YEDITEPE UNIVERSITY

GRADUATE SCHOOL OF HEALTH SCIENCES

MASTER'S PROGRAM IN NUTRITION AND DIETETICS

INVESTIGATION OF EATING ATTITUDES AND BEHAVIORS OF EMPLOYEES OF A BANK IN ISTANBUL WITH EAT-40

MASTER THESIS

ŞEBNEM SARAL DİCLE

ISTANBUL, 2018

YEDITEPE UNIVERSITY
GRADUATE SCHOOL OF HEALTH SCIENCES
MASTER'S PROGRAM IN NUTRITION AND DIETETICS

INVESTIGATION OF EATING ATTITUDES AND BEHAVIORS OF EMPLOYEES OF A BANK IN ISTANBUL WITH EAT-40

MASTER THESIS

ŞEBNEM SARAL DİCLE

THESIS ADVISOR

ASSIST. PROF. ARZU DURUKAN

ISTANBUL, 2018

TEZ ONAYI FORMU

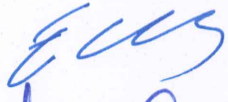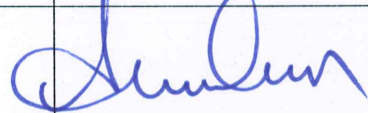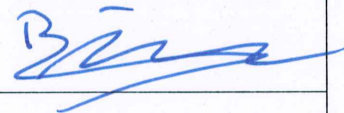Kurum : Yeditepe Üniversitesi Sağlık Bilimleri Enstitüsü

Program : Beslenme ve Diyetetik

Tez Başlığı : İSTANBUL'DA BULUNAN BİR BANKA ÇALIŞANLARININ YEME TUTUM VE DAVRANIŞLARININ EAT-40 İLE İNCELENMESİ
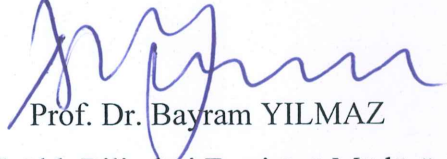
Tez Sahibi : Şebnem SARAL

Sınav Tarihi : 4.6.2018

Bu çalışma jurimiz tarafından kapsam ve kalite yönünden Yüksek Lisans Tezi olarak kabul edilmiştir.

	Unvanı, Adı-Soyadı (Kurumu)	İmza
Jüri Başkanı:	Dr. Öğr. Üyesi Elvan Yılmaz Akyüz	
Tez danışmanı:	Dr. Öğr. Üyesi Arzu Durukan	
Üye:	Dr. Öğr. Üyesi Binnur Okan Bakır	
Üye:		
Üye:		

ONAY

Bu tez Yeditepe Üniversitesi Lisansüstü Eğitim-Öğretim ve Sınav Yönetmeliğinin ilgili maddeleri uyarınca yukarıdaki jüri tarafından uygun görülmüş ve Enstitü Yönetim Kurulu'nun 06./07./2018... tarih ve 2018/12–05.... sayılı kararı ile onaylanmıştır.

Prof. Dr. Bayram YILMAZ

Sağlık Bilimleri Enstitüsü Müdürü
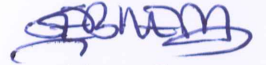
DECLARATION

I declare that this thesis is my own work and that I have not acted unethically at any stage from planning to writing. I have obtained all the information in the thesis in academic and ethical rules. I inform you that all the information that is not obtained by this thesis work have been included in the references list. I declare that I do not have any behavior that violates the patent and copyrights during my thesis work and writing.

Date

26|07|2018

Signature

Name Surname

SEBNEM SARAL DICLE

ACKNOWLEDGEMENT

TABLE OF CONTENTS

TABLES AND FIGURES

SYMBOLS AND ABBREVIATIONS

ABCs	Analyses of the History, Behaviors and Consequences
AN	Anorexia Nervosa
BED	Binge Eating Disorder
BMI	Body Mass Index
BN	Bulimia Nervosa
CBT	Cognitive Behavioral Therapy
cm	cantimeter
CMR	Crude Mortality Rate
DSM	Diagnostic and Statistical Manuel of Mental Disorders
EAT-40	Eating Attitude Test
ED	Eating Disorder
EDNOS	Eating Disorders not Otherwise Specified
ICD	International Classification of Diseases
kcal	kilocalories
kg	kilogram
m²	square meters
person-years	persons per year
SD	Standard Deviation
SES	Socioeconomic States
SPSS	Statistical Package for the Social Sciences

ABSTRACT

Saral, Ş. (2018). Investigation of Eating Attitudes and Behaviors of Employees of a Bank in Istanbul with EAT-40. Yeditepe University, Institute Health Sciences, Department of Nutrition and Dietetics MSc Thesis. Istanbul.

Eating disorders have begun to become a growing health problem in Turkey. Due to the inadequacy of the studies and theories, questions about eating disorders remain unanswered. The aim of the study is to determine the risk factors of eating disorders that are becoming widespread in our country and to measure the prevalence among adult females and males. The risk factors for eating disorders include psychological factors, childhood stories, familial problems, occupational problems and medical problems. This study was conducted among 100 adult working individuals. The EAT-40 questionnaire was used during the study and for the statistical analysis, SPSS 15.0 for Windows program was used. Total point average of EAT-40 questionnaire related to study group was 18,7±8,4. Minimum EAT-40 score was 4 and maximum EAT-40 score was 46. In 11 out of 100 people, eating disorders were detected. In the study group, total point average of female gender was determined to be significantly higher than male gender in terms of statistics. A statistically significant, negative relation was determined between EAT-40 score, height, minimum weight and ideal weight. In conclusion, both women and men are affected by socio-cultural influences. In spite of, it is observed that there are differences in terms of eating disorders between women and men. Since this study with working, adult individuals has a limited number of subjects, further researches should be done.

Keywords: Feeding and Eating Disorders, Anorexia Nervosa, Bulimia Nervosa, EAT-40

ÖZET

Saral, Ş. (2018). İstanbul'da Bulunan Bir Bankanın Çalışanlarının Yeme Tutum ve Davranışlarının YTT-40 Testi ile İncelenmesi. Yeditepe Üniversitesi, Sağlık Bilimleri Enstitüsü, Beslenme ve Diyetetik Programı Master Tezi. İstanbul.

Türkiye'de yeme davranışı bozuklukları giderek artan bir sağlık sorunu olmaya başlamıştır. Çalışmaların ve teorilerin yetersizliği nedeniyle yeme davranışı bozuklukları ile ilgili sorular cevapsız kalmaktadır. Bu çalışmanın amacı, ülkemizde yaygınlaşmaya başlayan yeme davranışı bozukluklarının risk faktörlerini açıklamak ve erişkin kadın ve erkeklerde yaygınlığını ölçmektir. Yeme davranışı bozuklukları için risk faktörleri arasında psikolojik faktörler, çocukluk öyküleri, ailevi sorunlar, mesleki sorunlar, ve tıbbi sorunlar yer alır. Bu çalışma 100 yetişkin, çalışan birey ile yapılmıştır. Çalışmada YTT-40 anketi kullanılmış ve istatiksel analiz için SPSS 15.0 programı kullanılmıştır. Çalışma grubuyla ilgili YTT-40 anketinin toplam puan ortalaması 18,7±8,4 bulunmuştur. Minimum YTT-40 skoru 4 ve maksimum YTT-40 skoru 46 olarak tespit edilmiştir. 100 kişiden 11'inde yeme davranışı bozukluğu tespit edilmiştir. Çalışma gurubunda, kadınların toplam puan ortalaması, istatiksel olarak erkeklere göre anlamlı düzeyde yüksek bulunmuştur. YTT-40 skoru, boy, minimum kilo ve ideal kilo arasında istatiksel olarak anlamlı, negatif bir ilişki tespit edilmiştir. Sonuç olarak, hem kadınlar hem de erkekler sosyo-kültürel etkilerden etkilenmektedir. Buna rağmen, kadın ve erkek arasında yeme davranışı bozuklukları açısından farkılıklar olduğu görünmüştür. Araştırmaya katılanların sayısı sınırlı olduğundan, yetişkin ve çalışan bireyler ile yapılmış daha geniş kapsamlı araştırmalara ihtiyaç vardır.

Anahtar Kelimeler: Yeme Davranışı Bozuklukları, Anoreksiya Nervoza, Bulimiya Nervoza, YTT-40

1. INTRODUCTION

Eating disorders (EDs) are long-term and severe psychiatric disorders are accompanied by unhealthy eating habits and severe overeating, distress, or extreme worry about body weight or body shape (1). EDs are complex psychiatric disorders characterized by abnormal eating behaviours that result in a high morbidity and even death if not cared for or untreated (2). The Diagnostic and Statistical Manual for Mental Disorders-5 (DSM-5) distinguishes the following diseases in the section of "Feeding and Eating disorders": Anorexia Nervosa (AN), Bulimia Nervosa (BN), Binge eating disorder (BED) and "Eating disorder not otherwise specified" (EDNOS) that does not meet the nervosa criteria and binge eating disorder criteria (3).

Anorexia and Bulimia Nervosa from eating disorders have been classically described in young women. Although recent researches have shown that the prevalence in men has been less marked than before, anorexia and bulimia nervosa have a clear female predisposition (4). Several factors have been found to cause this finding, mostly psychosocial. The extreme value of slimness that is widespread in Western culture, is accepted to be an important contributing factor in the pathogenesis of EDs. As a result of the cultural transformation, it is assumed that these disorders are more prevalent in "Western nations" and gradually spread to "non-Western nations" (5).

