

T.C.
YEDİTEPE UNIVERSITY
INSTITUTE OF HEALTH SCIENCES
DEPARTMENT OF NUTRITION AND DIETETICS

**INVESTIGATION OF THE RELATIONSHIP
BETWEEN MINDFUL EATING BEHAVIOUR AND
ANTHROPOMETRIC MEASUREMENTS
OF INDIVIDUALS APPLYING TO A NUTRITION
AND DIET POLICLINIC OF A PRIVATE
HOSPITAL IN ISTANBUL**

MASTER THESIS
DIETITIAN ELİF BOZYEL

İSTANBUL, 2020

T.C.
YEDİTEPE UNIVERSITY
INSTITUTE OF HEALTH SCIENCES
DEPARTMENT OF NUTRITION AND DIETETICS

**INVESTIGATION OF THE RELATIONSHIP
BETWEEN MINDFUL EATING BEHAVIOUR AND
ANTHROPOMETRIC MEASUREMENTS
OF INDIVIDUALS APPLYING TO A NUTRITION
AND DIET POLICLINIC OF A PRIVATE
HOSPITAL IN ISTANBUL**

MASTER THESIS
DIETITIAN ELİF BOZYEL

SUPERVISOR
DR. FACULTY MEMBER HÜLYA DEMİR

İSTANBUL, 2020

THESIS APPROVAL

Kurum : Yeditepe Üniversitesi Sağlık Bilimleri Enstitüsü

Program : Beslenme ve Diyetetik

Tez Başlığı : İstanbul’da Özel Bir Hastanenin Beslenme ve Diyet Polikliniğine Başvuran Bireylerin Yeme Farkındalığı Davranışı ile Antropometrik Ölçümleri Arasındaki İlişkinin İncelenmesi

Tez Sahibi : Elif BOZYEL

Sınav Tarihi : 30.06.2020

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

	Unvanı, Adı-Soyadı (Kurumu)
Jüri Başkanı:	Prof. Dr. Şenay UZUN (Yeditepe Üniversitesi)
Tez danışmanı:	Dr. Öğr. Üyesi Hülya DEMİR (Yeditepe Üniversitesi)
Üye:	Dr. Öğr. Üyesi Burcu Yavunç YEŞİLKAYA
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 29/07/2020 tarih ve 2020/07-16 sayılı kararı ile onaylanmıştır.

Prof. Dr. Bayram YILMAZ

Sağlık Bilimleri Enstitüsü Müdürü

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.

22.08.2020

ELİF BOZYEL

ACKNOWLEDGEMENTS

Endless Thanks To,

Dear Dr. Faculty Member Hülya DEMİR being in Yeditepe University Nutrition and Dietetics Department, who is my valuable thesis advisor for her contributions and support from the beginning to the end of my research,

My dear family members who have been with me in every period of my life and who have not refrained from any material or moral support...



ABSTRACT

Bozyel E., Investigation of the Relationship Between Mindful Eating Behavior and Anthropometric Measurements of Individuals Applying to a Nutrition and Diet Policlinic of a Private Hospital in Istanbul. Yeditepe University Institute of Health Sciences, Nutrition and Dietetics Department, Master of Science Thesis, İstanbul, 2020.

Recently, the importance of developing mindful eating in gaining healthy eating behavior is emphasized and its success in using it as an intervention technique in the treatment of obesity is discussed. Obesity is an ongoing health problem and brings with it many chronic diseases. The relationship between eating behavior and weight gain and obesity has been known for a long time. The calorie restriction used in obesity treatment cannot be sustainable in long-term treatments. Classical strategies have often been proven ineffective in achieving long-term and sustainable weight loss. For these reasons, different interventions are needed in addition to calorie restrictive applications. It is thought that it can provide a permanent solution in the treatment of obesity since mindful eating provides mindfulness of nutritional feelings and habits without being judged. In this study, it is aimed to evaluate the relationship between mindful eating behavior and anthropometric measurements. This research, which was planned and applied in a descriptive and cross-sectional pattern, was conducted in individuals over the age of 18 who applied to the Nutrition and Diet Policlinic of a private hospital in the European side of Istanbul. The research was carried out between September 2019 - May 2020. In the research, Mindful Eating Questionnaire was applied to measure individuals' socio-demographic characteristics and anthropometric information (age, gender, height, body weight, body mass index, waist / hip ratio, income status, etc.) and mindful eating. NCSS (Number Cruncher Statistical System) 2007 (Kaysville, Utah, USA) program was used for statistical analysis. Descriptive statistical methods (mean, standard deviation, median, frequency, ratio, minimum, maximum) were used when evaluating the study data. Ethics committee approval was obtained for this research from the clinical research ethics committee of a private foundation hospital in the Anatolian side of Istanbul. The research was carried out on 200 individuals, 81.5% of whom were women and 18.5% were men. The ages of the cases ranged between 18 and 68, with an average of 30.52 ± 10.01 years. Mindful Eating Questionnaire total scores are 3.19 ± 0.52 on average; 66.0% of cases have a score of 3 or above. According to the data obtained from the study, while there

was a statistically significant relationship between body weight and total mindful eating score in women ($p < 0.05$), there was no statistically significant relationship between weight measurements in men and total scores ($p > 0.05$). A negative correlation was found between BMI measurements and total scores in women ($p < 0.05$). There is no statistically significant relationship was found between BMI measurements and total scores in men ($p > 0.05$). While there was a statistically significant relationship between waist circumference and hip circumference measurements and total scores in women ($p < 0.05$), This difference was not statistically significant in men ($P > 0.05$). No statistically significant relationship was found between waist-hip ratios and total scores in men and women ($p > 0.05$). In addition to calorie restriction, it can be seen that improving mindful eating behavior may decrease body weight in obesity treatment. Therefore, it is recommended to include mindful eating application in diet treatments.

Keywords: Nutrition, Mindful Eating, Anthropometric Measurement, Obesity, Hunger

ÖZET

Bozyel E., İstanbul'da Özel Bir Hastanenin Beslenme ve Diyet Polikliniğine Başvuran Bireylerin Yeme Farkındalığı Davranışı ile Antropometrik Ölçümleri Arasındaki İlişkinin İncelenmesi. Yeditepe Üniversitesi Sağlık Bilimleri Enstitüsü, Beslenme ve Diyetetik Anabilim Dalı Yüksek Lisans Tezi, İstanbul, 2020.

Son dönemlerde sağlıklı yeme davranışının kazanılmasında yeme farkındalığının geliştirilmesinin önemi vurgulanmakta ve obezite tedavisinde bir müdahale tekniği olarak kullanılmasıdaki başarısı konuşulmaktadır. Obezite artarak devam etmekte olan bir sağlık sorunudur ve birçok kronik hastalığı da beraberinde getirmektedir. Yeme davranışı ile ağırlık artışı ve obezite ilişkisi uzun süredir bilinmektedir. Obezite tedavisinde kullanılan kalori kısıtlaması uzun süreli tedavilerde sürdürülebilir olamamaktadır. Klasik stratejilerin uzun vadeli ve sürdürülebilir kilo kaybı elde edilmesinde çoğu zaman etkisiz olduğu kanıtlanmıştır. Bu nedenlerle kalori kısıtlayıcı uygulamalara ek olarak farklı müdahalelere ihtiyaç duyulmaktadır. Yeme farkındalığı, beslenmeyle ilişkili duyguların ve alışkanlıkların yargılanmadan farkına varılmasını sağladığından obezite tedavisinde kalıcı çözüm sağlayabileceği düşünülmektedir. Bu araştırmada, yeme farkındalığı davranışı ile antropometrik ölçümler arasındaki ilişkinin değerlendirilmesi amaçlanmıştır. Tanımlayıcı tipte ve kesitsel desende planlanarak uygulanan bu araştırma İstanbul Avrupa yakasında özel bir hastanenin Beslenme ve Diyet polikliniğine başvuran 18 yaş üzeri bireylerde gerçekleştirilmiştir. Araştırma, Eylül 2019 - Mayıs 2020 tarihleri arasında yürütülmüştür. Araştırmada bireylerin sosyo-demografik özellikleri ile antropometrik bilgilerini içeren (yaş, cinsiyet, boy, vücut ağırlığı, beden kütle indeksi, bel/kalça oranı, gelir durumu v.b.) anket formu ve yeme farkındalıklarını ölçmek için Yeme Farkındalığı Ölçeği uygulanmıştır. İstatistiksel analizler için NCSS (Number Cruncher Statistical System) 2007 (Kaysville, Utah, USA) programı kullanıldı. Çalışma verileri değerlendirilirken tanımlayıcı istatistiksel metodlar (ortalama, standart sapma, medyan, frekans, oran, minimum, maksimum) kullanıldı. Bu araştırma için İstanbul Anadolu yakasında özel bir vakıf hastanesinin klinik araştırmalar etik kurulundan etik kurul onayı alınmıştır. Araştırma %81,5'i kadın, %18,5'i erkek 200 birey üzerinde yürütülmüştür. Olguların yaşları 18 ile 68 arasında değişmekte olup, ortalama $30,52 \pm 10,01$ yıldır. Yeme Farkındalığı Ölçeği toplam puanları ortalama $3,19 \pm 0,52$ 'dir; olguların %66,0'sının puanı 3 ve üzerindedir. Çalışmadan elde edilen verilere göre kadınlarda vücut ağırlığı ile toplam yeme farkındalığı puanı arasında negatif yönlü istatistiksel olarak anlamlı ilişki saptanırken ($p < 0,05$), erkeklerde kilo ölçümleri ile

toplam puanlar arasında istatistiksel olarak anlamlı ilişki saptanmamıştır ($p>0,05$). Kadınlarda BKİ ölçümleri ile toplam puanlar arasında negatif yönlü istatistiksel olarak anlamlı ilişki saptanmıştır ($p<0,05$). Erkeklerde ise BKİ ölçümleri ile toplam puanlar arasında istatistiksel olarak anlamlı ilişki saptanmamıştır ($p>0,05$). Kadınlarda bel çevresi ve kalça çevresi ölçümleri ile toplam puanlar arasında negatif yönlü istatistiksel olarak anlamlı ilişki saptanırken ($p<0,05$), erkeklerde bu fark istatistiksel olarak anlamlı bulunmamıştır. ($p>0,05$). Kadın ve erkeklerde bel-kalça oranları ile toplam puanlar arasında istatistiksel olarak anlamlı ilişki saptanmamıştır ($p>0,05$). Obezite tedavisinde kalori kısıtlamasına ek olarak yeme farkındalığı davranışı geliştirmenin vücut ağırlığında azalma sağlayabileceği görülmektedir. Bu nedenle diyet tedavilerine yeme farkındalığı uygulamasının dahil edilmesi önerilmektedir.

