

T.C.
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DEPARTMENT OF NUTRITION AND DIETETICS

**RELATIONSHIP BETWEEN INDIVIDUALS
EATING BEHAVIORS AND BODY MASS INDEX**

MASTER THESIS

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ONAY

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DECLARATION

I hereby declare that this thesis is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which has been accepted for the award of any other degree except where due acknowledgment has been made in the text.

02.09.2020



Sahure Özay Hasar

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LIST OF SYMBOLS AND ABBREVIATIONS

ADA	American Diabetes Association
AN	Anorexia Nervosa
APA	American Psychiatric Association
BMI	Body Mass Index
BN	Bulimiya Nervosa
DSM-TR	Diagnostic and Statisical Manuel of Mental Disorders
EAT 40	Eating Attitudes Test
Kg	Kilogram
M ²	Square meters
N	Number of Individuals Participating in theStudy
RDA	Recommened Daily Allowence
SD	Standard Deviation
WHO	World Health Organisation
X	Mean

ABSTRACT

Özay Hasar, S. (2020). Relationship Between Individuals Eating Behaviors and Body Mass Index. Yeditepe University, Institute of Health Sciences, Department of Nutrition and Dietetics, Master of Science Thesis, Istanbul.

This study was conducted to determine the relationship between individuals' eating attitudes behavior and body mass index (BMI). We enrolled voluntarily women who wanted to lose weight (n=400) aged between 18-65 years. A questionnaire including socio-demographic characteristics, was applied to participants. Anthropometric measurements were taken by using bioelectrical impedance analysis. To determine the participants risk of eating attitude disorder we applied Eating Attitude Test (EAT40) consisting of 40 items. 51,7% of women were scored 30 points or more on EAT40 scale (mean±SD 26,72 ± 14,22). We found that only 18 (8,7%) of these 207 individuals had BMI in normal the range (18.5-24,9 kg/m²). Moreover, we found that BMI of 78 (37,7%) women were in the range of 25-29,9 kg/m². And 111 (53,6%) women were obese. We found a positive and highly statistically significant correlation between the EAT40 scores and the BMI index values of women (r=0,614, p=0,001). We determined that 30 individuals with EAT40 scale score of 30 and above were in primary education, 165 individuals were in high school, 105 individuals were undergraduate and 7 were postgraduate. We found low level of statistically significant negative correlation between the women education status and eating attitude disorder (r=-0,218, p=0,001). While BMI was ascending, increasing EAT40 score accompanies this suggested that eating attitude disorder has an effect on the prevalance of obesity. This scale should be applied to patients with anorexia and bulimia nervosa, as well as all obese women who apply to the clinic for slimming. Firstly, eating attitudes and behaviors should be evaluated then behavioral change treatment should be done together with a multidisciplinary approach while arranging appropriate treatment.

Key Words: Body Mass Index, Eating Attitude Test (EAT40), Eating Disorder, Eating Attitudes Behavior

ÖZET

Özay Hasar, S. (2020). Bireylerin Yeme Tutum Davranışları ve Beden Kütle İndeksleri Arasındaki İlişki. Yeditepe Üniversitesi Sağlık Bilimleri Enstitüsü, Beslenme ve Diyetetik Bölümü, Yüksek Lisans Tezi, İstanbul.

Bu çalışma, bireylerin yeme tutum davranışları ve BMI arasındaki ilişkiyi belirlemek amacıyla yapılmıştır. Çalışma zayıflamak isteyen 18-65 yaş arası 400 kadın bireyle gerçekleştirilmiştir. Bireylere sosyo-demografik özelliklerini içeren anket formu uygulanmıştır. Antropometrik ölçümler alınmış ve ölçümler biyoelektrik impedans analizi kullanılarak yapılmıştır. Yeme tutum bozukluğu riskini belirlemek amacıyla 40 maddeden oluşan Yeme Tutum Testi (EAT40) uygulanmıştır. Yeme tutum ölçeği puanlarının ortalaması $26,72 \pm 14,22$ olan bireylerin %51,7'si EAT40 ölçeğinden 30 puan ve üzerinde puan almıştır. Bu 207 bireyin sadece 18'inin (%8,7) BMI değeri 18,5-24,9 kg/m² BMI aralığında olup, 78 birey (%37,7) 25-29,9 kg/m² BMI aralığında ve kalan 111 birey (%53,6) ise 30 kg/m² BMI değeri ve üzerinde olduğu belirlenmiştir. Buna göre araştırmaya katılan bireylerin yeme tutum ölçek puanlarına BMI indeksi değerleri arasında pozitif ve yüksek düzeyde istatistiksel olarak anlamlı bir korelasyon bulunmuştur ($r=0,614$, $p=0,001$). EAT40 ölçek puanı 30 puan ve üzerinde olan 30 bireyin öğrenim durumu ilköğretim, 165 bireyin lise, 105 bireyin lisans ve kalan 7 bireyinde lisansüstü olduğu saptanmıştır. Buna göre bireylerin eğitim yılı ve yeme tutum bozukluğu görülmesi arasında düşük düzeyde istatistiksel olarak anlamlı negatif bir korelasyon bulunmuştur ($r=-0,218$, $p=0,001$). Bireylerin beden kütle indeksleri arttıkça yeme tutum ölçeğinden alınan puanlarının anlamlı derecede yükseliş göstermesi yeme tutum bozukluğunun obezite oluşumunda etkisinin olduğunu düşündürmektedir. Bu ölçek anoreksiya ve bulimiya nevroza hastalarının yanısıra zayıflama amacıyla kliniğe başvuran tüm obez bireylere de uygulanmalıdır. Buna göre bireylerin önce yeme tutum ve davranışları değerlendirilmeli ve uygun tedavi düzenlenirken multidisipliner bir yaklaşımla zayıflama ve davranış değişikliği tedavisi bir arada yapılmalıdır.

Anahtar kelimeler: Beden Kütle İndeksi, Yeme Tutum Testi (EAT40), Yeme Bozuklukları, Yeme Tutum ve Davranışları

1. INTRODUCTION AND PURPOSE

Obesity (obesity); is the increase in the amount of fat in the body at a level that will impair health. Today, in many countries, the increase in obesity prevalence in children and adults has reached a daunting dimension. Mild obesity and aggregation are when the bodyweight is above the recommended reference value (standard) or relative weight according to the height. To identify mild obesity about an individual's overweight or excess of muscle mass, it is necessary to evaluate body weight, body composition, and distribution of fat in the body. For this purpose, height, body weight and body mass index (BMI) used in the field and clinic are simple anthropometric measurements.

BMI is an index based on height and body weight, which correlates with total body fat, defines the difference between muscle tissue and body weight due to adipose tissue increase. It is an indicator of swelling and chronic energy deficiency. The body mass index (Quetelet index) was first introduced by Quetelet in 1869 and is calculated by dividing the weight in kilograms by the square of the height in meters. It is estimated that individuals' body fat may be too high with the BMI being 30 and above. Briefly, the body mass index is a useful, easy-to-use index and enables the definition of obesity and obesity at the community level (1)

A behavior: A response to previously experienced events, that is to any stimulus, is a conditional reflex. The more intense what happened before, the more behaviors are. Behavior also creates the result. The intensity of these results in a positive, negative, similar behavior. Behavior and attitude are important factors that affect weight loss and maintenance. Although eating attitudes and behaviors are regulated through environmental factors, it is a cause of social, cognitive, sensory, and motor development. Every person has their eating and behavior patterns. While environmental factors such as strong emotions, gender, and the family's attitude towards nutrition often cause individuals to consume excessive food, in some, it may lead to not eating. But this does not mean that all individuals will experience eating disorders (2).

Eating disorder; is a disorder that is accompanied by psychological and physiological problems in the individual, which occurs with the occurrence of visible disruptions and disorders in the individual's eating attitudes and behaviors and causes behavioral disorders in the individual (3) (4). Eating disorders are not just about being slim and shapely, but also about self-confidence, depression, strength, and self-control.

The eating disorder occurs as either refusing to eat and refusing to eat or vomiting guiltily because of eating. Excessive attenuation as a result of the rejection of food is defined as 'anorexia neurosis (AN)', vomiting as 'bulimia neurosis (BN)'. Apart from AN and BN, eating disorders such as binge eating syndrome and night eating syndrome have been collected under the diagnosis of an eating disorder that cannot be named otherwise (5). In clinical studies, it has been observed that individuals with eating disorders started dieting before eating disorder behavior and behavior began (4). Studies conducted in recent years; Not only one reason in eating disorders, but also social conditions such as biological and psychological predisposition, family and business life, and multiple perceptions such as body perceptions that they consider their body too big and fat play a role. At the beginning of these, individuals' fear of gaining weight and being fat is excessive, there is an excessive obsession with slimming and thinning (6).

It is observed that the weight, which is a similar disorder in overweight or obese individuals, is not noticed, ignored, and no reaction to body composition deterioration, not trying to lose weight and not paying attention to body weight.

In this study, it will be tried to be shown that not only diseases of eating behavior disorders (anorexia, bulimia, pica, rumination...) known as a general definition, but also being overweight individuals are included in the eating behavior disorder scale in a similar figure.

It was aimed to evaluate the eating attitudes of the patients who applied to the obesity outpatient clinic, to discuss the relationship between eating attitude and body mass index and education levels, age, marital status, and whether they work or not. This research was planned and conducted to determine whether eating habits were impaired and how it changed according to BMI values by evaluating the eating behavior score (EAT-40) of eating habits, ie eating attitudes.

2. LITERATURE REVIEW

2.1. Nutrition

2.1.1. Definition

Nutrition; To be able to fulfill the vital needs, growth, development, reproductive and physical activities, to protect the health, and to consume food from outside, to consume life (7). Nutrition is a science; it affects life physically and behaviorally as well as being a compulsory need for individuals to survive from birth to death (8). Nutrition is not an act of feeding the individual uncontrollably whenever he wants or just an act of feeding the stomach to suppress hunger. The main purpose of nutrition is to consume nutrients in a correct and conscious figure in order to meet the nutrients that the body needs in sufficient quantities and at appropriate times, to maintain and improve health, and then to improve the quality of life (8) (9) (10).

2.2. Foods and Food Groups

Edible plant and animal tissues are defined as “food”. Foods are complex elements. While individuals like the sensory quality of foods (appearance, aroma, flavor), metabolism also benefits from the survival functions of the nutrients found in foods. Nutrients: It consists of organic and inorganic elements such as protein, carbohydrate, fat, vitamins, and minerals. These items are called "food items". Each food contains different amounts of nutrients that are not identical (11) (12)

Foods break down into nutrients and pass into the blood during digestion and are transported through the blood to the cells where most of the body's functions take place. We can collect more than 40 nutrients contained in foods and that people need in six groups (13).

1. Proteins
2. Oils
3. Carbohydrates
4. Minerals
5. Vitamins
6. Water

The foods will be together according to the nutrients they contain. The figure is divided into 4 groups (11) (14).

These;

1. Milk and dairy products
2. Meat, eggs, legumes
3. Vegetables and fruits
4. Bread and cereals

2.3. Balanced Diet

Adequate nutrition usually means providing the energy necessary for the body to survive and work. Carbohydrates, fats, and proteins are elements that provide energy. Balanced nutrition, on the other hand, is to supply all nutrients as much as needed besides the energy needed for the continuation of life (13).

Consumption of various nutrients needed by the body in the required quantities and use in the required figure in the body is called a balanced and healthy diet. A balanced and healthy diet is essential in preventing diseases and maintaining health (15).

2.4. Causes of Nutrition Problems in Society

We can divide the factors that affect food choices and nutritional habits of individuals into two groups as genetic and environmental factors (11). Since the beginning of human history, the importance of nutritional and health interaction has been known and leads people to research this direction. Nutrition is of great importance not only in the treatment or treatment of diseases but primarily in the prevention of diseases. In short, nutrition is one of the environmental factors affecting nutritional problems in society (9).

We can group the reasons for the nutritional deficiencies in societies in several groups as below (13).

1. Inadequacies and deficiencies in the production and technology of foods
2. Low purchasing power and inequality
3. Cultural differences and lack of education
4. The majority of family members
5. Incompatibility of environmental conditions and health rules with each other

The main reason for malnutrition is the lack of enough food for the population living in the community. Other reasons for nutrient deficiency are lack of enough land to meet the population living in the community, insufficiency of agriculture and animal

husbandry in these lands, low productivity in production, and disruptions in the distribution of produced foods.

As the number of people in families' increases, the income per person decreases. For this reason, food supply becomes more difficult in crowded families. Inequality of income distribution in our country is also an important problem. Generally, the average number of individuals in families is 5, and in most of these families, the number of people responsible for the livelihood of the family is one. Income levels of those who have a minimum wage level do not meet adequate and balanced nutrition, and families in this situation go to feed themselves with cheap foods. On the other hand, individuals who feed more than they need also become fat because they cannot spend the calories they take and contribute to the formation of many chronic degenerative diseases in society.

Since the basic principles of food preparation, cooking, and storage are not known, there are many losses in food items. Environmental conditions not complying with the health rules are among the causes of nutritional problems. Preparation, storage, and processing of foods in unsuitable conditions cause harmful items to enter the body. Thus, despite adequate nutrients, nutritional deficiencies occur because this food is not used properly in the body (13).

Adequate and balanced eating habits can be taught to individuals who make up the society with behavioral change treatment that can be applied to all age groups. This behavior acquisition is important for their advanced lives to live healthily (16).

2.5. The Effect of Poor and Unbalanced Nutrition on Health

The nutrients necessary for our body to carry out its normal duties are not taken in regular and balanced figures. In short, we can say that "adequate and balanced nutrition is the basis of health". As a result of malnutrition, there will be a decrease in body resistance, these individuals become easily sick (measles, tuberculosis, diarrhea) and their illnesses are more severe. Malnutrition may also reveal many problems such as anemia, osteoporosis, dental caries, and nervous system diseases. On the other hand, it causes the emergence of diseases such as diabetes, arteriosclerotic diseases, high blood pressure, infectious diseases, skeletal and joint diseases, especially in obesity (5). In the absence of any nutrients in metabolism, the disease will arise due to the disruptions in the work of the mechanisms in the body, and if this nutrient deficiency is

not resolved, the metabolism of these individuals will be more severe since they do not resist microorganisms (12).

The condition of development and growth as a society is to use manpower to increase production. Malnutrition lowers the creativity of individuals, their ability to plan, and primarily their work power. People who are mentally and physically undeveloped, exhausted, unwilling to work, sick people are not useful to create a strong and strong society, even a burden for that society (9). Studies show that if measures are not taken regarding childhood obesity, which has been increasing in recent years, the problem may become a serious public health problem in the future (17).

Studies in developed countries reported that 33% of adults and 20-27% of children and adolescents were obese, after the decade after 1976, obesity increased by 54% at the age of 6-11, and by 64% in children at the age of 12-21 (18).

2.2. Obesity

2.2.1. Definition

It is the increase in the body's fat mass to a level that will impair health. Not all people who are overweight are considered obese. In some people, if the muscle development is high, that is, the lean mass of the body is high, this increases the weight. Therefore, obesity and weight do not mean the same thing. World Health Organization obesity (obesity) is defined as abnormal or excessive fat accumulation in the body to the extent that it impairs health (5) (19).

Body Mass Index, calculated by proportioning the weight to the square of the neck in meters, is a method used in the classification and determination of obesity (20). According to this classification, individuals whose body mass index (BMI) is calculated over 25 are considered to be slightly overweight, and individuals over 30 are considered obese (21). The fact that waist circumference is 102 cm in males and 88 cm in females indicates that android type obesity has occurred. In the last 10 years, waist/hip ratio above > 1.0 in men and > 0.8 in women are used to define abdominal fat accumulation. Waist circumference; It shows a favorable correlation with BMI and waist/hip ratio and is therefore considered as an indicator of abdominal fat mass and total body fat (22). Bunlara ek olarak yaşına göre olduğu ağırlık, boyuna göre olduğu ağırlık, deri kıvrım kalınlıkları ve vücut kompozisyonlarındaki içerdikleri yağ yüzdeleri kullanılan farklı tanı yöntemleridir (17). Over the last 20 years, obesity has exploded worldwide and has

reached high rates (23). While there were 200 million obese adults worldwide in 1995, the number of obese adults reached 300 million in 2000 (24). The prevalence of obesity in studies in Turkey, 22%, 25.2%, was reported as 35.5% and 28% (25). In Turkey, where 24,788 people screened TURDEP one of the women in the study 30%, while 13% of men; in general, have been identified in the obesity rate of 22.3%. It is observed that the incidence of obesity increased in the 30s and peaked in the 45-65 age range (26). The results of the recently published TURDEP-2 study are an indication that the snowball has turned into an avalanche and has reached us (27). According to the results of the addressed population records in 2019, the percentage of obese individuals was reported as 31.2% and the percentage of overweight individuals as 37.5% (28). As we have seen obesity is increasing rapidly in Turkey. As in many countries throughout the world, Turkey has also found that more women than men prevalence of obesity (29). In the TEKHARF study conducted by the Cardiology Association in 1990, the frequency of obesity according to gender was 18.7% in men and 38.8% in women. In the 90s of our country, the prevalence of obesity increased by 65% in men and 30% in women (30).

2.2.2. Causes of Obesity

Why and how obesity occurs is an ongoing research topic, but it has a multifactorial etiology (31) (32). It is basically an increase in fat accumulation in the body as a result of the imbalance between energy taken and spent for a long time. The primary and most important reasons are excessive and unbalanced nutrition and lack of physical activity. Apart from these, environmental and biochemical factors, genetic and socio-cultural factors and the interaction of many psychological causes cause the formation of obesity (28) (33) (34).

The main causes of obesity are (34)

- ✓ Age and gender
- ✓ Education level
- ✓ Socio-cultural factors
- ✓ Excessive and unbalanced eating habits
- ✓ Aktivite Lack of physical activity
- ✓ Hormonal and metabolic factors
- ✓ Genetic factors
- ✓ Psychological reasons Frequent unhealthy low-calorie diets

- ✓ Medicines (antidepressants, glucocorticoids, etc.)
- ✓ Number of births and time between births

One of the issues to be considered in the increase in the frequency of obesity is the feeding of the newborn. It is reported that breastfeeding rates and risks are lower in babies who are breastfed than babies who are not breastfed. The amount of breastfeeding in infancy, duration, additional nutritional start time, and the amount is directly proportional to obesity (36) (37).

2.2.3. Health Problems Caused by Obesity

If bodyweight exceeds 20%, it increases the risk of hypertension, coronary heart disease, hyperlipidemia, and Type 2 diabetes. Metabolic syndrome, which is defined by insulin resistance with weight gain and associated disruption in type 2 diabetes, high blood pressure, and blood lipid profile, is the most common condition in obesity (13). Obesity, apart from the diseases accompanying it, is one of the causes of increased mortality (34) (35). Research shows that obesity reduces the quality of life, shortens life, and is responsible for increased morbidity and mortality rate. Diseases caused; medical complications negatively affect all body systems (36).

2.2.4. Treatment of Obesity

Purpose in the treatment of obesity; It is to regulate the energy balance of the body by reducing the amount of energy entering the body or increasing the energy consumption in the body or by applying both. Medical approaches to the treatment of the individual; Increasing physical activity, performing the appropriate dietary treatment, applying behavioral change therapy, pharmacological treatment, and their application together when necessary, and finally surgical treatment if necessary (37).

The difficulty in obesity treatment is manifested in maintaining this condition in the long term after weight loss is achieved. Therefore, the goal of treating these individuals should be not only slimming but also the treatment of behavior change. In this treatment, a 10% loss in body weight will benefit the improvement of blood pressure, cholesterol, diabetes, and joint pain. Setting new goals little by little instead of long and big goals makes it easier to achieve results in treatment (38) (39).

The most important point in the treatment of obesity is medical nutrition therapy. The target is to reduce body weight to an appropriate level compared to the

dye. Over 95% of individuals who lose weight as a result of medical nutrition therapy gain weight again (28) (40).

In general, nutritional lists that provide 1000-1200 kcal/day for women and 1200-1600 kcal/day for men are suitable. 15% of the daily needed energy should be provided from proteins, 25-30% from fats, and 55-60% from carbohydrates (41). Very low-calorie diets that require constant medical control and cannot be applied in the long term are not suitable for the medical nutrition therapy protocol of obesity and are not recommended (42). In the treatment of obesity behavior change, the second component of the weight loss program is physical activity. The obese individual is recommended to do physical activity daily for 30 to 60 minutes (such as walking, cycling, or swimming) for 3 to 5 days a week (43).

The third indispensable component in the treatment of behavior change is self-monitoring. These include recording food consumption daily, stress control, slow and heavy eating habits, physical movement, and rewarding behavior changes (44).

2.3. Body Mass Index

2.3.1. Definition

It is an anthropometric measurement used in obesity research to determine body composition accepted by the World Health Organization. Body mass index, calculated using body weight and height measurements, can be applied to all individuals without gender discrimination. It is a commonly used height weight index for determining weakness and obesity since it is easy to apply and calculate (15). It was first described in history by Quetelet in 1835 and the BMI has been used in studies for a long time (45) (46).

$$\text{BMI} = \text{Weight (kg)} / \text{height (m}^2\text{)} \text{ (47).}$$

Table 2. 1. BMI values according to age

Age (years)	BMI (kg/m ²)
19-24	19.00-24.00
25-34	20.00-25.00
35-44	21.00-26.00
45-54	22.00-27.00
55-64	23.00-28.00
65 +	24.00-29.00

The use of ready-made BMI rulers in studies shortens the time taken for the calculation works. BMI is associated with the total amount of fat in the body rather than the percentage of fat in the body. The correlation coefficient between them varies between 0.7-0.8 (48).

There are formulas that extract body fat from BMI.

These:

$$\text{Body fat\% (men)} = [1.33 \times \text{BMI (kg / m}^2)] + [0.236 \times \text{Age (years)}] - 20.2$$

$$\text{Body fat\% (women)} = [1.21 \times \text{BMI (kg / m}^2)] + [0.262 \times \text{Age (years)}] - 6$$

In some studies, BMI levels were found to increase proportionally depending on age and body fat (49). BMI is an index that can be used for all age groups (50).

2.4. Eating Attitudes and Behaviors

2.4.1. Definition

Eating attitude is the tendency of the person to form their behavior, feelings, and thoughts about eating and feeding (51). Eating behavior is also related to emotional life, not only to ensure the biological and physiological development of the person (52). In addition to physical hunger, psychological causes affect a person's desire to eat. In summary, eating attitude is not just about nutrition. Eating behavior meets the needs of physiological needs and biological development, as well as psychological and social importance for the person. Although eating attitude has a complex structure, it is formed by being influenced by many emotional, environmental, cognitive, and physiological factors (53). To have a positive eating attitude, it is necessary to acquire adequate, balanced briefly healthy eating habits. The positive eating attitudes gained in the preschool period in children continue in their future lives (54). But eating attitudes that are poorly acquired are the main factors that cause eating disorders in their future lives (55).

