight | 36.84±8.18 |                  |
| Obese      | 37.96±8.92 |                  |

\*p<0.05 level

In the present study, the mean score of anxiety scales and weight groups were compared with One-way ANOVA. It was found that there was no significant difference between the mean score of anxiety scale and weight groups ( $p=0.781$ ). The comparison of the mean score of Beck Depression scales and gender is depicted in Table 14.

**Tablo 14. The Comparison of the Mean Score of Beck Depression Scales and Gender**

|        | m±sd       | t (p)              |
|--------|------------|--------------------|
| Female | 12.97±9.55 | -2.269<br>(0.004)* |
| Male   | 8.69±5.44  |                    |

\*p<0.05 level

In the present study, the mean score of Beck Depression scales and gender were compared with Independent-Samples T-Test. It was found that there was a significant difference between the mean score of depression scale and gender ( $p=0.004$ ). The comparison of the mean score of Beck Anxiety scales and gender is depicted in Table 15.

**Tablo 15. The Comparison of the Mean Score of Beck Anxiety Scales and Gender**

|        | m±sd        | t (p)              |
|--------|-------------|--------------------|
| Female | 15.66±11.66 | -3.543<br>(0.000)* |
| Male   | 7.50±6.64   |                    |

\*p<0.05 level

In the present study, the mean score of Beck Anxiety scales and gender were compared with Independent-Samples T-Test. It was found that there was a significant difference between the mean score of anxiety scale and gender ( $p=0.000$ ). The comparison of the mean score of Beck Depression scales and education level is depicted in Table 16.

**Table 16. The Comparison of the Mean Score of Beck Depression Scales and Education Level**

|                  | m±sd       | t (p)             |
|------------------|------------|-------------------|
| Primary school   | 31.00±     | 3.426<br>(0.022)* |
| secondary school | 14.00±8.48 |                   |
| Highschool       | 11.77±9.39 |                   |
| University       | 9.22±5.92  |                   |

\*p<0.05 level

In the present study, the mean score of Beck Anxiety scales and education level were compared with Independent-Samples T-Test. It was found that there was a significant difference between the mean score of depression scale and education level (p=0.022). The comparison of the mean score of Beck Depression scales and profession is depicted in Table 17.

**Table 17. The Comparison of Mean Score of Beck Depression Scales and Proffesion**

|             | m±sd        | f (p)             |
|-------------|-------------|-------------------|
| Working     | 10.38±6.44  | 4.212<br>(0.008)* |
| Not Working | 6.08±3.20   |                   |
| Housewife   | 17.44±13.58 |                   |

\*p<0.05 level

In the present study, the mean score of Beck Depression scales and proffesion were compared with One-way ANOVA. It was found that there was a significant difference between the mean score of depression scale and proffesion (p=0.008). The comparison of the mean score of Beck Anxiety scales and profesion is depicted in Table 18.



**Table 18. The Comparison of Mean Score of Beck Anxiety Scales and Proffesion**

|             | m±sd        | f (p)             |
|-------------|-------------|-------------------|
| Working     | 12.08±10.06 | 2.885<br>(0.042)* |
| Not Working | 4.50±4.06   |                   |
| Housewife   | 14.78±11.67 |                   |

\*p<0.05 level

In the present study, the mean score of Beck Anxiety scales and proffesion were compared with One-way ANOVA. It was found that there was a significant difference between the mean score of anxiety scale and proffesion (p=0.042).

#### 4. DISCUSSION

In this study, levels of depression and anxiety with adult attachment style within the obese and overweight individuals are analyzed by comparing to normal weight individuals.

As a result of the study, there is no significant difference in obese and overweight individuals in comparison to individuals with normal weight. Many studies have shown that depression is seen more with obese individuals than individuals with normal weight. One of these studies is done by Roberts et al. (2000, 166) and they have argued that obesity is an important risk factor for depression. It is determined that obese individuals who participated in the study have 2 times more depression symptoms than the individuals with normal weight (Roberts and et al., 2000, 166). Similarly, in a study done by Scott et al. (2008, 194-196), they have found statistically significant findings between the BMI scores and depressive disorders of obese groups and especially overweight groups. In their studies, Heo et al. (2006, 516-517) have indicated that overweight and obese women have long term depressive symptoms. Additionally, overweight and obese men have more significant modes than it is referred (Heo and et al., 2006, 516-517). On the other hand, in some studies it is argued that depression levels are low in obese individuals. One of these studies is done by Goldney et al. (2009, 654) and as a result of face-to-face interviews with participants it is found that obese individuals have less major depression findings than individuals with normal weight. Faubel, (1989, 389), who observed women with obesity more in detail, has obtained the findings that early and late onset obesity is not an important risk factor for depression. Ömürlü (2012, 37-38) has performed a study based on obese individuals in Turkish Republic of Northern Cyprus. As a result of the study, there is found no clear evidence for depression in SCL-90 inventory.

In significant findings as a result of studies which were conducted on individuals who had weight problems related to their depression levels support the Jolly Fat Hypothesis by Crips and McGuinness (1976). To do so, in the study which has been

done by Crips and McGuinness (1976, 7-8) no significant difference is found between depression and middle aged obese individuals, and the participants were propounded as “Jolly”. In another study which has been also conducted by Crips et al., (1980, 239) less depression findings were found only in obese men aged 40 and above. In contrast with men, no results were obtained when the relationship between demographic features and depression findings of women were compared.

When it has been closely looked at the relationship between gender and depression in this study, remarkable findings were obtained especially on women. As mentioned before, there were no significant findings in women when their weight groups and depression levels were compared. However, women who participated in this study faced more depression rather than men. Based on these findings, it is possible to say the presence of depression in women support the explanation of Rosen and Rosen (2012). However, those findings are not clear although there are some sources which support the idea that obese women are more depressed than normal weight women. In such studies suggesting similar results, it is thought that women’s depression can also be effected by other factors than their weight. The crux of the matter amongst these factors is that women’s sensivity might also be due to environmental and genetic effects (Rossen, Rossen, 2012, chapter 3).

Another point was examined in this study is the assessment of relationship between overweight and obese individuals and anxiety. According to the results, when overweight and obese individuals were compared to normal weight population there is no statistically significant results in anxiety. In contrast to these findings, Scott et al. (2008b, 196) have found that there were significant differences between anxiety disorders in women and identified that youngsters and elders have more anxiety disorders. In Turkey, when findings related to anxiety disorders which were clarified in detail the most common disorder among obese individuals is social phobia (Eren, Erdi, 2003, 154) whereas somatic anxiety draws attention on studies which was conducted on Swedish obese individuals (Rydén et al., 2003a, 1535-1538). As a result of the anxiety scale analysis, Rydén et al. (2003b, 1537-1538) have identified



that there is somatic anxiety in both genders (2003). However, some studies show that there are some supportive findings based on the result. In contrast to these findings, Bjerkeset et al. (2008, 196) could not find a mounting evidence between anxiety and BMI in their studies. Also, Bjerkeset et al (2008, 196) mentioned that gender related differences may affect the anxiety levels of the individuals. Ömürlü (2012, 37-38) also conducted a study on obese, overweight, underweight, normal and morbid obese patients by using SCL-90 inventory. As a result of the study, there is no clear evidence on the anxiety levels of the participants. On the basis of this reason, the studies of Crips and Guinness supporting “Jolly Fat” Hypothesis have gained importance. The results of the study show that obese individuals not only have low depression levels but they also have low anxiety levels in the sample. The data obtained show that there is a statistical positive bond in both genders (Crips and McGuinness, 1976, 7-8).