Anahtar Sözcükler: Beslenme, Yeme Farkındalığı, Antropometrik Ölçüm, Obezite, Açlık

TABLE OF CONTENTS

THESIS APPROVAL	ii
DECLARATION	iii
ACKNOWLEDGEMENTS.....	iv
ABSTRACT.....	v
ÖZET	vii
LIST OF TABLES	xi
LIST OF FIGURES.....	xii
ABBREVIATIONS.....	xiii
1.INTRODUCTION AND PURPOSE.....	1
1.1.Definition and Importance of the Problem	1
1.2. Purpose of the Research.....	4
1.3.Hypotheses of the Research	5
2. GENERAL INFORMATION	6
2.1. Mindful Eating Concept.....	6
2.1.1. Definition and Development	6
2.1.2. Effects of Mindful Eating on Nutritional Behavior.....	7
2.1.2.1. Obesity	7
2.2. Anthropometric Measurements in Evaluation of Nutritional Status	8
2.2.1. Definition and Importance of Anthropometric Measurements	8
2.2.2. Making Anthropometric Measurements	9
2.3. Mindful Eating and Its Importance.....	9
3.MATERIALS and METHODS.....	33
3.1. Type and Pattern of the Research.....	33
3.2. Place and Time of the Study	33
3.3. The Universe and the Sample of the Research.....	33
3.4. Inclusion Criteria for the Research.....	33
3.5. Criteria not Included In The Research.....	33
3.6. Data Collection Tools	33
3.6.1. Socio-Demographic and Anthropometric Properties.....	34
3.6.2. Questionnaire.....	35
3.6.2.1. Mindful Eating Questionnaire (MEQ-30).....	35
3.7. Evaluation of the Data	36
3.7.1. Dependent and Independent Variables of the Study	37
3.7.2. Statistical Analysis to be Used in the Research	37

3.8. Application of the Research	37
3.9. Limitations of the Research	38
3.10. Ethical Dimension of the Research	38
4. RESULTS	39
5.The Relationship and Comparison of the Mindful Eating Questionnaire Mean Points According to the Socio-Demographic Characteristics of the Individuals	46
6. The Relationship Between the Anthropometric Measurements of the Individuals and the Mindful Eating Questionnaire	54
5.DISCUSSION	70
5.1. Discussion of Findings Related to Mindful Eating Questionnaire Score Average According to Socio-Demographic Characteristics of Individuals	70
5.2. Discussion of Findings Related to Mindful Eating Questionnaire Mean Scores According to Anthropometric Properties of Individuals	72
6. CONCLUSION AND RECOMMENDATIONS.....	78
6.1. CONCLUSION	78
6.2. RECOMMENDATIONS	84
8. APPENDICES.....	93
APPENDIX 1: Ethical Approval	94
APPENDIX 2: Informed Consent Form.....	95
APPENDIX 3: Questionnaire Form.....	97
APPENDIX 4: Mindful Eating Questionnaire (MEQ-30)	99
APPENDIX 5: Curriculum Vitae.....	101

LIST OF TABLES

Table 4.1. Distribution of Socio-Demographic Characteristics of Individuals	39
(n = 200)	39
Table 4.2. Distribution of Anthropometric Properties of Individuals (n = 200)	41
Table 4.3. Distribution of Individuals' Responses to Mindful Eating Questionnaire Items (n = 200)	43
Table 4.4. Distribution of Individuals' Mindful Eating Questionnaire Items, Sub-Dimension and Total Scores.....	45
Table 5.1. The Relationship Between the Age of the Individuals and the Mindful Eating Questionnaire	46
Table 5.2. Comparison of Sub-Dimension and Total Score Means of Mindful Eating Questionnaire According to the Gender of the Individuals	48
Table 5.3. Comparison of Sub-Dimension and Total Score Means of Mindful Eating Questionnaire According to Income Levels of Individuals.....	51
Table 6.1. The Relationship Between Individuals' Body Weight and Mindful Eating Questionnaire	54
Table 6.2. The Relationship Between Individual's Height Length Measurements and Mindful Eating Questionnaire	55
Table 6.3. The Relationship Between Individual's BMI Values and Mindful Eating Questionnaire	56
Table 6.4. Comparison of the Mindful Eating Questionnaire Mean Scores of Women According to BMI Levels	59
Table 6.5. A Comparison of the Mindful Eating Questionnaire Scores of Men According to BMI Levels	62
Table 6.6. The Relationship Between Individual's Waist Circumference Measurement and Mindful Eating Questionnaire	64
Table 6.7. The Relationship Between Individual's Hip Perimeter and Mindful Eating Questionnaire	66
Table 6.8. The Relationship Between Individuals' Waist-Hip Ratio and Mindful Eating Questionnaire	68

LIST OF FIGURES

Figure 1. Distribution of Ages of Individuals	40
Figure 2. Distribution of Individuals' Genders.....	40
Figure 3. Distribution of Income Levels of Individuals	41
Figure 4. Distribution of BMI Levels in Female and Male	42
Figure 5. The Relationship Between BMI Measurements and Mindful Eating Questionnaire Sub-dimension and Total Scores in Female	58
Figure 6. The Relationship Between Waist-Hip Ratios and Mindful Eating Questionnaire Sub-Dimension and Total Scores in Women.....	69

ABBREVIATIONS

ACT	Acceptance and Commitment Therapy
BED	Binge Eating Disorder
BMI	Body Mass Index
CAR	Cortisol Awakening Response
CRP	C Reactive Protein
DBT	Dialectical Behavioral Therapy
DEBQ	The Dutch Eating Behaviour Questionnaire
DSME	Diabetes Self-Management Education
EA	Emotional Ability
EMPOWER	Enhancing Mindfulness for the Prevention of Weight Regain
FMI	The Freiburg Mindfulness Inventory
GR	Glucocorticoid Receptor
HADS	The Hospital Anxiety and Depression Scale
HPA	Hypothalamic-Pituitary-Adrenal
IL-6	Interleukin-6
Kg	Kilogram
M	Meter
MACBT	Mindfulness-Action Based Cognitive Behavioral Therapy
MBCT	Mindfulness-Based Cognitive Therapy
MB-EAT	Mindfulness-based Eating Awareness Training
MBSR	Mindfulness-Based Stress Reduction
MEAL	Mindfulness Eating and Living
MEQ-30	Mindfulness Eating Questionnaire

NCSS	Number Cruncher Statistical System
PECB	Psychoeducational/cognitive-behavioral intervention
RCT	Randomized Controlled Trail
SEI	Cognitive Behavioral Stress-Eating Intervention
SPSS	Statistical Packages for Social Science
SUD	Substance Use Disorders
UCS	Uncontrolled Cohort Study



1.INTRODUCTION AND PURPOSE

1.1. Definition and Importance of the Problem

Eating behavior is influenced by many factors such as emotional state, environmental factors, appetite changes and religious practices. The emotional states such as stress, sadness, tension, happiness, excitement, which individuals are frequently exposed to in their daily lives, are effective in eating attitude and behavior (1). Many studies have highlighted the relationship between eating behavior, emotions, and increased energy intake. It is important to cope with emotional states in maintaining body weight control. It has been reported that eating behavior in obese individuals mostly results from emotional states. It has been observed that when individuals' mindfulness of eating is increased, their ability to cope with emotions also increases (2).

Recently, the importance of developing mindful eating in gaining healthy eating behavior is emphasized and its success in using it as an intervention technique in the treatment of obesity is discussed. Especially on eating behavior, it develops the ability to recognize and cope with emotional states, and the efficiency of body weight control therapy can be increased by gaining mindfulness of eating. Healthier alternatives can be chosen by increasing the attention given to food during eating behavior, internalizing the food consumed, and reducing the sensitivity to emotions and thoughts during consumption (1).

The concepts of mindfulness and mindful eating have become increasingly popular recently. Kabat-Zinn (2003) has expressed the concept of "Conscious mindfulness" as "an mindfulness that involves paying attention to the present unconditionally consciously". The term 'mindfulness' means 'conscious mindfulness'. When evaluated in terms of eating behavior, "mindfulness eating" is called "Mindful eating" or "eating by realizing" (3).

Today, one of the pioneers of mindfulness is Jon Kabat Zinn (4), who developed the mindfulness-based stress reduction program (MBSR), which is used internationally in the management of depression.

Mindful eating consists of making conscious food choices, developing mindfulness of physical / psychological hunger and satiety tips, and making healthy food choices in response to these tips. It is conceptualized as being aware of the present moment when the person is eating, paying close attention to the effect of the food on the senses and paying attention to the physical and emotional sensations in response to the food (4).

Recently, the effects of mindfulness on pain, depression and psychological well-being have been studied in many studies. Regarding eating behavior, in the late 1990s, Kristeller & Hallet began investigating the use of mindfulness in binge eating with early interventions (using Attention-Based Mindful eating Training (MB-EAT: mindfulness-based eating awareness training). This intervention was later developed for obese populations with or without binge eating disorders. In recent years, attention and careful eating have increased in obese / overweight and normal weight populations (4).

Intuitive eating is a complementary term used instead of mindfulness of eating. Intuitive nutrition was first described in 1995 by dieticians in the United States in terms of “rejection of diets, prevention of labeling food as “ bad ”, honoring hunger and allowing satisfaction with food intake. Both mindful eating and intuitive eating focus on intrinsic eating; however, intuitive eating does not include meditation (4). Intuitive eating aims to teach how to eat according to hunger and satiety tips by rejecting the perception of diet and to create an intuitive relationship between the food and the body, and to increase eating to a healthy and sustainable dimension (5).

Although mindfulness of eating and intuitive eating are seen as similar concepts, in mindful eating, while it is about gaining mindfulness of what and where the individual will eat, food is not judged and eating without being affected by environmental factors, the reasons that push the individual to eat in intuitive eating are emphasized (1).

Promoting the mindfulness eating approach seems to be a positive message for individuals in general weight management (4).

Excessive body weight is one of the toughest public health problems today. Our relationship with food is important; A recent report by the UK on providing a positive 'food future' has shown that consumers have lost links that need to be protected with food. Problem eating behaviors are characterized by obesity, for example, binge and emotional eating (4).

Obesity is an ongoing health problem and brings with it many chronic diseases. The relationship between eating behavior and weight gain and obesity has been known for a long time. The calorie restriction used in obesity treatment cannot be sustainable in long-term treatments. Classical strategies have often been proven ineffective in achieving long-term and sustainable weight loss (3).

The basis of nutrition programs applied in the treatment of obesity is based on calorie restriction. It was observed that approximately half of the weight lost after treatment was recovered in the first year. It has been observed that 80% of the individuals reached their old weight in 3-5 years and even exceeded it. For these reasons, different interventions are needed in addition to calorie restrictive applications. It is thought that it can provide a permanent solution in the treatment of obesity since mindful eating provides mindfulness of nutritional feelings and habits without being judged (6).

There is also evidence that repeated dietary interventions can adversely affect both physical and mental health (6). In addition to this, providing a behavioral change such as mindful eating, reducing body weight is much more effective (3).

Mindful eating is a form of eating that focuses on food that will be consumed at the moment without being affected by environmental factors and judging food choices, by realizing how and why eating behavior occurs rather than what is eaten, by internalizing the concept of physical hunger-satiety, and aware of the effect of emotions and thoughts. The main focus in mindful eating is to gain full mindfulness of the taste and texture of the food. Mindful eating requires the elimination of all distracting environmental factors such as television viewing. This mindfulness reduces food craving, slows down the speed of eating and thus can help maintain weight control (1). With this teaching, it is possible to change the eating behavior permanently. It helps to reduce the acceptance of emotions and to accept the emotions in order to avoid the emotions. When saturation is achieved through mindful eating behavior, it is expected to end eating

behavior and to enjoy eating. Thus, it helps to realize healthy weight loss by reducing excess calorie food consumption (5)

In mindful eating intervention, it is changed by influencing eating habits in different ways. Individuals eat according to their feelings of physical hunger and satiety with increased mindful eating behavior. The feeling of satiety is perceived by the brain approximately 20 minutes after the meal is started. Mindful eating slows down the speed of eating, making individuals feel more full with a smaller amount of nutrients, thereby reducing overall energy intake. Mindfulness training increases the ability to relax in the face of many negative events and emotions that can induce an automatic response, helps to reduce the impulsiveness associated with overeating, thereby reducing eating without thinking that develops in response to non-physical cues (5).