Studies on eating attitudes are increasing day by day; they aim to make some definitions by showing what the eating attitudes and behaviors should be evaluated in the Figure. In this respect, the difference between attitude and behavior concepts draws attention. The attitude in Psychology; are the tendencies that reveal the emotions, thoughts, and behaviors of the individual. In summary, attitudes do not refer to concrete behaviors by individuals, but to abstract trends that lead to these behaviors (56). When we say the concept of eating attitude; are the tendencies that cause all emotions, thoughts, and behaviors related to the individual's eating behavior and nutrition. Eating behavior may differ depending on the person's being happy, stressed, sad, or angry (57) (58).

Eating behavior is associated with the emergence of social relationships that continue from mother to child starting from birth and continue throughout life. In addition to some changes in early age and adolescence in terms of physical development, nervous development, psychological and spiritual maturation; Life-long habits can occur in this period. Eating attitudes and behaviors that develop negatively during this period may pose a risk for advanced life in adolescents (59).

Everyone's eating habits are different; some are eating less or less frequently throughout the day, while others divide the day into 2 meals, others try to maintain and

maintain their current weight through diet (60). Everyone has an eating arrangement that he gets used to and that he accepts correctly. Eating habits differ due to many reasons such as mouth taste, lifestyle, life hours, family life, culture, social environment, and it is extremely difficult to classify them as a proper diet or malnutrition behavior. The eating behavior of the individual and the relationship between food constitutes the concept of what we call normal food. The diet that meets the physical needs of the individual in the most correct figure is healthy eating (61).

Since arousal levels of obese individuals are lower than those of normal weight individuals, the difference in eating attitudes mostly results in overeating. It was determined that there is a relationship between anxiety level and eating attitude in obese and overweight individuals. Studies have shown that obese individuals consume more nutrients in situations that cause anxiety than normal individuals. In some studies; approximately 10% of obese individuals, daily stress, anorexia in the morning, insomnia, and nighttime eating behavior were determined. These behaviors occur when we are under stress and do not stop as long as the stress continues. During the episode of eating without a hunger urge, control is lost, so a lot of nutrients are consumed during this time (52).

Evaluation of eating behavior is important in predicting the problems associated with body weight and eating disorders (62). In a study conducted by Becker et al. (1999); When evaluated from a psychosocial perspective, it has been determined that some of the obsessions of eating attitude and one's own body weight and appearance can cause disorders in eating attitude (63). Disorders occurring in the attitudes of individuals about eating and nutrition gain continuity over time and prepare the ground for eating disorders that occur in their later lives (64).

Experts use the term eating disorders to describe negative eating patterns and behaviors (65). According to Leşkeri (1989); There are three main factors in the occurrence of eating disorders. These; factors in the first infrastructure are the second triggering factors and finally the sustaining factors. Infrastructure factors, the desire to be very weak, unhappiness in body perceptions, and dissatisfaction can be given as examples to the infrastructure. Negative life experiences such as the divorce of family members, school change, mocking in front of the crowd, dying of a loved one or adolescence are the trigger factors. Non-stop diet and long-term and high starvation are examples of sustaining factors (66).

In the treatment of eating disorders, determining and analyzing the main causes that cause that behavior, not external behavior can control and prevent unwanted behaviors that may occur in the future (67).

2.4.2. Physiological Side of Eating Behavior - Homeostatic Eating

The state where nutrients are not taken from the outside and the calories needed are removed from the internal stores is called starvation in metabolism. Blood glucose concentration should be kept at the level of 70-110 mg / dL. In the case of starvation of the body, the glucose need for metabolism is quickly resolved. It does this by the destruction of the glycogen stores in the liver, which we call glycogenolysis, or by the synthesis of glucose from proteins and lipids, which we call gluconeogenesis (68). The postprandial condition is the formation of satiety signals in metabolism as a result of taking as many nutrients as the body needs, and as a result of this, the nutrient intake to the body is terminated. The feeling of satiety and satiety is very close, so it is difficult to understand the difference between them. Satiety; While defining the time until the first feeling of hunger that occurs after the end of the food intake, the feeling of satiety defines the completion of the food intake (69) (70).

The first row in the homeostatic balance of food consumption is directed to regulate the energy balance, the metabolism tries to establish the energy balance by increasing the appetite, that is, appetite, when the energy stores of the body decrease (71). In the short-term energy regulation, which ensures increased food intake in case of hunger and cessation of food intake in case of satiety; The homeostatic signals that provide this transmit nutrient-related feedback to many hormones and certain areas in the hypothalamus and brainstem. Homeostatic signals that regulate the long-term energy balance responsible for maintaining persistent adiposity are structures associated with adiposity (72).

Two main neural centers control food intake briefly in appetite hypothalamus. These are the center of satiety in the ventromedial hypothalamus and the fasting center in the lateral hypothalamus. Arcuate nucleus (ARC), paraventricular nucleus (PVN) and dorsomedial hypothalamus (DMH) are other hypothalamic areas responsible for hunger, satiety, and food consumption (73) (74).

There are two different groups of neurons with opposite functions in the arcuate nucleus region. These neurons responsible for food consumption are divided into two groups. These are anorexigenic neurons, such as Neuropeptide Y (NPY) and Agouti-

related protein (AgRP), which express cocaine-amphetamine-associated transcript (CART), which reduce appetite, increase energy consumption, and reduce nutrient intake, and function as the opposite (74) (75).

Feelings of satiety and hunger arise from the messages and messages received by these neurons, which form a network in the body, from the periphery, the hypothalamus, or the nucleus tractus solitaries (NTS) located in the brainstem (76). Messages from peripheral tissues (insulin, leptin, ghrelin, PYY, etc.) cross the blood-brain barrier and reach the hypothalamus and brain stem. They affect the release of anorexigenic and orexigenic neuropeptides, such as POMC / CART or NPY / AGRP, expressed in the arcuate nucleus region in the hypothalamus. These are delivered to the following nuclei, such as PVN and LHA, and affect the synthesis of anorexigenic peptides such as TSH, CRH, and orexigenic peptides such as MCH and orexin. Appetite, obesity, or weakness and, most importantly, nutrition are regulated in the appetite mechanism of these peptides and in the result of increasing or preventing nutritional intake (75) (77).

These central and peripheral pathways, which are involved in the regulation of eating behavior, are important in determining the pathophysiology of obesity. Generally, peripheral and central pathways are responsible for food intake. The signals that make up the peripheral control are the signals transmitted from the gastrointestinal tract, the signals sent from the pancreas and adipose tissue, and nutrient-sensing signals. Central pathways consist of three systems called neuropeptidergic, monoaminergic, and endocannabinoid (75) (74).

The peripheral control of food consumption consists of the signals responsible for regulating the energy stores in the metabolism, which are called short-term signals and long-term signals, which determine the beginning of eating, which is the state of hunger, the end of eating, which we call saturation, and the full time between meals (78). This control is cholecystokinin (CCK), peptide YY (PYY) released from the gastrointestinal tract, glucagon-like peptide 1 and 2 (GLP-1 and GLP-2), amylin, oxyntomodulin (OXM), enterostatin, bombesin family (Bombesin, gastrin-releasing peptide. It does it with the help of hormones such as neuromedin B), apolipoprotein A-IV (Apo A-IV) and ghrelin. Of these hormones, only ghrelin has an appetite-enhancing, orexigenic effect; others are anorexigenic peptides, that is, they reduce appetite-reducing nutrient intake (74).

2.4.3. Psychological Side of Eating Behavior - Hedonic Eating

In reality, although the organism has any biological energy needs, the desire to eat is called hedonic hunger (79). In societies with high nutritional levels, food intake depends on hedonism, not hunger or energy needs. Hedonism is a philosophical belief that bases the meaning of life only on pleasure and pleasure. According to this belief, pleasure caused by consuming foods also increases the desire to eat (80).

Delicious dishes, usually sweet and savory flavors, encourage eating more than bitter, acrid and sour flavors. The features such as beautiful images, delicious flavors, attractive odors, colors of the foods encourage individuals to eat even in the body's satiety (81). When a person who has just finished eating and is full is recommended to eat a dessert he likes, it is hedonic hunger to answer yes when he is full. Briefly, hedonic hunger; Although the energy stores of metabolism are full, it prevents the homeostatic pathways and increases the desire for the consumption of delicious foods (80).

In daily life, food choices of individuals can be affected by environmental factors such as smelling of food, seeing food, visual advertisements, or food consumption of people around. It can also be affected by mental conditions such as being sad, angry, stressed, and internal causes such as rewarding experiences. Everyone's responses to these triggers are different. Some may increase food consumption while others may have the opposite effect (82). The differences here are generally; differences in individuals' self-control, differences in their desire to eat delicious food or differences in the rewarding experiences of foods (83). It has been determined that food consumption increases due to environmental factors such as seeing food, smelling good, and fat and obese individuals (84).

People's weight gain is thought to be related to hedonic hunger rather than homeostatic hunger. (85). In the developed world, it is believed that eating before the state of hunger occurs, which is called "non-homeostatic" or "hedonic". It is a meal that is not metabolically based on feedback and is based on emotional and cognitive causes (86).

Hedonic pathways that affect food consumption are organized and controlled in reward regions in the central nervous system (71). There are three systems in charge of controlling the food and pleasure pathways. These are endocannabinoids, mesolimbic (dopamine), and endogenous opioid systems (87). In hedonic nutrition, dopamine,

endocannabinoids, and opioids are released with the consumption of delicious foods. They stimulate the brain's reward circuits, allowing permanent stimulation of hypothalamic signals and suppression of toughness mediators. Thus, eating, that is, energy gain continues without stopping only because of delicious and rewarding foods (88).

2.4.4. Factors Affecting Eating Behavior

Even if they have the same economic and socio-cultural level, differences are observed in the eating behavior of individuals. These differences arise from individuals having different opinions about food preferences and consumption (89). Experts have put forward three different theories to explain this situation and emphasize three different concepts related to them. These theories are psychosomatic, externality, and constraint. The concepts they have developed according to these are emotional eating, uncontrolled eating, and cognitive restraint behavior (90). With these theories and concepts, they try to understand and explain why some individuals eat more than others (91).

2.4.4.1. Emotional Eating Behavior

The most studied and researched eating behavior in recent years. It was first described in the literature by Kaplan and Bruch and is an effective psychological factor in food selection (89) (92) (93). Even if the individual is not hungry, it is the fact that he eats when he encounters emotional situations such as sadness, stress, loneliness, or happiness, that is, the increase of food consumption. Regardless of whether the emotional stimulus is positive or negative, its effect on eating behavior shows that eating has a strong relationship with psychological needs. In these cases, individuals do not realize what they eat and how often. There are two different dimensions of emotional eating. One of them is eating, which is made to dissolve emotion intensity like boredom, not finding anything to do, and the other is eating behavior developed in response to a certain emotion such as anger and anger. Often the second situation is more common (94).

In a study by Match in 2008; determined that appetite increased 30% and decreased 48% as a result of emotional stimuli (95). Self-distrust, unhappiness, and loneliness are the main factors affecting the eating behavior of individuals with emotional eating. negative emotions such as low self-esteem, inadequacy, stress,

depression, fatigue, anger, fear, and positive emotions such as happiness increase emotional eating (96) (97).

Individuals who tend to eat more when they are stressed are more likely to eat unhealthy, high-calorie, and non-nutritious foods than those who do not eat under stress (98) (99) (100).

In a study conducted on 120 adult female individuals; It was determined that emotional eating was not only related to overeating behavior but could be related to psychopathology, which is also the reason for eating disorders, which is also observed in individuals with a long-term and very low-calorie diet (101).

In children of families who are used as a reward for food at a young age or used as a means of comfort in case of any situation or who are over-pressured about eating or not vice versa; There are disruptions in their ability to decide on hunger or satiety. Therefore, when these children encounter an emotional stimulus in their future lives, they can exhibit eating behavior even if they are not hungry (102).

Studies on emotional eating were conducted primarily on obese and overweight individuals. As a result of these studies, emotional eating scores of obese individuals were higher than normal weight and weak individuals (103).

2.4.4.2. Restrictive Eating Behavior

It is the restriction of food consumption in a conscious Figure by controlling the amount of energy taken from the outside and the type of food consumed to prevent weight gain in the body or reduce weight gain (104). In the eating attacks, we see in this eating behavior, the individual's body is unable to distinguish between the others in the process of restriction from others and begins to feel hungry as if they are in famine (105). As a result of this, an excessive increase in the individual's food consumption is observed and weight gain is observed again (106).

Generally, individuals with restrictive eating behaviors often diet. For this reason, when these individuals think they ate too much, they believe that their diets are disrupted and terminate their restrictions for a while (107). All these eating behaviors cause the formation of binge eating, obesity, and many other eating pathologies and therefore they are seen as problematic eating behaviors (108).

Obese individuals with restrictive eating behavior tend to disrupt their diets less than those who are not obese but are restrictive. They have higher self-control over their diets (109).

Made works; low calorie and low-fat dieters have shown a significant reduction in their weight, but after the finished diet, they gained weight gain again, turning to overeat, and even eating binge attacks (110). In individuals with restrictive eating behavior, this restriction has been disrupted for any reason and brings with it the guilt that causes a diet again. Thus, the same vicious circle continues (111).

2.4.4.3. External Eating Behavior

It is an eating behavior that is sensitive to external stimuli related to food, causing an individual to gain weight (112). Some individuals are more sensitive to external food stimuli than others. Although these individuals are not physiologically hungry, the features such as the smell, appearance, and taste of the food there create more sensitivity, and as a result, eating behavior improves (113).

As with emotional eating behavior, individuals do not decide according to their physiological hunger and satiety status in external eating behavior. The point that separates external eating from emotional eating is the reason for the beginning of eating. These individuals do not normally have a mind in mind. When only one nutrient is in the environment, they are affected by reasons such as its appearance and smell and they start eating (114). In short, while eating behavior develops in response to an abrupt stimulus in external eating behavior, they eat against emotional eating behavior, not against an external stimulus, but changes in emotional states of the individual's psychological inner world. In both eating behaviors, "obese eating behavior" is observed. It is in the foreground that both individuals are on a diet at that time. In restrictive eating behavior, different from these two eating behaviors, overeating attacks due to diet at the end of diet are at the forefront (108).

In a study conducted by Nisbett in 1968, it was determined that the individual's weight was decisive in his response to external factors. The greater the individual's weight, the stronger it is in the response to eating. It has been observed that individuals with normal weight when they encounter external stimuli, evaluate their physical hunger toughness levels more accurately, and act accordingly. However, it has been determined that obese individuals start eating under the influence of external factors regardless of their physiological needs (115).

2.5. Eating Attitude Disorder

2.5.1. Definition

Eating disorders are a psychiatric disorder that extends to significant impairments in eating attitudes and behaviors, and if a precaution is not taken at the right time, it may endanger the life of the individual and may even result in death (52).

In summary, eating disorder behavior is determined by serious disorders in eating behavior. These; are excessive behaviors towards losing weight through restricted eating or excessive exercise due to refusal to stay in body weight. They are impaired eating actions where severe anxiety and fears about weight gain are experienced, and unhealthy behaviors such as the use of laxatives and diuretics in the wrong figure, knowingly, willingly induce vomiting. Eating behavior disorder is the opposite of these, as the individual consumes much more food than he can consume after the loss of control overeating. Here again, there is an error in the individual's assessment of body weight and related eating disorders (116).

Although there is not yet a complete consensus about the definition of eating disorders, three basic features are sought to say that an individual has an eating attitude disorder (117):

1. Significant deterioration in eating habits or weight control behaviors,
2. There is a deterioration in eating attitudes and behaviors or only behavioral disorders at a level that will cause a clinically significant deterioration in physical health and psychosocial aspects,
3. A behavioral disorder that develops regardless of a general medical condition or psychiatric disorders.

Individuals with eating disorders set excessive goals for themselves regarding their consumption of food and control of their body weights, and they constantly criticize themselves in this regard. When they fail to achieve their goals, they still believe that they are wrong and make more efforts to be successful. However, the goals they set are at extreme levels and are difficult to achieve or achieve. These efforts to control eating behaviors, body weights, and body figures result in a vicious circle and eating disorders occur after a while and this situation continues (118).

In a study done by Fallon and Rozin university students in 1985; they have shown pictures of their sex to men and women, and asked them to choose pictures that are closest to their current body appearance, which they think are ideal for them and that

they believe the opposite sex will like more. As a result, they determined that male individuals choose pictures that are similar to themselves, but they choose pictures that are different from their current appearance or pictures that women think the opposite sex will find more attractive. They found that women consider themselves fatter than their current weight compared to male individuals (119).

In another meta-analysis study carried out by Cash and Deagle in 1997; It was found that the female dissatisfaction rate of female individuals with eating disorders was 87% higher compared to the normal population. It was also determined that 73% of the same individuals had deterioration in their body perceptions (120).

In 2016, the study of Musaiger et al. On 530 university students; evaluated the eating attitudes of students and negative eating attitudes; found that fear of gaining weight was associated with anorexia nervosa, bulimia nervosa, and binge eating behavior (121). In another study related to eating attitudes and behaviors of 1000 university students, 22.6% of students were found to have an eating attitude test (EAT) score of 30 and above (122).

Anorexia nervosa and bulimia nervosa are two known eating disorders. Of these, anorexia nervosa is determined by the individual's response to maintaining the lowest possible body weight. Bulimia neurosis is determined by behaviors such as vomiting, even after repeated binge-eating attacks, using laxatives, emptying the intestines, using edema-enhancing drugs or herbal mixtures, refusing to eat, never eating, or doing excessive sports. Impairment in the perception of body weight and shape is found in both anorexia nervosa and bulimia nervosa. Apart from these, disorders that do not include any eating disorder diagnostic criteria are classified under the name of an eating disorder that cannot be named otherwise (123).

2.5.2. Causes of Eating Behavior Disorders

Eating and behavioral disorders, in which many factors such as psychiatric, environmental, and familial factors play a role, begin at an early age. The disease persists for a long time and is difficult to treat (124). A Many reasons such as family attitudes, negative body perception, environmental and hereditary causes, and the “zero body” perception created by the media are effective in the occurrence of eating disorders (125).

It is the behavioral, emotional, and cognitive-behavioral strategies that individuals create when dealing with weaknesses, mood disorders, development ages,

and problems they encounter in their relationships with people (126). Again, it is thought that the traumas, sexual, emotional abuse, and violation individuals experience during childhood are directly or indirectly related to developing eating disorders (127).

2.5.2.1. Sociocultural Factors

The high sociocultural values about the external appearance affect the perception of the individual related to the external appearance. With the introduction of technological innovations into our lives due to scientific developments, the interaction between different cultures has increased, and the view of being slim has been adopted, which is mostly accepted by western countries (128). In socioculturally developed western societies, unhealthy, unbalanced eating behaviors and attitudes occur due to the adoption of weak, attractive, and ideal women concentrations on women. In this adoption process, when the individual reasons are excluded, sending messages through communication and media channels suggesting that being slim expresses beauty and attractiveness causes many women to become weaker towards ideal body perception and thus eating disorders (122). In some occupational groups such as dancers, mannequins, ballerinas, athletes, TV players, jockeys where external appearance is important in their competitions with each other in business life, the risk of developing eating disorders is higher than other occupational groups (128).

In a study conducted by Garner and Garfinkel in 1980; It has been determined that the frequency of eating disorders increases in direct proportion with the increase in poor body perception and curiosity towards individuals. In the period we live, the pressure on women is the ideal woman is a weak woman and her pressure continues to increase. With the acceptance of the perception of being weak in women in western countries, the incidence of anorexia nervosa and bulimia nervosa has increased and it has been determined that the risk of eating disorders also increases (129). In advanced modern societies, it is emphasized that women are beautiful, men are smart and strong, and this pressure is constantly supported through media and communication. The woman should always be young, beautiful, slim, and attractive, and remain (130). The increase in obesity in Western societies and the idealization of the slim female model coincided with the same period. This situation had adverse effects on some individuals and caused them to eat more.

In developing countries; It is observed that many dietary prescriptions and slimming formulas in the media that cause health problems cause an increase in the

frequency of eating disorders such as anorexia and bulimia in those societies (131). It is determined that eating disorders are increasing in Asian Countries and Arabian Peninsula with increasing globalization and industrialization (132).

2.5.2.2. Hunger Syndrome

People with negative eating behaviors and attitudes are very interested in their weight and appearance. These people have a desire to be thinner and weaker at all times rather than their biological health. For this reason, they develop some behavioral patterns such as voluntarily vomiting, laxative, and laxative use and doing too many sports so that they try to keep themselves under control and control (133). The most important thing for these people is their body weight, appearance, eating, weakness, fear of gaining weight, and of course diet practices (134).

2.5.2.3. Body Image

Body perception covers the process related to how the individual perceives and evaluates his own body. The concept of body image, on the other hand, defines the shape of the body that the individual dreams of, that is, what he wants to achieve. Many factors such as family, peer, communication, and media are effective in the formation of body perception and image. In addition to this, the pressure that society creates against being weak or obese or the meaning it places on them has a serious effect on the perceptions of individuals (135).

Individuals with anorexia nervosa perceive their bodies differently than they are due to the deterioration in their body images. For this reason, the clinical Table continues without stopping. The fact that the patient sees himself fat in the mirror and his body weight and Figure perception deteriorate are characteristic features for anorexia nervosa. While a cachectic weakened anorexia patient claims that he is still fat, he can even see that another individual like himself is extremely weak (136).

2.5.2.4. Genetic Factors

In recent years, studies that draw attention to the genetic aspect of eating disorders have been conducted. In these studies, it was found that individuals with a family history of eating disorders have a higher risk of eating disorders. Therefore, the importance of familial predisposition has recently been emphasized (137).

There is a 6.6% anorexia nervosa tendency in the sisters of anorexia patients. In a study conducted by Becker et al. In 2004, it was determined that the risk of eating

disorders in the family members of patients who were previously diagnosed with anorexia nervosa increased up to 10 times. In their study on twins, it was concluded that twin twins do not have any predisposition, but restrictive type anorexia can be observed in 66% of single twins (138). Genetic studies focused primarily on dopamine, serotonin, and BDNF (brain-derived neurotrophic factor) (139). The results show that there is a relationship between the possibility of anorexia and bulimia nervosa and dopamine-related gene (140).

2.5.2.5. Family Relations and Interaction

The family is where the individual experiences social experiences for the first time. It is the first place where face-to-face and unrequited pure relationships are experienced and even started. Family is the primary group that conveys the sociocultural characteristics of the society in which they live, thus playing an active role in the personality formation of the child (141).

The thoughts and expectations of the family related to the appearance are also effective in the formation of an eating disorder. If the family sees weakness as a success criterion, if the physical image is important to him, his critical perspective on this issue increases the risk of eating disorders in that family's children (142).

It is believed that the problems of an individual with anorexia nervosa in family relationships are the reason for the formation of anorexia nervosa in that individual. According to the psychosomatic family theory, the symptom of intra-family communication pathology is an individual with anorexia nervosa. So in another definition; the reflection of the problems caused by the underlying causes not spoken in family communication to the outside is called an anorexia individual (136). As a result of some studies on anorexia nervosa, the mother-daughter relationship is especially emphasized and attention is drawn to the problematic relationship between mother and daughter (143).