Lastly, the attachment styles of adults in close relationships are examined in this study. When it is looked at the attachment styles between weight groups and control groups, the obtained results show that there is no statistical significant difference. Studies done on attachment styles in adulthood propound that family relationship established in childhood are effective in the years ahead. For instance, Boone (2013, 933) state that girls have more avoidant attachment with their fathers when compared to boys. It is determined that the individuals with this type of attachment show more binge eating symptoms. Similar results in the study show that there is a positive relationship in avoidant attachment with mother (Boone, 2013, 933). Especially, it is seen that there is a negative relationship between family members and individuals with secure attachment on binge eating symptoms. In brief, the study shows that there is a positive relationship between all insecure attachment styles and binge eating symptoms except for the avoidant attachment with mother (Boone, 2013, 933). In another study, it is found that anxious and avoidant attachment styles of both genders are effective on eating behaviours (Koskina, Giovazolias, 2010, 457-459). Ömürlü (2012) has examined the attachment skills of obese individuals. As a result of the study, anxious attachment style was found more common in obese individuals.

Almost half of the total number of the study population has had anxious attachment (Ömürlü, 2012, 37-38). Although no significant difference was found between the participants and attachment styles in this study, the difference in subscale scores is remarkable. For instance; although there is not a significant difference when avoidants subscale and weight groups are compared, overweight groups' higher scores are remarkable when compared to obese individuals. Additionally, it is identified that anxious attachment subscales have higher scores than obese individuals. Due to this reason the findings argued by Alexander and Siegel's studies (2013, 375-376) state that there is an important bond between anxious attachment style and hunger can be supported. Moreover, when it is looked at gender related differences, it can also be seen from the studies done by Keating et al. (2013, 369-371) that women with eating disorders have insecure attachment skills.

On the basis of above mentioned findings, cultural and social changes might have a relation between eating behaviours and weight in evidence and background (Nonas, Foster, 2009, 220). Especially cultural factors effect our choice of food and food types significantly. For this reason, what people eat and what meaning they assign to food can come up as an important feature in ethnic groups as a characteristic attribute. As cultural effects between societies develop as a natural response, weight or eating behaviours of the people can be perceived positively. However these perceptions may result in a negative evaluation in cultures developed differently from each other (Nonas, Foster, 2009, 220). Because of this reason, the results of the sample determined in the borders of Turkish Republic of Northern Cyprus might have shown insignificance.

## 5. CONCLUSION

This study investigated the effects of depression, anxiety and adult's attachment style on obesity group by comparing with normal weight group. According to the findings, there is no significant through depression, obesity, adult's attachment styles and anxiety.

When obese and normal weight individuals are compared by considering their depression and anxiety levels there is no significant relationship between normal and obese weight individuals. However, it is important to recognise that there might be some factors which affect the level of depression and anxiety. Based on individuals' demographic features it is possible to say that, women, house wives and low educated individuals have high depression and anxiety levels.

The present study suggests that demographic features need to be closely investigated. The reason is, it has been believed that health related situations such as menopause, pregnancy and getting old might affect the results of the researches. Moreover, this study shows that factors such as culture and jelly fat hypothesis have great importance on studies which are conducted on obese individuals. The population of the study has been chosen by dietitians who run their own private consulting business. For this reason, this study suggests that it is better to use different sample for the further studies.

As conclusion, obesity causes both psychological and physical disorders. For this reason, a dietician should work with a psychologist at the same in order to prevent obesity and to get better results from the treatment. At this point, the role of the psychologist is to find out the factors such as anxiety, depression and other disorders which cause to weight problems. Also, factors such as gender, profession and education status should be considered in the psychotherapy of individuals who have weight problems.



## REFERENCES

- Abba Kastin, Abba J. Kastin, **Handbook of Biologically Active Peptides**, 10 th Ed. (USA: Elsevier Inc., 2006), 994.
- A. H Crisp, B. McGuiness, "Jolly Fat: Relation between Obesity and Psychoneurosis in General Population", **British Medical Journal**, (1976a):7-8, (1976b):8.
- A. H Crisp, M. Queenan, Y. Sittampaln, G. Harris, "Jolly Fat Revisited", **Journal of Psychosomatic Research**, vol.24 (1980a):234, (1980b):238, (1980c):239.
- A.J. Stunkard, TI Sorensen, C Hanis, TW Teasdale, R Chakraborty, WJ Schull, et al., 'Adoption Study of Human Obesity', **N Engl J Med**, (1986):193-198 as cited Philip L. Beales, I. Sadaf Farooqi, Stephen O'Rahilly, 'Genetics of Obesity Syndromes', **Oxford University Press**, (2009):14.
- Albert J. Stunkard, Myles S. Faith, Kelly C. Allison, "Depression and Obesity", **Society of Biologiccal Psychiatry**, 54 (2003):331-332.
- Almudena Sánchez-Villegas, Andriano M. Pimenta, Juan J. Beunza, Francisco Guillen-Grima, et al., "Childhood and Young Adult Overweight\Obesity and Incidence of Depression in the SUN Project", **Nature Puplician Group**, vol.18 no.7 (July 2010):1443-1447.
- Anne Grundy, Michelle Cotterchio, Victoria A. Kirsh, Nancy Kreiger, "Association between Anxiety, Depression, Antidepressant Medication, Obesity and weight among Canadian Women", **PLoS ONE**, vol.9 no.6 (June 2014):2-4.
- Anne Ward, Rosalind Ramsey, Janet Treasure, "Attachment research in eating disorders", **British Journal of Medical Psychology**, no.73 (2000):45.
- Anthony N. Fabricatore, Thomas A. Wadden, "Psychological aspects of Obesity", **Clinics in Dermatology**, vol.22 no.4 (2004):332-337.

A. Rydén, M. Sullivan, JS. Torgerson, J. Karlsson, A-K Lindroos, C. Taft, "Severe obesity and personality: a Comparative controlled study of personality traits", **International Journal of Obesity**, no. 27 (2003a):1535-1538, (2003b):1537-1538.

Artuner Deveci, M. Murat Demet, Bilgin Özmen, Erol Özmen, Zeliha Hekimsoy, "Obez hastalarda psikopatoloji, aleksitimi ve benlik saygısı", **Anatolian Journal of Psychiatry**, (2005a):87, (2005b):88, (2005c):89.

Ayşe Baysal, Meral Aksoy, H. Tanju Besler, Nazan Bozkurt, Sevim Keçecioglu, Seyit M. Mercangil, Türkan K. Merdol, Gülden Pekcan, Emine Yıldız, **Diyet El Kitabı**, 5 th Ed. (Ankara: Hatipoğlu Basım ve Yayım, 2008a), 42; (2008b), 43; (2008c), 45; (2008d), 48; (2008e), 48-49.