The unfavorable eating disorders and eating behaviours have started to present a significant health problem in Turkey where rapid technological changes and technological advancements have been recently observed (6). Unfavorable eating behaviours is the result of a complex interaction between of genetic, biological features, socio-cultural environment, familial and psychological factors. Eating behaviours are affected by problems related to the distorted body perception, friends and unsatisfying view of their body image cause of the effect of the social media in Turkey (7).

Eating disorders are significant public health problem in developing countries. Considering the amount of casual theories and epidemiological studies, there are major shortcomings in the estimates and many questions remain unclear. Studies on the detection of eating behavior disorders in Turkey have been conducted mostly on young girls and female population. The purpose of this study is to determine the prevalence of the populations at risk of developing eating behaviour disorders among a bank employees of both sexes in Istanbul. Since most of the previous studies was done with

the young population, the situation of the middle aged group and working population was sought to be investigated. For this reason, the research was carried out among bank employees.

2. GENERAL INFORMATION

The great number of past studies have focused on the relationship between self-esteem, body image, depression and anxiety level and eating attitudes. In these studies, it was reported that there was a relation between eating attitudes and increased depression and anxiety level, body dissatisfaction and low self-esteem. In the study conducted by Vardar and Erzengin in Turkey, the comorbidity was mentioned as a major anxiety in 8.8% and a depression in 13.2% of those stricken from EDs. In another study conducted in Turkey, Celikel et al. reported that eating disorders were positively related with phobic anxiety, obsessive-compulsive symptoms, and depression (7).

Medical complications in eating behaviour disorders result from the hunger rate and quantity, the methods of weight loss (self-induced vomiting, with or without over exercising, dieting alone, diuretics, diet pills, laxatives), and binge eating (5).

Disorders of eating behaviour from psychiatric disorders are associated with the highest mortality rates in those who initially need hospitalization within 20 years (4). Patients of eating behaviour disorders die from the medical conditions such as starvation (arrhythmia, cardiac muscle loss, hypokalemia) or suicide. The mortality rate was found 5.9% in 42 published researches conducted in 1995. In the studies indicating the cause of death, the percentage of patients who die from complications of eating disorders is 54%, those who commit suicide is 27%, and those who die from unknown or other causes are %19 (8).

The treatment of eating behaviour disorders begins with a therapeutic treatment plan, followed by a wide medical and psychiatric evaluation. The need for laboratory analysis should be determined individually. Treatment planning requires that the intensity of treatment is in accordance with the severity of the disease. The ways of treatment plan include nutritional, medical, behavioral, psychotherapeutic, educational, and pharmacological components (5).

For underweight patients, nutritional rehabilitation is aimed at reducing weight, normalizing eating habits, achieving normal satiety and hunger perceptions, and correcting the psychological and biological consequences of malnutrition. The first short-term objective is to restore the healthy and ideal weight according to the height, age and sex of the person, immediately and safely. Calorie intake must be carefully calculated to avoid refeeding syndrome. Calorie intake levels should generally start at

30 – 40 kcal/kg/day. In the course of weight gain, it may be necessary for some patients to progress gradually to 70 – 100 kcal/kg/day (5).

2.1. Clinical Features of Eating Disorders

The clinical characteristics of eating disorders are varied and generally involve more than one body system, but the important symptoms are associated with eating habits, body shape and body weight.

2.1.1.Anorexia Nervosa

Anorexia nervosa is characterized by low energy intake which leads to lower body weight than expected (<85% predicted); unwarranted emphasis on body shape; intense fear of weight gain. There are two overlapping anorexia nervosa subtypes: restrictive and binging/purging types (3).

The most common medical conditions appertain: electrolyte imbalance (hypomagnesemia, hypokalemia, hypophosphatemia), cardiopulmonary system (hypotension, mitral valve prolapse, ventricular arrhythmias), reproductive system (infertility, amenorrea), gastrointestinal system (gastroesophageal reflux, gastric dilatation, constipation), musculaskeletal system (weakness, osteopenia, trabecular bone fractures), endocrine system (diabetes mellitus, hypoglycemia) disorders, and oral health problems (binging/purging subtype) (9). Early childhood eating problems and gastrointestinal problems, depressive and anxiety disorders, and sexual abuse history are severe risk factors that play a role in the pathophysiology of anorexia nervosa (10).

International Classification of Diseases (ICD)-10 lists the following criteria for the diagnosis of AN:

- Loss of weight or lack of weight gain in children leads to a body weight of at least 15% below the expected weight for age and height

- Weight loss occurs spontaneously by avoiding "nutritious foods"

- There is a feeling of being too fat with a fat intrusive fear that leads to a self-imposed low weight threshold

- A common endocrine disorder involving the hypothalamic-pituitary-gonadal axis manifests itself as amenorrhea in women and sexual interest loss and sexual power loss in men (11).

2.1.2. Bulimia Nervosa

According to DSM-5 criteria, bulimia nervosa is characterized by episodes of binging, which most people repeat with a lack of short-term control, also by repetitive, compensatory and inconvenient behaviours to avoiding weight gain (i.e. excessive use of laxatives or diuretics, self-induced vomiting, exercise extreme) (3).

Purging and binging sections are existing at least twice a week for 3 months. The self-assessment of bulimia nervosa patients is unaffected by their body weight and body shape (3). Bulimia Nervosa has two categories: purging and not purging type. Similarly to AN, many risk factors, such as increased body weight and shape concerns, early childhood nutrition, negative self-assessment, sexual abuse, gastrointestinal problems, general psychiatric morbidity, and other negative experiences, have been associated with bulimia nervosa (10).

Like anorexia nervosa, even bulimia is burdened with a variety of gastrointestinal (gastroesophageal reflux, constipation, diarrhea, Barrett esophagus), cardiopulmonary (ventricular arrhytmias, atrial arrhytmias), musculoskeletal (weakness), electrolyte balance (metabolic alkalosis, hypokalemia, hypochloremia), gynecologic (irregular menses) complications and oral (sialadenosis, dental caries, gingivitis) problems. As a result, there should be multiple medical branches in bulimia nervosa management (9).

The ICD-10 lists the following criteria for the diagnosis of bulimia nervosa:

- There are repetitive periods of overeating (at least twice a week for 3 months) in which huge amounts of food are binged in small sections

- There is a strong desire or a sense of coercion for food (craving) and a persistent preoccupation with eating

- The patient tries to avoid the "weight gain" effects of the food with one or more of the followings:

  - Self-induced purging

  - Self-induced vomiting

  - Changing starvation periods

  - Use of medicines such as thyroid preparations, appetite suppressants, or diuretics; when bulimia nervosa occurs in diabetic patients, they may prefer to ignore their insulin therapy

- There is an extreme fear of being overweight (generally leads to underweight) (11).

2.1.3. Binge Eating Disorder (BED)

DSM-5 published the binge eating disorder as an independent eating disorder in May 2013, while first listed as an EDNOS that needed a future definition. This disease leads to a high socio-economic impact, depending on the frequency of primary care, its link to obesity, and the psychiatric and medical comorbidities, particularly as the quality of life declines and the use of health care services increases (12).

Binge eating was structured by Stunkard in 1959 as a specific syndrome that adopted the notion of "overeating without compensatory behaviours" and was mentioned as a nosological entity by Fairburn and Spitzer in DSM-IV as a definition in the 90's. DSM-5 recently described binge eating disorder as an autonomic disease, due to over-exploration activity that provides strong evidence of binge eating disorder, bulimia, obesity and EDNOS (3).

Most of the binging episodes typically occur in less than 2 hours, with a psychopathological and clinical prescription for food intake. Control loss is a key feature associated with higher body dissatisfaction, high level of depression and lower quality of life (13). BED is characterized by eating behaviour associated with obesity, impulsivity impairment, in many cases found in those who have not yet been considered an autonomous syndrome but have been affected by BED. Selective cravings, emotional overeating and snacking are some conditions that should be considered as subdivisions of the BED (14).

Some researches have shown a genetic effect in binge eating disorder development; in fact, this disorder is highly predictive of inheritance. This disorder was accompanied by different risk factors in such as depression, anger, anxiety, impulse control difficulties, lower self-esteem, poorer body image, greater body dissatisfaction and acute stress (14). In addition, food intake patterns in binge eating disorder are clinically important. According to food intake patterns, negative emotions that are associated with body image and low self-esteem leads to anxiety, causing excessive dietary restrictions, which triggers binging (14).

The risk of mortality of binge eating disorder is often associated with the obesity complications. Moreover, obese individuals with BED are often experiencing

breakdowns in mood and impaired quality of life and major depression as a vicious cycle has increased the risk of premature death, particularly cardiovascular problems. In fact, previous researches have shown that the metabolic syndrome (insulin resistance, hypertension, dyslipidemia, visceral obesity) are higher in depressive patients, through an obscure mechanism (14).

2.1.4. Eating Disorder Not Otherwise Specified

Eating disorder not otherwise specified (EDNOS) is the clinically severe eating disorder, mentioned in DSM-IV, that do not meet diagnostic criteria for anorexia nervosa, bulimia nervosa and BED. In common with EDNOS: first, it should be determined that there is a clinical malnutrition; and then, diagnostic criteria of anorexia, bulimia and binge eating disorder are not met (16).