Mindful eating has been shown to have effects on making healthier food choices, providing less energy intake, and thereby aiding healthy weight loss (1). In addition, mindful eating has been found to be effective on stress reduction and eating disorders (1). In eating disorders, it provides effect by limiting and controlling food intake. Mindful eating-based interventions can offer a more holistic and long-term treatment approach than traditional body weight management practices alone. It is thought that the new treatment methods that will be developed by using the mindfulness of eating together with traditional practices in the treatment of body weight management and eating disorders will be promising (1).

In most studies on mindful eating, the effect of mindful eating on weight and body mass index was investigated. Unlike the studies in the literature, this study also reveals the effect of waist-hip ratios from anthropometric measurements on mindful eating.

1.2. Purpose of the Research

In this study, it is aimed to evaluate the relationship between mindful eating behavior and anthropometric measurements.

In the treatment of obesity, classical calorie restriction strategies have often been proven ineffective in achieving long-term and sustainable weight loss. It was observed that approximately half of the weight lost after diet therapy was

recovered in the first year. For these reasons, different interventions are needed in addition to calorie restrictive applications. Calorie-restricted dietary interventions are not a permanent solution to body weight loss, behavioral interventions raise mindfulness about eating and saturation, and provide more permanent weight loss by directing them to healthy eating habits. For these reasons, different interventions are needed in addition to calorie restrictive applications. Mindful eating is thought to provide a permanent solution in the treatment of obesity as it provides mindfulness of nutritional feelings and habits without being judged.

1.3.Hypotheses of the Research

H1. There is a difference between the mean scores of the mindful eating scale according to the age of the individuals.

H2. There is a difference between the mean scores of the mindful eating scale according to the sex of the individuals.

H3. There is a difference between the mean scores of the mindful eating scale according to the income levels of the individuals.

H4. There is a difference between the mean scores of the mindful eating scale according to the body weight of the individuals.

H5. There is a difference between the mean scores of the mindful eating scale according to the body mass index of the individuals.

H6. There is a difference between the mean scores of mindful eating scale according to the waist-hip ratios of the individuals.

2. GENERAL INFORMATION

2.1. Mindful Eating Concept

The concept of "mindfulness" involves paying attention unconditionally to this moment.

Mindful eating is a form of eating that focuses on food that will be consumed at the moment, without being affected by environmental factors and judging food choices, by realizing the concept of how and why eating behavior occurs rather than what is eaten, by internalizing the concept of physical hunger-satiety and aware of the effect of emotions and thoughts. Mindful eating is the simplest definition that can be defined as eating by focusing on the food to be consumed at the moment (2). Mindful eating is an approach that focuses on the individual's sensory mindfulness and experiences about food. It has nothing to do with calorie intake, carbs, fat or protein. The purpose of eating with caution is not to lose weight, but those who adopt this eating style are likely to lose weight. The aim is to enable individuals to enjoy the moment and food, to help them exist exactly at that moment for the eating experience (9).

2.1.1. Definition and Development

The term "mindfulness-mindfulness" was first described by Jon Kabat-Zinn. Kabat-Zinn was the original developer and leader of the mindfulness Based Stress Reduction (MBSR) program at the University of Massachusetts Medical School. Based on his experience in this program since 1979, he wrote the book *Full Catastrophe Living* in 1990 to guide him on living with mindfulness (9). Mindfulness according to Jon Kabat-Zinn "It is a state of consciousness that we have gained by giving our attention now, continuously, deliberately, without specific prejudice." It is one of many forms of meditation. Mindfulness is consciousness. The main prejudice we are in is deliberate attention without any judgment. It is the state of consciousness itself (10).

2.1.2. Effects of Mindful Eating on Nutritional Behavior

Mindful eating plays an important role in body weight control. This is achieved by portion control, preventing emotional eating and being able to stop overeating. Mindful eating does not mean to perform eating behavior reflexively and has the potential to reduce automatic eating responses. With mindfulness, emotional eating will lose its effect and consumption of unnecessary foods will decrease (2).

2.1.2.1. Obesity

Obesity can be defined as an abnormal increase in fat mass. In addition to genetic factors, high calorie food consumption and sedentary life are among the most important environmental factors causing obesity (2).

Body mass index (BMI) classification is generally used in the diagnosis of obesity. Body mass index is calculated by dividing body weight in kilograms (kg) by the square of the neck in meters (m). In the BMI classification, it is defined that when BMI is less than $18.5 \text{ kg} / \text{m}^2$, it is weak, it is normal to be between $18.5\text{-}24.9 \text{ kg} / \text{m}^2$, it is slightly fat to be between $25\text{-}29.9 \text{ kg} / \text{m}^2$, it is obese to be between $30 \text{ kg} / \text{m}^2$ and higher (2).

Obesity is the second leading cause of preventable deaths and is associated with an increased risk of chronic diseases such as hypertension, type 2 diabetes and cardiovascular disease. In addition, obesity has been shown to affect psychological health and is associated with increased depression, anxiety, and poor quality of life. These psychological conditions can negatively affect weight loss and weight management attempts. As obesity continues to contribute negatively to social, economic and personal outcomes, there is an urgent need for effective weight management techniques (7).

In 2016, 39% of adults aged 18 and over worldwide were overweight or obese, meaning they had a body mass index of 25 and over. This condition is associated with an increased risk for musculoskeletal disorders such as cardiovascular diseases, diabetes, osteoarthritis and some cancers (6).

The prevalence of obesity was 42.4% in 2017 ~ 2018. Between 1999-2000 and 2017-2018, the obesity prevalence increased from 30.5% to 42.4% and severe obesity prevalence increased from 4.7% to 9.2% (8).

The severe nature of these health outcomes and their economic importance classify overweight and obesity as a growing global health problem (6).

In studies examining the effect of eating speed on total calorie intake, it was observed that less food intake occurred in slower food consumption, regardless of starvation (2).

Evidence suggests that weight loss in overweight or obese people can prevent or reduce most of the risks for chronic diseases. Various strategies such as calorie restriction, physical activity, pharmacotherapy or bariatric surgery can be used in weight loss. General recommendations for weight loss include: reducing calorie intake, increasing physical activity, and behavioral change. As part of the behavior change, mindfulness-based practices are shown as a potential strategy for weight management interventions (7).

2.2. Anthropometric Measurements in Evaluation of Nutritional Status

Anthropometric measurements are important in determining nutritional status, as they are indicative of growth, lean body tissue and the amount of adipose tissue and its distribution in the body. Measurements such as body weight, height, upper middle arm circumference, waist circumference, hip circumference, skin fold thickness are frequently used methods. When anthropometric measurements are used continuously and regularly, the nutritional status of the individual can be evaluated as healthy.

Body weight, height, BMI, waist circumference, hip circumference and waist-hip ratio are more frequently used anthropometric measurements.

2.2.1. Definition and Importance of Anthropometric Measurements

Body weight and height measurement are often used as an indicator of nutritional status. Weight is the sum of total fat, muscle, water and bones in the body. BMI, which is an index based on height and body weight, is the most commonly used anthropometric index at both individual and community levels.

BMI is used to evaluate obesity. BMI is calculated by dividing body weight (kg) by the square of the length (m).

2.2.2. Making Anthropometric Measurements

Weighing instrument which can be calibrated is used in body weight measurement. Measurement is done with thin clothes and without shoes. Weighing instrument sensitive to 0.5 kg should be used.

Whenever possible, measurement should be done after defecation when hungry in the morning.

Length measurement is made with feet together and the head in the Frankfort plane. Stadiometer should be used in measurement.

BMI is calculated by dividing body weight (kg) by the square of the length (m).

Measurement of waist circumference is located between the lower rib bone and the crest of the ilium, the circumference passing through the midpoint is measured by the tape measure.

Hip circumference measurement is standing on the side of the individual and environmental measurement is made from the highest point.

The waist to hip ratio is also obtained by dividing the value of the waist circumference in cm by the value of the hip circumference in cm.

2.3. Mindful Eating and Its Importance

In recent years, there has been an increase in literature examining the relationship between mindfulness and obesity. Mindfulness practice involves consciously aware of the usual patterns of thoughts, emotions, and behaviors, thus allowing adaptive responses. Being aware of the habit patterns enables the individual to have the ability to better control emotional reactions and adapt when necessary. In addition, mindfulness individuals show more compassion, self-control, and emotional regulation (7).

Mindful-based eating education has shown some positive results that will improve psychological and physical health by modifying the eating behavior and

eating attitudes of obese adults and to some extent by affecting body mass index and physiological risk factors (11).

Mindful eating interventions also help reduce emotional eating and automatic eating behaviors in impulsive eating and binge eating disorders. Calorie-restricted diet interventions cannot be a permanent solution to body weight loss, behavioral interventions raise mindfulness about eating and satiety, provide more permanent weight loss by directing them to healthy eating habits(2).

Mindful eating skills include recognizing individuals' feelings such as boredom or anxiety, inappropriate clues about food and not responding to them with eating behavior (12).

Mindfulness skills are different from the most commonly taught cognitive skills for weight management such as meal planning, record keeping and portion control. Indeed, it has been observed that the “mindful-eating” behaviors of those who are weak in the long term and who are successful in weight loss interventions develop more (12).

Mindful eating encourages mindfulness of our eating experiences. It is also a strategy that meets the criteria to change one's overall eating approach. Careful eating has also become the focus of the eating approach, which meets the criteria for changing the general approach to eating. Unless behavior is changed, the results of the diet applied are considered to be non-permanent. When diet applications are examined, it is seen that all of them are effective in the short term and most of them are ineffective in the long term. Therefore, interventions are needed to assist in weight control and to ensure permanent results (9).

Mindfulness is a process-oriented behavior rather than a result-oriented one. It is based on the individual's current experience. The individual focuses on the eating experience and is not concerned with limiting intake. The person who eats chooses what and how much to consume. With a careful approach, the choices of the person are generally in the form of eating less, enjoying more and choosing foods that are more beneficial for health (9).

'Mindful-based eating awareness training' (MB-EAT), one of the mindful eating interventions, is specifically designed for the treatment of Binge Eating.

Since then, attention-based interventions are increasingly being used in the treatment of eating-related problems, from eating disorders to obesity and comorbidities (13).

Mindfulness practice has been proposed as an alternative approach to healthy weight regulation, because it takes into account incompatible responses to internal and external signals, and people feel their food and beverage decisions more under control.

Mindful eating is to recognize one's own hunger and satiety tips and follow them to decide when, what and how much to eat, choosing nutritious foods, slowing one's eating speed, eating as the only activity (eg not in front of TV or in the car), and the use of all the senses while eating involves responding to food without judgment, eating without mindfulness and gaining increased mindfulness and meditation about its consequences.

The application takes into account the responses to internal and external tips to reduce autopilot eating responses. Making self-conscious eating or food and beverage decisions while in autopilot may contribute to increased eating and calorie intake because there is a significant lack of mindfulness of how much a person eats (14).

Mindfulness practice has been proposed as an alternative approach to healthy weight regulation, because it takes into account incompatible responses to internal and external signals, and people feel their food and beverage decisions more under control.