Ayşe Baysal, Murat Baş, **Yetişkinlerde ağırlık yöntemi**, 1 st Ed. (İstanbul: Ekspres Baskı A.Ş., 2008a), 140; (2008b), 20; (2008c), 140.

Ayşe Parlak, Şenay Çetinkaya, "Oyun Çocukluğu Dönemi Obez Çocuğun ve Ailelerinin Beslenme Alışkanlıklarının Değerlendirilmesi, Atatürk Üniversitesi", **Hemşirelik Yüksekokulu Dergisi**, vol.11 no. 3(2008):60.

Ayşe Baysal, **Yüz Soruya Yüz Yanıtla Sağlıklı Beslenme**, 2 nd Ed. (Ankara: Hatipoğlu Basım ve Yayım, 2013), 121-122.

Audrey J. Ruderman, "Obesity, Anxiety, And Food Consumption", **Addictive Behaviors**, vol.8 (1983):238-239.

Bahar E. Ergin, "Kişilerarası Problem Çözme Davranışı, Yetişkinlerdeki Bağlanma Biçimleri Ve Psikolojik Rahatsızlık Belirtileri Arasındaki İlişkiler", **Hacettepe Üniversitesi Sosyal Bilimler Enstitüsü**, Yüksek Lisans Tezi, (2009):33.

B. Britz, W. Siegfried, A. Ziegler, C. Lamertz, BM. Herpertz-Dahlmann, H. Remschmidt, H-U. Wittchen, J. Hebebrand, "Rates of psychiatric disorders in a clinical study group of adolescent with extreme obesity and in obese adolescents ascertained via a population based study", **International Journal of Obesity**, 24(2000):1710-1711.

B. Keskingöz, “Üniversite öğrencileri ile anoreksiya nevroza tanısı alan ve almayan bireylerde bağlanma biçimleri, kişilerarası şemalar ve yeme örüntüleri arasında ilişkiler”, (Yayınlanmamış Yüksek Lisans Tezi, H.Ü. Sosyal Bilimler Enstitüsü, 2002)’den aktaran Nursen Oral, Nesrin Hisli Şahin, “Yeme Tutum Bozukluğunun Kişilerarası Şemalar, Bağlanma, Kişilerarası İlişki Tarzları ve Öfke ile İlişkisi”, **Türk Psikoloji Dergisi**, vol.23 no.62 (2008):38.

Bruce Blaine, ‘Does Depression Cause Obesity? A Meta-analysis of Longitudinal Studies of Depression and Weight Control’, **Journal of Health Psychology**, vol.13 no.8 (2008):1192-1195.

C. Dong, LE. Sanchez, RA. Price, “Relationship of Obesity to Depression: a Family-based Study” **International Journal of Obesity**, Vol.28 (2004):792.

Candeğer Yılmaz, **Obezite**, (Nobel Tıp Kitapevileri, 1995a), 10; (1995b), 11.

Carol George, Malcolm L. West, **The Adult Attachment Projective Picture System: Attachment Theory and Assesment in Adults**, (United States of America: The Guilford Press, 2012), 47.

Carol Green-Hernandez, Joanne K. Singleton, Daniel Z. Aronzon, **Pirimary Care Pediatrics**, (United States of America: Lippincott Williams & Wilkins, 2001), 74.

Cathy A. Nonas, Gary D. Foster, **Managing Obesity: A Clinical Guide**, (:American Dietetic Associati,2009), 220.

Chiadi U. Onyike , Rosa M. Crum, Hochang B. Lee, Constantine G. Lyktsos, William W. Eaton, ‘Is Obesity Associated with Major Depression? Results from the Third National Health and Nutrition Examination Survey’, **American Journal of Epidemiology**, vol.158 no.12 (2003):1142-1143.

Cindy Hazan, Philip Shaver, “Romantic Love Conceptualized as an Attachment Process” **Journal of Personality and Social Psychology**, Vol.52 No.3 (1987a):512, (1987b):522.



Demet G. Oyekcin, Deniz Yıldız, Erkan Melih Şahin, Savaş Gür, “Depression and Anxiety in Obese Patients”, **Turk JEM**, 15 (2011):122-123.

Dil Derneği,

<http://www.dildernegei.org.tr/TR/Sozluk.aspx?F6E10F8892433CFFAAF6AA849816B2EFEC9E8A7FA3AA308F&Sozcuk=obezite%20%20&Detay=1&ANAH=43614>.

[14.12.13].

Dil Derneği,

<http://www.dildernegei.org.tr/TR/Sozluk.aspx?F6E10F8892433CFFAAF6AA849816B2EFEC9E8A7FA3AA308F&Sozcuk=%C5%9F%C5%9Fman&Secim=1> [14.12.13].

E. Andreou, PG. Hajigeorgiou, K Kyriakou, Th Avraam, G. Chappa, P. Kallism, Ch. Lazarou, Ch. Philippou, C. Christoforou, R. Kokkinofa, C. Dioghenous, SC. Savva, A. Kafatos, A. Zampelas, D. Papandreou, “Risk Factor of Obesity in a Cohort of 1001 Cypriot Adults: An Epidemiological Study”, **Hipopokratia**, vol.16 no.3 (2012):258.

Eldra P. Solomon, Linda R. Berg, Diana W. Martin, **Biology**, 8 th Ed. (USA: Cengage Learning, 2008), 1045.

Fezile Ömürlü, “The relationship between obesity, attachment and Psychopathology”, (Yayınlanmamış Yüksek Lisans Tezi, NEU Sosyal Bilimler Enstitüsü, 2012), 37-38.

Florian S. Luppino, Leonore M. de Wit, Paul F. Bouvy, Theo Stijnen, Pim Cuijpers, Brenda W. J. H. Penninx, Frans G. Zitman, “Overweight, Obesity, and Depression”, **Arch Gen Psychiatry**, Vol.67 No.3 (Marc 2010a):224-225, (2010b):225.

Franziska Großschädl, **Epidemiology of obesity among Austrian adults: Long-term trends, social inequalities and obesity-associated diseases and disorders**, (Erscheinungsjahr: Books on Demand 2014), 111-113.

“Gender and women’ mental health”, World Health Organisation,

[http://www.who.int/mental\\_health/prevention/genderwomen/en/](http://www.who.int/mental_health/prevention/genderwomen/en/) [30.9.14]

George A. Bray, Claude Bouchard, **Handbook of Obesity: Clinical Applications**, 2.ed (CRC Press, 2003), 26-27.

G. Garipey, J. Wang, AD Lesage et al, "The Longitudinal Association From Obesity to Depression: Results From the 12-year National Population Health Survey", **Obesity (Silver Spring)**, no.18 (2010):1033-1038'den aktaran George A. Bray, Claude Bouchard, **Handbook of Obesity: Clinical Applications**, 4 th Ed. (CRC pres, 2014), 636

Gloria R. Leon, Karen Chamberlain, "Emotional Arousal, Eating Patterns, And Body Image As Differential Factors Associated With Varying Success In Maintaining A Weight Loss", **Journal Of Consulting and Clinical Psychology**, Vol.40 No.3 (1973):476-479.

Global Database on Body Mass Index, World Health Organization,  
[http://apps.who.int/bmi/index.jsp?introPage=intro\\_3.html](http://apps.who.int/bmi/index.jsp?introPage=intro_3.html) [27.9.2014].