Clinical descriptions of EDNOS are consistent in that they often have similar diagnostic criteria for anorexia nervosa and bulimia nervosa, though in different combinations or at different levels (17).

It is useful to distinguish two subgroups within EDNOS, but there is no sharp boundry between them. They are very similar to anorexia nervosa or bulimia nervosa in the first place but cannot meet the diagnostic criteia. For example, the weights may be over the limit for AN, or the frequency of binging for a diagnosis of BN may be too low. These cases can be seen as examples of "subthreshold" of anorexia or bulimia, respectively. In the second group, there are situations in which the diagnostic criteria of AN and BN are combined differently than in the two accepted cases. These cases are best described as "mixed". Other subgroups were used to describe subgroups such as "subclinical" and "atypical" or "partial" for the second group (16).

The DSM-IV now lists six clinical EDNOS specimens. It is important to remember that this list is not detailed, and has other symptoms that will also guarantee diagnose of EDNOS:

- All criteria for anorexia are fulfilled by individuals except for normal menstrual cycles
- All criteria for anorexia are fulfilled, but despite the loss of weight, the current weight of the person remains within normal limits
- All criteria for bulimia are fulfilled except for purging or binging behaviours for less than two times a week or for less than three months

- Individuals show purging behaviours after eating a small amount of food while maintaining normal body weight

- Chewing and spitting food repeatedly in large quantities before swallowing

- All that meets the criteria for binge eating disorder (18).

2.2. Treatment Strategies of Eating Disorders

To combat eating behaviour disorders; the treatment team has three medical branches: psychological, physiologic and behavioral. A doctor, a dietitian, and a psychiatrist should be part of the treatment team. All branches of the treatment team are important (19).

The psychologist will try to understand the trigger or cause of eating disorder. They work with the eating disorder patient and their family to deal with the trigger or cause. The doctor will focus on the physical condition of eating disorder patient; metabolic state, cardiovascular problems and weight (19). The nutritionist is particularly concerned with the dietary needs of the patient. The nutritionist will create the optimal nutrition plan to help the patients reaching their healthy weight. Above all, the dietitian should be able to know which foods the patient has not eaten and form nutrition plan accordingly. This team together will work for years to help a patient to be in a healthy weight (20).

2.2.1. Treatment of Anorexia Nervosa

Anorexic individuals will resist eating but they will need food as part of their rehabilitation. A standard nutritional treatment, initial diet will be planned to be between 1000 to 1200 kcal/day. This calorie range can be normal for someone who has lost weight. However, for someone who is trying to recover from an eating disorder, the calorie content of diet needs to be increased by 200 kcal/day depending on the need (21). This small, daily calorie boost prevents refeeding syndrome, which may kill the patient. For an ongoing patient, standart diet should consist of 60% of carbohydrates, 20% of proteins and 20% of essential fats. If a person is fed with a nasogastric tube, the diet should have a standard diet content that is completely liquid and has high fat content (21).

Rehabilitation may not always work 100%. The patient's relapse is always a glutton. There are many problems with eating disorders that patients will encounter

during rehabilitation. Anorexic patients may be diagnosed with hypophosphatemia, refeeding syndrome, and some long term results. All these problems can put the patient back on the rehabilitation (20).

2.2.1.1. Refeeding Syndrome

Refeeding syndrome is the inability of the body to cope with excessive changes in metabolic function, the body's inability to eat, or unbalanced nutrition. The signs of refeeding syndrome (22):

- Hypomagnesaemia, hypophosphatemia and hypokalemia

- Heart failure

- Edema

- Depletion of B group vitamins

These symptoms are caused by the change from fat to carbohydrates in the metabolism as the main fuel source of energy in the body. When an anorexic patient is in starvation phase, they use stored fat as their primary energy source. However, when they eat again, their bodies may start to use carbohydrates again from their food by using stored fat as energy. This change will lead to the release of pancreatic insulin to aid in the intake of glucose, phosphate, magnesium, potassium, and water (23). The only way to prevent refeeding syndrome is to start feeding the body very slowly (22).

2.2.2.Treatment of Bulimia Nervosa

Bulimia nervosa is best treated with a multidisciplinary team. This team should include the doctor, psychotherapist, psychiatrist, and dietitian. If eating disorders are outside the expertise of the psychiatrist, the specialist psychotherapist should be involved in the treatment plan of eating disorders. Examination of dietary habits and nutrition counselling should be provided by a qualified dietitian. Depending on the complication situation, bulimia nervosa patients may need support in other medical branches. The goals of treatment are: (24)

- Decrease and eliminate purging and binge eating

- Physical complication treatment and nutritional health improvement

- Coordinating the regeneration of healthy nutrition and improving the motivation of the patient to participate in treatment

- To educate the patient about healthy eating behaviours

- Help bulimia nervosa patients to reevaluate and modify useless thoughts, attitudes, motivations, contradictions, and emotions about bulimia nervosa disease

- Treat the relevant psychological difficulties and psychiatric conditions, including deficiencies in the regulation of mental disorders, and factors contributing to poor self-esteem

- Provide family support and family therapy when appropriate

- Prevent recurrence

2.2.2.1.Cognitive Behavioral Therapy

Cognitive behavioral therapy (CBT) which is an evidence-based treatment method, is used for bulimia nervosa. Behavioral procedures are used to avoid undesired eating behaviours, including keeping nutritional diary; behavioral analyses of the history, behaviors, and consequences (so-called ABCs) associated with purging and binging sections; and paired with food exposure from binge eating and purging protection.

Distortion of inconsistent thoughts about weight and shape has been examined and encountered other illogical beliefs for better understanding, improved self-control and body image. The cognitive factor of cognitive behavioral therapy seems to be a fundamental ingredient for therapy, as behavioral interventions are ineffective on their own (24).

2.2.3.Treatment of Binge Eating Disorder

The main goal of binge eating disorder therapy is to avoid binging, and then to achieve a sustained weight loss. Nevertheless, BED therapy should target the education for healthier lifestyles, the increase of motivation, the modification of eating bahviours, the increase of abilities to cope with negative emotions, the treatment of psychiatric comorbidities and physical situation and prevention of relapse. The therapeutic program should support a steady decline in calorie intake and sustained healthier eating habits, including self-monitoring of patients' symptoms (12).

Behavioral therapies focusing on diet and lifestyle modification are frequently proposed as useful interventions for BED treatment in patients with low relational psycopathology with some perceptible outcomes comparable to more complex treatments (12).

Dietary therapy is necessary to support loss of weight, and therefore BED is characterized by dissatisfaction and overevaluation of body shape and body weight, usually representing negative predictors, among patients. It is also known that although body weight is not directly related to the severity of the disease, it is closely related to many medical complications. In addition, body weight greatly affects health, self-esteem and mood in people affected by binge eating disorder. On the other hand, binging attacks are triggered by the excessive diet restriction that can be arranged to reduce body weight of BED patients more rapidly. For this reason, calorie restriction proposed in BED should be appropriate, and the normal or low calorie diet seems to be the optimal way for preventing binge eating (12).

Physical activity combined with balanced diet, both the direct effect on consumption of fat and the restrictive effect on excessive food intake, is another factor for weight loss. It also helps with dietary goals, and improves overall health and reduces the clinical features of BED (25).

2.3. Etiology of Eating Disorders

Eating disorders including psychological, biological, sociocultural factors are a group of psychiatric disorders that are recognized as one of the most prominent forms of the ongoing effort on the body and one of the rapidly increasing disorders of Modern Age (26).

Today, the change in the aesthetic perceptions leads to the increment in eating disorders (27). The understanding that overweight people look older and thinner and chic looks younger, and so especially young girls want to have a slim look (27). It has been observed that deterioration is continued weight-based behaviors and eating behavior cause deterioration of psychosocial and physical conditions. The etiology of EDs includes genetic and biological factors, such as sociocultural norms, family problems, obesity, presence of familial eating disorders, efforts to lose weight, low self-esteem, adolescent problems, sexual trauma etc. (29)

At present, eating disorders are thought to be complex disorders with multi-factor aetiology, including psychological, biological and environmental factors. The present biological hypothesis represents the predominance and preponderance of the neurobiologically normal regulated eating behaviors in response to the continuing excitement for being slim and the conditioning fear of being in a normal weight.

According to recent evidence, it has been shown that genetics can trigger eating disorders. Genetic factors have been shown to cause more than 50% of cases of anorexia and bulimia nervosa (5).

In the first half of the twentieth century, psychodynamic formulations of eating disorders overwhelm. The presence of features such as the desire to be perfect, rigidity, and being prim in childhood increases the risk of developing anorexia nervosa later on. In general, trauma in adolescence or childhood leads to emerge of later psychiatric disorders, not particularly an eating disorder (5).

Culture is one of the important etiological factors that leads to the development of the eating behavior disorders. The proportions of these disorders vary between different cultures and the culture evolve and changes over time. Furthermore, eating disorders seem to be more prevalent among more modern cultural groups than in previous times. Since the late 19th century, anorexia nervosa has been recognised as eating disorder and there is evidence that the rate of this disorder has increased over the past several decades. In 1979, bulimia nervosa was first described, and there was a prediction that a previously unrecognized state could represent a new malfunction (30).