Mindful eating includes enjoying the food without judging the senses. The basic principles of mindful eating are to listen to the body's inner tips (hunger and satiety tips) to avoid excessive consumption, and to use external tips (reducing portion sizes while eating, reducing distractions and slow food) to gain mindfulness. Some practical ways to incorporate mindful eating into life are to chew food thoroughly before swallowing, to drink water between food bites, to taste and taste the food, to use smaller plates and bowls, to turn off the television and computer while eating, and to create a pleasant dining experience (15).

High body mass index is associated with a low mindful eating score, this suggests that careful nutrition can be used as a weight method program. It can also be used to treat behaviors associated with obesity; it has been shown to increase positive attitudes and behaviors towards food, such as overeating, binge eating behaviors, problematic eating behaviors, and constant desire for snacks (15).

There are multiple principles that make up the mindful of eating, but Monroe emphasized 5 principles: reducing eating speed, evaluating hunger and satiety tips, reducing portion sizes, reducing distractions while eating, and enjoying food. The first basic principle of mindful eating is to reduce the speed of eating. Since slow eating speed allows satiety signals to reach the brain (estimated to take about 20 minutes), lowering the eating speed is assumed to reduce energy intake. Due to the time difference between the chewing and swallowing mechanism and the digestion and absorption of food and nutrients, it is assumed that the feeling of satiety is delayed and supports the idea of reducing the rate of eating. In addition to eating speed, having emotional intelligence and evaluating signs of hunger and saturation are important to achieve the principle of mindful eating. Stress-induced eating or emotional eating, ie eating in response to positive or negative emotional cues, has been reported to contribute to excessive energy gain and weight gain. It has been shown that obesity is associated with emotional reactivity and that obese individuals are more prone to emotional eating. Reducing portion sizes by giving yourself less food, using smaller plate sizes, or ordering smaller portions in restaurants has been identified as methods to prevent weight gain by reducing excess calorie consumption. Distraction while eating causes decreased sensory cues such as taste perception and saturation. Enjoying food is the fifth and last basic mindful eating principle. Using all your senses (sight, smell, taste and feel) is the key to choosing foods that are pleasant / delightful (15).

Mindfulness training is given in various treatment programs such as Mindfulness-Based Stress Reduction-MBSR), Mindfulness-Based Cognitive Therapy-MBCT, Acceptance and Commitment Therapy -ACT, Dialectical Behavioral Therapy-DBT and numerous appropriate interventions targeting specific outcomes or populations (eg Mindfulness Based Mindful Eating Training) are practiced. mindfulness-based interventions such as MBSR and MBCT first developed cognitive behavioral therapies for mood and anxiety

disorders. Acceptance-based (eg ACT) or other behavioral (eg DBT) interventions that systematically raise mindfulness training are created to meet the needs of individuals seeking behavioral change. While mindfulness-based interventions affect thoughts and bodily sensations, acceptance-based and behavioral interventions focus on the acceptance of these emotions and sensations (17).

For body weight, a more significant weight loss was achieved in the intervention group. The mindful eating intervention group showed significantly stronger weight loss compared to the control group that did not receive dietary intervention. No weight loss was observed compared to the control group that received diet therapy compared to the intervention group. No significant reduction was found for the BMI and waist circumference. Therefore, mindful eating nutrition strategy can be considered as an alternative for people struggling with restriction of calorie intake or food selection, which is common in other dietary approaches (6).

According to the results of the systematic analysis performed by Katterman et al, mindfulness meditation shows that in populations with this behavior it effectively reduces binge eating and emotional eating; however, it is emphasized that the results of its effect on weight are mixed. In the study, they found a positive correlation when they evaluated mindfulness interventions related to emotional eating and weight loss. It has been reported that mindfulness interventions are effective in individuals with high emotional eating behavior. Weight loss was observed when it was the main target. However, there is no evidence that loss occurs when there is no specific focus on weight management in mindfulness intervention (18).

A combination of mindfulness training and behavioral strategies in weight management is thought to have more positive effects than only the standard weight loss protocol. Current evidence of mindful eating and weight loss shows that mindfulness training alone without additional behavior may not be effective in weight management and consistent weight loss. Mindful eating intervention has been shown to significantly reduce binge eating and emotional eating. Reducing the connection with thoughts and emotions during food consumption increases mindfulness. With increasing mindfulness, consumption of unnecessary foods

decreases and healthier food choices are made easier. Therefore, it is thought that mindfulness can be used as an effective method in permanent weight loss (18).

A pilot study conducted by Dalen et al in 2010 provides preliminary evidence that an eating-based mindfulness-based intervention may cause significant changes in weight, eating behavior and psychological stress in obese individuals (19).

In this study of Timmerman and Brown with 35 healthy premenopausal women between the ages of 40 and 59, careful eating intervention outside the home was found to be effective in preventing weight gain and reducing daily calorie and fat intake. Timmerman and Brown assessed the effect of the mindfulness intervention on the weight management of obese women who eat out at least 3 times a week; In the 6-week intervention, mindfulness meditations including hunger, satiety and emotional eating signals were performed and it was observed that more weight loss and less daily calorie intake occurred in the intervention group. In a study examining the effects of mindful eating on weight, waist circumference, daily calorie and fat intake reported by individuals, emotional eating, diet self-efficacy and weight management; The participants in the intervention group lost significantly more weight, their average daily calorie and fat intake was lower, their diet-related self-efficacy increased and they faced fewer barriers to weight management while eating out. The results indicate that this special mindful eating intervention shows positive changes in behaviors related to weight management (20).

According to the systematic and metaanalysis results of ten studies reviewed by Fuentes et al., Mindful eating / intuitive eating was not different from traditional diet programs. There was no statistically significant difference in the reduction of BMI or waist circumference. However, they emphasized that it can be used as a practical approach to weight control (6).

Dunn et al examined studies on the effect of mindful eating intervention on weight loss. Four of the five studies examined after the intervention continued to lose weight, while only one experienced increased weight. It has been demonstrated that inclusion of mindful eating interventions as a component or focus in weight management programs provides a significant benefit for the

treatment of obesity. In many of the studies reviewed, while mindful eating strategies compared to traditional treatment methods only see modest improvements, These skills may continue to increase weight loss efforts over time and have been concluded to be effective on long-term weight management (7).

In the study of Mantzios et al., The results show that both mindful eating and self-compassion may be more promising than weight loss alone or diet alone (21).

In a study by Miller et al, mindful eating and self-diabetes management education have been shown to facilitate improvement in diet intake, mild weight loss and glycemic control (22).

According to the results of the study of Daubenmier et al. it has been found that adding mindful eating intervention to diet and exercise program does not show significant weight loss benefit, but may promote long-term improvements in some aspects of metabolic health (23).

In the study of Camilleri et al., which supports the use of mindfulness as a possible component of obesity, women with high attention mindfulness were less likely to be overweight, while higher mindfulness in men was associated with lower probability of obesity (17).

The aim of Durukan and Gül's work was to find generative differences and similarities in eating with mindful. In this cross-sectional study, the Mindful Eating Questionnaire (MEQ: Mindful Eating Questionnaire) was selected and the Turkish version of the questionnaire was used. The survey was published on the internet for one week in January 2019. 43 men and 455 women aged 15-72 participated in the survey. In this intergenerational study, 43 people from the baby boomers generation, 137 from the X generation, 383 from the Y generation and 35 from the Z generation were included. The minimum BMI for the whole group was 15.79 and the maximum was 46.88. BMI values were inversely proportional to the MEQ score as expected. From this result, it is said that eating with mindfulness can play an important role in long-term weight maintenance. It means that the internet user participants of this research are careful eaters. The baby boomers generation had higher scores for almost every subscale than any other generation. Competitive, individualistic generation X had significantly higher

scores for emotional nutrition and conscious eating subscales than other generations. Free spirit generation Y did not have a significant score in this study. However, mindfulness was not important for the deeply emotional Z-generation (24).

Mindfulness-based approaches can reduce compulsive overeating and address behavioral and emotional disorder associated with eating. This randomized study investigated the effectiveness of Attention Based Mindful eating Training (MB-EAT) and psychoeducational / cognitive-behavioral intervention (PECB: Psychoeducational / cognitive – behavioral intervention). The training was a mindfulness training received by groups of 12 sessions. MB-EAT includes apps to create more mindfulness about hunger and fullness tips, sensory satiety and emotional and other triggers for food. The study consisted of 150 overweight or obese people, and 66% of the participants met the criteria for eating disorder, such as DSM-IV-R obstructive. At the 4th month after the intervention, 95% of individuals with obstructive eating disorders did not meet the criteria for BED (Binge Eating Disorder) after MB-EAT and 76% after PECB, in addition, it was found that the binge eating attacks occurred in a smaller size. Improvements are envisaged on a number of variables, including the amount of mindfulness practice and weight loss. The results showed that MB-EAT clinically significantly reduced binge eating and associated symptoms and improved the degree of mindfulness practice (25).

In a randomized controlled study comparing mindfulness-based treatment of Forman et al. with standard treatment, mindfulness training was provided to the intervention group to help raise mindfulness about their perceptual, cognitive and sensory experiences. While weight loss was observed in both groups after therapy, it was found to be significantly higher in the intervention group compared to the control group (13.17% vs 7.54%, $p = 0.01$). In the sixth month control, it was observed that the group receiving mindfulness training continued to maintain the weight they lost (10.98% vs 4.83%, $p < 0.01$) (26).

The portion size in weight management plays an important role in reducing energy consumption and therefore in the treatment of obesity. In order to examine the relationship between mindfulness and portion size, Beshara et al. were asked

to record their daily mindfulness, mindful eating and consumption of high-energy foods. It has been determined that individuals with high mindfulness levels consume high energy foods in smaller portions. According to the results of this research, it has been stated that increasing the mindful of eating can have a significant effect in reducing the portion sizes, reducing the consumption of energy-rich foods and reducing the emotional eating associated with stress (27).

In a study by Alberts et al. (2012), the effects of mindfulness intervention on problematic eating behavior were investigated. For eight weeks; mindful of eating feelings and thoughts related to eating, not being judged, accepting, changing steps of daily eating and physical activity habits were covered. Compared to the control group, in the intervention group, craving, emotional and external eating, body image anxiety decreased significantly and their mindfulness increased (25).

The study of Alberts et al. (2010) examined whether mindfulness-based strategies could effectively reduce food cravings and snacks in the overweight and obese adult population. Overweight individuals who participated in the intervention group treatment received an additional 7-week training aimed at organizing snack requests. The control group did not receive this additional training program. The results showed that participants in the intervention group had less desire for food than the control group after the intervention. The findings emphasize that the possible obsessive thought related to food will be resolved and automatic relations between impulse and response will be reduced (28).

In the study of Corsica et al., It was stated that increase in stress-related eating makes healthy eating behaviors and weight control more difficult. However, several interventions have been designed specifically to reduce stress-related eating. In addition, the optimal goal of such an intervention is uncertain because the goal can be conceptualized as general stress reduction or changing thoughts and behaviors related to emotional eating. This pilot study compared the effects of three intervention components on stress-related eating, perceived stress, and weight loss individually and in combination to determine whether they are effective alone or together. Fifty-three overweight participants (98% women) who had high stress levels and reported increased stress-related eating levels and were

at risk of obesity were randomly assigned to one of three six-week interventions: Modified Mindfulness-Based Stress Reduction-MBSR intervention, cognitive behavioral stress-related eating intervention (Cognitive Behavioral Stress-Eating Intervention-SEI) and combination intervention including all MBSR and SEI components. All three interventions significantly reduced perceived stress and stress-related eating, but the combination intervention caused further reduction and also had a moderate effect on short-term weight loss. Positive results in the six-week follow-up continued. The pattern of results suggested that combination intervention (MBSR + SEI) may initially show promise in stress-induced eating therapy (29).