Grazyna Jasienska, Anna Ziomkiewicz, Maciej Górkiewicz, Andrzej Paja, "Body Mass, Depressive Symptoms and Menopausal Status: An examination of the 'Jolly Fat' hypothesis", **Women's Health Issues**, Vol.15 (2005):147-149.

Gregory E. Simon, Michael Von Korff, Ronald C. Kessler, "Association Between Obesity and Psychiatric disorders In The Us Adult Population", **Arch Gen Psychiatry**, Vol.63 No.7 (July 2006a):3-7, (2006b):5, (2006c):6 .

Glden Kksal, Hlya G. zel, "**Okul ncesi Dnemde Obezite**", (Saėlık Bakanlıėı Yayınları, 2012), 9.

Glden Kksal, Hlya G. zel, "**ocukluk ve Ergenlik Dneminde Obezite**", (Ankara: Saėlık Bakanlıėı Yayınları, Şubat 2008), 7-9.

Gnsel Koptagel-İlal, **Psikonevroz Psikosomatik Psikoterapi**, (İstanbul: İstanbul niversitesi Basımevi, 2000a), 99; (2000b), 100.

G. Zhao, Es Ford, S. Dhingra, C. Li, TW Strine, AH Mokdad, “ Depression and Anxiety Among Us Adults: Associations With Body Mass Index”, **International Journal of Obesity**, vol.33 (2009a):258-260, (2009b):259.

I. H. Kaplan, S. H. Kaplan, “The psychosomatic concept of obesity”, **Journal of Nervous and Mental Disease**, no. 41 (1957):303-314 as cited Richard Shepherd, Monique Raats, **The Psychology of Food Choice**, 3 th Ed. (United Kingdom: CABI, 2006), 381-382.

I. H. Kaplan, S. H. Kaplan, “The psychosomatic concept of obesity”, **Journal of Nervous and Mental Diseases**, Vol.125 (1957):181-201 as cited Audrey J. Ruderman, “Obesity, Anxiety, And Food Consumption”, **Addictive Behaviors**, Vol.8 (1983):235.

Işık Savaşır, Nesrin H. Şahin, **Bilişsel-Davranışçı Terapilerde Değerlendirme: Sık Kullanılan Ölçekler**, (Ankara: Türk Psikologlar Derneği, 1997a), 23; (1997b), 27.

İbrahim Eren, Özlem Erdi, “Obez Hastalarda Psikiyatrik Bozuklukların Sıklığı”, **Klinik Psikiyatri**. 6 (2003):154.

İbrahim Balcıoğlu, Sinem Z. Başer, “Obezitenin Psikiyatrik Yönü”, **Sempozyum Dizisi**. No.62 (Mart 2008a): 342, (Mart 2008b):343, (Mart 2008c):344.

İlhan Satma, Volkan D. Yumuk, Cihangir Erem, Fahri Bayram ve diğ., **Obezite Tanı ve Tedavi Klavuzu**, 1 st Ed. (Ankara:Türkiye Endokrinoloji ve Metabolizma Derneği, 2014), 27.

Jamie S. Bodenlos, Stephenie C. Lemon, Kristin L. Schneider, Madeline A. August, Sherry L. Pagoto, “Associations of mood and anxiety disorders with obesity: Comparisons by ethnicity”, **Journal of Psychosomatic Research**, no.71 (2011):320-321.

Ji-Yong Kim, Hye-Mi Chang, Jung-Jin Cho, Sang-Ho Yoo, Soo-Young Kim, ‘Relationship between Obesity and Depression in the Korean Working Population’, **J. Corean Med. Sci**, 25 (2010):1561-1563.



John A.H. Wass, Paul M. Steward, **Oxford Textbook of Endocrinology and Diabetes**, 2 nd Ed. (United States: Oxford University Press, 2011), 1653.

Judith A. Feeney, Lyndia Hohaus, Patricia Noller, Richard P. Alexander, **Becoming Parents: Exploring the Bonds between Mothers, Fathers, and Their Infants**, 1 st Ed. (United States of America: Cambridge University Press, 2001), 23.

Karen J. Miller, Steven A. Rogers, **The Estrogen-Depression Connection: The hidden Link Between Hormones and Women's Depression**, (USA: New Harbinger Publication, 2007), 84-85.

Katherine E. Alexander, Harold I. Siegel, "Perceived hunger mediates the relationship between attachment anxiety and emotional eating", **Eating Behaviors**, no.14 (2013):375-376.

Kenneth M. Carpenter, Deborah S. Hasin, David B. Allison, Myles S. Faith, 'Relationship Between Obesity and DSM-IV Major Depressive Disorder, Suicide Ideation, and Suicide Attempts: Results From a General Population Study', **American Journal of Public Health**, vol.90 no.2 (February 2000):253-254.

Kim Bartholomew, Leonard M. Horowitz, "Attachment styles among young adults: A test of a Four-Category model", **Journal of Personality and Social Psychology**, vol. 61 no.2 (1991):227.

KM. Scott, R.Bruffaerts, GE. Simon, J. Alonso, M. Angermeyer, G. De Girolamo, K. Demyttenaere, I. Gasquet, JM. Haro, E. Karam, RC. Kessler, D. Levison, ME. Medina Mora, MA. Oakley Browne, J. Ormel, JP. Villa, H. Uda, M. Von Korff, "Obesity and mental disorders in the general population: results from the World mental health surveys", **International Journal of Obesity**, no.32 (2008a):194-196, (2008b):196.

Lauren M. Rossen, Eric A. Rossen, **Obesity 101**, (New York: Springer Publishing Company, 2012), Chapter 3.

Leah Keating, Giorgio A. Tasca, Robert Hill, "Structural Relationships among attachment insecurity, alexithymia, and body esteem in women with eating disorders", **Eating Behaviors**, no. 14 (2013):369-371.

Liesbet Boone, "Are Attachment Styles Differentially Related To Interpersonal Perfectionism And Binge Eating Symptoms?", **Personality and Individual Differences**, Vol.54 (2013):933.

Marialice Faubel, "Body Image and Depression in Women With Early and Late Onset Obesity" **The Journal of Psychology**, vol.123 no.4 (2001):389.

Margaret Harris, George Butterworth, **Developmental Psychology: A Student's Handbook**, (Canada: Psychology Press, 2002a), 31; (2002), 33.

Mario Mikulincer, Gail S. Goodman, **Dynamics of Romantic love: Attachment, Caragiving, and sex**, (United States of America: Guilford Press, 2006), 47.

Matthew W. Gillman, Lucilla Poston, **Maternal Obesity**, 1 sd Ed. (New York: Cambridge University, 2012), 74.

M. Boskind-White, "Gender and eating disorders", **Paper presented at the Eating Disorder Conference**, (February, 1991) as cited Raymond Lemberg, Leigh Cohn, **Eating Disorders: A Reference Sourcebook**, (Canada: The Oryx Press, 1999), 8.

Meryem Alici, Rukiye Pinar, "Obez Hastalara Verilen Eğitimin Etkinliğinin Değerlendirilmesi", **Hemşirelikte Araştırma Geliştirme Dergisi**, (2008):38-39.