Keel and Klump think that culture has a pathogenic effect in anorexia AN in terms of weight and shape concerns while BN appears to be a culture-related disease. Most of the patients examined from non-Western countries were found have a lack of weight concerns (31). The view that EDs are aetiologically related to the internalization of the social oppression stemming from the standards of the Western cultures or modern cultures of women's beauty has a dominant position in the current discourse on the aetiology of eating disorders (32). Directives taken from authority figures (nurses, doctors, teachers, coaches), teasing by family and friends, enrollment to ballet schools play a role in the eating disorders' pathogenesis (5).

When person is able to experience an eating disorder, it tends to have a strong genetic impact. A person with familial eating disorder history has a higher risk of developing an eating disorder than a non-familial one. Personal characteristics can lead to eating disorders. It is observed that anorexia nervosa patients are emotionally restrained, obsessive, and often perfectionists. Patients with bulimia nervosa can sometimes have impulsivity, hypersensitivity, and low self-esteem. Every case is unique, but each feature is common with the disorder (33).

Family dynamics can cause eating disorders in young women. Some mothers can illustrate popular trends to their children. Young girls are sometimes taught that being slim is good. Besides the familial pressures, social pressures can be some cause of eating disorders in young females. In Western societies, young women believe that they are only attractive when they attain that unachievable slimness (33).

Unhealthy eating attitudes are the result of a complex interaction of biological features, genetics, family characteristics, socio-cultural environment, and psychological feautres. Eating attitudes are affected by the problems experienced with friends, the distorted body image, and the unsatisfactory appearance due to the effect of media in Turkey. Unhealthy eating attitudes are also caused by psychological problems such as insecure attitudes, low self-esteem, stress, depression, anxiety, hopelessness, gender acceptence, family problems, sexual trauma, eating stories in the family (7).

A healthy diet prevents cardiac diseases, obesity, diabetes mellitus, and certain cancer types. However, nutritional rules are often not followed, and compliance with nutritional rules gradually declining as socioeconomic status (SES) declines. In fact, SES is multi-dimensional and can be assessed in terms of occupation, education level and income. Each of these features has its own way of eating habits. It has been suggested that the income – diet relationship is driven by the cost of diet and the access to food and that the occupation – diet relationship is driven by social networks and workplace. Lastly, education level – diet relationship can be mediated through family values, nutritional knowledge, and social support for wellness (34).

Educational level seems to be the most important social feature explaining differences in eating bahviours. In fact, higher education makes it possible not only for the individual to learn about nutrition, but also for shapes and beliefs that influence behaviours. Early studies have investigated the effect of behaviours towards healthy eating behaviours in the relationship between education level and diet and have shown that positive behaviours are associated with a healthier diet in women. The link between them has not been reported in men, but there is evidence that men and women show differences in their healthy nutritional behaviour (34).

2.4. Incidence of Eating Disorders

The incidence rate is explained as the number of new cases of new disorder in the population over a specific time period. The eating disorders incidence rate is usually

expressed in terms of per 100 000 persons per year (person-years). Community based studies evaluating the incidence of eating disorders are limited (35).

Incidence rates obtained from general practices represent eating behaviour disorders that are detected at the earliest by the public health system. Currin et al. (36) surveyed the General Practice Research Database in the United Kingdom between 1994 and 2000 for new anorexia nervosa cases and compared their data with the similar study results for 1988—1993 (37). During the two study periods, anorexia nervosa incidence rate remained stable: It was 4.7 per 100 000 persons per year in 2000 and in 1993, it was 4.2 per 100 000 persons per year.

Only a few bulimia nervosa incidence researches have been performed. According to the nationwide primary care study in the Netherlands, the overall incidence rate of bulimia nervosa was 8.6 per 100 000 persons per year in 1985—1989 and in 1995-1999, 6.1 per 100 000 persons per year (38). In a primary-care study in the United Kingdom, the overall gender- and age-adjusted bulimia nervosa incidence rate decreased during the second half of the 1990s from 12.2 per 100 000 persons per year in 1993 to 6.6 per 100 000 persons per year in 2000. However, the bulimia nervosa incidence rate remained relatively stable around 40 per 100 000 persons per year in 1993 as well as 2000, in women aged 10 – 19 years (36).

Epidemiological studies of EDNOS are rare, due to its unspecified operational criteria and heterogeneity, except for BED where DSM-5 research criteria are formulated. In population-based study in Spain, using the Public Health Register to identify cases of eating behaviours disorders diagnosed by psychologists, the EDNOS incidence rate was 6.5 per 100 000 person-years (39).

Binge eating as eating behaviour disorder is quite common in adolescents. In a long-term study of a large cohort of adolescents in the United States, the binge eating incidence rate was 10.1 per 1000 persons per year among women and 6.6 per 1000 persons per year among men (both sexes ≥ 14 years), which translates into 1010 per 100 000 persons per year and 660 per 100 000 persons per year among young women and men, respectively (40).

2.5. Prevalence of Eating Disorders

The prevalence can be expressed as point prevalence, annual prevalence rate and life-long prevalence. The point prevalence is a prevalence at a certain time, e.g. March

11 of a certain year. The annual prevelance rate is the point prevalence plus one-year incidence rate. The life-long prevalence is the percentage of individuals with disorder at any time in their life. The prevalence is the most common precaution for health care planning because it is indicative of the need for care. Two-step screening case detection approach is the standard procedure to predicting the eating disorders prevalence. In the first step, a large population is scanned for the possibility of eating disorders through a screening survey that identifies a risk group. In the second step, certain cases in the risk group are based on a personal interviews (35).

2.5.1. Prevalence of Anorexia Nervosa

Anorexia nervosa is characterized by emaciation, extreme fear of gaining weight, ruthless search for slimness, extremely impaired eating behaviour, and appearance of body image out of normal. A lot of people with AN see themselves as overweight, even when they are hungry or when they are not obviously fed. Nutrition and controlling weight become idee fixe for anorexia nervosa patients (41).

In a community based study of female twins of the 1975 – 1979 birth cohort in Finland, the lifetime prevelance of AN was found two times higher when the broad definition was used: broad definition was 4.2% and DSM-IV definition was 2.2%. A relatively small sample of 496 young girls was followed by Stice et al., and their life-long prevalence was found 0.8% according to the DSM-5 criteria by the age of 20 years. DSM-IV anorexia nervosa cases for Portuguese female university and college students were reclassified to DSM-5 criteria. The point prevelance of DSM-5 anorexia nervosa was 0.7% with a definition of BMI less than 17.5 kg/m^2 and 1.0% with a definition of BMI less than 18.5 kg/m^2, compared with 0.6% for DSM-IV criteria. The annual prevelance amoung young women is about 0.4% (42).

2.5.2. Prevalence of Bulimia Nervosa

Bulimia nervosa is characterized by frequent and repetitive sections of eating extraordinarily large quantities of food, and control loss over eating. Purging (e.g., excessive use of diuretics, vomiting or using laxatives), hunger and/or excessive exercise come after binge eating attacks. Unlike anorexia, bulimia nervosa patients can remain within the normal weight for height limits. But like anorexia patients, they often have a fear of being overweight, be in a desperate desire to weight loss, and feel extremely unhappy with their body shape and body size (41).

Many community studies have shown that the bulimia nervosa prevalence increases by 30% when using the DSM-5 criteria, leading to a point prevalence of 0.6% for DSM-5 criteria among adolescents and women. The annual bulimia nervosa prevalence in young women is 1 – 1.5% (42).

2.5.3.Prevalence of Binge Eating Disorder

Binge-eating disorder is characterized by repetitive binging attacks when a person feels that one has lost his/her control over eating. Unlike bulimia, binging episodes do not involve purge, excessive exercise, or hunger. As a result, BED patients are mostly obese or overweight. At the same time, they experienced guilt, embarrassment and sadness about the binge eating, that could lead to more binging (41).

A few population-based studies have found very small increases in the lifetime prevalence for BED according to DSM-5 criteria and lead to an estimated annual BED prevalence under DSM-5 criteria of 1.7% for women in United States, with the one-year prevalence of men remaining at 0.8%. In the first international community survey which included low-income, middle-income, and high-income countries, the average life-long binge eating disorder prevalence was found 1.9% according to questionnaires. Life-long prevalence predictions are less than 1% in many European countries: 2.6% in the United States and 4.7% in Brazil. The example from the second country is from Sao Paulo (42).

2.5.4.Prevalence of Eating Disorders Not Otherwise Specified

The residual diagnosis EDNOS is a heterogeneous category. The DSM-5 criteria defines five types of EDNOS: atypical anorexia nervosa, bulimia nervosa of low frequency and/or limited period, BED of low frequency and/or limited period, purging disorder, and night eating syndrome. For most of these conditions, small epidemiological data are available.

In a cohort study of adolescent girls and women in United States, the purging prevalence was 2-2,5%. In another sample of 496 adolescent girls from US, the life-long atypical anorexia nervosa prevalence was 2.8% by age 20, the life-long subthreshold bulimia nervosa prevalence was 4.4%, the life-long subthreshold BED prevalence was 3.6%, and the life-long purging disorder prevalence was 3.4%. These conditions accounted for 68.9% of all DSM-5 eating behaviour disorder diagnosis. However, some studies have confirmed that the DSM-5 criteria effectively decrease the rate of EDNOS diagnosis, but the size of this decrease is different in studies (42).

2.6. Mortality of Eating Disorders

Mortality rate can be defined as the incidence rate of death of the observed event. Mortality rates are often used as disease severity indicators. The standard criteria for mortality are the crude mortality rate (CMR) and the standardized mortality ratio (SMR). The CMR is the number of deaths that occur in a given time period of study. The SMR is the ratio of deaths occuring in the study population to the number of deaths in the original population (35).