Mother-child relationships, which do not allow children to individualize during periods of autonomy, are very important in this respect. Because experts think that the most important area in which children can gain autonomy is eating behavior and attitudes (144).

In a study on 92 female students and their mothers aged 12, it was found that there was a relationship between the dysfunctional functionality detected in the distribution of their roles, behaviors, and responsibilities in the family and the

characteristics of bulimia nervosa (64). In another study conducted; It has been determined that the education level of the mother increases the risk of eating disorders (145). Again, situations such as overeating behavior in the family, death of family members, and deterioration of family integrity have been found to increase the risk of eating disorders (146).

2.5.2.6. Biological Views

Some clinical features of anorexia nervosa and bulimia nervosa, certain distribution and a certain onset age show that the possibility of occurrence in different individuals belonging to the same family may be effective in their biological causes in the development of eating disorders (138).

In another study conducted in the presence of positron emission tomography, it was determined that caudate nucleus metabolism was higher in the period when the individual was anorectic than in the post-eating period. In some studies, conducted in patients diagnosed with bulimia nervosa, some individuals have observed an increase in plasma endorphin levels. It is thought that patients feel good after vomiting due to this level of endorphins (147)

During adolescence, children evaluate themselves differently from other peers and find them more repulsive because of their body figures that differ from early menstruation and their increased weight. They have difficulty in dealing with these feelings, and as a result, the risk of eating disorders increases in these children (148).

2.5.3. Risk Factors in the Formation of Eating Behavior Disorders

An eating disorder is too complex to be linked to a single cause. Many factors affect the process of eating disorders differently. These are developmental factors, genetic and sociocultural factors, familial opinions and psychological factors, and many other factors such as these (143).

We can group the risk factors for eating disorders in several groups. These; (4).

2.5.3.1. Individual Risk Factors

- ✓ Early puberty
- ✓ Obesity
- ✓ Personality
- ✓ Low self-esteem
- ✓ Not being able to cope with the incidents

- ✓ Perfectionism
- ✓ Dissatisfaction with the shape of the body
- ✓ Diyet Continuous diet
- ✓ Anxiety about being fatBiyolojik etmenler

2.5.3.2. Family Risk Factors

- ✓ An individual's being fat
- ✓ Excessive restriction and protection
- ✓ Exclusion from the family
- ✓ Psychopathology
- ✓ Death or divorce of family members
- ✓ Physical, emotional or sexual abuse
- ✓ Family's socio-cultural and socio-economic structure
- ✓ Family conflict
- ✓ Concerns about body shape or weight
- ✓ Having family members with eating disorders

2.5.3.3. Socio-cultural Risk Factors

- ✓ Environmental factors
- ✓ Weight concerns among peers
- ✓ Being ridiculed among friends
- ✓ The idealism of being weak in the environment in which he lives
- ✓ The effort to reach the ideal weight to be on the sports team
- ✓ Social factors
- ✓ Media printing
- ✓ The importance is given to outer appearance for success
- ✓ Beauty weakness ideal of the society in which it lives

2.5.3.4. Correlational Factors

- ✓ Fat stores in the body
- ✓ Depression
- ✓ Continuous restrictive diets
- ✓ Insight problems
- ✓ Effects of media and communication
- ✓ Perfectionism
- ✓ Low self-esteem

- ✓ Sexual abuse
- ✓ Fear of being overweight

2.5.3.5. Causal Factors

- ✓ Body dissatisfaction
- ✓ Negative affect
- ✓ Socio-cultural pressure on being weak
- ✓ International interaction on the idealism of being weak (4)

2.5.4. Frequency of Eating Disorders

Eating disorders, which are among the most important psychiatric problems that may result in death, are among the difficult and time-consuming diseases group. Studies on eating disorder diseases, the prevalence of which has increased in developing countries as well as in developed countries, have been ongoing for the last 20-30 years (138).

The incidence of eating disorders is 1-3%. Eating disorders are common among adolescents and young women, although their disease is less common in the general population (149). Although the first identification of these diseases in the literature is very old, the incidence in hospitals has increased in the last 50 years. Eating disorders are grouped into three classes: anorexia nervosa, bulimia nervosa, and unclassified eating disorders. Among these, the frequency of anorexia nervosa is 0.5-1%, the frequency of bulimia nervosa is 2%, and the incidence of unclassified eating disorders is 10-34%.

Generally, high school and university students are at high risk for eating disorders. In terms of gender, women carry 90% more risk than men (150).

In another study conducted by Mintz and Betz on university students in 1988, 82% of students showed one or more dietary behaviors per day. In the same study, it was found that 33% of the students had unhealthy behaviors such as vomiting and laxative use, and 38% showed problems related to binge eating behavior (151).

In Sweden, in the study conducted by Ghadari and Scott on women between the ages of 18-30 in 2001, 1.2% of binge eating disorder was detected. In another prevalence study conducted using DSM-5 diagnostic criteria of binge eating disorder, lifetime incidence was determined as 2.3% (152).

Semiz Turkey in 2013, Kavakçı, swarthy, Sculptor, and swans living in Sivas by the 18-44 age range in studies with 1122 participants eating disorder prevalence was

determined as 1.52%. In the same study, the prevalence of anorexia nervosa was not detected, while the prevalence of bulimia nervosa was 0.63% and the prevalence of binge eating disorder was 0.81%. In the same study, the incidence of eating disorders was 88.2% higher in women than in men (52).

2.5.5. Identification and Classification of Eating Disorders

Eating disorders diseases are collected in 3 classes in DSM-IV-TR, which is the Diagnostic and Statistical Manual of Mental Illnesses. These;

1. Anorexia nervosa: is characterized by excessive anxiety towards weight gain, excessive effort to lose weight, reaction to staying at the current healthy weight. While the person constantly evaluates himself, he relates it to his weight.
2. Bulimia nervosa: is characterized by unhealthy behavior, such as self-vomiting, laxative, laxative, laxative, and diuretic use to compensate for this and not to gain weight.
3. Eating disorders not otherwise named; eating disorders that the person associates with his weight while evaluating himself but do not fall into the anorexia and bulimia categories (116).

In the DSM-V Diagnostic Criteria handbook, in the classification of "eating disorders"; pica, rumination disorder, avoidant/restrictive food intake disorder, anorexia nervosa, bulimia nervosa, binge eating disorder (153).

2.6. Anorexia Nervosa

2.6.1. Definition

Anorexia nervosa was first described by Simone Porta O. Portio in the 16th century under the current name. In the 17th century, John Reynold's 18-year-old anorectic case named Martha Taylor and two anorectic cases that Richard Morton dealt with were the first known patients (154).

The literal meaning of anorexia nervosa is the nervous loss of appetite. However, today this definition is not sufficient, but it is not exactly equivalent. The situation experienced in anorexia nervosa is not anorexia, but an attempt to over-control the individual's weight and appetite. The individual tries to control his weight by refusing to eat, go to portion restrictions, or by inappropriate behaviors such as self-vomiting, excessive exercise, and laxative use (155).

In the clinical examination, the deterioration in the individual's perception of the body comes to the fore. Individuals with anorexia nervosa have much lower body weights than they should, based on their current age and height index. But because of their impaired body perceptions, they still find themselves overweight and are very afraid of gaining weight (156).

The main features of patients diagnosed with anorexia nervosa (123);

- The individual's reaction to maintaining his lowest weight
- Individual's fear of gaining weight,
- Bozukluk Impairment in the perception of the individual regarding body shape and shape,
- After seeing the first menstruation of young girls, there is no re-menstruation (amenorrhea)

Briefly, anorexia nervosa; the desire to be weak, and fear of being fat and eating disorder is a table in which objectionable behavior can be done while trying to lose weight (157).

2.6.2. Epidemiology

The incidence of anorexia nervosa, which is more common in women and western countries, is between 0.5-1% (158). Young girls and women constitute 90-95% of the patients (123). The mortality rate due to anorexia nervosa is 10.5% (159).

The study of eating disorder cases seen in Turkey has increased due to the increase in the count. In our country, more cases were defined in the high and middle sociocultural class (160). Even if she is not diagnosed with anorexia nervosa, mental efforts related to body shape, eating attitude, and behaviors are frequently encountered in young girls. The number of individuals who have developed an eating disorder behavior but have not been diagnosed with the disease is much higher. eating in student reading at the university as a result of a study conducted in Turkey attitudes and behavior disorder rate was found to be 12% (161).

2.6.3. Risk Factors in Development of Anorexia Nervosa

Intra-family relationships and interactions, sociocultural factors, genetic factors, and psychodynamic factors are thought to be effective in the development of anorexia nervosa. For example, a person with an eating disorder in a family with a first degree has a much higher risk of developing an eating disorder (155). Also, sexual abuse in

childhood, a childhood with high negative emotions, high parent expectations, childhood anxiety disorders, obsessive-compulsive disorder starting from childhood, obsessive features in childhood, and personal identity disorders are other risk factors that affect the development of anorexia nervosa (110).

2.6.4. Diagnostic Criteria for Anorexia Nervosa

In the DSM-IV-TR, which is the Diagnostic and Statistical Manual of Eating Disorders Mental Diseases, the diagnostic criteria of anorexia nervosa are collected in 4 groups (153);

- A. Being at the lowest level of the weight appropriate for age and height ratio or being overly reactive to being overweight.
- B. Despite having a much lower weight than it should be, there is an extreme fear of gaining weight, that is, being overweight.
- C. The deterioration in the perception of the body shape and weight of the individual, the effect of the body shape and weight in self-evaluation, the fact that being weak denies the importance of itself
- D. Amenorrhea developing after the first menstrual period in women, absence of at least three consecutive menstrual periods

Types:

Restricted Type: This type has not had any behaviors such as eating behavior, self-vomiting, use of laxative, or diuretic drugs in the last three months. The individual does more restrictive diets and excessive exercise or tries to lose weight by completely stopping eating.

Binge Eating / Purging Type: This type has had behaviors such as eating behavior, self-vomiting, use of laxative or diuretic drugs, or misuse of enemas in the last three months (162) (153).

2.6.5. Medical Complications of Anorexia Nervosa

The number of medical complications seen in anorexia nervosa is quite high. Many problems occur in these patients due to excessive weight loss and insufficient nutrient intake in the gastrointestinal, hematological, cardiological system, and neuropsychiatric terms (4). Cardiological problems such as low voltage in anorexia nervosa, bradycardia, arrhythmias, gastrointestinal problems such as decreased gastric motility, constipation, delay in gastric emptying, renal problems such as amenorrhea,

hypothyroid, growth hormone-binding protein, insulin-like growth factor and endocrinological problems such as a decrease in serum leptin levels. Also, we encounter hematological problems such as anemia, leukopenia, thrombocytopenia, reproductive problems such as infertility, preterm birth, complications during delivery, neurological problems such as a decrease in gray matter volume, a decrease in bone mineral density and musculoskeletal system problems such as osteoporosis (123).

The laboratory findings that we encounter in individuals diagnosed with anorexia nervosa are as follows (123);

Hematology;

- Leukopenia,
- Anemia (normochromic normocytic anemia) is excessively
- Thrombocytopenia is less common

Blood biochemistry;

- BUN level increase due to dehydration
- Increased cholesterol level
- Increased liver function tests
- The decrease in blood magnesium, zinc, phosphate and amylase levels
- Metabolic alkalosis, hypochloremia, and hypokalemia due to vomiting
- Metabolic acidosis
- T3 and T4 levels decrease
- Serum estrogen levels are low in women
- Serum testosterone levels are low in men

Other symptoms observed and physical examination findings;

- Intense constipation, abdominal pain, decreased resistance to cold and latergia
- The most common disease finding, excessive weakness
- Low blood pressure, hypothermia and dry skin
- Ugo lanugo, which we call increased hair growth in the body
- Arrhythmias
- Hypertrophy in salivary glands.

2.6.6. Treatment Approaches in Anorexia Nervosa

Treatment of eating disorders requires a multidisciplinary study of psychiatry, nutrition, and medical experts (163). The role of the dietitian in this team; to organize

the lists that meet the calorie and nutritional needs of the patient in terms of medical, psychological, and nutritional needs and to give advice on physical activity (164).

It was determined that 40% of the patients who were treated completely, 30% partially recovered, and 30% of the patients were chronic. 22% mortality was detected in the cases and suicide status was determined in 2-5% of chronic cases. The first step in the treatment of the disease is to reach the level of the individual's weight, and the second step is to correct the individual's behavior towards losing weight and to help individualize it by providing self-confidence. Also, it is the correction of physiological and psychological complications that develop in the patient.

In mild cases, outpatient treatment results, it is recommended that more anorectic patients at a chronic level are hospitalized, inpatient. The most important purpose of inpatient treatment is to teach the individual how to feed to gain weight in a healthy figure.

Treatments used for the patient to gain weight in a healthy figure:

- Nurse care, balanced and high-calorie diet and bed rest
- Behavior change treatment
- Hyperlimentation and tube feeding is mandatory situations
- Psychotherapy
- Pharmacotherapy

The patient should be told that the only purpose of treatment is not to eat and gain weight. The patient should believe that he will not gain excess weight during this period. For this, both individual and family therapies should be applied to the patient. The patient should trust the team involved in the treatment, believe that he will not lose his auto control, should be encouraged to eat when the mealtime comes, and his concerns about weight gain and overeating should be eliminated. As long as success is achieved at these points, 80% success is reported in the treatment of these patients (165).

2.6.6.1. Inpatient Service Treatment in Anorexia Nervosa

The psychological conditions experienced by the anorexia patients in their treatment and the chronic state of the disease increase the need for inpatient treatment. Weight loss of 15% is the primary criterion in deciding on inpatient treatment. Inpatient treatment provides the necessary medical intervention, appropriate psychological treatment, and proper and appropriate nutritional treatment when diagnosed. Inpatient

treatment is much higher than outpatient treatment. The dietician prepares an appropriate nutrition program according to the calories and nutrients needed by the individual in patients receiving inpatient treatment and motivates the patients during the treatment process (164) (166).

The objectives of inpatient treatment in anorectic patients (10);

- Treatment of developing medical complications,
- Patients reach a healthy and appropriate weight and body composition,
- Patients to develop healthy eating attitudes and behaviors
- Stopping unhealthy behaviors such as eating attacks, vomiting, diuretic and laxative use, extreme sports, such as obstructive eating in patients,
- Increasing the self-confidence of the patient,
- Teaching the patient to eat healthily,
- Treatment of psychiatric diseases accompanying anorexia,
- Planning after treatment,
- Treatments to prevent recurrence of the disease and, if necessary, determine the reasons for re-hospitalization.

In mild anorexia patients, inpatient treatment is applied daily. Patients are given two main meals and one or two snacks in their daily treatments, and motivation treatment is also provided (167). In patients with excessive weight loss, enteral, and total parenteral nutrition can be applied when necessary (168).

2.6.6.2. Nutrition Therapy in Anorexia Nervosa

In the guidelines of the American Psychiatric Association, he says; Determine healthy weight and gain weight in a controlled way to achieve this goal. It is 0.5-1 kg per week for patients with healthy weight gain and 0.25-0.5 kg for outpatients (169).

Purpose in nutritional therapy of anorectic patients; providing healthy nutrition education, planning daily meals, gaining regular eating habits, and most importantly, preventing patients from losing weight (167). These patients can memorize the calorie values of food. In their diet, they contain foods with low carbohydrate and fat content and high fiber rates such as salads and vegetables. They never consume high-calorie cereal foods such as bread, rice pilaf, and pasta. As a result of a work carried out; The attitudes and behaviors of anorectic patients before and after treatment were evaluated, and calorie and fat consumption after treatment increased significantly compared to the

situation before treatment. However, in both cases, the number of calories and fat intake was found to be significantly lower compared to non-sick individuals (170).

The nutrition plan applied in these patients is adjusted according to the individual's tolerability. The individual's body weight and requirements are in the secondary plan. Nutrition treatment is started by giving 30-40cal / kg/day calories daily. According to the patient's tolerance, the number of calories given is increased to 70-100 cal/kg/day (123).

In the applied diet, 30% of calories should come from fat, 15-20% from protein, 50-55% from carbohydrates. Due to constipation experienced in patients, fiber nutrition is suitable for these individuals. In a standard treatment, a continuous vitamin and mineral supplement is not recommended, and the vitamin and mineral supplement to be applied in treatment is decided according to the increase in weight and requirements. But usually, iron supplements are required at the beginning of treatment. During treatment, 25 mg/day thiamine can be supplemented. Although there is no consensus regarding calcium and vitamin D supplements, it is recommended to eat rich sources of calcium and vitamin D against the risk of low bone mineral density (169).

2.6.6.3. Psychotherapy in Anorexia Nervosa

Psychological factors play an important role in anorectic patients, so there should be psychotherapy in addition to nutritional therapy. Family therapy, group therapy, and behavioral therapy for behavioral change according to individual or need are necessary to gain self-confidence, help individual and social development and, most importantly, restore physical health. In the social development of the individual, the importance of individual therapy to improve the right eating behaviors and communication, family therapy, regulation of eating behaviors, and getting away from fixed thoughts are emphasized (168).

Cognitive Behavior Therapy is one of the most effective methods in the treatment of the disease, which motivates the individual during the treatment period, follows the self, criticizes objectively, improves eating behaviors, and at the same time helps to eliminate the deterioration in body perception (171).

2.6.6.4. Cognitive-Behavioral Therapies in Anorexia Nervosa

Even if anorectic individuals are very, very weak due to this deterioration in their perception of the body, they perceive themselves as fat, often weigh, take their body measurements and criticize their body shapes when they face the mirror (172). Problem-

solving training in these patients not only helps them cope with the situations they encounter in their daily lives but also helps them to control themselves in general.

The cognitive distortions we encounter in the case of an eating disorder are as follows (173):

- Selective abstraction (if I am weak, I am original, precious)
- Genel Excessive generalization (if I gained half a kilo, I cannot go into any clothes)
- Magnification (I will be ruined if I gain two pounds)
- Dikotom all or nothing thinking (if I can not fully control myself, I will lose all my control. If I am not successful in my life, everything will be ruined)
- Individualization and self-reflection (if I gain a kilo, everyone understands how fat I am)
- Superstitions (I do not like anything because everything I love disappears).

2.6.6.5. Anoreksiya Nervozada Psikofarmakolojik Tedaviler

In addition to psychotherapeutic and nutritional therapy in anorexia nervosa, drug therapy is also recommended as an adjunct to treatment. However, there is not much evidence to say that it is absolutely effective and must be in the acute or chronic level of anorexia related to drug therapy. Therefore, if there is no other condition accompanying the disease, drug supplements are not preferred in the treatment of the disease (171).

2.7. Bulimia Nervosa

2.7.1. Definition

Bulimia nervosa, another important eating disorder, was first described by Russel in 1979 (174). Bulimia nervosa, where the binge-eating behavior is constantly repeated, means "Being hungry as an ox food". Fear of obesity is also at the forefront of these patients (143). Patients with bulimia nervosa have obstructive eating attacks and an inability to control eating during eating (174). In these patients, overeating behavior comes in the form of a seizure, accordingly, weight gain develops, but these patients also try to stop weight gain. The feeling of guilt that occurs in patients after disease eating attacks is characterized by self-criticism and depression (175).

It is observed that individuals cannot stop eating despite all their efforts and fears during eating attacks. For this reason, they act like vomiting, using laxatives and

diuretics in order not to gain weight, just like in anorexia patients. These patients, like anorectics, are constantly thinking and engaged in body weight and shape, beauty, ugliness (126). During eating attacks, they prefer high-calorie and fast-eating foods. These attacks last about 1 hour. Ipeka syrup, which facilitates vomiting behavior, and the use of amphetamine medication that reduces appetite are common among patients with bulimia nervosa. They believe that they will prevent them from gaining weight with laxatives and diuretics, which they use extensively. However, going to the toilet very often causes not only energy loss but also fluid and electrolyte loss (176).

The situation we encounter more frequently in these patients than in anorectic patients is eating episodes in repeated large portions accompanied by the feeling of losing control (177). The diagnosis of bulimia nervosa is more difficult than anorexia nervosa (178).

Patients with bulimia nervosa are more heterogeneous in terms of impulsivity and emotional instability, avoidance of harm, and perfectionism. These features continue to be observed after patients recover (179).

2.7.2. Epidemiology

The incidence in women is higher than in men. In the findings obtained from studies where individual interviews were made with patients and detailed diagnostic methods were used; The prevalence of bulimia nervosa in life for women is between 1% and 2.8% (180).

Bulimic patients may be at their normal weight, which means they should be according to their age and height ratio (175). Therefore, it is more difficult to diagnose bulimia nervosa than the diagnosis of anorexia (178).

In 1978, the 14-19 age group in Turkey Yeşilbursa 4.3% in girls students in a study conducted in 1978, 0.6% of bulimia nervosa cases were identified in men. In another study conducted by 800 students between the ages of 15-18, Büyükkal found the rate of eating disorder to be 3% according to DSM-IV diagnostic criteria. 70% of the cases diagnosed with an eating disorder are bulimia nervosa and all of them are female students (181).

2.7.3. Diagnostic Criteria for Bulimia Nervosa

According to DSM-5, the diagnostic criteria of bulimia nervosa are as follows

- A. Recurring binge eating episodes. The binge eating period is determined by the following two conditions:
 1. Eating situation in a similar time, in the same period, that many people can consume, in another period
 2. The feeling that the control related to eating was lost during this period (the feeling that the individual could not stop eating, what he ate or how much he could not be controlled)
- B. To prevent weight gain, repetitive and inappropriate behaviors such as intentional vomiting, use of laxative and diuretic drugs in an incorrect figure, no level of eating or excessive exercise
- C. The occurrence of binge-eating episodes and inappropriate balancing behavior at least once a week in three months
- D. When the person evaluates himself/herself and relates to her body shape and weight and is affected by it
- E. Bulimia nervosa is not just a disease that occurs during anorexia nervosa periods.

Types:

Purging Type: The patient was constantly knowing vomiting behavior during those periods of bulimia nervosa and used laxative and diuretic drugs or enemas inappropriately.

Not-Purging Type: The patient did not restrict eating at any level during those periods of bulimia nervosa, or performed inappropriate balancing behavior such as excessive exercise, but did not knowingly use vomiting behavior and laxatives, diuretics or enemas in an unnecessarily wrong manner (123)

2.7.4. Medical Complications of Bulimia Nervosa

Among the clinical findings of bulimia nervosa, physical examination, erosion in the dental enamel, wounds due to vomiting in the skin of the finger, growth, and dehydration in the parathyroid gland are the findings. Hypokalaemia, hyponatremia, hypomagnesemia, metabolic alkalosis, and acidosis can be seen in biochemical results. Apart from these, electrocardiographic abnormalities in the cardiovascular system, delay in gastric emptying in the gastrointestinal tract, esophagitis, pancreatitis, cortisol in the endocrine system, FSH, LH, ST3, ST4, IGF-1 and leptin levels, and increase in GH levels are the findings we encountered in the disease (182).