M. Heo, A. Pietrobelli, KR. Fontaine, JA. Sirey, MS. Faith, "Depressive mood and obesity in US adults: Comparison and moderation by sex, age, and race", **International Journal of Obesity**, no.30 (2006):516-517.

M. T. Yılmaz, R. Bundak, E. Özer, H. Sav, F. Balkır, 'Cyprus Turkish Diabetes Association Obesity Report', **Cyprus Turkish Diabetes Association**, (March 2005).

“Obesity and overweight”, World Health Organization, 2014  
<http://www.who.int/mediacentre/factsheets/fs311/en/> [23.9.2014].

“Obezite”, Türkçe Bilgi, <http://www.turkcebilgi.com/sozluk/obese> [14.12.13].

Olca Tüzün, Kemal Sayar, “Bağlanma Kuramı ve Psikopatoloji”, **Düşünen Adam**, no.19 (2006):28.

Osman Özdel, Gülfizar Sözeri-Varma, Semin Fenkçi, Tanel Deyirmenci, Filiz Karadağ, Nalan Kalkan-Oğuzhanoğlu, Figen Ateşçi “Obez Kadınlarda Psikayatrik Tanı Sıklığı”, **Klinik Psikiyatri**, Vol.14 (2012a):211-213, (2011b):213.

Ottar Bjerkeset, Pal Romundstad, Jonathan Evans, David Gunnell, “Association of Adult Body Mass Index and Height with Anxiety, Depression, and Suicide in the General Population, The HUNT Study”, **American Journal of Epidemiology**, Vol. 167 No.2 (2008):196.

“Overweight”, World Health Organization,  
[http://www.who.int/gho/ncd/risk\\_factors/overweight\\_text/en/](http://www.who.int/gho/ncd/risk_factors/overweight_text/en/) [23.9.2014].

Özen Ö Sertöz, Hayriye E. Mete, “Obezite Tedavisinde Bilişsel Davranışçı Grup Terapisinin Kilo Verme, Yaşam Kalitesi ve Psikopatolojiye Etkileri: Sekiz Haftalık İzlem Çalışması”, **Klinik Psikofarmakoloji Bülteni**, no. (2005):123

Nefeli Koskina, Theodoros Giovazolias, “The Effect of Attachment Insecurity in the Development of Eating Disturbances across Gender: The Role of Body Dissatisfaction”, **The Journal of Psychology**, vol. 144 no. 5 (2010):457-459.

Nejat Özgül, Murat Tuncer, Melike Arabacıoğlu, Murat Gültekin, “Prevalence of Obesity among Women in Turkey: Analysis of KETEM data”, **Asian Pasific J Cancer Prev.** no.12 (2011):2402.

Perihan Arslan, Ayhan Dağ., Evrim G. Türkmen, **Her Yönüyle Obezite; Önleme ve Tedavi Yöntemleri**, (İstanbul: Cem Ofset Matbaacılık,2012a),71-72; (2012b), 73; (2012c), 72-76.



Qianghua Xia, Struan F.A Grant, "The Genetics of Human Obesity", **Ann. N.Y. Acad. Sci.**, 1281 (2013):178-186.

Qing Dong, Juan-Juan Liu, Rui-Zhi Zheng, Yong-Hai Dong, Xiao-Ming Feng, Jie Li, Fen Huang, "Obesity and Depressive symptoms in the elderly: a survey in the rural area of Chizhou, Anhui province", **International Journal of Geriatric Psychiatry**, no.28 (2013):229.

Rogerio A. Lobo, Jennifer Kelsey, Robert Marcus, "**Menopause: Biology and Pathobiology**", (USA: Academic Press, 2000), 249.

Robert E. Roberts, George A. Kaplan, Sarah J. Shema, William J. Strawbridge, "Are the Obese Greater Risk for Depression?", **American Journal of Epidemiology**, Vol. 152 No. 2 (2000):166.

Rober D. Goldney, Kirsten I. Dunn, Tracy M. Air, Eleanora Dal Grande, Anne W. Taylor, "Relationships between body mass index, mental health, and suicidal ideation: population perspective using two methods", **Australian and New Zealand Journal of Psychiatry**, no.43 (2009):654.

Sarah E. Anderson, Patricia Cohen, Elena N. Naumova, Aviva Must, "Association of Depression and Anxiety Disorders with Weight Change in Prospective Community-Based Study of Children Followed Up Into Adulthood", **Arch Pediatr Adolesc Med.**, 160 (March 2006):287-288.

S. Batur, H. Demir, P. Ulu, H. Güneş, E. Irmak, A. Aşkın, "Yeme Tutumu ve cinsiyet ile bağlanma biçimleri arasındaki ilişki", **Türk Psikoloji Yazıları**, vol.8 no.15 (2005):21-31 as cited Nursen Oral, Nesrin Hisli Şahin, "Yeme Tutum Bozukluğunun Kişilerarası Şemalar, Bağlanma, Kişilerarası İlişki Tarzları ve Öfke ile İlişkisi", **Türk Psikoloji Dergisi**, Vol.23 No.62 (2008):38.

Shadeen Asghar, Andres Magnusson, Azad Khan, Keramat Ali, Akhtar Hussain, "In Bangladesh, Overweight Individuals Have Fewer Symptoms of Depression Than Nonoverweight Individuals", **Nature Publician Group**, vol.18 no.6 (2010):1143-1144.

Shinichi Kuriyama, Yayoi Koizumi, Kaori Matusuda-Ohmori, Toru Seki, Taichi Shimazu, Atsushi Hozawa, Shuichi Awata, Ichiro Tsuji, "Obesity and depressive symptoms in elderly Japanese: The Tsurugaya Project", **Journal of Psychosomatic Research**, Vol.60 (2006):232-233.

Steven B. Heymsfield, Jack Wang, Joseph Kehayias, Stanley Heshka, Steven Lichtman, Ricard N. Pierson, "Chemical Determination of Human Body Density In Vivo: Relevance To Hydrodensitometry", **American Journal of Clinical Nutrition**, no.50 (1989):1282-1288.

T.C. Sağlık Bakanlığı Temel Sağlık Hizmetleri Genel Müdürlüğü, **Türkiye Sağlıklı Beslenme Ve Hareketli Hayat Programı (2010-2014)**, (Ankara, 2011), 19.

T.C. Sağlık Bakanlığı Temel Sağlık Hizmetleri Genel Müdürlüğü/ HÜ. SBF Beslenme ve Diyetetik Bölümü/ MEB Sağlık İşleri Daire Başkanlığı. Türkiyede Okul Çağı Çocuklarında (6-10) Yaş Grubu Büyümenin İzlenmesi (Toçbi) Projesi Araştırma Raporu. Ankara. Temmuz 2011'den aktaran Perihan Arslan, Ayhan Dağ,

Evrin G. Türkmen, **Her Yönüyle Obezite; Önleme ve Tedavi Yöntemleri**, (İstanbul: Cem Ofset Matbaacılık,2012),14.

Tore Hällström, Henry Noppe, "Obesity In Women In Relation To Mental Illness, Social Factors And Personality Traits", **Journal of Psychosomatic Research**, Vol. 25, No.2 (1981): 75-78.