In a recent meta-analysis of 35 published studies, the weighted CMR for anorexia nervosa was 5.1 deaths per 1000 person-years, this is 0.51% per year. One person from 5 anorexia patients had commited suicide. The total SMR was 5.86 during the mean follow-up of 14 years (35).

In a recent meta-analysis of twelve studies describing the bulimia nervosa mortality rates was found 1.74 deaths per 1000 person-years, which means that 0.17% of bulimia nervosa patients die per year. The total SMR was 1.93 (35).

A recent meta-analysis of six studies describing the one-year mortality rate of EDNOS patients of 3.31 deaths per 1000 person-years. The total SMR was 1.92 (35).

Keel and Brown observed 6 studies describing the BED's course and its results. The follow-up period varies from one to twelve years. The single 12-year follow-up study ensured the only follow-up death report: two of 68 patients hospitalized for inpatient BED treatment died after 12 years, resulting in a 2.9% CMR and a 2.29 insignificant SMR. This inpatient sample data obtained may not be representative of BED patients seen in other settings (35).

3. MATERIAL AND METHOD

3.1.Material

The study was conducted among 100 adult working individuals. The study was done among employees of a bank in Istanbul. The survey was conducted among all volunteers who applied during the period 1 March – 28 April 2017. The questionnaire of the study is based on personal answers except weight and height. Weights and heights were measured with Tanita SC 330 model scales during the study. Age average of the group participating in the study was 34,0 ±7,4 years, 39 of them were male and 61 of them were female. Their height average was 166,5±8,9 cm, weight average was 71,2±17,0 kg, BMI average was 25,5±5,0 kg/m^2, the maximum weight average except for pregnancy was 78,0±18,7 kg, minimum adulthood weight average was 59,1±11,6 kg. Calculated ideal weight average of the study group was 62,6±11,4 kg.

3.2.Method

For statistical analysis, SPSS 15.0 for Windows program was used. Descriptive statistics were given as number and percentage for categorical variables, average, standard deviation, minimum and maximum for numerical variables. Because normal distribution condition was not ensured in numerical variables comparison of two groups, Mann Whitney U test was performed. Ratio of categorical variable between groups was tested with Chi Square Analysis. When conditions were not met, Monte Carlo simulation was applied. Relations between numerical variables was examined with Spearman Correlation Analysis because the parametric test condition was not met. Statistical alpha significance level was accepted as $p<0,05$.

3.3.EAT-40

The scale consists of 40 items and their responses are marked on a 6 point likert type scale whose answers range from always and never. Grading is performed according to the responses at the end points pathologically and points range between 0 and 3. For the questions 1, 18, 19, 23, 27 and 39 in the scale, sometimes option gets 1 point, occasionally option gets 2 points, never option gets 3 points and other options get 0 point. In all other questions in the scale, always, very often and often options get 3, 2 and 1 points respectively and other options get 0 point. Total point collected from the scale is acquired by adding up the points of all questions and point increase indicates the deterioration in eating attitudes. Original break point of the scale was determined as 30

points. Works for reliability and validity of Turkish version of the scale were performed by Savaşır and Erol.

The EAT-40 is a reliable test that is often used in researches. Since this widely used test is reliable, it has become a preferred reason to use it in research.

4. RESULTS

Age average of the group participating in the study was 34,0 ±7,4 years, 39 of them were male and 61 of them were female. Their height average was 166,5±8,9 cm, weight average was 71,2±17,0 kg, BMI average was 25,5±5,0 kg/m^2, the maximum weight average except for pregnancy was 78,0±18,7 kg, minimum adulthood weight average was 59,1±11,6 kg. Calculated ideal weight average of the study group was 62,6±11,4 kg.

According to the results of anthropometric measurements of study group (Table 1.), 39% of participants were male and 61% of them were female. The maximum age was 55 years. Minimum height was 150 cm and maximum height was 194 cm of the participants. Minimum current weight was 45 kg and maximum current weight was 123 kg. Minimum BMI was 17,6 kg/m^2 and maximum BMI was 42,5 kg/m^2. Minimum maximum weight except pregnancy was 48 kg and maximum was 134 kg. Maximum minimum adulthood weight was 94 kg and minimum was 39 kg. Minimum calculated ideal weight was 45 kg and maximum calculated ideal weight was 100 kg.

Table 1. Anthropometric measurements of study group

		n	**%**
Your Gender	Male	39	39,0
	Female	61	61,0
		Avg.±SD	**Min-Max**
Age		34,0 ±7,4	0-55
Height (cm)		166,5±8,9	150-194
Current weight		71,2±17,0	45-123
BMI (Body Mass Index)		25,5±5,0	17,6-42,5
You maximum weight(except pregnancy) (kg)		78,0±18,7	48-134
Minimum adulthood weight (kg)		59,1±11,6	39-94
İdeal weight		62,6±11,4	45-100

Total point average of EAT-40 related to study group was 18,7±8,4 as showed in EAT-40 scores of study group (Table 2.). Minimum EAT-40 score was 4 and maximum EAT-40 score was 46. In 11 out of 100 people, eating behavior disorder was detected. In 89 out of 100 people, eating behaviour disorder was not detected.

Table 2. EAT-40 scores of study group

		Avg.±SD	Min-Max
EAT-40 Total points		18,7±8,4	4-46
		n	**%**
Eating attitude disorder	N/A	89	89,0
	A	11	11,0
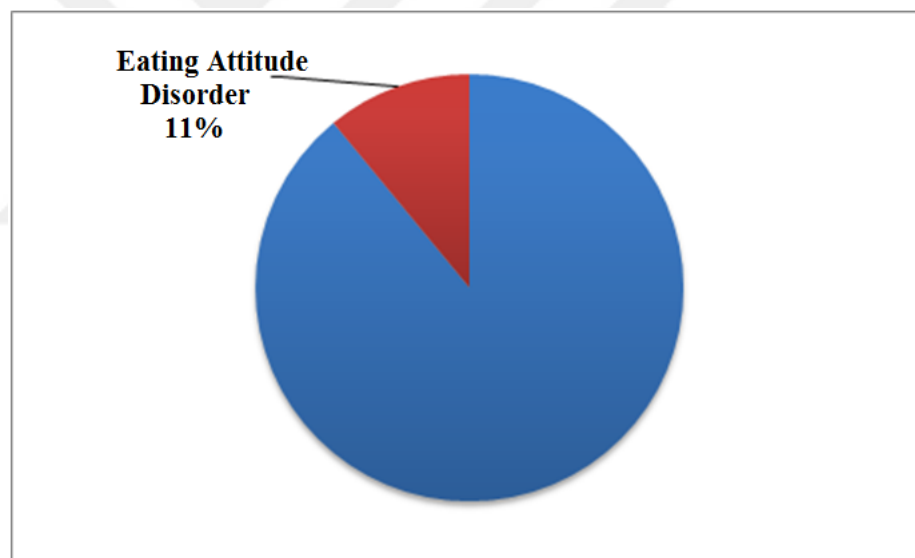
Figure 1. Eating attitude disorder in study group

According to Figure 1. Eating attitude disorder in study group, in 11,0% of them, eating attitude disorder was determined. In 89.0% of them, eating attitude disorder was not determined.

In the age averages of gender groups, there was no statistically significant difference (p=0,846) as shown on the anthropometric measurements grouped by men and women (Table 3.). Age average of the male group was 34,4±6,6 years, minimum male age was 21 years and maximum was 55 years. Age average of the female group was 34,4±6,6 years, minimum female age was 24 years and maximum female age was 54 years. Height average of the male group was 175,1±6,4 cm, minimum height was 168 cm and maximum height was 194 cm. Height average of the female group was 161,0±5,1 cm, minimum height was 150 cm and maximum height was 171 cm. Current weight average of the male group was 84,9±16,9 kg, minimum current weight was 55,8 kg and maximum current weight was 123 kg. Current weight average of the female group was 62,4±9,7 kg, minimum current weight was 45 kg and maximum current weight was 89 kg. BMI average of the male group was 27,8±5,6 kg/m^2, minimum BMI was 17,6 kg/m^2 and maximum BMI was 42,5 kg/m^2. BMI average of the female group was 24,0±3,9 kg/m^2, minimum BMI was 18,3 kg/m^2 and maximum BMI was 37,0 kg/m^2.

Maximum weight average of the male group was 92,8±19,1 kg, minimum was 58 kg and maximum was 134 kg. Maximum weight average (except pregnancy) of the female group was 68,5±10,7 kg, minimum was 48 kg and maximum was 95 kg. Minimum adulthood weight average of the male group was 69,7±10,4 kg, minimum was 52 kg and maximum was 94 kg. Minimum adulthood weight average of the female group was 52,3±5,9 kg, minimum was 39 kg and maximum was 65 kg. Ideal weight average of the male group was 74,4±8,2 kg, minimum ideal weight was 54 kg and maximum ideal weight was 94 kg. Ideal weight average of the female group was 55,1±4,8 kg, minimum ideal weight was 45 kg and maximum ideal weight was 68 kg.