Bulimic patients are usually at a normal weight. In these patients, it can be seen in ammonia. Again, these patients have a typical facial appearance. Round and swollen cheeks but a weak body appearance is observed due to the growth in the parathyroid gland (183).

Medical complications that are less serious in bulimia nervosa compared to anorexia nervosa develop. The mortality rate is low. In these patients, excessive fatigue, constant sleepiness, and swelling are the problems experienced. Nausea, stiffness, abdominal pain, and other problems experienced during irregular menstruation. In more chronic cases, esophageal perforation, gastric dilatation, rarely, gastric rupture, and related death may occur (181).

2.7.5. Bulimia Nervosa Treatment Approaches

Outpatient treatment is recommended for the treatment of bulimic patients with normal weight. In cases where outpatient treatment is not sufficient, if the individual is susceptible to suicide, if advanced complications have developed, if there is borderline personality disorder and mood disorder is observed, inpatient treatment is considered appropriate (184).

In the results of the study, which was followed up for two years and more, remission was observed in 50% of the patients. Although the healing status of patients is higher and the mortality rates are low in bulimia nervosa compared to anorexia nervosa, this situation may also change in the future. It has been observed that bulimia nervosa patients become asymptomatic by 50% after cognitive-behavioral treatment and additional treatments as a result of follow-up periods of 2-10 years (181).

The goals in the treatment of patients diagnosed with bulimia nervosa (168);

- To gain self-confidence of patients,
- To reduce vomiting behavior and prevent misuse of laxatives and diuretics,
- To regain healthy eating behavior for patients,
- Ensuring patients reach normal body weights.

2.7.5.1. Psychotherapy Treatment in Bulimia Nervosa

Medical and psychiatric evaluation in the treatment of bulimia nervosa is the most important step in the treatment of the disease (181). There is no basic treatment approach in the treatment of bulimia nervosa as in the treatment of anorexia. The

benefits of personal psychotherapy treatments, cognitive-behavioral therapies, family and group therapy, and drug therapy in the treatment of the disease are discussed (160).

Cognitive-behavioral psychotherapy is the most effective method of treating the disease. In uncomplicated cases, treatment is recommended to start with this method. In this treatment, it is aimed to correct the wrong eating behaviors and attitudes and excessive struggle with weight (185).

2.7.5.2. Nutritional Therapy in Bulimia Nervosa

In the nutritional treatment of bulimia nervosa, there should be 3 main meals a day and a snack between 1 and 3. At the beginning of the treatment, daily calories should be regulated as 1200-1500 kcal/day. 50-55% of the diet should come from carbohydrates, 25-30% from fat, and 15-20% from high-protein protein. Multivitamins can be used to meet micronutrients in the amounts recommended by RDA (4).

3 main meals should be given to inpatients. Foods rich in simple carbohydrates such as sweets, chocolate, lemonade, and sugar should not be given. Most patients with bulimia nervosa use laxative medications and eat high-fiber foods. Patients' toilet habits should be evaluated and monitored until they gain normal toilet habits. Because bulimic patients believe that normal defecation will cause weight gain, they panic and try to use drugs or vomiting to solve this. Medical and metabolic negative effects of voluntary and continuous vomiting behavior should be taught to patients. Monitoring and control after inpatient treatment in bulimic patients are also very important. These patients are asked to come to the hospital for a weekly check-up and to keep their diaries for better control of their food (168).

2.7.5.3. Pharmacological Treatment in Bulimia Nervosa

It has been determined that antidepressants are more effective than placebo in the treatment of bulimia nervosa. Fluoxetine, a serotonin reuptake inhibitor, is the drug most frequently used and used in the pharmacological treatment of the disease. Since 1989, fluoxetine and serotonin are used in an effective figure in the treatment. While 60 mg/day fluoxetine is used in treatment, other antidepressant drugs are used in normal treatment doses (160).

2.8. Eating Disorders Unspecified

For eating disorders that do not meet any specific eating disorder diagnostic criteria, the definition of an eating disorder that cannot be named otherwise is defined. The main examples are as follows (153):

1. In women, the condition of meeting the anorexia nervosa diagnostic criteria except for the individual having regular menstrual cycles
2. The condition of meeting the anorexia nervosa diagnostic criteria except that the individual's body weight at the time should be at the required weight despite a certain weakening.
3. The condition to meet bulimia nervosa diagnosis criteria, except that eating behavior and inappropriate balancing behaviors are performed more frequently than twice a week or less than 3 months.
4. An individual trying to maintain the current body weight, even if he/she has unhealthy balancing behaviors after eating,
5. In case of chewing large amounts of food but spitting it without swallowing
6. Binge Eating Disorder; recurrent binge-eating episodes in the individual without inappropriate balancing behaviors specific to bulimia nervosa

Although patients with eating disorders that cannot be named otherwise do not meet the diagnostic criteria for anorexia and Nervosa, they constitute 50% of the population with eating disorders. It is reported that individuals with these behaviors may turn into bulimia or anorexia over time if they are not treated and treated promptly (186).

2.8.1. Binge Eating Disorder

Individuals with obstructive eating disorders quickly consume much more than any other person can eat within the same time and conditions. In doing so, they believe that nothing can stop them from eating. The individual cannot control himself. There is no limit to what you eat and how much you eat. These patients may have one or more of the behaviors described as "faster than it may be", "at an uncomfortable level" or "eating too much without a feeling of hunger". The feature that distinguishes binge eating disorder from other eating disorders is that after eating attacks, measures to prevent its negative effects are not applied (187).

Eating disorder is the most common eating disorder in adults. In epidemiological studies; The prevalence rate of binge eating disorder in the general population was found to be 0.7% and 6.6% (188).

In 2006 492 girls in Turkey, 459 males, 951 university students between were detected diagnosed just eating disorder in 21 students in a study including 18 of bulimia nervosa is binge eating disorder 3 and was found that this was the man in the three

diagnosed students (189). To determine the prevalence of eating disorders seen in Turkey, another study conducted on adolescents, the incidence of binge eating disorder was detected by 0.99%. This rate is higher than the incidence of anorexia and bulimia in Turkey (190). It is more common in male individuals (191).

Although the prevalence of binge eating disorder is more common among obese people, this rate is estimated to be 8%. While 25-30% of people who apply to the hospital for weight loss are obstructed eating disorders, this rate is 50% for those who go to the hospital for bariatric surgery (188). In a study conducted by Annagür et al., 22 of 48 patients who came to the hospital due to weight loss had binge eating disorders (192).

According to Fairburn's work; Individuals with obstructive eating disorders believe that their body shape and weight should be tightly controlled (193) (188). In another study by Fairburn et al; It was found that childhood weight, obesity in family members, depression, lack of self-confidence, and exposure to negative evaluations related to external appearance were effective in the occurrence of eating disorders (194). In a study conducted on sociodemographic and clinical features, the idea that migration caused binge eating disorder (195).

According to DSM-5 diagnostic criteria, binge eating episodes should be at least once a week in these three months. There may be differences in the duration of eating attacks. Most of these patients are obese individuals, albeit to varying degrees. Many patients make efforts to diet but fail. While some of their patients continue to control themselves about eating, others stop dieting because of their negative experiences (162).

In the literature, Albert Stunkard talked about eating behaviors for the first time (196).

According to DSM-5, binge eating diagnosis criteria are as follows (162);

- A. Recurring binge eating periods. A binge eating attack should have both states below
 1. Eating more food in a separate period than many people can consume in similar conditions,
 2. Meanwhile, the feeling of loss of control overeating
- B. At least three or more of the following during periods of binge eating
 1. Eating at an above-normal rate
 2. Eating until you feel the fullness of discomfort
 3. Eating excessive amounts despite feeling hungry

4. Eating while alone because it is ashamed of the amount of food eaten
 5. Self-hate, disgust or guilt after eating
- C. Major distress related to binge eating
- D. The occurrence of binge eating behaviors in about three months, at least once a week
- E. In binge eating disorder, improper compensatory behavior does not occur as in bulimia nervosa, binge eating disorder does not only occur during bulimia and anorexia nervosa.

The severity of Binge Eating Disorder According to DSM-5

Sluggish: Occurrence of binge-eating attacks usually 1-3 times a week

Moderate: Occurrence of binge-eating attacks, usually 4-7 times a week

Severe: Occurrence of binge-eating attacks, usually 8-13 times a week

Excessive: binge-eating attacks, usually 14 or more per week

The purpose of the treatment of binge eating disorder is to gain healthy eating habits to the individual after stopping the eating bouts of binge. It is then to help the individual have steady body weight and to treat physical and mental illnesses related to weight (188). Psychotherapy methods such as cognitive behavioral therapy, weight loss therapy with behavioral methods, motivational therapy, interpersonal psychotherapy, drug treatments, and bariatric surgery are the methods used in the treatment of binge eating disorder (197) (188).

2.8.2. Night Eating Syndrome

Nocturnal eating syndrome in the evenings and overnight eating syndrome in the mornings were described by Stunkard in 1955 for the first time in the literature (198). These patients start the day without breakfast, but they eat more than 50% of the calories that should be consumed during and after dinner, and even wake up from their night's sleep and eat (199). Although night eating syndrome is observed in individuals with normal weight, it is more common in obese individuals and especially those who apply to the hospital for a diet (198).

Identified by one or both of the following (200) (199);

- A. Individuals' daily eating patterns increase significantly in the evening hours and at night.

1. At least 25% of the daily food should be after the evening meal

2. There should be a minimum of two nights' eating behavior in a week
- B. The individual should be aware of and remember the eating attacks he makes in the evening and at night.
 - C. The clinic is defined by minimum three of the following
 1. Loss of appetite in the morning meal and not eating breakfast at least four times a week or more
 2. Feeling a strong desire to eat during the evening meal to sleep and throughout the night
 3. Having difficulty sleeping and maintaining sleep four or more nights a week
 4. Considering that an individual need to eat to be able to sleep
 5. The mood is often depressed and gets worse in the evening
 - D. The disorder is associated with serious distress and functionality disruption
 - E. Impaired eating should last for a minimum of three months
 - F. The disorder should not be secondary to substance abuse, any medical condition, drugs used, or any psychiatric condition.

While the incidence of night eating syndrome in obese individuals is between 6-16%, it was found to be 1.5% in the general population. This rate has been reported as 12-22% in psychiatric patients receiving outpatient treatment, 25% in severe psychiatric patients with obesity, and 12% in obese schizophrenia patients. In studies conducted, the eating and sleep behaviors of obese individuals diagnosed with night eating syndrome were examined separately, and in the results, obesity and night eating syndrome were found to impair sleep quality (201).

Treatment methods used in night eating syndrome have not been published in a comprehensive figure in the literature. The use of serotonin feedback inhibitors and topiramate are pharmacological treatment methods used in the treatment of the disease. Also, cognitive behavioral therapy and light therapy applications are made, and relaxation training is provided (199).

2.9. Other Eating Disorders

The individual's life; In this category, there are nutritional and nutritional symptoms predominantly experienced, which cause a serious clinical problem in a

social, professional or another important area, but do not meet the diagnostic criteria of any of the disorders of eating disorders (153) (202).

2.9.1. Partial Syndrome Bulimia Nervosa

It is in the category of other eating disorders in DSM-IV-TR. The definition of excretory disorder is hidden within the definition of 'patients regularly behaving inappropriately after compensating less than normal-weight individuals', which belongs to the definition of partial bulimia neurosis (203).

Dental caries, deterioration in electrolyte balance, and aspiration pneumonia are medical complications of the disease. While the excretory disorder is like bulimia nervosa, there are not enough studies showing similarity with anorexia nervosa (204).

2.9.2. Ortholexia Nervosa

Otoreksiya can be defined as the fact that healthy nutrition carried out at an excessive level of nervosa becomes obsessive enough to interfere with the normal life of the individual (205). In other words, it is an obsession with "pure" diet consumption that affects the individual's life. When the individual is obsessive, the disease occurs. Ortoreksiya Nervosa is not related to the amount of food consumed; the quality of the food is important for the individual. The disease can be defined if it is seen in the life of the individual for a long time and creates serious negativity in the life of the individual (206) (207). When orthorexia is nervous, healthy eating becomes the main goal of life, and when the patient moves away from the planned diet, he feels guilt and even hates himself (206).

In 1997, Bratman and Knight first used the term orthorexia (206). In a study conducted by Donini et al., They found the frequency of orthorexia Nervosa to be 6.9% of the general population (208). Women, health education students, sportspeople, dieticians, performance artists, adolescents are high-risk groups for orthorexia neurosis (209).

In a study conducted by Korinth et al. In Germany to examine dietary restriction, orthorexia nervosa susceptibility, and healthy nutrition choices in nutrition students; It has been determined that nutrition science students have higher dietary restrictions than other students (210). n another study conducted in Austria, 12.8% of dietitians have been shown to show symptoms of four or more orthorexia Nervosa (211). n a study conducted by Bo et al., It was determined that university students with

courses related to nutrition and sports sciences had eating disorders and orthorexia nervosa tendencies at the rates of 9.1% and 25.9%. In the same study, the risk of eating disorders was found 2 times higher in nutrition science students (212).

Since the behaviors in orthorexia nervosa are generally seen as positive, statistics regarding the prevalence of the disease are rare. Due to the increase in obesity, medical professionals' idealizing healthy eating makes it difficult to diagnose individuals with authors (206). Of course, healthy and balanced eating habits are not pathological, but if this situation becomes excessive in a level that negatively affects the daily life of the individual, then it is reported that orthorexia nervosa can become a disorder that covers the individual's personality and behavior dimensions (213).

Individuals with orthorexia neurosis examine the label information of long foods to check whether they contain any carcinogens, dyes, hormones, or additives in their ingredients when purchasing any food. They control every meal they eat in an exaggerated figure. They show an obsessive meticulous attitude towards consumed food and foods being completely pure and additive-free. Therefore, they prefer to eat many foods raw. These healthy eating obsessions of orthodoxies tend to stop eating many foods after a while as they keep them under extreme psychological pressure. With these features, after a while, they start to lose a lot of weight just like individuals with anorexia nervosa (214).

2.9.3. Pica

It is a behavioral disorder that is characterized by the fact that a substance or nutrient with no nutritional value is eaten regularly and in excessive amounts, defined by Hippocrates in 400 BC for the first time in BC (215) (216). The disease takes its name from a bird named pica, which is known to eat everything (216). According to the DSM-IV-TR diagnostic criteria, pica, which is an eating disorder in the classification of "feeding and eating disorders of infants or young children", can be seen in all age groups and the entire population (110) (215). It is thought that many causes such as age, current society, gender difference, religion, socio-cultural structure, genetics, or psychological effects may be effective in the detection of the disease. Physical abuse, inadequate mother-child relationship, and low socioeconomic level are thought to have important effects on the pica (216).

Pica often occurs due to iron, zinc, and copper deficiency. Generally, individuals with pica eat substances such as soil, paper, ice, lime, paint, and string (110). The type seen by eating solid ice is called 'pagophagia' (215).

In the results of a study conducted with 1430 children aged 7-13 in Switzerland, the rate of clinically showing pica behavior was determined as 3.8%. In another study conducted with 804 children aged 7-14 in Germany, the incidence of pica was found to be 4.98%. In the same study, the incidence of pica was found to be significantly higher in boys than in girls. While it has been reported that pica is frequently seen worldwide during pregnancy, it is generally found that this prevalence is more common in rural communities and low-income families. In a meta-analysis in which a group of women participated during pregnancy and postpartum periods, the incidence of pica was found to be 27.8%.

Currently, there is no evidence-based treatment protocol for pica. Psychosocial, behavioral, and family therapies come to the fore in the treatment of patients. Studies show that some behavioral treatment methods are beneficial in the treatment of pica and increase the success rate to 80% (216).

2.9.4. Diabulimia

It is a condition characterized by the fact that individuals with type 1 diabetes neglect the use of insulin for weight control or their insulin doses are reduced. Patients with type 1 diabetes lose significant weight before the initial diagnosis and treatment periods of their disease. This situation returns to weight gain after treatment begins. While the control of the disease is ensured by the use of insulin in these patients, many patients struggle with their current weight. Insulin is a hormone that causes an increase in fat in metabolism. Many individuals with type 1 diabetes noticed the relationship between reducing the amount of insulin used and weight loss.

Reducing the current insulin dose to lose weight increases the risk of dehydration in the body and fatigue due to the destruction of muscle tissue. If patients continue to decrease the insulin dose needed, these patients may develop renal failure, retinopathy, and vascular diseases over time, and this may even result in death (217).

2.9.5. Women's Athlete Trilog

In the literature, American sports college disease was first described in 1992, but this definition was updated in 2007 (217). The female athlete triad syndrome, which

we usually encounter in female athletes, has emerged to provide higher performance in sports events where there is competitive competition; it is a syndrome characterized by three symptoms, including impaired eating behavior, amenorrhea, and osteoporosis (200). It is a behavioral phenomenon made to provide athletic performance. In studies related to the trilogy of women athletes, although the disease is generally accepted as an eating disorder seen in women athletes who are interested in sports with the competition, it has been found that it is also seen among athletes specializing in gymnastics, dance and ballet branches (218).

2.9.6. Bigorexia

It is characterized by being obsessed with the pathological level associated with muscle building and constantly thinking about it. Generally, this occurs in male individuals who are interested in developing muscles. These individuals constantly think that they have insufficient muscles and therefore prefer to eat too high protein. The life of these individuals mostly takes place in exercise and sports centers (219).

2.9.7. Rumination Disorder

A rumination disorder is defined as the person's mouth swallowing and chewing food after being swallowed, transmitted to the stomach, and partially digested, without any reason for disgust or nausea. Recurring withdrawal status is not evaluated in the context of an individual's existing gastrointestinal tract disease or a mouse disorder (153).

The word “rumination” is derived from the Latin word “ruminare”, which means “ruminating”. Rumination disorder is in the class of disorders that develop in infancy, childhood, or adolescence in DSM-IV-TR diagnostic criteria. If the rumination state has repeatedly repeated in individuals, it is called rumination disorder. In the literature, this situation, which usually appears in infants, children, and patients with developmental retardation, can also be confused in adolescents and healthy adults. Epidemiological studies to determine the incidence of the disease are limited. It has been determined that the incidence in young children with mental retardation is 6-10%.

Although the etiology of the disease is multifactorial, socio-cultural, socio-economic, genetic, and psychological causes stand out in the formation of the disease. The relationship between the negative psychosocial environment and extremely stressed life with rumination disorder has been reported. Inadequate mother-child relationship

and neglect can cause the child to turn towards self-comforting behavior. Therefore, the child who brings the contents of the stomach back to the mouth starts the process of eating again and tries to calm himself and get rid of stress. The rumination behavior can cause weight loss and, accordingly, conditions such as malnutrition and electrolyte imbalance. In cases such as esophagitis and erosion of tooth enamel, we often encounter it.

Rumination disorder is usually a self-healing condition. A more chronic course can be observed in adults. Methods such as behavioral therapies, self-observation, relaxation exercises, and diverting attention to different sides are used in the treatment of the disease (216).



3. MATERIALS AND METHODS

3.1. Place and Duration of Study

This study applied at a Sahure Özyay Diet and Nutrition Counseling private obesity clinic in Istanbul between January 2, 2019 and April 1, 2019. We enrolled 400 female aged between 18-65. This study was carried out by the T.C. Marmara University Faculty of Health Sciences Non-Interventional Ethics Committee with the approval of the Ethics Committee No. 06 dated 03.01.2019 (Annex-1).

3.2. Determination of Participants

This study was conducted aged between 18-65 women (n=400) who applied Sahure Özyay Diet and Nutrition consultancy center in Istanbul between 02.01.2019 and 01.04.2019, without any psychological health problems.

Before volunteers included the study, they filled a consent form (Annex-2). Individuals who are under the age of 18 and older than 65, who applied before or after the specified dates, who were diagnosed with any psychological health problem before or during the study were not included in the study.

3.3. Data Collection

3.3.1. Survey

To determine the personal characteristics of the participants, a questionnaire containing general information (Annex-3) was applied.

The questionnaire contains information about the demographic characteristics of the individuals including age, educational status, employment status, etc.

EAT40 eating attitude test (Annex-4) was applied to the participants by one-to-one interview for identifying eating behavior disorder.

Body composition, body mass index (BMI) were calculated using Bioelectrical impedance analysis (BIA) by Tanita BC-418. And participants' anthropometric measurements such as body height and weight were measured.

3.3.2. Determination of Anthropometric Measurements

Body weight and height: The participants' bodyweight was measured without shoes and socks, using Tanita Body Composition Analyzer BC-418. Participants body

height were measured by using the ADE brand MZ10023 model in the Frankfort plane in an upright position, the feet were juxtaposed with the heel touching the wall.

Body Mass Index (BMI): BMI was calculated by dividing body weight by the length of the square meter, body weight (kg) / length² (m). In Table 3.1, Body mass index was evaluated according to the World Health Organization (WHO) classification.

Table 3. 1. Classification of body mass index (BMI) (220)

Classification	BMI (Kg/m²)
Underweight	<18.50
Severe thinnes	<16.00
Moderate thinnes	16.00-16.99
Mild thinness	17.00-18.49
Normal	18.50-24.99
Overweight (obese)	≥25.00
Pre-obese	25.00-29.99
Obese	≥30.00
Obese I	30.00-34.99
Obese II	35.00-39.99
Obese III	≥40.00

3.3.3. Bioelectrical Impedance Analysis (BIA)

BIA is a method used in determining body weight and body compositions. The resistance created by giving an electrically weak current (microA; 50 kHz) to the body is measured (221). Measurements made with 4 hours of fasting during the day,

- in dress
- Without shoes and socks
- Without metal jewelry etc.
- Participants should not perform 24-48 hours before the measurement without heavy physical activity.

Tanita BC-418 segmental body analyzer was used as a measuring instrument. Individual's right arm, left arm, right leg, left leg, total fat% for body, fat amount (kg) and lean body mass was measured. Body weight was recorded to the relevant form.

3.3.4. Eating Attitude Test (EAT40) (Annex-4)

Eating attitude test was firstly developed by Garner and Garfinkel (222) in 1979 to measure the symptoms of anorexia nervosa and bulimia nervosa. It is used in the clinical evaluation to identify those with eating disorders. Also, it determines the changes that occur as a result of treatmenttarafından (217).

EAT40 is a self-rating scale based on 6 grades of 40 items that can be used for young and adult and has no time limitation when applied. Degrees; It consists of “always”, “very often”, “often”, “sometimes”, “rarely” and “never” options (222). For items 1, 18, 19, 23, 27, 39, sometimes the grade is calculated as 1 point, rarely 2 points and no time grade is 3 points, while the other grades are calculated as 0 points. For those other than these items, the grade is always calculated as 3 points, very often the grade is 2 points and frequently the grade is 1 point and other grades are calculated as 0 points. The scores obtained from each item of the scale are calculated and the total gives the score of the scale (6).

The cut-off point on the total score level is 30 points. To be diagnosed with anorexia nervosa, the distinction score is 30 points. This score is associated with a significant eating disorder (223).