W. A. Borgart, **Regulating obesity?: Government, Society, and Questions of Health**, (New York: Oxford University Press, 2013), 42.

W. Edward Craighead, Charles B. Nemeroff, **The Concise Corsini Encyclopedia of Psychology and Behavioral Science**, 3 th Ed. (Canada: John Wiley & Sons, 2004), 91.

WH Dietz, TN Robinson, 'Assesment And Treatment of Childhood Obesity', **Pediatrics in Review**, vol.14 no.9 (1993):337-344 as cited Ayşe Parlak, Şenay Çetinkaya, Oyun Çocukluğu Dönemi Obez Çocuğun ve Ailelerinin Beslenme Alışkanlıklarının Değerlendirilmesi, Atatürk Üniversitesi **Hemşirelik Yüksekokulu Dergisi**, vol.11 no. 3(2008):60.

WHO, **World Health Statstics 2012** (France, 2012), 110-117.

Yavuz Furuncuoğlu, **Obeziteden Diyete Bilimsel Zayıflama**, (İstanbul: Akis Kitap, haziran 2006a), 9; (2006b), 19-23.

Zhi Bin Li, Sai Yin Ho, Wai Man Chan, Kin Sang Ho, Mun Pik Li, Gabriel M Leung, Tai Hing Lam, "Obesity and depressive symptoms in Chinese elderly", **International Journal of Geriatric Psychiatry**, Vol.19 (2004a):69-70, (2004):69-72.

Z. J. Acs, Kenneth R. Stanton, **Obesity Business and Public Policy**, (Cheltenham: Edward Elgar Publishing, 2010), 82-83.



**APPENDIX A****AYDINLATILMIŞ ONAM FORMU**

Elinizde bulunan anket formu, kilo problemi yaşayan bireyler üzerinde yapılan bir çalışmanın parçasıdır. Bu çalışmaya katılım tamamıyla gönüllülük esasına dayanmaktadır. Ankette, sizden kimlik belirleyici hiçbir bilgi istenmemektedir. Cevaplarınız tamamıyla gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir. Bireysel hiçbir değerlendirme yapılmayacaktır ve elde edilen bilgiler sadece bilimsel yayımlarda kullanılacaktır. Anket, genel olarak kişisel rahatsızlık verecek soruları içermemektedir. Yanıtlarınızın gerçek duygu ve düşüncelerinizi yansıtması ve hiçbir maddeyi boş bırakmamanız oldukça önemlidir. Anket sonunda, bu çalışmayla ilgili sorularınız cevaplanacaktır. Bu çalışmaya katıldığınız için şimdiden teşekkür ederim.

Psk. Beliz Köroğlu

Yakın Doğu Üniversitesi

Klinik Psikoloji Yüksek Lisans Programı

**İmza:**

**Tarih:**

**APPENDIX B**  
**SOSYODEMOGRAFİK BİLGİ FORMU**

1. Yaş:.....
2. Cinsiyet:
  - (a) Erkek
  - (b) Kadın
3. Boy: .....
4. Kilo: .....
5. Eğitim düzeyi:
  - (a) İlk okul
  - (b) Orta okul
  - (c) Lise
  - (d) Üniversite ve üzeri
6. Meslek:
  - (a) Çalışıyor
  - (b) Çalışmıyor
  - (c) Ev hanımı
7. Medeni hali: .....
8. Çocuk sayısı: .....
9. Ekonomik durum (TL):
  - (a) Düşük
  - (b) Orta
  - (c) Yüksek
10. Aşırı kilo almanıza neden olan, ilaç kullanımı yada tıbbi bir duruma bağlı her hangi bir etmen:
  - (a) Var
  - (b) Yok

## APPENDIX C

### BECK DEPRESYON ENVANTERİ

Aşağıda gruplar halinde bazı cümleler yazılıdır. Her gruptaki cümleleri dikkatle okuyunuz. Bugün dahil geçen hafta içinde kendinizi nasıl hissettiğinizi en iyi anlatan cümleyi seçin. Seçiminizi yapmadan önce gruptaki cümlelerin hepsini dikkatle okuyunuz ve yalnızca bir maddeyi işaretleyin.

1. (a) Kendimi üzgün hissetmiyorum.  
(b) Kendimi üzgün hissediyorum.  
(c) Her zaman için üzgünüm ve kendimi bu duygudan kurtaramıyorum.  
(d) Öylesine üzgün ve mutsuzum ki dayanamıyorum.
2. (a) Gelecekte umutsuz değilim.  
(b) Geleceğe biraz umutsuz bakıyorum.  
(c) Gelecekte beklediğim hiçbir şey yok.  
(d) Benim için gelecek yok ve bu durum düzelmeyecek.
3. (a) Kendimi başarısız görmüyorum.  
(b) Çevremdeki birçok kişiden daha fazla başarısızlıklarım oldu sayılır.  
(c) Geriye dönüp baktığımda, çok fazla başarısızlığımın olduğunu görüyorum.  
(d) Kendimi tümüyle başarısız bir insan olarak görüyorum.
4. (a) Her şeyden eski kadar zevk alabiliyorum.  
(b) Her şeyden eskisi kadar zevk alamıyorum.  
(c) Artık hiçbir şeyden gerçek bir zevk alamıyorum.  
(d) Bana zevk veren hiçbir şey yok. Herşey çok sıkıcı.
5. (a) Kendimi suçlu hissetmiyorum.  
(b) Arada bir kendimi suçlu hissettiğim oluyor.  
(c) Kendimi çoğunlukla suçlu hissediyorum.  
(d) Kendimi her an için suçlu hissediyorum.
6. (a) Cezalandırıldığımı düşünmüyorum.  
(b) Bazı şeyler için cezalandırılabilceğimi hissediyorum.  
(c) Cezalandırılmayı bekliyorum.  
(d) Cezalandırıldığımı hissediyorum.



7. (a) Kendimden hoşnudum.  
 (b) Kendimden pek hoşnut değilim.  
 (c) Kendimden hiç hoşlanmıyorum.  
 (d) Kendimden nefret ediyorum.
8. (a) Kendimi diğer insanlardan daha kötü görmüyorum.  
 (b) Kendimi zayıflıklarım ve hatalarım için eleştiriyorum.  
 (c) Kendimi hatalarım için çoğu zaman suçluyorum.  
 (d) Her kötü olayda kendimi suçluyorum.
9. (a) Kendimi öldürmek gibi düşüncelerim yok.  
 (b) Bazen kendimi öldürmeyi düşünüyorum, fakat bunu yapmam.  
 (c) Kendimi öldüre bilmeyi isterdim.  
 (d) Bir fırsatını bulsam kendimi öldürürdüm.
10. (a) Her zamankinden daha fazla ağladığımı sanmıyorum.  
 (b) Eskisine göre şu sıralarda daha fazla ağlıyorum.  
 (c) Şu sıralarda her an ağlıyorum.  
 (d) Eskiden ağlayabilirdim, ama şu sıralarda istesem de ağlayamıyorum.
11. (a) Her zamankinden daha sinirli değilim.  
 (b) Her zamankinden daha kolayca sinirleniyor ve kızıyorum.  
 (c) Çoğu zaman sinirliyim.  
 (d) Eskiden sinirlendiğim şeylere bile sinirlenemiyorum.
12. (a) Diğer insanlara karşı ilgimi kaybetmedim.  
 (b) Eskisine göre insanlarla daha az ilgiliyim.  
 (c) Diğer insanlara karşı ilgimin çoğunu kaybettim.  
 (d) Diğer insanlara karşı hiç ilgim kalmadı.
13. (a) Kararlarımı eskisi kadar kolay ve rahat verebiliyorum.  
 (b) Şu sıralarda kararlarımı vermeyi erteliyorum.  
 (c) Kararlarımı vermekte oldukça güçlük çekiyorum.  
 (d) Artık hiç karar veremiyorum.