Table 3. Anthropometric measurements grouped by men and women

	Male		Female		
	Avg.±SD	Min-Max	Avg.±SD	Min-Max	p
Age	34,4±6,6	21-55	34,4±6,6	24-54	0,846
Height (cm)	175,1±6,4	168-194	161,0±5,1	150-171	<0,001
Current weight	84,9±16,9	55,8-123	62,4±9,7	45-89	<0,001
BMI (Body Mass Index)	27,8±5,6	17,6-42,5	24,0±3,9	18,3-37	<0,001
Your maximum weight (kg)	92,8±19,1	58-134	68,5±10,7	48-95	<0,001
Minimum adulthood weight (kg)	69,7±10,4	52-94	52,3±5,9	39-65	<0,001
Ideal weight	74,4±8,2	54-100	55,1±4,8	45-68	<0,001

In the study group, total point average of female gender was determined to be significantly higher than male gender in terms of statistics (p=0,010). Average EAT-40 score in male group was 16,3±8,8, minimum EAT-40 score was 4 and maximum score was 38. Average EAT-40 score in female group was 20,2±7,9, minimum score was 6 and maximum score was 46.

According to EAT-40 scores grouped by men and women (Table 4.), there was no statistically significant difference in the eating attitude disorder percentages of gender groups (p=0,521). No eating behavior disorder was observed in 36 of 39 male subjects (92,3% of males) and in 3 of the 39 males, eating behavior disorder was observed (7,7% of males). No eating behavior disorder was observed in 53 of 61 female subjects (86,9% of females) and in 8 of the 61 females, eating behavior disorder was observed (13,1% of females).

Table 4. EAT-40 scores grouped by men and women

		Male		Female		
		Avg.±SD	Min-Max	Avg.±SD	Min-Max	p
EAT-40		16,3±8,8	4-38	20,2±7,9	6-46	0,010
		n	%	n	%	p
Eating attitude disorder	N/A	36	92,3	53	86,9	0,521
	A	3	7,7	8	13,1	
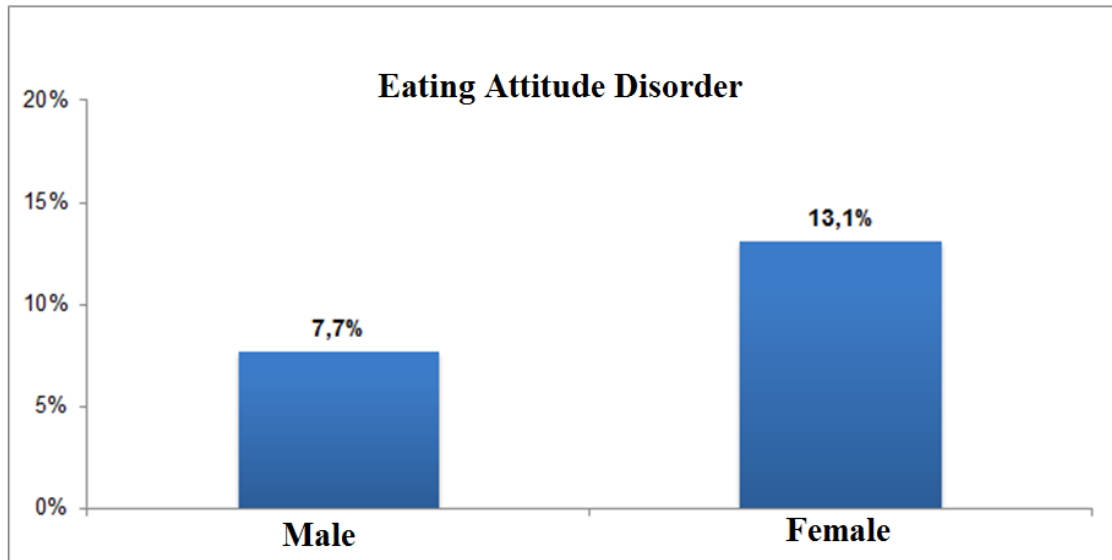
Figure 2. Eating attitude disorder grouped by men and women

According to Figure 2, 7.7% of males exhibit eating behavior disorders, while 13.1% of females show eating behavior disorders.

A statistically significant, negative relation was determined between eating attitude test point, group height, minimum weight and ideal weight (p=0,004 p=0,001 p=0,009). According to Table 5, the shorter the height (rho=-0,284), the more frequently the eating behavior disorder is seen (p=0,004). The weaker the person (rho=-0,339), the more often the disorder of eating behavior is seen (p=0,001). If the person thinks the ideal weight should be less (rho=-0,261), then the eating behavior disorder is seen so often (p=0,009). There was no statistically significant difference between EAT-40 point, age, weight, BMI and maximum adulthood weight.

Table 5. Eating attitude test points of anthropometric measurements

	Eating Attitude Test Point	
	rho	p
Age	0,006	0,953
Height	-0,284	0,004
Weight	-0,046	0,647
BMI	0,118	0,242
Maximum adulthood weight	-0,061	0,544
Your minimum weight	-0,339	0,001
Your ideal weight	-0,261	0,009

There was no statistically significant difference determined between age, height, BMI and weight averages of those who have/don't have eating attitude disorder (Table 6). Average age of group without having eating behaviour disorder was $34,5\pm6,4$ years and average age of group having eating behavior disorder was $33,5\pm8,0$ years. Average height of group without having eating behavior disorder was $166,8\pm9,1$ cm and average height of group having eating behavior disorder was $163,7\pm7,5$ cm. Average weight of group without having eating behavior disorder was $70,7\pm17,2$ kg and average weight of group having eating behavior disorder was $74,9\pm16,1$ kg. Average BMI of group without having eating behavior disorder was $25,2\pm4,9$ kg/m^2 and group having eating behavior disorder was $27,8\pm5,3$ kg/m^2. Average maximum adulthood weight of group without having eating behavior disorder was $77,6\pm19,0$ kg and group having disorder was $81,3\pm17,3$ kg. Average minimum weight of group without having eating behavior disorder was $59,5\pm11,8$ kg and group having disorder was $55,5\pm9,4$ kg. Average calculated ideal weight without having eating behavior disorder was $62,8\pm11,5$ kg and group having eating behavior disorder was $60,6\pm10,5$ kg.

Table 6. Average anthropometric measurements of people with or without eating diorder

	Eating Attitude Test Point		
	N/A	**A**	p
	Avg.±SD	Avg.±SD	
Age	34,5±6,4	33,5±8,0	0,343
Height	166,8±9,1	163,7±7,5	0,396
Weight	70,7±17,2	74,9±16,1	0,290
BMI	25,2±4,9	27,8±5,3	0,077
Maximum adulthood weight	77,6±19,0	81,3±17,3	0,372
Your minimum weight	59,5±11,8	55,5±9,4	0,236
Your ideal weight	62,8±11,5	60,6±10,5	0,526

There was no statistically significant difference determined in the percentages of eating attitude disorder in age groups according to EAT-40 scores of people with or without eating disorder according to age. Seventeen people aged 20-29 years did not experience eating disorders (81,0%) and 4 people experienced eating disorders (19%). 54 people aged 30-39 did not experience eating disorders (91,5%) and five people experienced eating disorders (8,5%). 14 people between 40-49 ages did not experience eating behavior disorders (93,3%) and one people experienced eating disorders (6,7%). 3 people between 50-59 ages did not experience eating disorders (75,0%) and 1 people experienced eating disorders (25,0%).

Table 7. EAT-40 score of people with or without eating disorder according to age

		Eating Attitude Test Point				
		N/A		**A**		
		n	%	n	%	
Age group	20-29	17	81,0	4	19,0	0,303
	30-39	54	91,5	5	8,5	
	40-49	14	93,3	1	6,7	
	50-59	3	75,0	1	25,0	

5. DISCUSSION

Turkey is a developing country. With unique social and cultural background, it has recently been influenced by Western societies, including its own value system. In particular, Turkish population are making increasing efforts to comply with international standards and to fulfill traditional responsibilities in its socio-cultural environment. Women's physical appearance is being foregrounded in sexual roles, and being extremely slim is a new trend in society. This is especially true in large cities, where educated population is exposed to social pressure and Western values are prevail. Rural areas are under the same influence via internet and television. As a result, eating disorders in non-Western countries including Turkey, there is growing evidence of increased prevelance.

Like many illnesses, eating disorders can affect adults in the workforce. A lot of people with eating disorders are perfectionists who lead to being highly qualified employees. However, if someone does not learn to manage this feature it can contribute to eating behaviour disorders.

Although it's not always easy to identify an eating behaviour disorder in a colleague, an untreated or undiagnosed disorder can cause serious health problems, even death. Even if an eating disorder seems mild or not worth mentioning, it can be a significant influence on the concentration of a person to do his/her job.

The eating disorders prevalence has increased and eating disorders are permenant problems that require long-life treatment. The workplace is an important living environment for patients, but there are few reports on the current status of ED in workplace. This study was carried out at a bank, which was a corporate company and has both male and female educated employees. For this reason, the results of this study may represent the prevalence of eating behaviour problems of employees of a bank in Istanbul.

According to the National Eating Disorder Association's eating disorder estimation, up to 30 million people suffer from an eating behaviour disorder such as anorexia nervosa, bulimia nervosa, binge eating disorder or EDNOS, in the USA. Worldwide, 70 million people suffer from an eating disorder. About 20 million female and 10 million male have a specific eating behaviour disorder during significant period of life (43). Eating behaviour disorders are more common in the Europe and United States. However, the eating disorders incidence is increasingly widespread in non-

Western people. Looking back to Table 2, according to findings, the mean of EAT-40 score was 18,7±8,4 in a sample of Turkish bank employees. 11.1% of those who participated in the study were found to have an eating attitude disorder. 11 out of 100 experiences eating disorders in a workplace. Because the incidence and prevalence are higher in this group, eating disorders are more likely to be predominantly found in a young female workforce. However, anyone can be affected by an eating disorder.