Eating Attitude Test has been developed to determine the behavior and attitudes of individuals with or without eating disorders related to eating (224) (225).

In our country, Savaşır and Erol (225) evaluated the validity and reliability of EAT-40. As a result of the factor analysis of the scale, four factors were found effective in fat formation. These;

- Obesity anxiety
- Diet- regime
- Social pressure
- Thinnes anxiety

EAT40 is a valid and reliable scale that has been widely used for screening and detecting eating disorders, has been translated into Turkish and has psychometric examinations (217).

The Kuder Richardson reliability of the original form is 0.79 alpha and structure validity is 0.87. The reliability of the test, which was repeated one month apart for the Turkish form, was 0.65, and the Kuder Richardson reliability was 0.70 alpha (223).

3.3.5 Statistical Analysis

The data were evaluated with the IBM SPSS Statistics 22 (Statistical Package for Social Sciences for Windows 22) computer program. Descriptive statistics are expressed as percent (%), mean (\bar{X}) and standard deviation (SD) values.

The normal distribution of variables was tested using with the Kolmogorov-Smirnov test since the sample size was more than 35 (237). For statistical significance, $p < 0.05$ was accepted.

The Paired sample t-test was used when data with normal distribution. The Mann Whithney U test was used for non-normally distributed data. And the Kruskal Wallis test was used to compare more than two non-normally distributed measurements.

We examined the correlation between variables using Perarson and Spearman correlation tests. If the data normally distributed, we used "Pearson correlation" on the other hand if the data did not show normal distribution we used "Spearman correlation" analysis.

4. RESULTS

4.1 General Characteristics of Individuals

Table 4.1 shows the distribution of individuals participating in the study according to their educational status, employment status, and marital status. Accordingly, the average age of the individuals participating in the research is 39.02 ± 12.08 . Considering the educational status of the individuals, it was determined that 10.3% of them had primary education, 31% had a high school, 52.3% had undergraduate and 6.5% had postgraduate education. It was determined that 57.3% of the individuals still work in one job and 42.8% do not work in any job. Considering the marital status of the individuals participating in the study, it was determined that 40.5% were single, 55.3% were married and 4.3% were widows.

Table 4. 1. Distribution of individuals according to their general characteristics

General Features	N	%
Age, years ($\bar{X} \pm SD$)		39.02±12.08
Education status		
Primary education	41	10.3
High school	124	31
License	209	52.3
Graduate	26	6.5
Working status		
Working	229	57.3
Not working	171	42.8
Marital Status		
Single	162	40.5
The Married	221	55.3
Widow	17	4.3

The distribution of individuals participating in the study according to BMI classification is given in Table 4.2. 38.2% of the individuals were found to be in the normal BMI range. When individuals were overweight and obese, it was determined

that 31% were overweight (slightly fat), 21% were 1st degree obese, 6% were 2nd degree obese and 3.8% were 3rd degree obese.

Table 4. 2. Distribution of BMI values of individuals

BMI Classification kg/m ²	Female	
	N	%
18.5-24.9	153	38.2
25-29.9	124	31
30-34.9	84	21
35-39.9	24	6
40-44.9	15	3.8
Total	400	100

The average and standard deviation values of eating attitude and behavior scores of the individuals participating in the study and their distribution according to whether they have an eating attitude and behavior disorder are shown in Table 4.3. The average score of EAT-40 of individuals was found to be 26.72 ± 14.22 . When the distribution of individuals participating in the study according to their eating attitudes and behavioral disorders are examined, while 48.3% of individuals do not have eating attitudes and behavior disorders; It was observed that 51.7% had eating attitudes and behavioral disorders.

Table 4. 3. Average of eating attitude disorder scores of individuals and distribution of eating attitude disorders

Eating Attitude Disorder	Individuals	
	N	%
Yes (≥ 30)	207	51.7
None (< 30)	193	48.3
Score $\bar{X} \pm SD$	26.72 \pm 14.22	

The average values of the anthropometric measurements of the individuals participating in the research are given in Table 4.4. Bodyweight average and standard deviation of the individuals were found 72.92 ± 15.37 kg. Length average and standard deviation values were determined as 1.62 ± 0.05 cm, BMI mean, and standard deviation values were determined as 27.53 ± 5.58 kg /m².

Table 4. 4. Average of anthropometric measurements of individuals

Anthropometric Measurements	Female $\bar{X} \pm SD$
Body weight, kg	72.92±15.37
Height, m	1.62±0.05
BMI, kg/m ²	27.53±5.58

4.2 The Relationship Between General Characteristics of Individuals to Eating Attitudes and Behavior Disorders and BMI Values

According to the educational status, marital status, and working status of the individuals participating in the study, the rates of eating attitude and behavior disorder are given in Table 4.5. Eating attitudes and behavior disorders were not found in 48.3% of individuals. It has been determined that 26.8% of the education levels of individuals without eating attitude and behavioral disorders are at primary education level, 47.6% at the high school level, 49.8% at the undergraduate level, and 73.1% at the postgraduate level. Eating attitudes and behavior disorders were found in 51.7% of the individuals who participated in the study. When the education levels of these individuals were analyzed, it was determined that 73.2% of them were at the primary level, 52.4% were at the high school level, 50.2% were at the undergraduate level and 26.9% were at the postgraduate level. While 50.6% of the individuals who were single in the study were not found to have eating attitudes and behavioral disorders, 49.4% of them were found to have behavioral disorders. While 47.1% of married individuals did not have a behavioral disorder, 52.9% of them were found to have eating attitudes and behavioral disorders. While eating attitudes and behavioral disorders were not determined in 41.2%

of the individuals who were widowed, 58.8% of them were found to have behavioral disorders. While 50.7% of the individuals participating in the study were working in an existing job, eating attitude and behavior disorder were not determined, while 49.3% of the individuals who were eating were not identified. In non-working individuals, the rate of not having eating attitude and behavioral disorder was 45%, whereas the rate of behavior disorder was 55%.

Table 4. 5. The distribution of eating attitudes and behavioral disorders according to the educational status, marital status and working status of the individuals

Education Status	Eating Attitudes Disorders (EAT40)			
	Yes (≥ 30)		None (< 30)	
	N	%	N	%
Primary education	30	73.2	11	26.8
High school	65	52.4	59	47.6
License	105	50.2	104	49.8
Graduate	7	26.9	19	73.1
Marital Status				
Single	80	49.4	82	50.6
The married	117	52.9	104	47.1
Widow	10	58.8	7	41.2
Working Status				
Working	113	49.3	116	50.7
Not working	94	55.0	77	45.0
Total	207	51.7	193	48.3

The distribution of BMI values according to the educational status, marital status, and working status of the individuals participating in the research are given in Table 4.6. Accordingly, 38.3% of the individuals participating in the study are normal weight, 31% are overweight, 25.3% are 1st degree obese, 6% are 2nd degree obese and

3.8% is 3rd degree It was determined as obese. 22% of those with primary education are overweight, 19.5% are overweight, 46.3% are 1st degree obese, 7.3% are 2nd degree obese, and 4.9% 3 He was found to be obese. 33.49% of individuals with an education level of high school are overweight, 32.3% are overweight, 21% are 1st degree obese, 8.9% are 2nd degree obese, and 4% is 3%. It was found to be extremely obese. 41.1% of those with an undergraduate level of education is normal weight, 64% are overweight, 16.3% are 1st degree obese, 4.8% are 2nd degree obese and 3.8% 3 degree obese was determined. In those with a postgraduate level, 61.5% were found to be normal weight, 19.2% were overweight and 19.2% were first degree obese. 40.1% of single individuals participating in the study are normal weight, 32.1% are overweight, 17.9% are 1st degree obese, 5.6% are 2nd degree obese, and 4.3% It has been determined that fame is 2nd degree obese. 36.7% of married individuals are overweight, 30.3% are overweight, 24% are 1st degree obese, 5.4% are 2nd degree obese, and 3.6% is 3rd degree It was found to be obese. It was determined that 41.2% of widowed individuals who participated in the study were normal weight, 29.4% were overweight, 11.8% were 1st degree obese and 17.6% were 2nd degree obese. When we evaluate individuals according to their employment status, 43.2% of those with a current job is normal weight, 29.7% are overweight, 19.2% are 1st degree obese, 4.8% are 2nd degree obese and 3.1% it was determined that was obese in the 2nd degree. Of those who do not work in a current job, 31.6% are overweight, 32.7% are overweight, 23.4% are 1st degree obese, 7.6% are 2nd degree obese, and 4.7% It was determined that she was obese in the 3rd degree.

Table 4. 6. Distribution of BMI values of individuals according to their marital status, education status and employment status

Education Status	BMI Classification										Total	
	18.5-24.99		25-29.99		30-34.99		35-39.99		40-44.99		N	%
	N	%	N	%	N	%	N	%	N	%	N	%
Primary education	9	22	8	19.5	19	46.3	3	7.3	2	4.9	41	100
High school	42	33.9	40	32.3	26	21	11	8.9	5	4.0	124	100
Licence	86	41.1	71	64	34	16.3	10	4.8	8	3.8	209	100
Graduate	16	61.5	5	19.2	5	19.2	0	0.0	0	0.0	26	100
Marital status												
Single	65	40.1	52	32.1	29	17.9	9	5.6	7	4.3	162	100
The married	81	36.7	67	30.3	53	24	12	5.4	8	3.6	221	100
Widow	7	41.2	5	29.4	2	11.8	3	17.6	0	0.0	17	100
Working status												
Working	99	43.2	68	29.7	44	19.2	11	4.8	7	3.1	229	100
Not working	54	31.6	56	32.7	40	23.4	13	7.6	8	4.7	171	100
Total	153	38.3	124	31.0	84	21.0	24	6.0	15	3.8	400	100

The mean and standard deviation values of anthropometric measurements and BMI values of individuals with and without eating attitude and behavioral disorders are given in Table 4.7. Bodyweight average and standard deviation value of individuals with eating attitude and behavior disorder are 81.72 ± 13.83 kg, height length average, and standard deviation value 1.62 ± 0.05 m, BMI values average, and standard deviation value 30.85 ± 4.93 kg / m². Bodyweight average and standard deviation of 63.48 ± 10.62 kg, height, average and standard deviation of 1.62 ± 0.05 m, BMI values of average, and standard deviation of 23 individuals without eating attitude and behavioral disorders participated in the study. It was determined to be 98 ± 3.75 kg/m².

Table 4. 7. Average of anthropometric measurements of individuals according to their eating attitudes and behavioral disorders

Anthropometric Measurements	Yes (≥ 30) $\bar{X} \pm SD$	None (< 30) $\bar{X} \pm SD$
Body weight, kg	81.72 \pm 13.83	63.48 \pm 10.62
Height, m	1.62 \pm 0.05	1.62 \pm 0.05
BMI, kg/m ²	30.85 \pm 4.93	23.98 \pm 3.75

The distribution of individuals' BMI values according to the reference ranges according to the presence and absence of eating attitudes and behavioral disorders are given in Table 4.8. 8.7% of individuals with eating attitude and behavior disorder are overweight, 37.7% are overweight, 36.7% are 1st degree obese, 10.1% are 2nd degree obese, 6%, Eight of them were found to be 3rd degree obese. 69.9% of individuals without eating attitude and behavioral disorders have normal weight, 23.8% are overweight, 4.1% 1st degree obese, 1.6% 2nd degree obese, and 0%, 5 of them were found to be 3rd degree obese.

Table 4. 8. The distribution of individuals' BMI values according to reference intervals according to their eating attitude and behavioral disorders

BMI Values kg/m²	Eating Attitude and Behavioral Disorders					
	Yes (≥ 30)		None (< 30)		Total	
	S	%	S	%	S	%
18.5-24.99	18	8.7	135	69.9	153	100
25-29.99	78	37.7	46	23.8	124	100
30-34.99	76	36.7	8	4.1	84	100
35-39.99	21	10.1	3	1.6	24	100
40-44.99	14	6.8	1	0.5	15	100
Total	207	51.7	193	48.3	400	100

It was determined that 38.3% (n = 153) of the individuals with eating attitude and behavioral disorders were at normal weight. 76.2% of these individuals (n = 32) 0-

9, 63.5% (n = 73) 10-19, 83.3% (n= 30) 20-29, It was determined that 11.6% (n = 17) scored between 30-39 and 3.1% (n = 1) scored between 40-49. 31% (n = 124) of the individuals were found to be overweight, and 21.4% (n = 9) of these individuals were between 0-9, 27% (n = 31) between 10-19 and 16%, It was determined that 7 (n = 6) scored between 20-29. Again, 39% (n = 57) of 30-39, 37.5% (n = 12) of 40-49, 40% (n = 8) of 50-59, 16% of these individuals It was determined that 7 (n = 1) scored between 60 and 69. 21% (n = 84) of the individuals participating in the study were 1st degree obese and 2.4% (n = 1) of these individuals were between 0-9, 6.1% (n = 7) 10-19 It was determined that he received points. Again, 37% of these individuals (n = 54) 30-39, 31.3% (n = 10) 40-49, 40% (n = 8) 50-59, 50% (n = 3) scored between 60-69 and 33.3% (n = 1) scored between 70-79. It was determined that 6% (n = 24) of the individuals participating in the study were obese of the 2nd degree and 2.6% (n = 3) of these individuals got a score between 10-19. Again, 7.5% of these individuals (n = 11) 30-39, 15.6% (n = 5) 40-49, 5% (n = 1) 50-59% It was determined that 33.3 (n = 2) scored between 60-69 and 66.7% (n = 2) scored between 70-79. 3.8% (n = 15) of the remaining individuals are 3rd degree obese and 0.9% (n = 1) of them between 10-19, 4.8% (n = 7) of 30-39 It was determined that 12.5% (n = 4) between 40-49 and 15% (n = 3) between 50-59.

Table 4. 9. EAT40 score distributions of individuals according to BMI values of those with eating attitude and behavior disorders

EAT40 Score	BMI Values										Total	
	18.5-24.99		25-29.99		30-34.99		35-39.99		40-44.99		N	%
	N	%	N	%	N	%	N	%	N	%		
0-9	32	76.2	9	21.4	1	2.4	0	0.0	0	0.0	42	100
10-19	73	63.5	31	27.0	7	6.1	3	2.6	1	0.9	115	100
20-29	30	83.3	6	16.7	0	0.0	0	0.0	0	0.0	36	100
30-39	17	11.6	57	39.0	54	37.0	11	7.5	7	4.8	146	100
40-49	1	3.1	12	37.5	10	31.3	5	15.6	4	12.5	32	100
50-59	0	0.0	8	40.0	8	40.0	1	5.0	3	15.0	20	100
60-69	0	0.0	1	16.7	3	50.0	2	33.3	0	0.0	6	100
70-79	0	0.0	0	0.0	1	33.3	2	66.7	0	0.0	3	100
Total	153	38.3	124	31.0	84	21.0	24	6.0	15	3.8	400	100

The distribution of all the individuals participating in the study according to their answers to the eating behavior test questions is given in Table 4.10. According to this, 37% of the individuals like to eat with others, 38.5% of them cook for others and they eat the food themselves, 42.8% of them have no trouble before eating and 33% are afraid to be fat. They expressed. They said that 24.8% of individuals said that they tried to eat when they were hungry, 20% sometimes thought that their mind was at dinner, 32.3% sometimes they could not stop eating, and 27.3% again and sometimes they cut their meals into small pieces. Sometimes 24% of individuals answered that they sometimes know the calories of the food they eat, 36.3% can sometimes avoid high-calorie foods such as bread, potatoes, rice, and sometimes 29.8% feel like bloating after eating. 57% of the individuals said that they did not expect their families to eat too much, 88.5% did not vomit after meals, 24.8% sometimes felt guilty after eating, 18.8% always thought that their thoughts were weaker. Again, 36% of individuals say that they do not exercise until they get tired to burn the calories they eat from eating, 48.3% do not weigh a few times during the day, 31.3% do not like narrow dresses that surround their bodies, while 26.3% sometimes eat meat. they liked it, 42.5% said they woke up early in the morning and 30.8% said they could not eat the same food for days. 33.8% of individuals do not calculate the calories they spend after exercise, 35% are regular, 43.5% of others do not see it weak, 20% of them are busy thinking about getting their mind fat, 25.5% eat He said that the time elapsed while eating was no longer than his success. While 26.3% say they like to eat at a restaurant, 79.8% do not use laxatives, 35.5% sometimes avoid sugar foods, 28.5% sometimes eat diet food, 32.8% live 31% said that they did not control the food, sometimes they could control themselves about food, and 48.3% said that they felt that others did not press any figure about food. Again, 29.8% of individuals do not take much time to think about food, 25.3% do not complain of constipation, 24.8% do not feel uncomfortable after eating dessert, 23.3% sometimes do abstinence, 27.5% They said that they sometimes like that their stomachs are empty, 30% sometimes like to try sugary, fatty foods, and 86% do not vomit after meals.

Table 4. 10. The distribution of the total responses of all individuals to the expressions on eating attitude and behavior scale

Items	Always		Very often		often		Sometimes		Rarely		Never	
	N	%	N	%	N	%	N	%	N	%	N	%
1. Like eating with other people	148	37.0	36	9.0	82	20.5	71	17.8	26	6.5	37	9.3
2. Prepare foods for others but do not eat what I cook	31	7.8	38	9.5	24	6.0	69	17.3	84	21.0	154	38.5
3. Become anxious prior to eating	42	10.5	34	8.5	29	7.2	45	11.3	79	19.8	171	42.8
4. Am terrified about being overweight	132	33.0	44	11.0	65	16.3	99	24.8	28	7.0	32	8.0
5. Avoid eating when I am hungry	49	12.3	33	8.3	50	12.5	91	22.8	78	19.5	99	24.8
6. Find myself preoccupied with food	52	13.0	33	8.3	66	16.5	83	20.8	79	19.8	87	21.8
7. Have gone on eating binges where I feel that I may not be able to stop	34	8.5	47	11.8	57	13.0	129	32.3	88	22.0	50	12.5
8. Cut my food into small pieces	49	12.3	31	7.8	53	13.3	109	27.3	72	18.0	86	21.5
9. Aware of the calorie content of food that I eat	50	12.5	34	8.5	48	12.0	96	24.0	81	20.3	91	22.8
10. Particularly avoid food with a high carbohydrate content	44	11.0	43	10.8	73	18.3	145	36.3	51	12.8	44	11.0
11. Feel boated after meals	51	12.8	62	15.5	83	20.8	119	29.8	63	15.8	22	5.5
12. Feel that others would prefer if I ate more	30	7.5	15	3.8	26	6.5	41	10.3	60	15.0	228	57.0
13. Vomit after I have eaten	6	1.5	8	2.0	3	0.8	9	2.3	20	5.0	354	88.5
14. Feel extremely guilty after eating	40	10.0	46	11.5	50	12.5	99	24.8	85	21.3	80	20.0

Table 4. 10. The distribution of the total responses of all individuals to the expressions on eating attitude and behavior scale (continued)

Items	Always		Very often		Often		Sometimes		Rarely		Never	
	N	%	N	%	N	%	N	%	N	%	N	%
15. Am preoccupied with a desire to be thinner	75	18.8	56	14.0	64	16.0	72	18.0	68	17.0	65	16.3
16. Exercise strenuously to burn off calories	23	5.8	24	6.0	38	9.5	79	19.8	92	23.0	144	36.0
17. Weigh myself several times a day	36	9.0	7	1.8	30	7.5	47	11.8	87	21.8	193	48.3
18. Like my clothes to fit tightly	42	10.5	22	5.5	34	8.5	101	25.3	76	19.0	125	31.3
19. Enjoy eating meat	104	26.0	42	10.5	70	17.5	105	26.3	47	11.8	31	7.8
20. Wake up early in the morning	170	42.5	73	18.3	66	16.5	56	14.0	25	6.3	10	2.5
21. Eat the same foods day after day	13	3.3	24	6.0	36	9.0	91	22.8	113	28.2	123	30.8
22. Think about burning up calories when I exercise	49	12.3	28	7.0	39	9.8	71	17.8	78	19.5	135	33.8
23. Have regular menstrual periods	140	35.0	47	11.8	48	12.0	44	11.0	26	6.5	31	7.8
24. Other people think that I am too thin	30	7.5	22	5.5	42	10.5	60	15.0	72	18.0	174	43.5
25. Am preoccupied with the thought of	80	20.0	52	13.0	72	18.0	79	19.8	64	16.0	53	13.3
26. Take longer than others to eat my meals	48	12.0	23	5.8	38	9.5	83	20.8	106	26.5	102	25.5
27. Enjoy eating at restaurants	72	18.0	50	12.5	81	20.3	105	26.3	61	15.3	30	7.5
28. Take laxatives	3	0.8	7	1.8	10	2.5	27	6.8	35	8.8	317	79.3
29. Avoid foods with sugar in them	41	10.3	38	9.5	68	17.0	126	31.5	69	17.3	58	14.5

Table 4. 10. The distribution of the total responses of all individuals to the expressions on eating attitude and behavior scale (continued)

Items	Always		Very often		Often		Sometimes		Rarely		Never	
	S	%	S	%	S	%	S	%	S	%	S	%
30. Eat diet foods	44	11.0	59	14.8	61	15.3	114	28.5	65	16.3	57	14.2
31. Feel that food controls my life	42	10.5	41	10.3	43	10.8	83	20.8	60	15.0	131	32.8
32. Display self-control around food	72	18.0	62	15.5	82	20.5	124	31.0	42	10.5	18	4.5
33. Feel that others pressure me to eat	23	5.8	27	6.8	27	6.8	64	16.0	66	16.5	193	48.3
34. Give too much time and thought to food	25	6.3	36	9.0	58	14.5	70	17.5	92	23.0	119	29.8
35. Suffer from constipation	36	9.0	26	6.5	50	12.5	90	22.5	97	24.3	101	25.3
36. Feel uncomfortable after eating sweets	36	9.0	34	8.5	55	13.8	88	22.0	87	21.8	99	24.8
37. Engage in dieting behavior	57	14.2	63	15.8	84	21.0	93	23.3	48	12.0	55	13.8
38. Like my stomach to be empty	45	11.3	29	7.2	33	8.3	110	27.5	80	20.0	103	25.8
39. Enjoy trying new rich foods	36	9.0	39	9.8	68	17.0	120	30.0	80	20.0	57	14.2
40. Have the impulse to vomit after meals.	4	1.0	4	1.0	5	1.3	14	3.5	29	7.2	344	86.0

The distribution of the mean (\bar{X}) and standard deviation values of eating attitude and behavioral scale scores of the individuals participating in the study are shown in Table 4.11. Eating attitude-behavior disorder was detected in 207 individuals who participated in the study and the mean and standard deviation values of these individuals were determined as 38.09 ± 9.74 . On the other hand, 193 individuals did not experience eating attitude and behavioral disorders and their mean and standard deviation values were determined as 14.53 ± 5.46 . When the mean and standard deviation values of individuals with and without eating attitude-behavior disorder were examined, the difference between the two groups was found statistically significant ($p = 0.01$).