14. (a) Dış görünüşümün eskisinden daha kötü olduğunu sanmıyorum.  
 (b) Yaşlandığımı ve çekiciliğimi kaybettiğimi düşünüyorum ve üzülüyorum.  
 (c) Dış görünüşümde artık değiştirilmesi mümkün olmayan olumsuz değişiklikler olduğunu hissediyorum.  
 (d) Çok çirkin olduğumu düşünüyorum.
15. (a) Eskisi kadar iyi çalışabiliyorum.  
 (b) Bir işe başlayabilmek için eskisine göre kendimi daha fazla zorlamam gerekiyor.  
 (c) Hangi iş olursa olsun, yapabilmek için kendimi çok zorluyorum.  
 (d) Hiçbir iş yapamıyorum.
16. (a) Eskisi kadar rahat uyuyabiliyorum.  
 (b) Şu sıralarda eskisi kadar rahat uyuyamıyorum.  
 (c) Eskisine göre 1 veya 2 saat erken uyanıyor ve tekrar uyumakta zorluk çekiyorum.  
 (d) Eskisine göre çok erken uyanıyor ve tekrar uyuyamıyorum.
17. (a) Eskisine kıyasla daha çabuk yorulduğumu sanmıyorum.  
 (b) Eskisinden daha çabuk yoruluyorum.  
 (c) Şu sıralarda nerdeyse her şey beni yoruyor.  
 (d) Öyle yorgunum ki hiçbir şey yapamıyorum.
18. (a) İştahım eskisinden pek farklı değil.  
 (b) İştahım eskisi kadar iyi değil.  
 (c) Şu sıralarda iştahım bayağı kötü.  
 (d) Artık hiç iştahım yok.
19. (a) Son zamanlarda pek fazla kilo kaybettiğimi sanmıyorum.  
 (b) Son zamanlarda istemediğim halde üç kilodan fazla kaybettim.  
 (c) Son zamanlarda istemediğim halde beş kilodan fazla kaybettim.  
 (d) Son zamanlarda yedi kilodan fazla kaybettim.  
 Daha az yemeğe çalışarak kilo kaybetmeye çalışıyorum. Evet ( ) Hayır ( )

20. (a) Sağlığım beni pek endişelendirmiyor.  
(b) Son zamanlarda ağrı, sızı, mide bozukluğu, kabızlık gibi sorunların var.  
(c) Ağrı, sızı gibi bu sıkıntıları beni epeyi endişelendirdiği için başka şeyleri düşünmek zor geliyor.  
(d) Bu tür sıkıntılar beni öylesine endişelendiriyor ki artık başka hiçbir şey düşünemiyorum.
21. (a) Son zamanlarda cinsel yaşamımda dikkatimi çeken bir şey yok.  
(b) Eskisine oranla cinsel konularla daha az ilgileniyorum.  
(c) Şu sıralar cinsellikle pek ilgili değilim.  
(d) Artık, cinsellikle hiçbir ilgim kalmadı.



## APPENDIX D

### BECK KAYGI ENVANTERİ

Aşağıda insanların kaygılı ya da endişeli oldukları zamanlarda yaşadıkları bazı belirtiler verilmiştir. Lütfen her maddeyi dikkatle okuyunuz. Daha sonra, her maddedeki belirtinin bugün dahil son bir haftadır sizi ne kadar rahatsız ettiğini yandaki uygun yere (X) işareti koyarak belirleyiniz.

|   | Hiç | Hafif | Orta | Ağır |
|---|-----|-------|------|------|
| 1. Bedeninizin herhangi bir yerinde uyuşma/karıncalanma | ( ) | ( )   | ( )  | ( )  |
| 2. Sıcak / ateş basmaları                               | ( ) | ( )   | ( )  | ( )  |
| 3. Bacaklarda halsizlik, titreme                        | ( ) | ( )   | ( )  | ( )  |
| 4. Gevşeyememe  | ( ) | ( )   | ( )  | ( )  |
| 5. Çok kötü şeyler olacak korkusu                       | ( ) | ( )   | ( )  | ( )  |
| 6. Baş dönmesi veya sersemlik                           | ( ) | ( )   | ( )  | ( )  |
| 7. Kalp çarpıntısı                                      | ( ) | ( )   | ( )  | ( )  |
| 8. Dengeyi kaybetme duygusu                             | ( ) | ( )   | ( )  | ( )  |
| 9. Dehşete kapılma                                      | ( ) | ( )   | ( )  | ( )  |
| 10. Sinirlilik  | ( ) | ( )   | ( )  | ( )  |
| 11. Boğuluyormuş gibi olma duygusu                      | ( ) | ( )   | ( )  | ( )  |
| 12. Ellerde titreme                                     | ( ) | ( )   | ( )  | ( )  |
| 13. Titreklik   | ( ) | ( )   | ( )  | ( )  |
| 14. Kontrolü kaybetme korkusu                           | ( ) | ( )   | ( )  | ( )  |
| 15. Nefes almada güçlük                                 | ( ) | ( )   | ( )  | ( )  |
| 16. Ölüm korkusu  | ( ) | ( )   | ( )  | ( )  |
| 17. Korkuya kapılma                                     | ( ) | ( )   | ( )  | ( )  |

|   | <b>Hiç</b> | <b>Hafif</b> | <b>Orta</b> | <b>Ağır</b> |
|---|------------|--------------|-------------|-------------|
| <b>18.</b> Midede hazımsızlık/rahatsızlık hissi | ( )        | ( )          | ( )         | ( )         |
| <b>19.</b> Baygınlık                            | ( )        | ( )          | ( )         | ( )         |
| <b>20.</b> Yüzün kızarması                      | ( )        | ( )          | ( )         | ( )         |
| <b>21.</b> Terleme (sıcağa bağlı olmayan)       | ( )        | ( )          | ( )         | ( )         |

## APPENDIX E

## YAKIN İLİŞKİLERDE YAŞANTILAR ENVANTERİ

Aşağıdaki maddeler romantik ilişkilerimiz dahil olmak üzere yakın ilişkilerimizde (arkadaşlık, dostluk gibi) hissettiğiniz duygulara ilişkindir. Sizden, genel olarak yakın ilişkilerinizde yaşadıklarınızı dikkate alarak aşağıdaki ifadeleri değerlendirmeniz istenmektedir. Her bir maddenin ilişkilerinizdeki duygu ve düşüncelerinizi ne oranda yansıttığını karşılarındaki ölçek üzerinde çarpı işareti (X) koyarak işaretleyiniz.