According to the study of Daubenmier et al. (2011), psychological distress and high cortisol secretion may increase abdominal lubrication, which is a feature of metabolic syndrome. The effect of stress reduction interventions on abdominal lubrication is unknown. Forty-seven overweight / obese women (mean BMI = 31.2) were randomly assigned to a 4-month intervention group to investigate the effects of the stress-related mindful eating program. Mindfulness, psychological distress, eating behavior, weight, cortisol awakening response (Cortisol Awakening Response-CAR) and abdominal lubrication (with dual energy X-ray absorptiometry) were evaluated before and after treatment. Mindfulness, anxiety and environmental eating in the intervention group participants improved compared to the control group. The groups did not differ in mean CAR, weight, or abdominal lubrication. However, obese control group participants showed significant reductions in CAR and protection in body weight, while obese control group participants showed weight gain while having stable CAR. Mindfulness, chronic stress, and improvements in CAR have been associated with a decrease in abdominal lubrication. With this study, it has been concluded that mindfulness training can improve the eating order and CAR value, and thereby reduce abdominal lubrication over time (30).

Research on the use of mindfulness and self-compassion for diet has focused on meditative practices. However, maintaining meditation can be difficult, especially when dieting. Therefore, current research has sought to create mindfulness and self-compassion using food logs that require the participant to focus on concrete (that is, how they eat) or abstract (that is why they are eating)

structures. Concrete structures are expected to increase mindfulness and self-compassion, reduce avoidance and negative thoughts (which helps develop mindfulness and self-compassion). Study 1 found inversion of attention and self-affection with negative thoughts associated with avoidance and weight loss. Study 2 showed that concrete structural logs increased mindfulness and self-compassion, reduced avoidance and negativity, supported significantly greater weight loss than abstract structural logs. Study 3 compared concrete structural diaries with a careful self-compassionate meditation program. At the end of the intervention, there was no difference in terms of weight loss, but at three months of follow-up, the diaries performed better in maintaining the weight. Therefore, concrete structural diaries can increase mindfulness and self-compassion and potentially promote long-term weight loss (31).

In the study of Soleimaninanadegani et al, she tries to find and emphasize the possible relationship between cognitive function, obesity and weight control, especially among girls in the 11-15 age group, to emphasize the importance of preventing obesity and early intervention in children and adolescents. They wanted to measure and emphasize the impact of mindfulness-based cognitive therapy on reducing health risks. In this study, a total of 300 women students between the ages of 11 and 15 were selected from different schools and assigned to overweight and obesity test in 2010-2011. Mindfulness and Cognitive Behavioral Therapy techniques have been used in combination with nutritional treatments accompanied by dieticians. The study argues that these treatments can reduce overweight and increase mindfulness of existing obese students, as well as regular diet therapy offered by dieticians is designed with a healthier method to reduce excess weight, and the results are a major public health concern. This behavioral adjustment program has a major impact on reducing BMI. Significant weight reductions were observed in the MBCT group. With MBCT, a significant improvement was observed in the depression, anxiety and quality of life measurements of the participants between the baseline and completion time. The students participating in this study showed that the related physical and psychological symptoms decreased. Their ability to cope with stressful situations has increased. They showed greater enthusiasm for life, their self-esteem

improved, they had more energy, and their ability to cope with pain improved (32).

Cavanagh et al. organized a study on whether a short training and a short mindfulness study would reduce the impact of portion size on food intake. Participants were randomly assigned to one of the three conditions of knowledge (training, mindfulness or control), and then received from small or large portions of pasta at lunch. Neither training nor mindfulness training was effective in reducing the effect of portion size. Overall, participants consumed 34 percent more pasta when served in large portions compared to a small portion. Mindfulness group participants tended to eat less than participants in the other two conditions, but this trend was not significant (33).

Unlike distraction of having lunch with mindfulness as opposed to eating with or with a special focus, it was investigated whether it reduced the intake of snacks and whether this was related to a measure of meal memory. The participants were designed in three conditions. Twenty-nine women undergraduate students had a fixed lunch while (1) focused on the sensory characteristics of the meal (food focus group), (2) reading a newspaper article about food (food related thoughts control group), or (3) any secondary task (neutral control group) are divided into three groups as individuals with absence. The afternoon intake of lunch and the moment of lunch were measured. Participants consumed significantly less snacks in the food focus group than in the food thoughts control group and the neutral control group. In addition, the food focus group had a lower level of appetite (after lunch) than the other two groups, and a higher level of recalling lunch. The recall of lunch and snacks showed a negative correlation. These results show that by focusing on food while eating, eating can increase the memory of food, decrease subsequent intake, and memory plays an important role in appetite control (34).

In the study of Hong et al., he examined whether eating with mindful was typically a desire to eat more for unsatisfactory foods and whether they enjoyed more of these foods. Participants were randomly assigned for random mindful eating raisins, raisins without mindfulness (control) group condition or basic condition condition without task. People in the group eating raisins with

mindfulness stated that they enjoyed more than the other two groups. Mindful eating practices seem to be beneficial in promoting more enjoyment of previously unpopular or avoided foods. This finding shows that unhealthy eating habits, neophobia, selective eating behaviors, and poor nutritional practices (for example, restriction of consumed food) can potentially be reduced (35).

The study of Jacobs et al. Is a pilot study aimed at examining the effects of 1 hour mindfulness training on food consumption. The study was carried out at the urban, northeastern Catholic university. It consisted of 26 undergraduate English-speaking students whose participants were at least 18 years old. Students with a food allergy or a diagnosis of current or past eating disorders were excluded from the study. Participants were fasted for 4 hours. Between the third and fourth hours, they attended a 1 hour mindfulness training session, which combines three experiential mindfulness exercises with group discussion. After training, they practiced the skills they learned at a quiet lunch. The study found a statistically significant increase in mindfulness ($P = .002$). Eighty six percent of the participants consumed healthy food. There was no statistically significant change in current mindfulness ($P = .617$) or mealtime mindfulness ($P = .483$). In conclusion, it shows that there are promising benefits for the use of mindfulness training to prevent weight gain in healthy individuals. It was stated that more research is needed to understand the impact of mindfulness on long-term, weight gain prevention (36).

Obesity and overweight are important social problems. Mindfulness can promote healthier weight and eating habits. Four studies found a positive relationship between mindfulness and healthy eating. Mindfulness was associated with less impulsive eating, reduced calorie consumption, and healthier snack choices. In addition, mindfulness was shown to have a causal effect on healthier nutrition. An experimental manipulation of situational mindfulness caused participants to consume less calories in a spontaneous eating task. In addition, preliminary evidence was found that mindfulness affects eating behavior by promoting healthy food preference. Taken together, these results found strong evidence that mindfulness promotes healthier eating, even if there are no specific guidelines for feeding mindfulness. These results suggest that generic

mindfulness-based strategies may have helpful benefits to promote healthier eating behavior (37).

According to the study of Kearney et al., Diet-oriented interventions generally do not cause permanent reduction in weight. Increasing behavioral interventions will lead to healthy eating habits, increasing mindfulness about eating tips and saturation. It is assumed that participating in a program called mindfulness-based stress reduction (MBSR) will positively affect eating behaviors and food intake (through emotional eating, uncontrolled eating, and changes in the type and amount of food consumed). Forty-eight people were evaluated before MBSR, after MBSR, and again after 4 months in a large medical center. For all participants ($N = 48$), there was no significant change in emotional and uncontrolled eating in MBSR participants. In addition, there was no significant difference in the intake of energy, fat, sugar, fruit or vegetables at both tracking points compared to the baseline. Depressive symptoms decreased with advanced mindfulness skills. Changes in mindfulness skills had significantly and negatively correlated with changes in emotional eating and uncontrolled eating over time. Overall, there was no evidence that participation in MBSR was associated with significant reductions in eating or dietary intake. It was stated that randomized studies were needed to further describe the relationship between participation in the mindfulness program and eating behaviors (38).

According to the study of Courbasson et al. Individuals with Binge Eating Disorder-BED often have Substance Use Disorders-SUD with poor results simultaneously. This study is the first to examine the treatment results of the simultaneous irregular population. In this pilot study, 38 individuals diagnosed with BED and SUD participated in a 16-week Mindfulness-Action Based Cognitive Behavioral Therapy -MACBT group. The participants significantly improved their binge eating attacks; There was also an improvement in irregular feeding attitudes, alcohol and drug addiction severity, and depression. Taken together, MACBT appears to be promising in the treatment of co-existing BED-SUD patients (39).

According to the study of Kidwell et al., Consumers are generally careless eaters. This research provides a framework for how consumers can make their food

choices more careful. To do this, researchers develop a talent-based education program to strengthen people's ability to focus on targeted emotional information. It shows that only Emotional Ability-EA is trainable and food choices can be improved.(Study 1) also shows that EA training improves food options beyond a nutritional knowledge training program (Study 2). In Study 3, the authors tested a conceptual model and found that EA training increased targeted emotional thoughts and reduced confidence in unhealthy = delicious intuition. Both factors mediate cautious eating effects. Finally, Study 4 shows the long-term benefits of EA training by showing that emotionally trained people lose more weight than a control group and nutritional information training group over a three-month period. These findings show that consumers can control their food choices by developing EA (40).

In the study of Marchiori et al, they examined the effects of an mindfulness-based intervention to promote healthy nutrition. In particular, the effect of a short attention manipulation on portion size was tested and whether it could reduce excessive consumption of unhealthy snacks when hungry. Chocolate cookies were served in small or large portions after an audio book was played to 110 undergraduate students ($\text{Mage} = 20.9 \pm 2.3$; $\text{MBMI} = 22.3 \pm 2.5$) or an mindfulness exercise was performed. The current fasting level was assessed on a visual analog scale before eating. The participants consumed more cookies (83kcal) when presented with a large serving presentation compared to small portions. This situation was not affected by mindfulness intervention or starvation. However, when the control participants were hungry (67kcal), they consumed more unhealthy foods, while the mindfulness participants (1kcal) did not consume almost. The findings confirm the usability of the portion size effect. It was concluded that mindfulness-based interventions can be effective in reducing the effects of hunger on unhealthy food consumption (41).

In the study of Woolhouse et al., The effectiveness of a combined Mindfulness-Cognitive Behavioral Therapy group program was investigated for women with binge eating problems. The questionnaires were filled by group participants before the program ($n = 30$), after the program ($n = 30$) and after 3 months of follow-up ($n = 28$). Significant reductions in eating, body image dissatisfaction and diet were found between the points before and after the

program, and all reductions in follow-up continued. Qualitative interviews with 16 women following the completion of the program revealed the value of mindfulness in improving eating behavior through increased self-mindfulness. This research supports the value of adding mindfulness intervention to cognitive behavioral therapy-based programs that are more commonly used for binge eating (42).