Researches have shown that women wanted to have a slimmer body image than men. Women are more likely to experience eating disorders by getting false nutritional information from visual, written, and social media. In Turkey, some studies conducted among university students, Baş et al. (44) reported that 11.5% and Uzun et al. (45) reported that 17.1% of women had abnormal EAT scores. Similarly, in this study, eating attitude scores are more prevalent among women (13.1%) compared with men (7.7.%). These conclusions have parallels with our findings. This may be explained by the fact that women have a wish to be fascinated more than men do, they tend to be highly anxious and are more concerned about their body shape.

A community sample of 1002 twins (individuals) was surveyed through telephone interview. It is estimated that about 9% of all Australian women will be affected by an eating behaviour disorder that causes a clinically significant disorder throughout their life (46). In this study, prevalence of having eating disorders of female bank employees is found 13.1%. High rate of sample might be related with the sample size, which was 61 female employees of 100 subjects. The research could be done with more people, more clear results can be obtained.

Eating disorders are thought to be a disorder affecting girls in adolescence but this belief hides the fact that they have a significant influence on adolescent boys and men. Studies have shown that men may make up about 25% of those with AN or BN and 40% of those with binge eating disorder (47).

Beat, one of the UK's leading charity organizations, tells us that the majority of people suffering from eating disorders are women. However, studies show that up to 25% of all people influenced by eating disorders could be men. Eating disorders can affect anyone in society, with people from all backgrounds. Myths and stereotypes prevent some individuals from requesting help (48). According to Table 4, findings showed that 3 out of 11 who suffer from eating disorders are male. This finding was concordant with the results of Beat.

Eating behaviour disorders were related with body shape and weight. Nowadays slimness is regarded as beauty, so the thinner the people with anorexia nervosa are, the more beautiful they feel, and therefore lose their health, and even their lives. In fact, Table 5 is about this issue. The shorter the height of the person, the lower the weight he/she wants to be. In connection with this, the incidence of eating disorder is increasing in low-weight individuals. Individuals with an ideal weight target under the weight they should have are more likely to be at risk of eating disorder.

Eating disorders are emerging issues for women, triggered by stressful features such as marriage, pregnancy, carreer plans, divorce, and menopause. Beat emphasized that eating behaviour disorders are more likely to be present in the working population between 16 to 30 years of age. Nevertheless, it is possible to have an eating disorder for years, so older employees may also be affected (48). In a study conducted in Western Australia, 25% of patients with eating disorders from a community sample were found to have experienced onset of their eating behaviour disorder after the age of 30. There was no statistically significant differences between the 7 experiences of older women and those with early presentation (49). Similarly, as in Table 7, no statistically significant difference determined in the percentages of eating attitude disorder in age groups. In this study, 5 out of 11 eating disorder cases got eating disorders at the age onset 30 as mentioned in a study in Western Australia.

6. CONCLUSION

Studies on eating disorders have generally been conducted with adolescent girls and young women. The number of studies done on men and working populations is very limited. For this reason, I choose to work with working, adult women and men. In this way, I will be able to contribute with a different perspective and research on the literature on eating disorder.

This research was conducted with employees of a bank in Istanbul. EAT-40 was administered and assessed to determine if employees have eating disorders. 39% of the employees are male, 61% are female. Eating disorders were not observed in 89% of the employees and it was observed in 11% of the employees. 7.7% of men and 13.1% of women had eating disorders. Eating disorder in women is more common than men. A statistically negative relation was found between EAT-40 score, height, minimum weight and ideal weight expectancy. There was no statistically significant difference determined in the percentages of eating attitude disorder in age groups.

In conclusion, this study has certain limitations. First, all evaluations were based on self-report measurements. This may cause the feelings to be unknown. Second, all participants were selected from a homogeneous population. Third, the study was conducted with a relatively small group. Therefore, the results should not be considered precisely, and further studies should be conducted with a large sample of working population. Despite these limitations, the results show that eating disorders can emerge in working population as well in young Western population. Further data obtained from working population will make it easy to compare the both Western and non-Western societies with each other.

Nowadays, urbanization, economic development and globalization have led to changes in lifestyle and eating habits. In order to reach the expected quality of life in the rapidly changing and developing world, it is necessary to educate the individuals to become conscious of the nutritional issues and transform it into a lifestyle. The nutritional diversity in the diet should be increased for adequate, balanced, healthy diet. Providing healthy food choices and nutritional information to the individuals will help to protect them from the perception that being slim, especially with the media, social networks and the social environment, is making them beautiful or handsome, and helping them to make healthier decisions.

The treatment should be carried out in cooperation with other medical branches according to the patient's condition, under the leadership of the psychiatric specialist. Psychotherapy is indispensable, cooperation with the family and participation of the family in the treatment is important.

7. REFERENCES

1. Fairburn CG, Harrison PJ. Eating disorders. Lancet. 2003; 361:407 – 16.

2. Berkman ND, Lohr KN, Bulik CM (2007). Outcomes of eating disorders: a systematic review of the literature. Int J Eat Disord, 40 (4): 293 – 309.

3. American Psychiatric Association (2013). Diagnostic and statistical manual of mental disorders (5th edition). Arlington, VA: American Psychiatric Publishing.

4. Andersen AE, Yager J. Eating disorders. In: Sadock BJ, Sadock VA, Ruiz P, editors. Kaplan and Sadock's Comprehensive Textbook of Psychiatry. 9th ed. Lippincott Williams and Wilkins: Philadelphia; 2009. pp. 2128 – 49.

5. Sharan P, Sundar AS. Eating disorders in women. Indian J Psychiatry. 2015 Jul; 57 (Suppl 2): S286 – S295.

6. Saygın M, Ongel K, Calışkan S, Yağlı MA, Has M, Gonca T, et al. Süleyman Demirel Üniversitesi öğrencilerinin beslenme alışkanlıkları. Med J Suleyman Demirel Univ. 2011;18 (2): 43 – 7.

7. Çelik S, Uğur BA, Aykurt FA, Bektaş M. Eating attitudes and related factors in Turkish nursing students. Nurs Midwifery Stud. 2015 June; 4 (2): e25479.

8. Hoek HW. Incidence, prevelance and mortality of anorexia nervosa and other eating disorders. Curr Opin Psychiatry. 2006; 19:389 – 94.

9. Trent SA, Moreira ME, Colwell CB, Mehler PS (2013). ED management of patients with eating disorders. Am J Emerg Med, 31 (5): 859-65.

10. Jacobi C, Hayward C, de Zwaan M, Kraemer HC, Agras WS (2004). Coming to terms with risk factors for eating disorders: application of risk terminology and suggestions for a general taxonomy. Psychol Bull, 130 (1): 19-65.

11. Geneva: World Health Organisation; 1992. World Health Organisation. The ICD-10 Classification of Mental and Behavioural Disorders. Clinical Descriptions and Diagnostic Guidelines.

12. Amianto F, Ottone L, Daga GA, Fassino S. Binge-eating disorder diagnosis and treatment: a recap in front of DSM-5. BMC Psychiatry (2015) 15:70.

13. Wolfe BE, Baker CW, Smith AT, Kelly-Weeder S. Validity and utility of the current definition of binge eating. Int J Eat Disord. 2009; 42 (8):674-86.

14. Luca A, Luca M, Calandra C. Eating disorders in late-life. Aging and Disease. 2015 Feb; 6 (1): 48-55.

15. Fairburn CG, Cooper Z, Shfran R. Cognitive behaviour therapy for eating disorders: a "transdiagnostic" theory and treatment. Behav Res Ther. 2003; 41 (3):509-28.

16. Fairburn CG, Bohn K. Eating disorder NOS (EDNOS): an example of the troublesome "not otherwise specified" (NOS) category in DSM-IV. Behav Res Ther. 2005 Jun; 43 (6): 691-701.

17. Crow S J, Agras W S, Halmi K et al. Full syndromal versus subthreshold anorexia nervosa, bulimia nervosa, and binge eating disorder: a multicenter study. International Journal of Eating Disorders. 2002; 32: 309-318.

18. Le Grange D, et al (2012). Eating disorder not otherwise specified presentation in the US population. Int J Eat Disord. 2012 Jul; 45 (5): 711-8.

19. American Dietetic, P. E. (2007). Position of the american dietetic association: Nutrition intervention in the treatment of anorexia nervosa, bulimia nervosa, and other eating disorders. Journal of the American Dietetic Association, 106(12), 2073-82.

20. Peysar B., Thomas S. Nutritional rehabilitation for patients diagnosed with anorexia nervosa. May 2014.

21. Garber A. K. et al. (2013). Higher calorie diets increase rate of weight gain and shorten hospital stay in hospitalized adolescents with anorexia nervosa. Journal of Adolescent Health, 53(5), 579-584.

22. Gentile, M. G. et al. (2013). Metabolic and nutritional needs to normalize body mass index by doubling the admission body weight in severe anorexia nervosa. Clinical Medicine Insights: Case Reports, 6, 51-56.