|  | Hiç<br>Katılmıyorum | Katılmıyorum | Katılıyorum | Tamamen<br>Katılıyorum |
|--|---------------------|--------------|-------------|------------------------|
| 1. Gerçekte ne hissettiğimi birlikte olduğum kişiye göstermemeyi tercih ederim.  | ( )                 | ( )          | ( )         | ( )                    |
| 2. Terkedilmekten korkarım.  | ( )                 | ( )          | ( )         | ( )                    |
| 3. Arkadaş olduğum kişilere yakın olmak konusunda çok rahatımdır.  | ( )                 | ( )          | ( )         | ( )                    |
| 4. İlişkilerim konusunda çok kaygılıyım.   | ( )                 | ( )          | ( )         | ( )                    |
| 5. Birlikte olduğum kişi bana yakınlaşmaya başlar başlamaz kendimi geri çekiyorum.   | ( )                 | ( )          | ( )         | ( )                    |
| 6. Birlikte olduğum kişilerin beni, benim onları umursadığım kadar umursamayacaklarından endişelendiririm.                           | ( )                 | ( )          | ( )         | ( )                    |
| 7. Birlikte olduğum kişi çok yakın olmak istediğinde rahatsızlık duyarım.  | ( )                 | ( )          | ( )         | ( )                    |
| 8. Birlikte olduğum kişiyi kaybedeceğim diye çok kaygılanırım.   | ( )                 | ( )          | ( )         | ( )                    |
| 9. Birlikte olduğum kişilere açılma konusunda kendimi rahat hissetmem.   | ( )                 | ( )          | ( )         | ( )                    |
| 10. Genellikle birlikte olduğum kişinin benim için hissettiklerini, benim onun için hissettiklerim kadar güçlü olmasını arzu ederim. | ( )                 | ( )          | ( )         | ( )                    |
| 11. Birlikte olduğum kişilere yakın olmayı isterim ama sürekli kendimi geri çekerim.   | ( )                 | ( )          | ( )         | ( )                    |
| 12. Genellikle birlikte olduğum kişiyle tamamen bütünleşmek isterim ve bu bazen onları korkutup benden uzaklaştırır.                 | ( )                 | ( )          | ( )         | ( )                    |
| 13. Birlikte olduğum kişilerin benimle çok yakınlaşması beni gerginleştirir.   | ( )                 | ( )          | ( )         | ( )                    |



|  | Hiç<br>Katılmıyor | Katılmıyorm | Katılıyorum | Tamamen<br>Katılıyorum |
|--|-------------------|-------------|-------------|------------------------|
| 14. Yalnız kalmaktan endişelenirim.  | ( )               | ( )         | ( )         | ( )                    |
| 15. Özel duygu ve düşüncelerimi birlikte olduğum kişiyle paylaşmak konusunda oldukça rahatımdır.           | ( )               | ( )         | ( )         | ( )                    |
| 16. Çok yakın olma arzum bazen insanları korkutup uzaklaştırır.  | ( )               | ( )         | ( )         | ( )                    |
| 17. Birlikte olduğum kişiyle çok yakınlaşmaktan kaçınırım.   | ( )               | ( )         | ( )         | ( )                    |
| 18. Birlikte olduğum kişi tarafından sevildiğimin sürekli ifade edilmesine gereksinim duyarım.             | ( )               | ( )         | ( )         | ( )                    |
| 19. Birlikte olduğum kişiyle kolaylıkla yakınlaşabilirim.  | ( )               | ( )         | ( )         | ( )                    |
| 20. Birlikte olduğum kişileri bazen daha fazla duygu ve bağlılık göstermeleri için zorladığımı hissedirim. | ( )               | ( )         | ( )         | ( )                    |
| 21. Birlikte olduğum kişilere güvenip dayanma konusunda kendimi rahat bırakmakta zorlanırım.               | ( )               | ( )         | ( )         | ( )                    |
| 22. Terkedilmekten pek korkmam.  | ( )               | ( )         | ( )         | ( )                    |
| 23. Birlikte olduğum kişilere fazla yakın olmamayı tercih ederim.  | ( )               | ( )         | ( )         | ( )                    |
| 24. Birlikte olduğum kişinin bana ilgi göstermesini sağlayamazsam üzülür yada kızarım.                     | ( )               | ( )         | ( )         | ( )                    |
| 25. Birlikte olduğum kişiye hemen hemen her şeyi anlatırım.  | ( )               | ( )         | ( )         | ( )                    |
| 26. Birlikte olduğum kişinin bana istediğim kadar yakın olmadığını düşünürüm.                              | ( )               | ( )         | ( )         | ( )                    |
| 27. Sorunlarımı ve kaygılarımı genellikle birlikte olduğum kişiyle tartışırım.                             | ( )               | ( )         | ( )         | ( )                    |
| 28. Bir ilişkide olmadığım zaman kendimi biraz kaygılı ve güvensiz hissedirim.                             | ( )               | ( )         | ( )         | ( )                    |
| 29. Birlikte olduğum kişilere güvenip dayanmakta rahatımdır.   | ( )               | ( )         | ( )         | ( )                    |
| 30. Birlikte olduğum kişi istediğim kadar yakınımda olmadığında kendimi engellenmiş hissedirim.            | ( )               | ( )         | ( )         | ( )                    |
| 31. Birlikte olduğum kişilerden teselli, öğüt ya da yardım istemekten rahatsız olmam.                      | ( )               | ( )         | ( )         | ( )                    |
| 32. İhtiyaç duyduğumda birlikte olduğum kişiye ulaşamazsam kendimi engellenmiş hissedirim.                 | ( )               | ( )         | ( )         | ( )                    |
| 33. İhtiyacım olduğunda birlikte olduğum kişiden yardım istemek işe yarar.                                 | ( )               | ( )         | ( )         | ( )                    |
| 34. Birlikte olduğum kişiler beni onaylamadıkları zaman kendimi gerçekten kötü hissedirim.                 | ( )               | ( )         | ( )         | ( )                    |
| 35. Rahatlama ve güvencenin yanı sıra birçok şey için birlikte olduğum kişiyi ararım.                      | ( )               | ( )         | ( )         | ( )                    |
| 36. Birlikte olduğum kişi benden ayrı zaman geçirdiğinde üzülürüm.   | ( )               | ( )         | ( )         | ( )                    |

## **AUTOBIOGRAPHY**

Beliz Köroğlu was born in Nicosia, in 1990. She graduated from Şht Ertuğrul Primary School in 2001. She graduated at Near East College. After that, she went to England in order to complete her foundation programme. She has done her foundation in psychology at University of Essex, in 2007, then she completed her degree programme at Girne American University, and graduated from here in 2012.

As her degree thesis, she conducted a study based on the behaviours of university students on homosexuality. During her undergraduate degree, she has done her internship in many places such as, Special Education Foundation, Dyslexia Association of Turkish Cypriots, Kyrenia Rehabilitation Center. Also, she has joined to many conferences and seminars in psychology since 2007.

Then, she started her master degree in Clinical Psychology, and completed her study-internship in the department of Barış Ruh ve Sinir at Dr Burhan Nalbantoglu Hospital. Last but not least, she conducted a study on obese individuals and investigated their depression and anxiety level and attachment styles.