Table 4. 11. The distribution of the mean (\bar{X}) and standard deviation values of the eating attitude and behavior scale scores of the individuals according to their eating attitude and behavior disorder

Eating Attitude Score	N	$\bar{X} \pm SD$	P value
≥ 30	207	38.09 ± 9.74	
< 30	193	14.53 ± 5.46	0.001

Mann Whithney U Analysis ($p < 0,05$)

Table 4.12. The BMI index values of individuals participating in the study and the correlation between their education years and eating attitude disorders were examined. A low level of statistically significant negative correlation was found between the years of education and eating attitude disorder of the individuals ($r = -0.218$), ($p = 0.001$). A low level of statistically significant negative correlation was found between the years of education and BMI values of the individuals participating in the study ($r = -0.216$), ($p = 0.001$). A positive and highly statistically significant correlation was found between the eating attitude scale scores of the individuals and the BMI index values ($r = 0.614$), ($p = 0.001$).

Table 4. 12. The relationship between the individuals and eating attitude disorder and BMI index values and the years of education

Individuals (n=400)	Education (year)		EAT40		BMI (kg/m ²)	
	r	p	r	p	r	p
Education(year)	1		-0.218**	0.001**	-0.216**	0.001**
EAT40			1		0.614*	0.001*
BMI (kg/m ²)					1	

*Pearson Korelasyon Analysis ($p < 0.01$) **Spearman Korelasyon Analysis ($p < 0.01$)

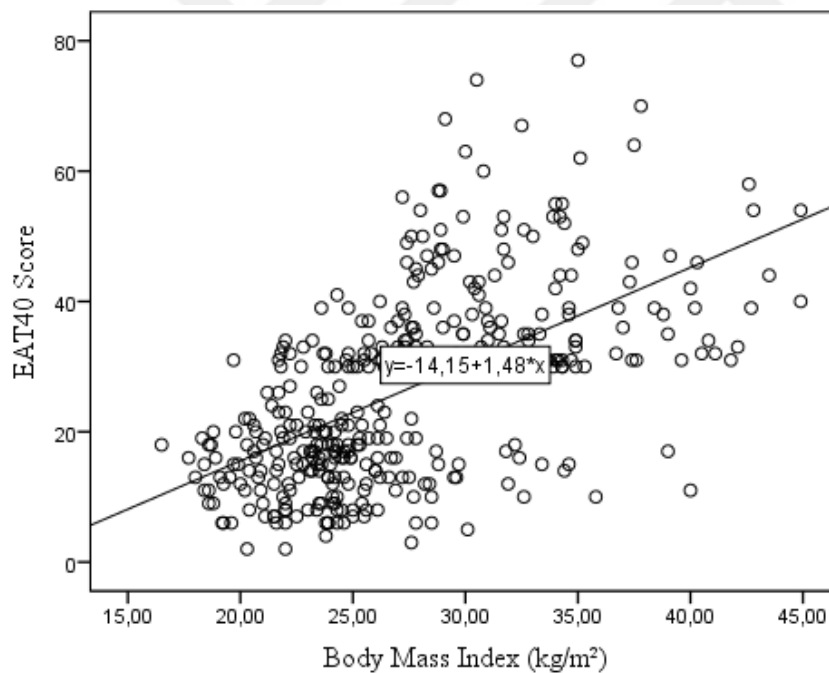


Figure 4. 1. Relationship between eating attitude test score and Body mass index

Figure 4.1. A positive and highly statistically significant correlation was found between individuals' eating attitude scale scores and BMI index values ($r = 0.614$, $p = 0.001$).

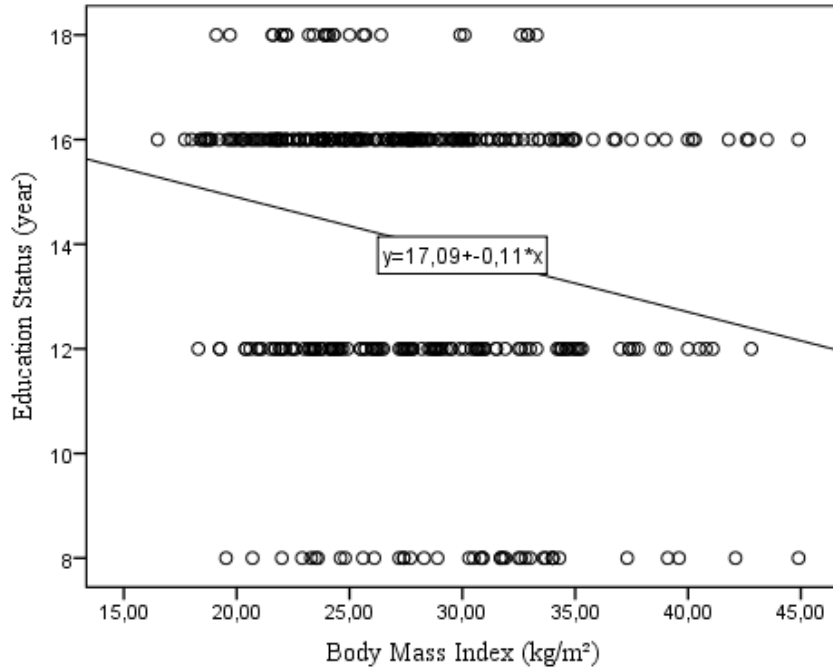


Figure 4. 2. The relationship between body mass index and educational status

In Figure 4.2, a low level of statistically significant negative correlation was found between individuals' education years and BMI values ($r = -0,216$, $p = 0.001$).

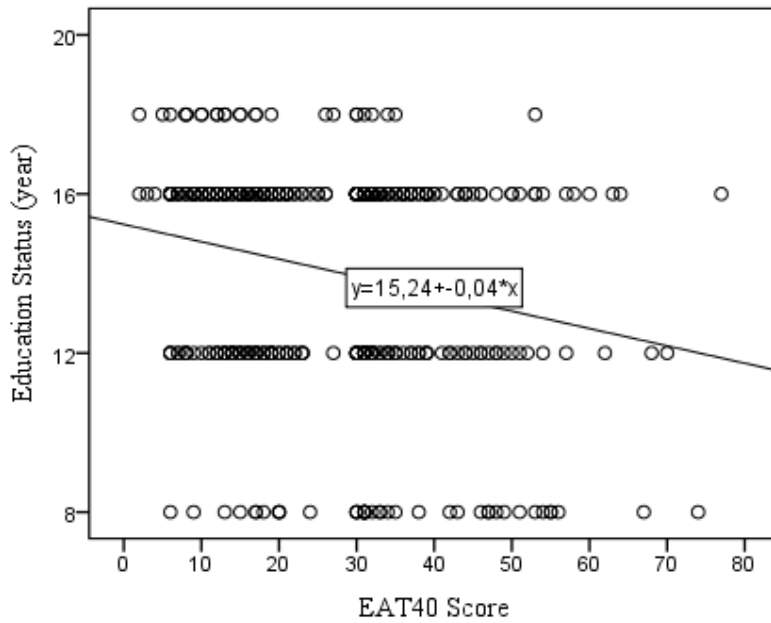


Figure 4. 3. Relationship between eating attitude test score and education level

In Figure 4.3, a low level statistically significant negative correlation was found between the years of education and eating attitude disorder of the individuals ($r = -0.218$, $p = 0.001$).

In Table 4.13, the distribution of the mean and standard deviation values of the eating attitude and behavior disorder scale scores according to the BMI values classification of the individuals who participated in the study were examined. It was determined that 18 of 207 individuals who participated in the study and whose eating behavior disorder was determined were between 18-24.9 kg / m² BMI values and EAT40 scale point average and standard deviation values were 33.88 ± 3.34 . 37.56 ± 8.66 was determined that 74 individuals were between 25-29.9 kg / m² BMI values and EAT40 scale point average and standard deviation values. It was determined that the BMI values of the other 115 individuals were ≥ 30 kg / m² and the mean and standard deviation values of EAT40 scale points were 39.52 ± 10.76 . Accordingly, no statistically significant difference was found between eating behavior disorder and BMI values ($p = 0.061$). It was determined that 135 of 193 individuals who participated in the study and who did not have eating behavior disorder were between 18-24.9 kg / m²

BMI values and EAT40 scale point average and standard deviation values were 14.71 ± 5.69 . It was determined that 44 individuals were between 25-29.9 kg / m² BMI values and the EAT40 scale mean and standard deviation values were 14.22 ± 5.20 . It was determined that 14 individuals' BMI values were ≥ 30 kg / m² and the EAT40 scale mean and standard deviation values were 13.71 ± 3.80 . Accordingly, no statistically significant difference was found between BMI values and no eating behavior disorder in individuals ($p = 0.727$).

Table 4. 13. Distribution of mean and standard deviation values of eating attitude and behavior disorder scale scores according to BMI values classification of individuals

BMI Values	EAT40 Score				P Value
	Yes ($p \geq 30$)		None ($p < 30$)		
	N	X \pm SD	N	$\bar{X} \pm SD$	
18-24.9 kg/m ²	18	33.88 \pm 3.34	135	14.71 \pm 5.69	**0.001
25-29.9 kg/m ²	74	37.56 \pm 8.66	44	14.22 \pm 5.20	**0.001
≥ 30 kg/m ²	115	39.52 \pm 10.76	14	13.71 \pm 3.80	**0.001
P value	*0.061		*0.727		

*Kruskall Wallis Analysis ($p < 0.05$). **Mann Whithney U Analysis ($p < 0.05$)

Distribution of the mean and standard deviation values of the eating attitude and behavioral disorder scale scores of the individuals participating in the study and whose eating behavior disorder was determined and not determined according to their marital status, education, and working status Table 4.14. It is shown in. 117 of 207 individuals who participated in the study and whose eating behavior disorder was determined were married and EAT40 scale mean and standard deviation values were 38.05 ± 8.89 and 90 were single and EAT40 scale mean and standard deviation values were 38.14 ± 10.79 . It was determined to be 10.79. There was no statistically significant difference between the mean score of 38.05 ± 8.89 and the average score of 38.14 ± 10.79 ($p = 0.702$). Of the 193 individuals who participated in the study and who did not have any eating behavior disorder, 104 were married and the mean score and standard deviation were $14.67 \pm$

5.43, 89 were single and the scale means, and standard deviation values were 14.37 ± 5.51 . It is set to 51. No statistically significant difference was found between the mean score of 14.67 ± 5.43 and the mean score of 14.37 ± 5.51 ($p = 0.702$).

It was determined that 95 of the 207 individuals who participated in the study and whose eating behavior disorder was determined received training under 12 years and the mean and standard deviation values of EAT40 scale points were 39.61 ± 10.50 . It was determined that 112 individuals received education over 12 years and the mean and standard deviation values of the EAT40 scale were 36.81 ± 8.89 . No statistically significant difference was found between eating behavior disorder and educational status in individuals ($p = 0.063$). It was determined that 15 of the 193 individuals who participated in the study and whose eating behavior disorder was not determined had education under 12 years and had EAT40 scale point average and standard deviation values of 15.32 ± 4.99 . It was determined that 123 individuals had education over 12 years and EAT40 scale mean and standard deviation values were 14.08 ± 5.67 . There was no statistically significant difference between the educational status of individuals and no eating behavior disorder ($p = 0.127$).

114 of 207 individuals who participated in the study and whose eating behavior disorder was determined, and the EAT40 scale point average and standard deviation values were 38.13 ± 10.20 , 93 individuals were not working and the EAT40 scale point average and standard deviation values were 37.89 ± 9.39 determined to be. No statistically significant difference was found between eating behavior disorder and working status in individuals ($p = 0,783$). 116 of 193 individuals who participated in the study and who did not experience eating behavior disorder and EAT40 scale mean and standard deviation values were 14.13 ± 5.73 , 77 individuals were not working and the EAT40 scale mean and standard deviation values were 15.35 ± 5.41 determined to be. No statistically significant difference was found between the absence of eating behavior disorder and the inability to work ($p = 0.198$).

Table 4. 14. The distribution of the mean and standard deviation values of the eating attitude and behavior disorder scale scores of the individuals according to their marital status, education, and employment status

Marital status	EAT40 Score					
	Yes ($p \geq 30$)			None ($p < 30$)		
	N	X \pm SD	P Value	N	$\bar{X} \pm SD$	P Value
The married	117	38.05 \pm 8.89		104	14.67 \pm 5.43	
Single	90	38.14 \pm 10.79	0.702*	89	14.37 \pm 5.51	0.702**
Education status						
<12 yıl	95	39.61 \pm 10.50		70	15.32 \pm 4.99	
>12 yıl	112	36.81 \pm 8.89	0.063*	123	14.08 \pm 5.67	0.127**
Working status						
Working	114	38.13 \pm 10.20	0.783*	116	14.13 \pm 5.73	0.138**
Not working	93	37.89 \pm 9.39		77	15.35 \pm 5.41	

* Mann Whithney U Analysis ($p < 0.05$) **Student t Test ($p < 0.05$)

5. DISCUSSION AND CONCLUSION

5.1. Discussion

The discussion section of this research, which is a descriptive and cross-sectional study conducted to determine the relationship between individuals' eating attitude behaviors and body mass indexes, will be evaluated in the same order as the titles covered in the findings, respectively. Respectively, these titles are the sections of the general characteristics of the individuals participating in the research, the individuals' eating attitude test scores, the answers given by individuals to the expressions in the eating attitude test, the relationship between the individuals' body mass indexes and the eating attitude scores, the relationship between the general characteristics of the individuals and the body mass indexes and the eating attitude test scores.

5.1.1. Evaluation of the General Characteristics of Individuals

The ages of the individuals participating in this study are between 18 and 64 years old, on average 39.02 ± 12.08 years. 797 years for women to examine the prevalence of obesity in a study conducted on women in Turkey average 42.36 ± 7.31 years (226). In another study conducted on 218 women on depression, self-perception, and eating attitude status of obesity, the average age was 44.8 ± 11.56 years. A healthy and productive society is thanks to the individuals who make it. The first condition for being a healthy individual is adequate and balanced nutrition (12). University period and adolescent period, which is considered as the period of adolescence and transition to adulthood, is the period in which healthy eating habits are laid, physical growth is the fastest, nutrition habits change, and many slimming diets are applied (227). For this reason, most studies in the literature on eating disorders seem to cover individuals between the ages of 16-25. In a study of eating disorders on 300 women, the average age was 21.2 ± 1.6 years (237). This study was conducted among a wide range of individuals who were overweight or normal weight who applied to a private clinic for any purpose. In the study in which the relationship between the weight and eating behaviors of these individuals was examined, the mean age of the individuals was found to be compatible with the literature.

The level of education of Turkey's population is 19.1%, according to TSI 2015 results have been reported as high school and college 13.9% (228). When Table 4.1 is examined, the education levels of the individuals participating in the study were

determined as 10.3% primary education, 31% high school, 52.3% university, and 6.5% graduate. Accordingly, the education levels of the individuals participating in our study were found higher than the results of TURKSTAT 2015.

As can be seen in Table 4.1, it was determined that 57.3% of the individuals participating in the study worked in a job but 42.8% did not. Not working in an existing job also increases the risk of obesity because it brings a lower level of physical activity and creates a more sedentary lifestyle (229) (230). In our study, body mass index rates of 58.5% of our non-employed individuals who were trained at the primary level were measured at 30 kg / m² and above.

T. C. Turkey, where the Family and Social Policy Ministry did in 2013. Family Structure Survey: Findings, According to Recommendations is research concluded that the bachelor of 34.9% of Turkey's population and was determined to be married 65.1% (231). As can be seen from Table 4.1, it is determined that 55.3% of 400 individuals participating in our study are married and 40.5% are single, and these results are in line with the results of the ministry's work.

Obesity is the public health problem we encounter most in nutrition-related society. Fighting obesity means preventing many diseases caused by obesity. Today, obesity prevalence is rapidly increasing in every region of the world. This situation has now become a serious problem not only for adult women and men but also for children. Many organizations around the world, especially the world health organization, develop and lead various community-targeted projects in the areas of gaining adequate and balanced eating habits in the fight against obesity and encouraging a lively life (232). It is determined that only 38.3% of 400 individuals participating in the study area in the body mass index range of 18.5-24.9 kg / m², which is considered normal weight according to the classification of WHO. It was determined that 31% of the remaining individuals are in the body mass index range of 25-29.9 kg / m², which expresses their overweight classification, and 30kg / m² of body mass index and above, 30.7% of which are obese and obese. In a study conducted on the effect of nurses' body mass indexes on work performance, work continuity, and eating disorders, 49.2% of individuals were in the range of 19-24.9 kg / m² Body mass index, 51.8% were 30 kg / m² and is over (233). In another study, where emotional eating correlated positively with depression and Body mass index, and with the participation of 205 individuals, 60 individuals were in the body mass index range of 18.5-24.9 kg / m², while 145 individuals were 30 kg / m² and above Body mass index It was found to be (234).

5.1.2. Evaluation of Individuals' Eating Attitude Test Scores

Healthy eating depends on individuals' daily eating attitudes and behaviors. To obtain proper eating habits, first of all, it is necessary to identify the stimuli that cause unhealthy nutrition and then treat behavior change. Eating and behavior disorders are a condition that causes medical, social, and psychological problems in the individual and reduces the quality of life of the individual (198). Eating disorders threaten public health worldwide, especially in western countries (235) (236). Turning healthy eating habits into a lifestyle in the treatment of obesity and eating disorders is the most permanent treatment (198). Eating attitude test is a screening tool for eating attitude and behavior disorders. Scores of 30 or higher from the test are indicative of an eating disorder. Although a clinical attitude test can detect the disease in the individual, it also determines the level of susceptibility of the individual to an eating disorder (237). In this study, eating attitude scores of individuals ranged from 2 to 75, with an average of 26.72 ± 14.22 . In 207 (51.7%) of 400 individuals who participated in the study, eating attitude test score was calculated as 30 and above, and eating disorders were determined in these individuals. In the other 193 individuals (48.3%), the eating attitude test score was calculated below the cut-off point of 30 points and no eating disorder was detected in these individuals. In the study of Kadioğlu and Ergün (238) eating disorder was determined as 7.1% and the average of eating attitude test score was determined as 17.91 ± 11.10 . In a similar study conducted by Ulaş et al. (239) on 384 individuals, the rate of an eating disorder was found to be 4.2%, and the mean of eating attitude test was found to be 14.8 ± 7.4 . In another study conducted on 600 students studying at the university, the average of eating disorder eating test score was found to be 60.32 ± 22.13 (240). Study results are in parallel with other studies.

If we want to keep our body weight at a healthy level, we should eat adequate and balanced and adopt regular physical activity. While being overweight and fat increases the risk of hypertension, high cholesterol, diabetes, and cardiovascular diseases, weakness is undesirable because it decreases body immunity and quality of life (34). Body mass index is an easy-to-calculate index used to detect obesity (220). In a study involving 721 individuals who investigated the effect of body perception and eating attitudes of individuals on body mass indexes, the average body weight of individuals was determined as $61.9 \pm 12.79\text{kg}$, and average height length was $1.69 \pm 0.80\text{m}$ (241). In this study, the average body weight of the individuals was $72.92 \pm 15.37\text{kg}$, the

average height of $1.62 \pm 0.05\text{m}$, and the body mass index average of $27.53 \pm 5.58\text{kg} / \text{m}^2$.

Eating behavior begins to occur with the mother-child relationship since birth and continues to develop throughout life by being affected by many emotional, environmental, cognitive, genetic, and physiological factors. Many reasons such as individuals' feelings and thoughts, education levels, culture, social environment, individuals they live with, living conditions, working conditions and hours, and the mouth taste cause differences in eating habits (59) (61). It is extremely difficult to classify these differences as true or false (61). All these factors may affect individuals' eating behaviors to be healthy or unhealthy (41). Eating attitude disorder was found in 30 (73.2%) of 41 individuals who participated in the study and whose education level was at primary education level, while 11 (26.8%) were not determined. Eating disorders were observed in 65 (53.4%) of 124 individuals whose education level was at the high school level, while 59 (47.6%) were not. While 105 (50.2%) of 209 individuals with undergraduate education level had eating disorders, 104 (49.8%) individuals did not have eating disorders. Eating disorders were found in 7 (26.9%) of 26 individuals with a postgraduate level, while 19 (73.1%) individuals did not experience eating disorders. Considering the literature studies on eating disorders, the idea that the risk of eating disorders increases as the level of education and socioeconomic level increases, whereas in recent studies, the risk of eating disorders increases as the level of education decreases (242). The rate of 40-85% of individuals, education, and socioeconomic levels observed in studies of eating disorders in Turkey were low (243). In our study, as the level of education decreased by the literature, the risk of eating disorders increased. In 90 of the 179 single individuals who participated in the study, the eating attitude test results were 30 points and above, while it was below 30 points in 89 individuals. While 117 (52.9%) of 221 individuals who were married and participated in the study showed eating disorders, 104 individuals (47.1%) did not experience eating disorders. For many cultures and societies, a family is a social unit that plays a role in the development, socialization, and individual habits of the individual. It is the institution where individuals' one-to-one relationships are experienced for the first time and the strongest. Therefore, the most important environment that affects individuals' life views, habits, personality, and behavior is family. Interdynamic dynamics that occur in the family are among the causes of eating disorders. Briefly, communication within the family, parent-

father behavior, family structure, the relationship between spouses are effective in the eating behavior of individuals (244).

The task of the woman, who started to work more with the effect of globalization in recent years, was to give birth to children in previous years and to fulfill her responsibilities at home (245). Even if they have positive or negative sources of stress, working and non-working women have negative effects on the nutrition of their stress, anxiety, and depression (246). Of the 229 individuals who participated in our study and worked in a job, 113 (49.3%) scored 30 points or more on the eating attitude scale, and 116 (50.7%) individuals scored below 30 points. Eating disorders were found in 94 (51.7%) of 171 non-working individuals, while eating disorders were not observed in 77 individuals (45%). In a study investigating the effects of emotional states of 103 women working and not working, 37 (35.9%) of 103 women were working, and 20 of them were 30 points below 17 while eating attitude test results were 30 and above. Of the 66 (64.1%) unemployed women, 30 were found to be 30 points or more as a result of the eating attitude test, and 33 points to the eating attitude test of 33 women (247).

The body mass index of individuals is calculated by dividing the weight in kilograms by the square in neck meters. This height weight index is widely used in determining weakness and obesity. Because it is easy to calculate and apply, and it can be used in both men and women, regardless of gender (15). In our study, classification was made according to WHO (248). Accordingly, those with BMI values in the range of 18.5-24.99 kg / m² are in the group of normal-weight individuals, those in the range of 25-29.99 kg / m² are in the group of slightly fat individuals, and those with BMI values of 30 kg / m² and above are as obese groups. It was evaluated. Education level is one of the factors causing obesity. There is a negative correlation between education level and Body mass index (249). In our study, it was determined that the body mass index increased as the education level decreased. 32 (78%) of 41 individuals with primary level education, 82 (66.1%) of 124 individuals with education level at the high school level, and 133 (56.5%) of 235 individuals with an education degree and over were obese and It was determined to be obese. As the level of education increases, the rates of use of media and communication tools increase, and thus, the opportunities to learn and apply correct information about nutrition are higher than the individuals with low education levels. Decreasing education level also decreases the importance given to health (250). A similar study conducted on women in 2010, it was determined that

Turkey Nutrition and Health Survey, according to the results of individuals' education level rises, seen a reduced risk of obesity (251).