In the literature review by O'Reilly et al., N = 21 articles were included in the study. Various approaches were used to implement mindfulness education, including interventions of mindfulness and cognitive behavioral therapies, Mindfulness-based stress reduction, acceptance-based therapies, mindful eating programs, and mindfulness exercises. Targeted eating behavior results include binge eating, emotional eating, external eating, and dietary intake. 86% of the studies reviewed reported improvements in targeted eating behavior. Overall, the results of this review on the subject support the effectiveness of mindful eating practices in changing obesity-related eating behaviors, especially binge eating, emotional eating, and external eating (43).

According to the study of Levin et al., There is an increase in research showing the potential positive benefits of mindfulness-based interventions for obesity, however, few studies examined the relationship between mindfulness processes and obesity-related behaviors among clinical populations, particularly bariatric surgery candidates. This study examined the relationship between specific mindfulness aspects and various problematic eating behaviors in a clinical sample of 820 patients with bariatric surgery. The results showed that especially more mindfulness was associated with less binge and emotional eating. More mindfulness was associated with less usual overeating and snacking, though less consistently (44).

Ouwens et al examined the relationship between mindfulness and eating behavior in bariatric surgery patients with morbid obesity. The Dutch Eating Behavior Questionnaire -DEBQ, The Freiburg mindfulness Inventory-FMI and The Hospital Anxiety and Depression Scale -HADS was used to collect relevant demographic and medical information in patients with morbid obesity (N = 335; 78.8% women) candidates for bariatric surgery. Three eating behavior styles

(measured, emotional, external / environmental) were used as dependent variables. In three separate multiple regression analyses, it was shown that mindfulness was positively associated with moderate eating behavior (Beta = .28, $p \leq .001$) and negatively related to emotional eating behavior (Beta = -.22, $p \leq .001$). Environmental eating behavior (Beta = -.32, $p \leq .001$) was found independent of gender, age, education level, body mass index and affective symptoms. Mindfulness was associated with more restricted eating and less emotional and environmental eating behavior in patients with morbidly obese bariatric surgery outpatient clinic above and beyond affective symptoms (45).

According to the study of Robinson et al., attention and memory processes support appetite control, however, it is unclear whether encouraging overweight individuals to eat more 'carefully' promotes reductions in energy consumption. In this study with a cross-subject design, a total of forty-eight-weight and obese women consumed a fixed lunch. Optional energy purchases of high-energy snack foods were observed during a second laboratory session later that day. Focused participants ate lunch while listening to voice instructions that encouraged them to pay attention to eating. Under control conditions, participants ate while listening to an audiobook with neutral (non-food-related) content. We measured the memory of the participants' lunch dishes to test whether the focused attention was affecting food intake by increasing the memory of the previously consumed meal. Optional snack intake was approximately 30% lower for participants in the focus condition than those in the control condition, and this difference was statistically significant. Eating with mindful can lead to a significant reduction in energy intake for later meals in overweight and obese individuals. Behavioral strategies that promote a more 'painstaking' diet can promote reductions in energy intake and weight loss (46).

According to the work of Pidgeon et al. Emotional eating resulting from attempts to manage psychological distress such as anxiety, depression and stress contributes significantly to obesity. Mindfulness was shown to be associated with eating behavior disorder. Using a non-clinical sample of 42 men and 115 women, this study investigated the contribution of mindfulness as a potential moderator between psychological distress and emotional eating, while controlling the effects of gender and general nutritional information. In accordance with the estimates,

while psychological distress was positively associated with participation in emotional eating, Mindfulness was found to share an inverse relationship. Findings from the current study support the use of mindfulness-based interventions for emotional eating treatment in individuals with anxiety, stress and low depression levels (47).

The purpose of the study of Moor et al. is to examine the relationship between BMI and physical activity levels of eating with mindfulness among students at a 4-year university and evaluate the potential usefulness of careful eating interventions. Ninety participants completed the questionnaire consisting of the Mindful Eating Questionnaire and questions about height, weight, and physical activity. Low BMI was generally significantly associated with careful nutrition. Physical activity level was not significantly associated with careful eating scores in general; however, students who are more physically active are more likely to eat in response to negative feelings and negative feelings about their food. These results suggested that feeding with mindfulness may be a useful concept (48).

Caldwell and his friends created a program to develop mindfulness skills in individuals who want to maintain weight loss, this program is the Enhancing mindfulness for the Prevention of Weight Regain (EMPOWER) program to prevent weight gain. Participants reported changes in eating behavior, thinking patterns, emotional responses and physical activity, and increased acceptance of personal responsibility in making choices, planning, demonstrating needs and achieving personal goals. They advocated the effect of mindfulness-based approaches in the treatment of obesity and in maintaining weight loss (49).

Grinnell et al. conducted a careful eating intervention with first grade university students (n = 75). Height, weight, waist circumference and blood pressure values were evaluated and online questionnaires were filled. After applying 3 sessions to students in the program for 8 weeks, it resulted in an increase in their mindfulness. Increased mindfulness was positively associated with self-regulation, and negatively with external and emotional eating. In addition, after the intervention, those who received mindfulness intervention had a significantly smaller waist circumference than those who received a traditional

diet intervention. Unfortunately, the short intervention period of the study did not allow the study of stronger anthropometric changes (50).

Olson and Emery (2015) reviewed 19 studies using the mindfulness approach for weight loss. Although they found significant weight loss in 13 of 19 studies, the researchers were unable to document that there was a relationship between careful eating and resulting weight loss. They proposed further research between mindful eating behavior and weight loss to study a particular relationship. This mindfulness is likely to be associated with weight loss, but future studies will be required to examine the exact correlation (51).

In systematic analysis and meta-analysis of Carrière et al., comprehensive data analysis was performed to evaluate the effectiveness of mindful eating practices on weight loss and eating behavior. A total of 18 publications (19 studies, $n = 1,160$) were included. Average weight loss after treatment was 3-3.5 kg at follow-up. Before and after application comparisons, it was concluded that mindful eating practices were moderately effective for weight loss ($n = 16$; Hedge's $g = .42$; 95% CI [.26, .59], $p < .000001$) and were broadly effective in reducing obesity-related eating behaviors. ($n = 10$; Hedge's $g = .70$; CI 95% [.36, 1.04], $p < .00005$). In studies that use informal and formal meditation practice together ($n = 6$; Hedge's $g = .55$; CI 95% [.32, .77], $p < .00001$) compared to formal meditation, greater effects on weight loss were found ($n = 4$ Hedge's $g = .46$; CI [.10, .83], $p < .05$). Results show that mindful eating practices were effective in improving weight loss and obesity-related eating behaviors in overweight and obese individuals (52).

In the pilot study of Carpenter et al. the feasibility and effectiveness of integrating mindfulness training of people with high emotional eating levels into a phone-based weight loss program was evaluated. 75 participants who reported high levels of overeating behavior in response to thoughts and emotions were included in the weight loss program. Seventy-five overweight and obese participants (92% women, 65% Caucasian, 26-68 years old) were randomized to the mindfulness-based weight loss program ($n = 50$) or standard behavioral weight loss program ($n = 25$). The weight loss percentage was not significantly different in the intervention and control groups at 6 months. Participants had significantly

better scores in mindful eating, binge eating, experiential avoidance, and mindfulness subscales. Analysis showed that improvements in various measurements predicted greater weight loss in the intervention group. This pilot study found that integrating attention into a telephone-based behavioral weight loss program was appropriate and acceptable for participants, but on the other hand, it did not result in, on average, more weight loss despite hypothetical changes in mindful eating. Only one third of the participants reported that they regularly attended mindfulness exercises. Changes observed in the intervention group suggest that adults with higher emotional eating levels may lose more weight through mindful eating and meditation intervention (53).

Mindful eating can increase mindfulness of hunger and satiety tips, improve eating patterns and diet patterns, reduce symptoms of depression and anxiety, and be an effective intervention to promote weight loss. Diabetes self-management education (DSME) can be an effective intervention to improve food choices and also for diabetes self-care. However, few studies compared the effect of careful eating and DSME-based treatment on patient outcomes. Adults between the ages of 35-65 years old, who did not require insulin therapy, who had been diagnosed with type 2 diabetes for 1 year or longer, were included and randomly included in the treatment group. There was no significant difference between the groups in weight change. In both groups (all $p < .0125$), there was a significant improvement in the disinhibition of cognitive control regarding depressive symptoms, outcome expectations, nutritional and eating self-efficacy, and eating behaviors (all $p < .0125$). Mindful eating and the availability of DSME-based approaches offer patients more options to meet their self-care needs (54).

The aim of the study of Ruffault et al. was to make a comprehensive quantitative synthesis of the effects of attention training on weight loss and health behaviors in overweight and obese adults using meta-analytical techniques. Studies included in the analysis ($k = 12$) are randomized controlled trials (RCT) that investigate the effects of any form of mindfulness training on weight loss, impulsive eating, binge eating, or physical activity participation in adults with overweight and obesity. In general, according to changes in body mass index after initial intervention in RCTs, mindfulness training in adults with overweight and obesity did not show a statistically significant difference. In general, post-

intervention binge eating and impulsive eating were statistically significantly lower in the intervention groups than in the control groups ($p < .01$). This mindfulness training can be effective in reducing impulsive and overeating in individuals with overweight or obesity, and in increased levels of physical activity that will lead to a better energy balance and contribute to better weight management. The random effects of meta-analyses showed that mindfulness training had no significant effect on weight loss, but had a general negative effect on impulsive eating ($d = -1.13$) and binge eating ($d = -.90$) and a positive effect on physical activity levels ($d = .42$). Among the methodological features, the only significant predictor of weight loss was post-intervention follow-up time ($\beta = 1.18$; $p < .05$), this suggests that longer follow-up times are associated with more weight loss. The results show that mindfulness education has short-term benefits to health-related behavior. In future studies, they stated that the effectiveness of mindfulness training on weight loss should be investigated after long-term intervention in adults with overweight and obesity. These results suggest that longer follow-up times are associated with more weight loss following mindfulness training. (55).

The purpose of the meta-analysis study of Rogers et al. was to evaluate the impact of mindfulness-based interventions on psychological and physical health outcomes in overweight or obese adults. 14 electronic databases were investigated for randomized controlled trials and prospective cohort studies that met eligibility criteria. Fifteen studies were identified in 560 people who measured the results of mindfulness-based interventions after treatment. Average weight loss was 3.5 kg in randomized controlled trials and 4.6 in prospective cohort studies. The average weight loss in the 15 studies evaluated was 4.2 kg. A review of 15 studies involving 560 participants examined their effects on a range of psychological outcomes, including gaining BMI and eating behavior, as well as mood symptoms, eating attitudes, and mindfulness skills. When analyzed collectively, mindfulness-based interventions were significantly effective in improving BMI ($g = 0.47$) from onset to post-test with average weight loss. The overall effects were greatly effective in improving eating behaviors ($g = 1.08$), depression ($g = 0.64$), anxiety ($g = 0.62$), and moderate effects on eating attitudes ($g = 0.57$) and body mass index (BMI; $g = 0.47$) and the results for metacognition were low

effective ($g = 0.38$). The therapeutic effects for BMI ($g = 0.43$), anxiety ($g = 0.53$), eating attitudes ($g = 0.48$) and eating behaviors ($g = 0.53$) remained significant only when the results from high-quality randomized control studies were examined. There was no efficacy advantage for studies that exceeded the 12-hour median dose for face-to-face intervention. While studies using the Acceptance and Commitment Therapy approach provided significant effects to improve BMI ($g = 0.66$), mindfulness approaches created a large variety of small to large ($g = 0.30$ - 1.68) related psychological health and eating. Finally, limited longitudinal data detected conservation of BMI ($g = 0.85$) and gains of follow-up eating attitudes ($g = 0.75$) only in low-quality prospective cohort studies. Attention-based interventions may be beneficial both physically and psychologically for overweight or obese adults, however, it was stated that higher quality researches are needed to examine the mechanisms of action (56).