23. Crook M. A. et al. The importance of the refeeding syndrome. Nutrition, 17(7-8), 623-637.

24. Yager J. (2014) Bulimia Nervosa Treatment & Management: Medical care, nonpharmacologic interventions, pharmacologic treatments. Medscape. http://emedicine.medscape.com/article/286485-treatment#showall

25. Vancampfort D, Vanderlinden J, et al. A systematic review on physical therapy interventions for patients with binge eating disorder. Disabil Rehabil. 2013; 35(26): 2191-6.

26. Güneş E, Çalık B. The relationship between eating attitude and behaviors with self-esteem of the university students. Anadolu Psikiyatri Dergisi 2015; 16:397-404.

27. Caqueo-Urizar A, Ferrer-Garcia M. et al. Associations between sociocultural pressures to be thin, body distress, and eating disorder symptomatology among Chilean adolescent girls. Body Image 2011; 8:78-81.

28. Widiger TA, Costa Jr PT. Personality disorders and the five-factor model of personality. Washington, DC: American Psychological Association, US; 2013.

29. Treasure J, Claudino AM, Zucker N. Eating disorders. The Lancet 2010; 375:583-593.

30. N. Miller M and Pumariega A. Eating disorders: culture and eating disorders. Healthy Place. 2008.

31. Keel PK, Klump KL. Are eating disorders culture-bound syndromes? Implications for conceptualizing their etiology. Psychol Bull. 2003; 129: 747-69.

32. Kiriike N, Nagata T et al. Prevalence of binge-eating and bulimia among adolescent women in Japan. Psychiatry Res. 1988; 26: 163-9.

33. Weiten W. Psychology themes & variations (8th ed.) Las Vegas, NV: University of Nevada. 2011.

34. Le J, Dallongeville J et al. Attitudes toward healthy eating: a mediator of the educational level – diet relationship. European Journal of Clinical Nutrition. 2013; 67: 808-814.

35. Smink, F.R.E., van Hoeken, D. & Hoek, Epidemiology of Eating Disorders: Incidence, Prevalence and Mortality Rates. H.W. Curr Psychiatry Rep (2012) 14: 406.

36. Currin L, et al. Time trends in eating disorder incidence. Br J Psychiatry. 2005; 186:132—5.

37. Turnbull S, et al. The demand for eating disorders care. An epidemiological study using the general practice research database. Br J Psychiatry. 1996;169(6):705—12.

38. Son GE, et al. Time trends in the incidence of eating disorders: a primary care study in the Netherlands. Int J Eat Disord. 2006;39(7):565—9.

39. Larranaga A, et al. High prevelance of eating disorders not otherwise specified in Northwestern Spain: population-based study. Social psychiatry and psychiatric epidemiology. 2012.

40. Field AE, et al. Family, peer, and media predictors of becoming eating disordered. Arch Pediatr Adolesc Med. 2008;162(6):574 – 9.

41. Hudson JI, Hiripi E, Pope HG, Kessler RC. The prevalence and correlates of eating disorders in the National Comorbidity Survey Replication. Biological Psychiatry. 2007; 61:348-58.

42. Hoek HW, et al. Epidemiology, course and outcome of eating disorders. Curr Opin Psychiatry. 2013, 26:543 – 548.

43. Wade, T. D., Keski-Rahkonen A., & Hudson J. (2011).Epidemiology of eating disorders. In M. Tsuang and M. Tohen (Eds.), Textbook in Psychiatric Epidemiology (3rd ed.) (pp. 343-360). New York: Wiley.

44. Baş et al. (2004). Eating attitudes and their psychological correlates among Turkish adolescents. Adolescence, 39, 593-599.

45. Uzun et al. (2006). Screening disordered eating attitudes and eating disorders in a sample of Turkish female college students. Comprehensive Psychiatry, 47, 123-126.

46. Wade, T. D., Crosby, R. D., & Martin, N. G. (2006). Use of Latent Profile Analysis to Identify Eating Disorder Phenotypes in an Adult Australian Twin Cohort. Archives of General Psychiatry, 63, 1377-1384.

47. Weltzin, T. E., Weisensel, N., Franczyk, D., Burnett, K., Klitz, C., & Bean, P. (2005). Eating disorders in men: Update. Journal of Men's Health & Gender, 2(2), 186-193.

48. https://www.b-eat.co.uk/about-eating-disorders

49. Fursland, A., Allen, K. L., Watson, H., & Byrne, S. M. (2010). Eating Disorders – not just an adolescent issue? Australia and New Zealand Academy of Eating Disorders (ANZAED) 8th Annual Conference, Auckland, New Zealand.

8. APPENDIX 1. EAT-40

KİŞİSEL BİLGİLER

Doğum tarihi: Cinsiyet: Kadın / Erkek

Boy: Kilo: BMI:

En yüksek yetişkinlik kilonuz: En düşük kilonuz:
İdeal kilonuz:
(Hamilelik hariç)

EAT – 40 YEME TUTUM ANKETİ

Bu anket sizin yeme alışkanlıklarınızla ilgilidir. Lütfen her bir soruyu dikkatlice okuyunuz ve size uygun gelen kutunun içine X işareti koyunuz. Örneğin, " Çikolata yemek hoşuma gider " cümlesini okudunuz. Çikolata yemek hiç hoşunuza gitmiyorsa "hiçbir zaman" yazılı kutunun içine X işareti koyunuz. Her zaman hoşunuza gidiyorsa "daima" nın altını X ile işaretleyiniz.

		Daima	Çok sık	Sık sık	Bazen	Nadiren	Hiçbir zaman
1	Başkaları ile birlikte yemek yemekten hoşlanırım.						
2	Başkaları için yemek pişiririm, fakat pişirdiğim yemeği yemem.						
3	Yemekten önce sıkıntılı olurum.						
4	Şişmanlamaktan ödüm kopar.						
5	Acıktığımda yemek yememeye çalışırım.						
6	Aklım fikrim yemektedir.						
7	Yemek yemeyi durduramadığım zamanlar olur.						
8	Yiyeceğimi küçük küçük parçalara bölerim.						
9	Yediğim yiyeceğin kalorisini bilirim.						
10	Ekmek, patates, pirinç gibi yüksek kalorili yiyeceklerden kaçınırım.						
11	Yemeklerden sonra şişkinlik						

36

	hissederim.						
12	Ailem fazla yememi bekler.						
13	Yemek yedikten sonra kusarım.						
14	Yemek yedikten sonra aşırı suçluluk duyarım.						
15	Tek düşüncem daha zayıf olmaktır.						
16	Aldığım kalorileri yakmak için yorulana kadar egzersiz yaparım.						
17	Günde birkaç kere tartılırım.						
18	Vücudumu saran dar elbiselerden hoşlanırım.						
19	Et yemekten hoşlanırım.						
20	Sabahları erken uyanırım.						
21	Günlerce aynı yemeği yerim.						
22	Egzersiz yaptığımda harcadığım kalorileri hesaplarım.						
23	Adetlerim düzenlidir.						
24	Başkaları çok zayıf olduğumu düşünür.						
25	Şişmanlayacağım (vücudumun yağ toplayacağı) düşüncesi zihnimi meşgul eder.						
26	Yemeklerimi yemek başkalarınınkinden daha uzun sürer.						
27	Lokantada yemek yemeyi severim.						
28	Müshil kullanırım.						
29	Şekerli yiyeceklerden kaçınırım.						
30	Diyet (perhiz) yemekleri yerim.						

31	Yaşamımı yiyeceğin kontrol ettiğini düşünürüm.						
32	Yiyecek konusunda kendimi denetleyebilirim.						
33	Yemek konusunda başkalarının bana baskı yaptığını hissederim.						
34	Yiyecekler ilgili düşünceler çok zamanımı alır.						
35	Kabızlıktan yakınırım.						
36	Tatlı yedikten sonra rahatsız olurum.						
37	Perhiz (diyet) yaparım.						
38	Midemin boş olmasından hoşlanırım.						
39	Şekerli, yağlı yiyecekleri denemekten hoşlanırım.						
40	Yemeklerden sonra içimden kusmak gelir.						

9. ÖZGEÇMİŞ

Kişisel Bilgiler

Adı	ŞEBNEM	Soyadı	SARAL
Doğum Yeri	İSTANBUL	Doğum Tarihi	05-09-1990
Uyruğu	TC	TC Kimlik No	38597041434
E-mail	sebnemsaral@gmail.com	Tel	+90 530 416 69 90

Öğrenim Durumu

Derece	Alan	Mezun Olduğu Kurumun Adı	Mezuniyet Yılı
Yüksek Lisans	Beslenme ve Diyetetik	Yeditepe Üniversitesi	2018
Lisans	Beslenme ve Diyetetik	Yeditepe Üniversitesi	2013
Lise	-	Pertenviyal Lisesi	2008

Bildiği Yabancı Dilleri	Yabancı Dil Sınav Notu (#)
İngilizce	

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

İş Deneyimi (Sondan geçmişe doğru sıralayın)

Görevi	Kurum	Süre (Yıl - Yıl)
Beslenme ve Diyet Uzmanı	Acıbadem Mobil Hizmetler	-
Beslenme ve Diyet Uzmanı	Özel Akgün Tem Hastanesi	-

Bilgisayar Bilgisi

Program	Kullanma becerisi
Microsoft Office	İyi
SPSS	İyi

*Çok iyi, iyi, orta, zayıf olarak değerlendirin

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

Diğer dergilerde yayınlanan makaleler

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

Hakemli konferans/sempozyumların bildiri kitaplarında yer alan yayınlar

Diğer (Görev Aldığı Projeler/Sertifikaları/Ödülleri)