One of the factors that cause obesity is marital status. The frequency of obesity is higher in individuals whose marital status is married (252). Results in a compilation of 23 studies conducted in Turkey, where it is that increases in obesity married and divorced individuals (253). In this study, it was determined that 150 (63%) of 238 married and widowed individuals have body mass index 25 kg / m² and above. In contrast, 97 (59%) of 162 single individuals who participated in the study were determined to have Body mass index 25 kg / m² and above. 76.6% of the individuals still married to another study conducted in Turkey were determined to be overweight and obese (254). In light of these data, the results in our study are compatible with the literature.

In this study, mild obesity and obesity were determined in 56.7% of 229 working individuals, while mild obesity and obesity were determined in 68.4% of 171 non-working individuals. According to another similar study results, while the body mass index average results of the working women were 31.44 ± 5.41 kg / m², the average results of the body mass index of the non-working women were 35.53 ± 7.17 kg / m² (247). According to Turkey's health research concluded that 64% of obese individuals have a job and, in contrast to 35.5% of the employees has been determined that the prevalence of obesity. Having a regular job brings more activity to the lives of individuals, and therefore not working causes less movement, causing obesity (255).

The average bodyweight of the individuals who participated in our study and whose eating attitude test score was 30 points and above was determined as 81.72 ± 13.83 kg. Bodyweight is an important psychosocial cause of eating disorders and obesity (256). Individuals with eating disorders have a high body dissatisfaction score. In a study related to eating disorders in the literature, it was found that as body weight increased, dissatisfaction with body weight increased and eating attitude test scores also increased (257).

The average height of the individuals was determined as 1.62 ± 0.05 in the eating attitude test scores of 30 points and above, and those below 30 points. No relation was found between the height of the individuals and eating behavior disorder.

In a study conducted on 123 women in Croatia, it was found that as the body mass indexes increased, the incidence of eating attitude and behavior disorder increased

(258). In our study, as a similar result, the BMI average and standard deviation values of our individuals whose eating attitude test results were 30 points and above were found to be $30.85 \pm 4.93 \text{ kg / m}^2$.

In our study, it was found that as the body mass index increased, eating attitude test scores also increased. It was determined that 91.3% (189 individuals) of 207 individuals with eating attitude test scores of 30 and above were in a BMI range of 25 kg / m^2 and above. On the other hand, while 69.9% (135 individuals) of 193 individuals whose eating attitude test results were below 30 points were within the range of 18.5-24.99 kg / m^2 BMI, only 30.1%, ie 62 individuals 25 kg / m^2 . and above it was determined to be in a BMI range. However, the eating attitude test scale is used in the clinic as an auxiliary test in diagnosing patients with bulimia and anorexia nervosa, primary individuals with anorexia nervosa (259). In our study, although anorexia or bulimia nervosa was not diagnosed, only 11.8% of the eating attitude disorder was detected in our 153 individuals with a body mass index of 24.9 kg / m^2 and below, while 88.2% were not eating determined. In this respect, it can be considered to apply the eating attitude test to every obese and obese individual who applied to the obesity clinic, except for patients diagnosed with anorexia and bulimia nervosa. Because if one of the reasons for the development of obesity in the individual is eating disorder, besides obesity treatment, appropriate eating attitude and behavior disorder treatment should be applied to the individual.

Eating attitude test is self-report based, consisting of 40 expressions and can be answered in 6 different degrees: always, very often, often, sometimes, rarely, and never. It is performed to identify adults with eating disorders, primarily anorexia, and finding, neurosis. The cutoff score of the scale that can be applied to anyone over the age of eleven is 30 points (222). While evaluating the scale with a maximum score of 120 points, individuals who score less than 21 points are low-risk individuals in terms of eating disorders, those who score between 21-30 points are those with moderate risk, and those who score more than 30 points are high-risk individuals (260). While 39.2% (157 individuals) of the 400 individuals participating in our study fall into the low-risk classification, 66.8% (105 individuals) of these 157 individuals have a body mass index of 24.9 kg / m^2 . 9% (36 individuals) of 400 individuals participating in our study are in the moderate risk group and 83.3% (30 individuals) of these 36 individuals are in Body mass index, again 24.9 kg / m^2 . 51.8% (207 individuals) of 400 individuals who participated in our study scored over 30 points and entered the group of individuals at

high risk for eating disorders. It is determined that only 8.7% of these 207 individuals, ie only 18 individuals, have a body mass index of 24.9 kg / m². The body mass index of the remaining 189 individuals was determined to be 25 kg / m² and above. In light of these results, the eating attitudes and behaviors of all individuals who apply for slimming treatment should be evaluated first and behavioral change treatment can be made for these individuals as well as appropriate nutritional therapy.

When we look at the answers given by the individuals who participated in our study to the eating attitude test questions, they rarely and never responded to the expression “I like to eat with others” at the rate of 15.8%. 84.2% of the remaining individuals made positive feedback. However, patients diagnosed with anorexia and bulimia nervosa prefer to eat alone to be able to compensate after meals (182). In our study, the answer to the statement “I am compromised on getting fat” was answered as yes at the rate of 85%. In a study conducted on patients with an eating disorder diagnosed with anorexia and bulimia, this rate was determined to be 68% close to our study (261). In light of these results, it can be thought that the patients who are diagnosed with anorexia nervosa have the same fear of obesity in their individuals who want to receive obesity treatment. In our study, the statement “My mind is eating” was 58.4% yes. On the other hand, the desire to have a weak body outweighs the anorexia nervosa patients, which prevents them from evaluating their appetite levels correctly (182). In our study, 65.5% yes answer was received to the expression “there are times when I cannot stop eating”. However, this is still the opposite of anorexia nervosa patients. Because these patients whose body perceptions are impaired, they excessively restrict food intake for their fears from obesity and have extreme control in this regard (262) (182). In our study, 82.3% negative feedback was received to the expression “my family expects me to overeat”. However, they encourage families to eat more because of the current weaknesses of patients with anorexia nervosa due to the deterioration in their body perceptions and their rejection of disease and treatment (244) (182). In our study, 45.3% never responded to the statement “I will divide my food into small pieces”. Again, patients with anorexia and bulimia nervosa are very sensitive to cut their food into small pieces and put certain calorie foods on their plates (262) (182). In our study, 90% no answer was taken to the expression “I vomit after eating”. This situation appears as compensatory behaviors such as vomiting after eating, on the contrary, in patients diagnosed with anorexia and bulimia (263). 81.8% negative feedback was received to the statement “I eat the same food for days”. On the contrary,

fat individuals, whose palate taste and eating are very important, are observed to be able to eat the same food for days to calculate calories, choose what they eat and not gain weight (182). In our study, 76.5% of no feedback was received to the statement “others think I am too weak”. In contrast to obese individuals who apply to a private clinic for slimming, their body perception is impaired and this is the opposite for patients with anorexia nervosa who see themselves constantly fat in the mirror (264). Again, in our study, 77.1% positive response was received to another item, "I like to eat at the restaurant". This is the opposite for patients with anorexia and bulimia nervosa, who have behavioral disorders such as vomiting after eating, using laxative drugs (262). The expression “I use laxatives” received 94.9% no answer in our study. However, laxative use such as laxatives and derivatives is one of the most common behavioral disorders for anorexia and bulimia patients (265). In our study, individuals answered 80.8% no to the statement “I feel that others pressured me about food”. It was also determined that patients with anorexia nervosa, who were weak but who thought that they were fat because their body perception was impaired, were the opposite, that is, they were pressured by others about food (266). In our study, the expression “vomiting comes after meals” received 87% negative feedback. However, this is one of the most common behaviors for anorexia and bulimia neurosis patients (266). Apart from these statements, individuals who participated in our study gave 58.7% feedback to the statement “I feel excessive guilt after eating”. In the same Figure, they gave 66.7% feedback to the statement “my only thought is to be weak”. The phrase “I try not to eat when I am hungry” is 55.7%, “I know the calories of the food I eat” is 77.2%, “I weigh several times a day” is 51.7%, “I eat diet food” is 69.5% The expression “I like my stomach empty” received 54.2% feedback. Similar rates were determined for these expressions for anorexia and bulimia nervosa patients (182). These results show that eating attitude scale can help diagnose eating disorders such as anorexia and bulimia neurosis, as well as assist in the diagnosis and treatment of obesity that may develop due to eating disorder and can also be used to prevent obesity due to eating disorder.

5.1.3. Relationship Between General Characteristics of Individuals and Body Mass Indexes and Eating Attitude Test Scores

Eating attitude test score average and standard deviation of 400 individuals who applied to a private clinic for slimming and agreed to participate in our study were determined as 26.72 ± 14.22 . The difference between the mean score of 38.09 ± 9.74 of our 207 individuals with an eating attitude disorder and the mean score of 14.53 ± 5.46

of our 193 individuals with no eating disorder was found statistically significant ($p = 0.01$). In a similar study conducted on 283 women who applied to a private center, the average score and standard deviation of the individuals' eating attitude test were determined to be 18.7 ± 9.1 (267). Another similar study conducted in Turkey still eating attitude test score was 15.3 ± 7.8 individuals. In the same study, the eating attitude test score average of individuals with a body mass index of $30 \text{ kg} / \text{m}^2$ and above was determined as 18.0 ± 9.1 (268). In line with these results, although the average score of the individuals who participated in our study was close to other studies, it was slightly higher in our study. This difference arises from the fact that the number of obese and obese individuals who participated in our study was more than the number of obese individuals who participated in other studies.

In our study, a positive and high level statistically significant correlation was found between individuals' eating attitude scale scores and BMI index values ($r = 0.614$, $p = 0.001$). This result suggests that using the eating attitude scale alone in screening to determine the impedance of anorexia neurosis may be erroneous or inadequate. When we look at the literature, a positive correlation was found between BMI values and eating attitude scores in obese individuals in the results of a study that examined the distribution of eating attitude test scores of individuals with different age and body mass indexes ($r = 0.39$, $p = 0.000$) (269). In a study on psychological symptoms and related causes in obesity, a positive correlation was found between BMI index and eating attitude score (270). These results show that our study is compatible with the literature. The fact that the scores obtained from the eating attitude scale increased significantly as the body mass indexes of individuals increased, suggests that individuals' eating attitude disorder may also be caused by factors such as hormonal and genetic causes that cause obesity formation. In this regard, performing this test in obese individuals besides anorexia and bulimia neurosis patients will help in planning the treatment.

Education level causes a change in behavior by improving nutritional awareness in individuals. According to this, as the level of education increases, as a result of the healthy nutrition behaviors developed by individuals, the rates of obesity are decrease (271) (272). There is a negative correlation between the level of education, which is one of the factors that cause obesity in general, and BMI (271) (253). In a study conducted on women who applied to a private diet clinic in İzmir and examining the frequency of obesity and related risk factors, it was found that Body mass index decreased as the level of education increased (254). In another study, the rates of obesity were found

lower among individuals with higher education compared to individuals with low education (273) . Similarly, women's education level as Turkey Nutrition and Health Survey results are based on decreasing obesity rates are increasing (251). In our study, a statistically significant negative correlation was found between the years of education and BMI values of the individuals who participated in our study by the literature ($r = -0,216, p = 0,001$).

In recent studies, the general view is that as the education level decreases, the risk of eating disorders increases (250). In our study, by the literature, a statistically significant negative correlation was found between the years of education of the individuals and the eating attitude test scores ($r = -0.218, p = 0.001$). However, when the literature is examined, not enough sample studies have been found and it has been determined that more research is needed to examine the relationship between educational status and eating attitude.

Eating attitude scale scores were not statistically significant according to the body mass index classification of 207 individuals with 400 eating individuals and 193 individuals without an eating disorder ($400 = p61$). When the studies in the literature were examined, a significant relationship was found between eating attitude test scores and BMI in a study conducted on 283 female individuals ($p = 0.03$) (267). In another study conducted on 318 university students between the ages of 18-45, the eating attitude test scores of the students in the mildly obese and obese group were found to be higher than those in the other groups ($p < 0.05$). In another study conducted with 291 participants to determine the eating attitudes of nurses, the opposite was found that the relationship between Body mass index and eating attitude test scores was not statistically significant ($p > 0.05$) (274). In another study conducted on 294 university students, the relationship between the participants' body mass index and eating attitude scale scores was not found to be significant ($p > 0.05$) (6). When the literature on this subject is examined, different conclusions have been reached. More detailed studies are needed on whether eating disorders are one of the causes of obesity formation.

Considering the relationship between the EAT40 test results and the socio-demographic information of individuals, it is thought that women's marital status does not affect the eating attitude test results (275). In our study, by the literature, there was no statistically significant difference between the eating and attitude test scores of the married and single individuals among the individuals with and without eating disorder ($p = 0.702, p = 0.702$).

It is thought that the outward appearance of women in their social lives will gain importance with the increase in their education levels. Although it is thought that they will be able to access healthy nutrition information more easily and have a balanced and adequate diet with their education levels, different results have been obtained regarding the relationship between the education levels of individuals with eating disorders and eating disorders (276). In our study, although there was a significant negative correlation between education level and eating attitude test results, there was no statistically significant difference between the eating attitude test score averages of individuals with an education level below or above 12 years ($p = 0.063$, $p = 0.127$).

It is thought that the income level and working status of women do not affect eating behavior. In another study, it is stated that as the socio-economic level of women increases, unhealthy eating behaviors increase (277). In our study, no statistically significant relationship was found between the averages of the scores of individuals with and without eating disorders by the literature, according to their study status ($p = 0.783$, $p = 0.198$). Literature studies on this subject are limited and more research is needed.

5.2. Conclusion

This study was conducted to determine the relationship between women's eating attitudes and body mass indexes. The results of the study are summarized below.

1. Women between 18-65 years participated in the study and the average age of individuals is 39.02 ± 12.08 years.
2. 10.5% of the individuals participating in the study received primary education, 31% received high school, 52.3% received undergraduate and 6.5% graduate education.
3. The marital status of individuals was determined as 40.5% single, 55.3% married, and 4.3% widowed.
4. The BMI value of the majority of the individuals (38.3%) is in the range of 18.5-24.9 kg / m². The BMI value of the remaining 31% of individuals is between 25.0-29.9 kg / m², BMI value of 21% is between 30-34.9 kg / m² and BMI value of 6% is between 35-39.9 kg / m². The BMI value of 3.8% of the participants is 40 kg / m² and above.
5. 51.7% of 400 individuals participating in the study have an eating attitude test score of 30 or above
6. Eating attitude test score of 48.3% of 400 individuals participating in the study is below 30 points.
7. The average body weight of individuals is 72.92 ± 15.37 kg.
8. The height of the individuals is 1.62 ± 0.05 m.
9. The average BMI values of individuals is 27.53 ± 5.58 kg / m².
10. 73.2% of the individuals with an eating attitude test score of 30 or above are primary education, 52.4% is in high school, 50.2% is in undergraduate and 26.9% is in graduate education.
11. 26.8% of individuals with eating attitude test scores below 30 points are at primary education, 47.6% at high school, 49.8% at the undergraduate level, and 73.1% at the postgraduate level.
12. 49.4% of the individuals who participated in the study and whose eating attitude test score is 30 points or more are single, 52.9% are married and 58.8% are marital.

13. 50.6% of the individuals who participated in the study and whose eating attitude test score is below 30 points are single, 47.1% are married and 41.2% are marital.
14. While 49.3% of individuals with an eating attitude test score of 30 points or above work in a job, 55% do not work in any job.
15. While 50.7% of individuals with an eating attitude test score below 30 points work in a job, 45% do not work in any job.
16. 2% of individuals with BMI values between 18.5-24.9 kg / m² are at primary education, 33.9% at high school, 41.1% at the undergraduate, and 61.5% at postgraduate level.
17. 19.5% of individuals with BMI values between 25.0-29.9 kg / m² are at the level of secondary education, 32.3% at high school, 64% at the undergraduate, and 19.2% at postgraduate level.
18. 58.5% of individuals with BMI values of 30 kg / m² and above are at the level of secondary education, 33.9% at high school, 24.9% at the undergraduate, and 19.2% at postgraduate level.
19. The marital status of individuals with BMI values in the range of 18.5-24.9 kg / m² is 40.1% single, 36.7% married and 41.2% widows.
20. The marital status of individuals whose BMI values are in the range of 25.0-29.9 kg / m² is 32.1% single, 30.3% married, and 29.4% widows.
21. The marital status of individuals with BMI values of 30 kg / m² or more is 27.8% single, 33% married, and 29.4% widows.
22. While 43.2% of individuals with BMI values in the range of 18.5-24.9 kg / m² are working, 31.6% are not working.
23. While 29.7% of individuals with BMI values in the range of 25.0-29.9 kg / m² are working, 32.7% do not work.
24. While 27.1% of individuals with BMI values of 30 kg / m² and above work, 35.7% do not work.
25. The average body weight of individuals with an eating attitude test score of 30 and above is 81.72 ± 13.83 kg.
26. The average body weight of individuals with an eating attitude test score below 30 points is 63.48 ± 10.62 kg.
27. The individuals with an eating attitude test score of 30 and above have an average height of 1.62 ± 0.05 m.

28. Individuals with an eating attitude test score below 30 points have an average height of 1.62 ± 0.05 m.
29. The average BMI values of individuals with an eating attitude test score of 30 and above are 30.85 ± 4.93 kg / m².
30. BMI values of individuals with an eating attitude test score below 30 points are 23.98 ± 3.75 kg / m².
31. 8.7% of individuals with an eating attitude test score of 30 points or more have BMI values in the range of 18.5-24.9 kg / m², 37.7% in BMI values of 25.0-29.9 kg / m² and BMI values of 53.6% are 30 kg / m² and above.
32. 69.9% of individuals with an eating attitude test score below 30 points have BMI values in the range of 18.5-24.9 kg / m², 23.8% of BMI values in the range of 25.0-29.9 kg / m² and 6.2% are 30 kg / m² and above.
33. BMI values of 76.2% of individuals who received 0-9 points from the eating attitude test result were in the range of 18.5-24.9 kg / m², BMI values of 21.4% were in the range of 25.0-29.9 kg / m² and BMI values of 2.4% are 30 kg / m² and above.
34. BMI values of 63.5% of individuals who received 10-19 points from the eating attitude test result were in the range of 18.5-24.9 kg / m², BMI values of 27% were in the range of 25.0-29.9 kg / m² and 8% have BMI values of 30 kg / m² and above.
35. The BMI values of 83.3% of the individuals who scored 20-29 points from the eating attitude test result are in the range of 18.5-24.9 kg / m² and the BMI values of 16.7% are in the range of 25.0-29.9 kg / m².
36. BMI values of 11.6% of individuals who received 30-39 points from the eating attitude test result in the range of 18.5-24.9 kg / m², 39% of BMI values in the range of 25.0-29.9 kg / m² and 49% 3 of them have BMI values of 30 kg / m² and above.
37. 3.1% of individuals scoring 40-49 from the eating attitude test result have BMI values in the range of 18.5-24.9 kg / m², 37.5% in BMI values of 25.0-29.9 kg / m² and BMI values of 59.4% are 30 kg / m² and above.
38. 40% of individuals who score 50-59 from the eating attitude test result have BMI values in the range of 25.0-29.9 kg / m² and 60% BMI values are 30 kg / m² and above.

39. The BMI values of 16.7% of individuals who scored 60-69 points from the eating attitude test result are in the range of 25.0-29.9 kg / m² and 83.3% of the BMI values are 30 kg / m² and above.
40. BMI values of all individuals who scored 70-79 points from the eating attitude test result are 30 kg / m² and above.
41. 148 individuals (37%) always responded to the expression "I like to eat with others" among the eating attitude test items. Eating behavior disorders were found in 65 (43.9%) of 148 individuals who always responded but eating behavior disorder was not observed in 83 (56.1%).
42. 154 individuals (38.5%) never responded to the statement "I cook for others, but I don't eat the food I cook", among the eating attitude test items. Eating behavior disorders were observed in 69 (44.8%) of 154 individuals who never responded, and 85 (55.2%) did not experience eating behavior disorder.
43. 171 individuals (42.8%) never responded to the statement "I will be troubled before eating" from the eating attitude test items. Eating behavior disorder was found in 57 (33.3%) of 171 individuals who never answered, and no eating behavior disorder was observed in 114 (66.7%).
44. 132 individuals (33%) always responded to the statement "Euphoria is overcome" from the eating attitude test items. Eating behavior disorders were found in 98 (74.2%) of 132 individuals who always responded, but 34 (25.8%) did not experience eating behavior disorder.
45. 99 individuals (24.8%) never answered the statement "I try not to eat when I am hungry". Eating behavior disorders were detected in 29 (29.3%) of 99 individuals who never responded, and 70 (70.7%) did not experience eating behavior disorder.
46. 87 individuals (21.8%) never responded to the statement "My mind is eating" from the eating attitude test items. Eating behavior disorder was found in 28 (32.2%) of 87 individuals who never answered and eating behavior disorder was not observed in 59 (67.8%).
47. 129 individuals (32.3%) sometimes responded to the statement "There are times when I cannot stop eating" from the eating attitude test items. Sometimes, 61 (47.3%) of 129 individuals who answered were found to have an eating behavior disorder, but 68 (52.7%) were not eating.

48. From the eating attitude test items, 109 individuals (27.3%) sometimes responded to the phrase "I will divide my food into small pieces." Sometimes, 48 (44%) of 109 individuals who answered were found to have an eating behavior disorder, but 61 (56%) did not have an eating behavior disorder.
49. 96 individuals (24%) sometimes responded to the statement "I know the calories of the food I eat" from the eating attitude test items. Sometimes, eating behavior disorder was found in 35 (36.5%) of 96 individuals who answered, but 61 (63.5%) no eating behavior disorder.
50. 145 individuals (36.3%) sometimes answered the expression "I avoid high-calorie foods such as bread, potatoes, rice" among the eating attitude test items. Sometimes, 59 (40.7%) of 145 individuals who gave the response had eating behavior disorder, but 86 (59.3%) did not have an eating behavior disorder.
51. 119 individuals (29.8%) sometimes responded to the expression "I feel bloating after meals", among the eating attitude test items. Sometimes, 39 (32.8%) of 119 individuals who gave the response were found to have eating behavior disorder, but 80 (67.2%) did not show eating behavior disorder.
52. Of the eating attitude test items, 228 individuals (57%) responded to the expression "my family expects me to overeat". Eating behavior disorder was detected in 109 (48.8%) of 228 individuals who never responded, and no eating behavior disorder in 119 (52.2%).
53. Of the eating attitude test items, 354 individuals (88.5%) responded to the expression "I am vomiting after eating". Eating behavior disorder was detected in 177 (50%) of 354 individuals who never answered, and eating behavior disorder was not observed in 177 (50%).
54. From the eating attitude test items, 99 individuals (24.8%) sometimes responded to the statement "I feel extremely guilty after eating". Sometimes, 45 (45.5%) of the 99 individuals who answered were found to have an eating behavior disorder, but 54 (54.5%) did not have an eating behavior disorder.
55. 75 individuals (18.8%) always responded to the expression "my only thought is to be weaker" from the eating attitude test items. Eating behavior disorders were found in 61 (81.3%) of 75 individuals who always responded, but 14 (18.7%) did not experience eating behavior disorder.
56. 144 individuals (36%) never answered the statement "I exercise until I get tired to burn the calories I take" from the eating attitude test items. Eating behavior

disorder was found in 44 (30.6%) of 144 individuals who never responded, and 100 (69.4%) did not experience eating behavior disorder.