According to Mason et al., two obstacles to long-term weight loss were psychological stress, characterized by a lack of control over eating and a reduced feeling of satiety. Mindfulness training can be overcome by promoting these barriers, mindfulness of hunger and satiety tips, self-control control and stress reduction. The effects of a 5-month diet and exercise intervention on weight loss among adults, together with mindfulness training or alone, were studied. Mindfulness (according to control) participants showed a significant reduction in award-winning food at 6 months after the intervention, which was equivalent to the weight loss expected in 12 months. Psychological stress had no effect on weight loss in the intervention group at 12 and 18 months. These analyses show that integrating mindfulness components into a diet-exercise-weight loss intervention leads to further reductions in reward-oriented eating. These reductions in reward-guided eating are associated with greater weight loss. Reductions in reward-guided eating are a mechanism by which interventions affect weight change. Future interventions should target reductions in reward-oriented eating to improve weight loss results. As a result, reducing the reward-focused meal, which can be achieved using a diet and exercise intervention involving mindfulness training, can promote weight loss (57).

In a randomized controlled study of Smith et al., The effects of mindful eating intervention on health-related outcomes were examined. Thirty-six obese,

post-menopausal women were randomized to a 6-week Mindful Eating and Living-MEAL intervention or control group. Weight, body mass index (BMI), waist-to-hip ratio (WHR), binge eating, interleukin-6 (IL-6) and C-reactive protein (CRP) were initially evaluated for up to one year in four follow-up periods. Multilevel analyzes showed that the MEAL group had a decrease in weight, BMI, WHR, binge eating, IL-6 and CRP, and the control group had a decrease in weight, BMI and binge eating. The reductions in IL-6 and CRP were higher for MEAL compared to the control group. This study suggests that Mindful-based eating intervention may have various health benefits in obese post-menopausal women (58).

Mindfulness-based interventions are increasingly used in the treatment of binge eating. The effects of these interventions were not extensively reviewed. This systematic review and meta-analysis attempted to summarize the literature on mindfulness-based interventions and identify their effects on overeating behavior. As far as it is known, this study is the first systematic review and meta-analysis to examine the effects of mindfulness-based psychological interventions for binge eating. Nineteen unique studies published between 1999-2014 were identified. Although most of the initial studies were UCS (uncontrolled cohort study), more recent studies were RCT. MBSR (Mindfulness-based Stress Reduction) or MBCT (Mindfulness-based Cognitive Therapy) adapted for food were the most common approaches, followed by DBT (Dialectical Behavior Therapy) and ACT (Acceptance and Commitment Therapy). 11 of the 19 studies evaluated the BED (Binge Eating Disorder) and the majority of the participants in these studies met the BED criteria. Nine of the 19 studies used attention-based interventions. These studies typically used Mindfulness Based Cognitive Therapies (MBCT) or MBSR in the original format or adapted for overeating behavior. Four of these studies examined the effects of MBCT on eating to binge. This systematic review and meta-analysis found that mindfulness-based psychological interventions to reduce binge eating generally have large or medium-large effects. Random effects meta-analysis results supported the large or medium large effects on eating to binge on these interventions (intergroup random effects hedge's $g = -1.12$, 95% CI $-1.67, -0.80$, $k = 18$; mean inter-hedge Hedge's $g = -0.70$, 95% C1 $-1.16, -0.24$, $k = 7$). However, there was high statistical

heterogeneity among studies (59). More than a third of U.S. adults older than 20 are obese and about two-thirds are overweight or obese. The prevalence of obesity among US children and adolescents has increased almost three times since 1980, and 17% of all young people and children are now considered obese. Nine million children aged 6-19 are overweight and this makes obesity the biggest health threat facing today's children. Historically, interventions have been focused primarily on obesity that have increased physical activity and reduced calorie intake. American weight loss strategies, including dietary modifications and exercise, have been proven to be effective in achieving weight loss, but most of the weight is recovered over time. Mindfulness-based interventions, combined with other traditional weight loss strategies, have the potential to offer a long-term, holistic approach to healthy living. However, research reports examining the complementary addition of attention-based approaches to obesity treatment and eating disorders are relatively few in the literature. This article describes what is currently known about the role of mindfulness-based interventions when used alone or in combination with other traditional approaches to the treatment of obesity and eating disorders. In addition to the reduced symptoms of eating disorders, decreased BMI and hip and waist measurements can also be included in the benefits of yoga practice. Other eating benefits of yoga include a general reduction in food consumption, healthier food choices, and a reduced rate of eating (60).

3. MATERIALS and METHODS

3.1. Type and Pattern of the Research

The study examining the effect of mindful eating on anthropometric measurements is a descriptive and cross-sectional research.

3.2. Place and Time of the Study

It was conducted between September 2019-May 2020 in individuals who applied to the Nutrition and Diet Policlinic of a private hospital on the European side of Istanbul.

3.3. The Universe and the Sample of the Research

In the study, population and sample calculations were not made, and all volunteers who applied between the specified dates were included in the study. The sample of the study consists of individuals between the ages of 18-68 who apply to the Nutrition and Diet Policlinic of a private hospital on the European side of Istanbul.

3.4. Inclusion Criteria for the Research

Inclusion criteria for the research has been determined as follows:

- 1) Applying to the Nutrition and Diet Policlinic of the hospital by individuals
- 2) Being 18 years and older
- 3) Participating in the study as a volunteer

3.5. Criteria not Included In The Research

Criteria not included in the research:

- 1) It is determined to be under the age of 18.

3.6. Data Collection Tools

The questionnaire form prepared by the researcher by examining the relevant literature consists of nine questions including socio-demographic characteristics and anthropometric information of individuals (age, gender, height, body weight, body mass index, waist / hip ratio, income status, etc.) (See Appendix 3)

and Mindful Eating Questionnaire (MEQ-30) (See Appendix 4) was applied to individuals to evaluate eating behavior.

3.6.1. Socio-Demographic and Anthropometric Properties

In the first part of the questionnaire, the sociodemographic characteristics of individuals and their anthropometric measurements were questioned in the second part. While taking age, gender and income status from sociodemographic features, height, body weight, body mass index, waist circumference, hip circumference and waist / hip ratios were taken from anthropometric measurements.

The body weight of the participants was weighed by the researcher as a bioimpedance analyzer with a sensitivity of 0.1 kg (Tanita SC330) without shoes and bare feet (metal items, wallets, keyrings, telephones, etc.) on flat and hard ground.

Length length measurement was made with the stadiometer while the individuals were in the upright position and the head was in the Frankfort plane, the heels, hip and back were based on the wall and their feet were adjacent to the wall from the heels.

Body mass indices of individuals were calculated by dividing body weight by the square of the height (body weight (kg) / (height length (m) ²). According to the World Health Organization, BMI classification was used in the evaluation.

Before taking waist measurements, individuals were asked to remove clothes and clothing that would hinder the measurement. The waist circumference of the participants was measured with a stretch tape measure. Individuals were asked to stand upright, hands and arms on both sides and feet close together. Individuals stood directly opposite the person taking the measurement and the waist circumference of individuals from the midpoint between the crystalline bone, the starting point of the hip bone, and the lower rib bone were measured. According to the measurement results, the fact that waist circumference is ≥ 94 cm in men and ≥ 80 cm in women is considered to be a risk factor for metabolic disease and that the waist circumference is ≥ 102 cm in men and ≥ 88 cm in women are considered to be a high metabolic disease risk factor.

On the other hand, the circumference of the hip was measured by standing next to the individual and passing through the widest point. The results were

evaluated according to the World Health Organization waist / hip ratio values. The upper limit of waist / hip ratio is 0.8 in women; It has been accepted as 1.0 for men.

3.6.2. Questionnaire

Mindfulness Eating Questionnaire-30 (MEQ-30) (See Appendix 4) was used to measure individuals' mindful eating.

3.6.2.1. Mindful Eating Questionnaire (MEQ-30)

Mindful Eating Questionnaire (MEQ) was created by Framson et al. in 2009 to measure attention to eating behavior. This scale included four Likert-type questions consisting of 28 questions and five sub-dimensions. Turkish validity and reliability study of the scale was conducted in 2017 by Köse et al. (1). This scale adapted to Turkish has 30 questions, five-point Likert scale (1: none, 2: rarely, 3: sometimes, 4: often, 5: always) and 7 sub-dimensions (disinhibition, emotional eating, eating control, focus, eating discipline, mindfulness, interference) (3).

In scoring the scale, flat and reverse scoring is used: Items 1, 7, 9, 11, 13, 15, 18, 24, 25 and 27 are scored flat, and the remaining questions are scored reversely (Reverse Scoring: 1 = 5, 2 = 4, 3 = 3, 4 = 2, 5 = 1). As the scores obtained from the scale increase, it is accepted that individuals' mindful of eating also increases (2).

Sub-dimensions and sub-dimension contents of MEQ are listed as follows:

- 1. Disinhibition:** It literally means that an individual cannot stop eating even when full. It includes self-retention, quantity and time control as size content.
- 2. Emotional eating:** It includes eating in response to negative emotions, eating for emotional hunger, feeling good and satisfaction.
- 3. Eating control:** Includes the factors to adjust the eating speed and control the eating function.
- 4. Focus:** Focusing on the taste of the food includes taking a break from other activities and thoughts while eating.
- 5. Eating discipline:** It includes planning, preparing, balancing, keeping, order and time factors.

6. Mindfulness: It includes physical hunger-satiety mindfulness, calorie and nutritional value information, healthy nutrition knowledge, and habit mindfulness.

7. Interference: It is in the form of dealing with sensory factors such as smell, image, sound, and distractors such as invitation, food variety or advertisement (2, 5).

While scoring the scale, the arithmetic average of the sub-dimensions and total score is taken. The score of 3 and above obtained from each sub-dimension of the scale indicates that the individual has the feature evaluated by the relevant sub-dimension. The scale also gives the total mindful eating score.

Cronbach's Alpha coefficient obtained for Mindful Eating Questionnaire is 0.819 and it can be said that the scale is highly reliable.

Evaluation of the alpha coefficient is made according to the following criteria:

If $0.0 \leq \alpha < 0.40$, the scale is not reliable.

If $0.40 \leq \alpha < 0.60$ the scale is low reliability

If $0.60 \leq \alpha < 0.80$ the scale is very reliable.

If $0.80 \leq \alpha < 1.00$ the scale is a highly reliable scale.

(Y.KARAGÖZ; “SPSS 21.1 application, Biostatistics; 1st edition; 2014; p: 698)

Evaluation of the correlation coefficient (r) is made according to the following criteria:

0.0 - 0.25 Very weak

0.26 to 0.49 weak

0,50 - 0,69 medium

0.70 - 0.89 good

0,90 - 1,00 very good

(Akgül A. Çevik O. (2003) “Statistical Analysis Techniques”, Emek Ofset, Ankara)

3.7. Evaluation of the Data

NCSS (Number Cruncher Statistical System) 2007 (Kaysville, Utah, USA) program was used for statistical analysis. Descriptive statistical methods (mean, standard deviation, median, frequency, ratio, minimum, maximum) were used

when evaluating the study data. The suitability of the quantitative data for normal distribution was tested by Shapiro-Wilk test and graphical evaluations. Student's t test was used for comparing two groups of normally distributed quantitative data. One-way ANOVA and Bonferroni test were used for comparisons of three or more groups with normal distribution. Kruskal Wallis test was used for comparisons of three or more groups that did not show normal distribution, and Bonferroni-Dunn test was used for binary comparisons. Pearson Correlation Analysis was also used to evaluate the relationships between variables. Significance was evaluated at the level of $p < 0.05$.