57. Among the eating attitude test items, 193 individuals (48.3%) responded to the expression “I weigh several times a day”. Eating behavior disorder was found in 74 (38.3%) of 193 individuals who never responded, and no eating behavior disorder was observed in 119 (61.7%).
58. 125 individuals (31.3%) never responded to the expression “I like tight clothes that surround my body” from the eating attitude test items. Eating behavior disorder was detected in 74 (59.2%) of 125 individuals who never responded, and 51 (40.8%) eating behavior disorder was not observed.
59. 105 individuals (26.3%) sometimes responded to the expression “I like to eat meat” among the eating attitude test items. Sometimes, 49 (46.7%) of 105 individuals who answered were found to have an eating behavior disorder, but 56 (53.3%) were not eating behavior disorder.
60. 170 individuals (42.5%) always responded to the phrase "I wake up early in the morning", which is one of the eating attitude test items. Eating behavior disorders were found in 92 (54.1%) of 170 individuals who always responded, but 78 (45.9%) did not experience eating behavior disorder.
61. 123 individuals (30.8%) never responded to the phrase "I eat the same food for days", among the eating attitude test items. Eating behavior disorder was detected in 58 (47.2%) of 123 individuals who never responded, and 65 (23.8%) eating behavior disorder was not observed.
62. 135 individuals (33.8%) of the eating attitude test items answered the statement “I calculate the calories I spend when I exercise”. Eating behavior disorder was found in 47 (34.8%) of 135 individuals who never responded, and any eating behavior disorder in 88 (65.2%).
63. 140 individuals (35%) always responded to the expression “My periods are regular” among the eating attitude test items. Eating behavior disorders were found in 51 (36.4%) of 140 individuals who always responded, but 89 (63.6%) did not experience eating behavior disorder.
64. 174 individuals (43.5%) have never answered the statement "Eating others think I am too weak". Eating behavior disorder was detected in 105 (60.3%) of 174 individuals who never responded, and 69 (36.7%) did not experience eating behavior disorder.

65. 80 individuals (20%) always responded to the statement of "fattening (my body will collect fat)" as a result of eating attitude test items. Eating behavior disorders were found in 68 (85%) of 80 individuals who always responded, but 12 (15%) did not experience eating behavior disorder.
66. 106 of the individuals (26.5%) rarely responded to the statement "Eating my meals takes longer than others", among the eating attitude test items. Rarely, 45 (42.5%) of 106 individuals who responded were found to have eating behavior disorder and 61 individuals (57.5%) did not experience eating behavior disorder.
67. 105 individuals (26.3%) sometimes responded to the expression "I like eating at a restaurant", among the eating attitude test items. Sometimes, 43 (41%) of 105 individuals who answered were found to have an eating behavior disorder, but 62 (59%) did not have an eating behavior disorder.
68. Of the eating attitude test items, 317 individuals (79.3%) responded to the expression "I use laxatives". Eating behavior disorder was detected in 152 (47.9%) of 317 individuals who never responded, and no eating behavior disorder was observed in 165 (52.1%).
69. 126 individuals (31.5%) sometimes responded to the phrase "I avoid sugary foods" from the eating attitude test items. Sometimes, 48 (38.1%) of 126 individuals who answered were found to have eating behavior disorder, but 78 (61.9%) of them were not eating behavior disorder.
70. 114 individuals (28.5%) sometimes responded to the phrase "I eat diet (diet) meals", among the eating attitude test items. Sometimes, eating behavior disorder was found in 36 (31.6%) of 114 individuals who answered, but 78 (68.4%) did not experience eating behavior disorder.
71. 131 individuals (32.8%) never answered the statement "I think that my food controls my life". Eating behavior disorder was detected in 35 (26.7%) of 131 individuals who never answered and eating behavior disorder was not observed in 96 (73.3%).
72. From the eating attitude test items, 124 individuals (31%) sometimes responded to the phrase "I can control myself about food". Sometimes, 55 (44.4%) of 124 individuals who answered were found to have an eating behavior disorder, but 69 (55.6%) did not have an eating behavior disorder.

73. Of the eating attitude test items, 193 individuals (48.3%) never answered the statement “I feel that others pressured me about food”. Eating behavior disorder was found in 71 (36.8%) of 193 individuals who never responded, and no eating behavior disorder was observed in 122 (63.2%).
74. 119 individuals (29.8%) never responded to the statement "food thoughts take a lot of time" from the eating attitude test items. Eating behavior disorder was found in 31 (26.1%) of 119 individuals who never responded, and no eating behavior disorder was observed in 88 (73.9%).
75. 101 individuals (25.3%) never responded to the expression “I complain about constipation”, which is one of the eating attitude test items. Eating behavior disorders were detected in 34 (33.7%) of 101 individuals who never responded, and 67 (66.3%) did not experience eating behavior disorder.
76. 99 individuals (24.8%) never responded to the statement "I will be uncomfortable after eating dessert", among the eating attitude test items. Eating behavior disorder was found in 36 (36.4%) of 99 individuals who never responded, and any eating behavior disorder in 63 (63.6%).
77. From the eating attitude test items, 93 individuals (23.3%) sometimes responded to the phrase 'I do diet'. Sometimes, 27 (29%) of 93 individuals who answered were found to have eating behavior disorder, but 66 (71%) of them did not experience eating behavior disorder.
78. 110 individuals (27.5%) sometimes responded to the expression “I like my stomach empty”, among the eating attitude test items. Sometimes, 47 (42.7%) of 110 individuals who answered were found to have an eating behavior disorder, but 63 (57.3%) did not have an eating behavior disorder.
79. 120 individuals (30%) sometimes responded to the expression of 'I like to try sugary, fatty foods' from the eating attitude test items. Sometimes, 57 (47.5%) of the 120 individuals who answered were found to have an eating behavior disorder, but 63 (52.5%) did not have an eating behavior disorder.
80. 344 individuals (86%) responded to the expression "Vomiting after meals" from the eating attitude test items. Eating behavior disorder was detected in 168 (48.8%) of 344 individuals who never responded, and no eating behavior disorder in 176 (51.2%).

81. The eating attitude test score of 30 points and above is 207 individuals with an average of eating attitude test score of 38.09 ± 9.74 .
82. The eating attitude test score average of 193 individuals with an eating attitude test score below 30 points is 14.53 ± 5.46 .
83. The difference between the eating attitude test score average of 38.09 ± 9.44 and the eating attitude test score average of 14.53 ± 5.46 was statistically significant ($p = 0.01$).
84. A low level of statistically significant negative correlation was found between the years of education and eating attitude disorder of the individuals ($r = -0.218$), ($p = 0.001$).
85. A low level of statistically significant negative correlation was found between the years of education and BMI values of the individuals participating in the study ($r = -0.216$), ($p = 0.001$).
86. A positive and highly statistically significant correlation was found between the eating attitude scale scores of the individuals and the BMI index values ($r = 0.614$), ($p = 0.001$).
87. Eating attitude test score is between 18-24.9 kg / m² BMI of 18 of 207 individuals with 30 points and above and the EAT40 scale mean score is 33.88 ± 3.34 .
88. Eating attitude test score of 30 points and above is between 25-29.9 kg / m² BMI values of 74 of 207 individuals and the EAT40 scale average score is 37.56 ± 8.66 .
89. The BMI values of 115 of 207 individuals with an eating attitude test score of 30 and above are ≥ 30 kg / m² and the mean score of EAT40 is 39.52 ± 10.76 .
90. No statistically significant difference was found between an eating disorder and BMI values ($p = 0.061$).
91. 135 of 193 individuals with eating attitude test scores below 30 points are between 18-24.9 kg / m² BMI values and the EAT40 scale average score is 14.71 ± 5.69 .
92. 44 of 193 individuals with eating attitude test scores below 30 points are between 25-29.9 kg / m² BMI values and the EAT40 scale average score is 14.22 ± 5.20 .

93. BMI values of 14 of the 193 individuals with eating attitude test scores below 30 points are ≥ 30 kg / m² and the mean score of the EAT40 scale is 13.71 ± 3.80 .
94. There was no statistically significant difference between BMI values and no eating behavior disorder ($p = 0.727$).
95. 117 of the 207 individuals who participated in the study and whose eating attitude test was 30 and above were married and the mean score of the EAT40 scale was 38.05 ± 8.89 .
96. 90 of 207 individuals who participated in the study and whose eating attitude test is 30 and above are single and the mean score of the EAT40 scale is 38.14 ± 10.79 .
97. There was no statistically significant difference between married and single individuals who participated in the study and whose eating attitude test was 30 points or more ($p = 0.702$).
98. 104 of the 193 individuals who participated in the study and whose eating attitude test was below 30 points are married and the mean score scale is 14.67 ± 5.43 .
99. 89 of the 193 individuals who participated in the study and whose eating attitude test was below 30 points are single and the scale average score is 14.37 ± 5.51 .
100. There was no statistically significant difference between married and single individuals who participated in the study and whose eating attitude test was below 30 points ($p = 0.702$).
101. Of the 207 individuals who participated in the study and whose eating attitude, the test was 30 points or more, 95 of the 207 individuals received training under 12 years and the mean score of EAT40 is 39.61 ± 10.50 .
102. Of the 207 individuals who participated in the study and whose eating attitude, the test was 30 points or more, 112 of the 207 individuals received training over 12 years and the EAT40 scale mean score was 36.81 ± 8.89 .
103. No statistically significant difference was found between eating behavior disorder and educational status in individuals ($p = 0.063$).
104. Seventy of the 193 individuals who participated in the research and whose eating attitude test was below 30 points received education under 12 years and the EAT40 scale means the score was 15.32 ± 4.99 .

105. 123 of the 193 individuals who participated in the study and whose eating attitude test was below 30 points received education over 12 years and the mean score of the EAT40 scale is 14.08 ± 5.67 .
106. There was no statistically significant difference between the educational status of individuals and no eating behavior disorder ($p = 0.127$).
107. Of the 207 individuals who participated in the study and whose eating attitude test was 30 and above, 114 of them were working in a job and the mean score of the EAT40 scale was 38.13 ± 10.20 .
108. Of the 207 individuals who participated in the study and whose eating attitude test was 30 points or more, 93 of the 207 individuals were not working in a job and the EAT40 scale means the score was 37.89 ± 9.39 .
109. No statistically significant difference was found between eating behavior disorder and working status in individuals ($p = 0,783$).
110. 116 of the 193 individuals who participated in the research and whose eating attitude test was below 30 points are working in a job and the EAT40 scale average score is 14.13 ± 5.73 .
111. 77 of the 193 individuals who participated in the study and whose eating attitude test is below 30 points are not working in a job and the EAT40 scale average score is 15.35 ± 5.41 .
112. No statistically significant difference was found between the absence of eating behavior disorder and the inability to work ($p = 0.198$).

5.3. Recommendations

Obesity has become a serious public health problem with its prevalence, which hurts health and has been rising recently. The formation of obesity depends on many factors such as metabolic factors, hormonal factors, psychological factors, inadequate physical movement, and socio-cultural factors. In light of recent studies, an eating disorder is thought to be effective in the etiology of obesity.

In addition to patients with anorexia and bulimia nervosa, the application of the eating attitude scale in obese individuals will be effective and helpful in defining the disease and arranging the correct treatment.

More research is needed on the effects of eating disorders on the development of obesity. If it is decided that eating disorders are among the causes of obesity, it is possible to diagnose an eating disorder before obesity formation and prevent the

development of obesity with appropriate treatment. Thus, primary, a preventive treatment can be done in terms of obesity.

Briefly, according to the results of this study, eating attitudes and behaviors of obese individuals who applied to a private clinic for slimming should be evaluated first. While arranging appropriate treatment for individuals, both a slimming and behavioral change treatment should be done together with a multidisciplinary approach



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7. APPENDICES

Annex-1 Ethical Approval Form



T.C.
MARMARA ÜNİVERSİTESİ
Sağlık Bilimleri Fakültesi
Girişimsel Olmayan Etik Kurulu

PROJENİN ADI : "Bireylerin Yeme Tutum Davranışları ve Beden Kitle İndeksleri Arasındaki İlişki"
PROJENİN YÜRÜTÜCÜSÜ : Dr. Öğr. Üyesi Hülya DEMİR
PROJEDEKİ ARAŞTIRICILAR : Sahure ÖZAY
ONAY TARİHİ VE SAYISI : 03.01.2019-76-06

Sayın: Dr. Öğr. Üyesi Hülya DEMİR

"06" protokol numaralı "Bireylerin Yeme Tutum Davranışları Ve Beden Kitle İndeksleri Arasındaki İlişki" isimli projeniz Fakültemiz Etik Kurulu tarafından incelenmiş oy birliği ile etik yönden uygun olduğuna karar verilmiştir.

Prof. Dr. M. Gülden POLAT
Etik Kurul Başkanı

Prof. Dr. Mehveş TARIM

Prof. Dr. Ayşen GARGILI

Doç. Dr. Zübeyir SARI

Doç. Dr. Saime EROL

Dr. Öğr. Üyesi K. Barcu ÇALIK

Dr. Öğr. Üyesi S. Kumral ÖZÇELİK

Doç. Dr. M. Emin ALŞAHİN

Doç. Dr. Hasibe KADIOĞLU

Doç. Dr. Aysel YILDIZ

Dr. Öğr. Üyesi Ayşe KARAKOÇ

Doç. Dr. S. Burak BEKAROĞLU

Doç. Dr. Meltem BAL

Dr. Öğr. Üyesi Murat D. ÇEKİN

Dr. Öğr. Üyesi Şule ARTAÇ

Annex-2 Participant Approval Form

BİLGİLENDİRİLMİŞ ONAM FORMU

Araştırmanın Adı: Bireylerin Yeme Tutum Davranışları ve Beden Kütle İndeksleri Arasındaki İlişki.

Sayın Katılımcı,

Yukarıda adı yazılı araştırmaya katılmak üzere davet edilmiş bulunmaktasınız. Bu araştırmada yer almayı kabul etmeden önce, araştırmanın ne amaçla yapılmak istendiğini anlamanız ve bu bilgilendirme sonucunda kararınızı vermeniz gerekmektedir. Aşağıdaki bilgileri lütfen dikkatlice okuyunuz, sorularınız olursa sorunuz ve açık yanıtlar isteyiniz.

Bu araştırma ile beden kitle indeksi 25 kg/m²den fazla olan kadın ve erkek bireylerin beslenme davranışlarını saptamak amaçlanmıştır. Bu araştırma, kilo almanın yeme tutumuyla ilgisini değerlendirme de yarar sağlayacaktır. Araştırma için Marmara Üniversitesi Sağlık Bilimleri Fakültesi Etik Kurulundan izin alınmıştır. Sizden bu çalışmada anketi tam eksiksiz ve doğru olarak doldurmanız istenecektir. Bu işlem 15 dakikanızı alacaktır. Bunun size ve yakınlarınıza hiçbir zararı olmayacaktır. Çalışmaya katılmakla parasal yük altına girmeyeceksiniz ve size de herhangi bir ödeme yapılmayacaktır.

Bu araştırmaya katılıp katılmamakta tümüyle özgürsünüz. Gerek duyduğunuz tüm bilgileri istemeye ve doğru, açık, anlaşılır bilgi almaya hakkınız vardır. Araştırmaya katılmayı istemezseniz burada size verilen hizmet olumlu veya olumsuz Figurede etkilenmeyecektir. Gerekli gördüğü takdirde araştırmanın herhangi bir kısmında katılımcı araştırmadan çıkabilir, araştırmacı çalışmayı sonlandırabilir. Araştırmanın tüm aşamalarında kimlik bilgileriniz gizli tutulacaktır. Araştırma kapsamında elde edilen bilgiler bilimsel amaçlarla kullanılabilir gizlilik kurallarına uyulmak kaydıyla sunulabilir ve yayımlanabilir.

Araştırma ile ilgili daha fazla bilgiye ihtiyaç duyarsanız araştırmacıya sahure@sahureozay.com e-posta adresi veya 0532 601 33 55 numaralı telefondan ulaşabilirsiniz.

Yukarıda yer alan ve araştırmaya başlanmadan önce katılımcılara verilmesi gereken bilgileri içeren metni okudum (ya da sözlü olarak dinledim). Araştırma kapsamında elde edilen şahsıma ait bilgilerin bilimsel amaçlarla kullanılmasını, gizlilik

kurallarına uyulmak kaydıyla sunulmasını ve yayınlanmasını, hiçbir baskı ve zorlama altında kalmaksızın, kendi özgür irademle kabul ettiğimi beyan ederim

İmza/Tarih:

İmza/Tarih: 29.11.2018

Katılımcının adı soyadı

Sorumlu Araştırmacının adı soyadı

Dr. Öğr. Üyesi Hülya Demir



Annex-3 Participant Information Form

**YEDİTEPE ÜNİVERSİTESİ
SAĞLIK BİLİMLERİ FAKÜLTESİ
BESLENME VE DİYETETİK BÖLÜMÜ**

**Bireylerin Yeme Tutum Davranışları ve Beden Kütle İndeksleri
Arasındaki İlişki.**

ANKET NO:

TARİH:

ANKETÖR ADI-SOYADI:

DEMOGRAFİK BİLGİLER

1.Adı-Soyadı:

2.Cinsiyet:

1) Erkek 2) Kadın

3.Yaş: Yıl

4.Boy Uzunluğu:cm

5.Medeni Durum:

1) Evli 2) Bekar 3) Dul

6.Öğrenim Durumu:

1) Okur-yazar değil 2) Okur-yazar 3) İlkokul 4) Ortaokul 5) Lise 6) Üniversite

7) Lisans üstü

7.Çalışma Durumu:

1) Çalışıyorum 2) Çalışmıyorum

Annex-4 EAT40 Eating Attitude Test

Eating Attitude Test EAT40

İfadeler	Daima		Çok sık		Sık sık		Bazen		Nadiren		Hiçbir zaman	
	n	%	n	%	n	%	n	%	n	%	n	%
Başkalarıyla birlikte yemek yemekten hoşlanırım,												
Başkaları için yemek pişiririm, ama pişirdiğim yemeği yemem,												
Yemekten önce sıkıntılı olurum,												
Şişmanlamaktan ödüm kopar,												
Acıktığımda yemek yememeğe çalışırım,												
Aklım fikrim yemektedir,												
Yemek yemeği durduramadığım zamanlar olur,												
Yiyeceğimi küçük küçük parçalara bölerim,												
Yediğim yiyeceğin kalorisini bilirim,												
Ekmek, patates, pirinç gibi yüksek kalorili yiyeceklerden kaçınırım,												
Yemeklerden sonra şişkinlik hissederim,												
Ailem fazla yememi bekler,												
Yemek yedikten sonra kusarım,												
Yemek yedikten sonra aşırı suçluluk duyarım,												
Tek düşüncem daha zayıf olmaktır,												
Aldığım kalorileri yakmak için yorulana dek egzersiz yaparım,												
Günde birkaç kere tartılırım,												
Vücudumu saran dar elbiselerden hoşlanırım,												
Et yemekten hoşlanırım,												
Sabahları erken uyanırım,												
Günlerce aynı yemeği yerim,												
Egzersiz yaptığımda harcadığım kalorileri hesaplarım,												
Adetlerim düzenlidir,												
Başkaları çok zayıf olduğumu düşünür,												
Şişmanlama (vücudumun yağ toplayacağı) düşüncesi zihnimi meşgul eder,												
Yemeklerimi yemek başkalarınınkinden daha uzun sürer,												
Lokantada yemek yemeyi severim,												
Müşhil kullanırım,												
Şekerli yiyeceklerden kaçınırım,												
Diyet (perhiz) yemekleri yerim,												
Yaşamımı yiyeceğin kontrol ettiğini düşünürüm,												
Yiyecek konusunda kendimi denetleyebilirim,												
Yemek konusunda başkalarının bana baskı yaptığını hissederim,												
Yiyeceklerle ilgili düşünceler çok zamanımı alır,												
Kabızlıktan yakınırım,												
Tatlı yedikten sonra rahatsız olurum,												
Perhiz yaparım,												
Midemin boş olmasından hoşlanırım,												
Şekerli, yağlı yiyecekleri denemekten hoşlanırım,												
Yemeklerden sonra içimden kusmak gelir												

8. CIRRICULUM VITAE

ÖZGEÇMİŞ FORMU

Kişisel Bilgiler

Adı	SAHURE	Soyadı	ÖZAY HASAR
Doğum Yeri	ISTANBUL	Doğum Tarihi	26.11.1980
Uyruğu	TC	TC Kimlik No	69700195096
E-mail	sahure@sahureozay.com	Tel	5326013355

Öğrenim Durumu

Derece	Alan	Mezun Olduğu Kurumun Adı	Mezuniyet Yılı
Yüksek Lisans	BESLENME VE DIYETETİK	YEDİTEPE UNIVERSİTESİ	HALEN
Lisans	BESLENME VE DIYETETİK	HACETTEPE UNIVERSİTESİ	2003
Lise	FM	YALOVA SÜPER LİSESİ	1998

Bildiği Yabancı Dilleri	Yabancı Dil Sınav Notu (#)
İNGİLİZCE	YDS 2017: 62,5

Başarılımış birden fazla sınav varsa (KPDS, ÜDS, TOEFL; EELTS vs), tüm sonuçlar yazılmalıdır

İş Deneyimi (Sondan geçmişe doğru sıralayın)

Görevi	Kurum	Süre (Yıl - Yıl)
Diyetisyen	Özel Yunus Emre Hastanesi	2003-2013
Diyetisyen	Sahure Özay Diyet ve Beslenme Danışmanlığı	2013'ten beri

Bilgisayar Bilgisi

Program	Kullanma becerisi
MS OFFICE	İYİ

*Çok iyi, iyi, orta, zayıf olarak değerlendirin

Bilimsel Çalışmaları SCI, SSCI, AHCI indekslerine giren dergilerde yayınlanan makaleler

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Diğer dergilerde yayınlanan makaleler

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Uluslararası bilimsel toplantılarda sunulan ve bildiri kitabında (*Proceedings*) basılan bildiriler

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Hakemli konferans/sempozyumların bildiri kitaplarında yer alan yayınlar

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Diğer (Görev Aldığı Projeler/Sertifikalari/Ödülleri)

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