3.7.1. Dependent and Independent Variables of the Study

The independent variable of the research is socio-demographic and anthropometric features of individuals. The dependent variable is mindful eating scores.

3.7.2. Statistical Analysis to be Used in the Research

Descriptive statistical methods (mean, standard deviation, median, frequency, ratio, minimum, maximum) were used when evaluating the study data. The suitability of the quantitative data for normal distribution was tested by Shapiro-Wilk test and graphical evaluations. Student's t test was used for comparing two groups of normally distributed quantitative data. One-way ANOVA and Bonferroni test were used for comparisons of three or more groups with normal distribution. Kruskal Wallis test was used for comparisons of three or more groups that did not show normal distribution, and Bonferroni-Dunn test was used for binary comparisons. Pearson Correlation Analysis was also used to evaluate the relationships between variables. Significance was evaluated at $p < 0.05$ level

3.8. Application of the Research

The application of the research was carried out between September 2019 - May 2020. After being informed about the purpose and method of the research, the data collection form was applied to the individuals whose written consent was obtained, by using the face-to-face interview method by the researchers.

3.9. Limitations of the Research

The main limitation of the research is that the sample size cannot be increased due to the limited time for research practice.

In addition, the fact that the number of men is much lower than women is another limitation of the research.

3.10. Ethical Dimension of the Research

For this research, “Ethics Committee Approval” dated 04/12/2019 numbered 37068608-6100-15-1791 was received from the Clinical Research Ethics Committee of Yeditepe University (See Appendix 1).



4. RESULTS

Table 4.1. Distribution of Socio-Demographic Characteristics of Individuals (n = 200)

		n (%)
Age (years)	<i>Min-Max (Median)</i>	18-68 (26,5)
	<i>Mean±Sd</i>	30,52±10,01
Gender	Female	163 (81,5)
	Male	37 (18,5)
Income Level	2000-3000 TL	65 (32,5)
	3001-4000 TL	74 (37,0)
	4001-5000 TL	33 (16,5)
	>5000 TL	28 (14,0)

Table 1 shows the socio-demographic characteristics of the individuals participating in the research.

Accordingly, the age of individuals varies between 18 and 68, with an average of 30.52 ± 10.01 years. 81.5% of the individuals are women and people with 3001-4000 TL income make up 37%.

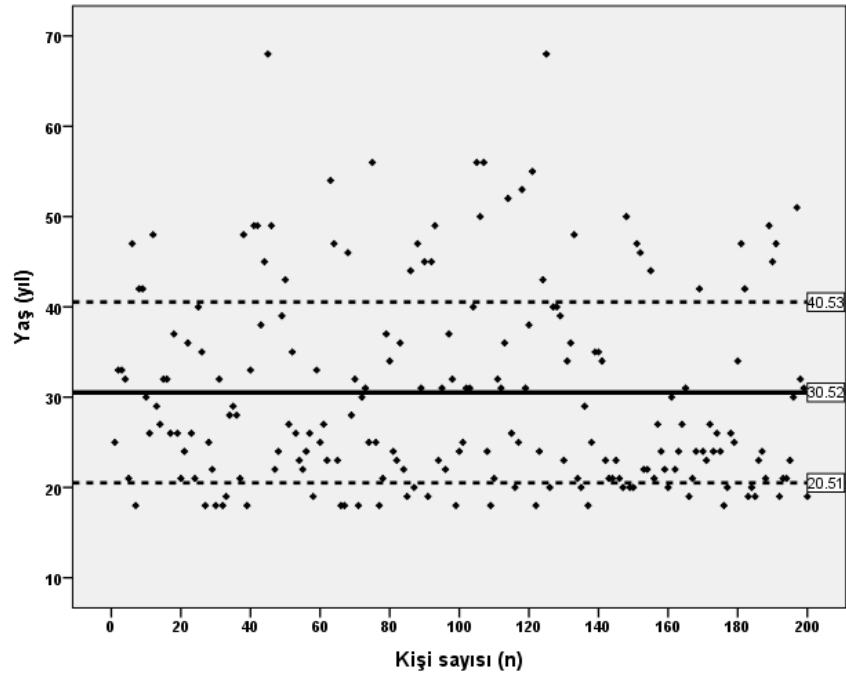


Figure 1. Distribution of Ages of Individuals

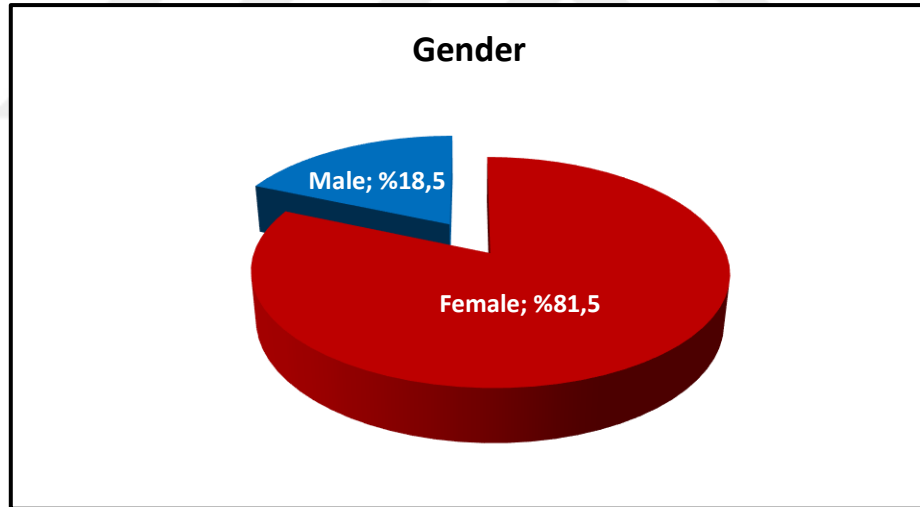


Figure 2. Distribution of Individuals' Genders

When income levels are analyzed; 32.5% (n = 65) with 2000-3000 TL income, 37.0% (n = 74) with 3001-4000 TL, 16.5% (n = 33) with 4001-5000 TL and 14.0% (n = 28) over 5000 of cases were observed.

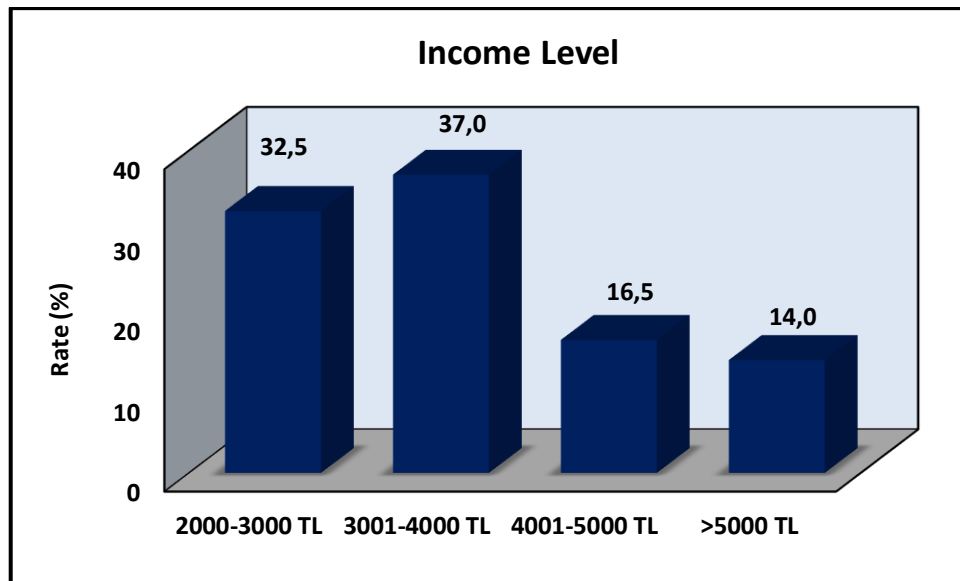


Figure 3. Distribution of Income Levels of Individuals

Table 4.2. Distribution of Anthropometric Properties of Individuals (n = 200)

		Female (n=163)	Male (n=37)
Kilogram (kg)	<i>Min-Max (Median)</i>	42-119 (76,9)	61,3-140 (96,5)
	<i>Mean±Sd</i>	75,85±15,65	95,12±17,34
Length (m)	<i>Min-Max (Median)</i>	1,5-1,7 (1,6)	1,7-1,9 (1,8)
	<i>Mean±Sd</i>	1,61±0,06	1,79±0,07
BMI (kg/m2)	<i>Min-Max(Median)</i>	16,6-47 (29,2)	18,6-40,8 (30,7)
	<i>Mean±Sd</i>	29,30±6,34	29,76±5,10
	Weak	7 (4,4)	0 (0)
	Normal	32 (19,6)	6 (16,2)
	Light fat	48 (29,4)	12 (32,4)
	Obese	76 (46,6)	19 (51,4)
Waist Cirsumference (cm)	<i>Min-Max (Median)</i>	49-131 (93)	74-143 (105)
	<i>Mean±Sd</i>	91,89±17,06	104,86±16,08
Waist Cirsumference (cm)	<i>Min-Max (Median)</i>	75-142 (113)	93-140 (112)
	<i>Mean±Sd</i>	111,89±13,48	111,54±11,14
Waist-Hip ratio	<i>Min-Max (Median)</i>	0,7-1 (0,8)	0,8-1,1 (0,9)
	<i>Mean±Sd</i>	0,82±0,08	0,94±0,07

In Female:

Weight measurements range from 42 to 119 kg, with an average of 75.85 ± 15.65 kg; length measurements range from 1.5 to 1.7 m and the average is 1.61 ± 0.06 m. BMI measurements range from 16.6 to 47 kg / m², with an average of 29.30 ± 6.34 kg / m²; 4.4% (n = 7) of the cases were weak, 19.6% (n = 32) were normal, 29.4% (n = 48) were slightly obese and 46.6% (n = 76) were obese. Waist circumference measurements range from 49 to 131 cm with an average of 91.89 ± 17.06 cm; hip circumference measurements range from 75 to 142 cm, with an average of 111.89 ± 13.48 cm. The waist-hip ratios ranged from 0.7 to 1, with an average of 0.82 ± 0.08 .

In Male:

Weight measurements range from 61.3 to 140 kg, with an average of 95.12 ± 17.34 kg; length measurements range from 1.7 to 1.9 m, with an average of 1.79 ± 0.07 m. BMI measurements range from 18.6 to 40.8 kg / m², with an average of 29.76 ± 5.10 kg / m²; 16.2% (n = 6) of the cases were normal, 32.4% (n = 12) were slightly obese and 51.4% (n = 19) were obese. Waist circumference measurements range from 74 to 143 cm with an average of 104.86 ± 16.08 cm; hip circumference measurements range from 93 to 140 cm, with an average of 111.54 ± 11.14 cm. The waist-hip ratios ranged from 0.8 to 1.1, with an average of 0.94 ± 0.07 .

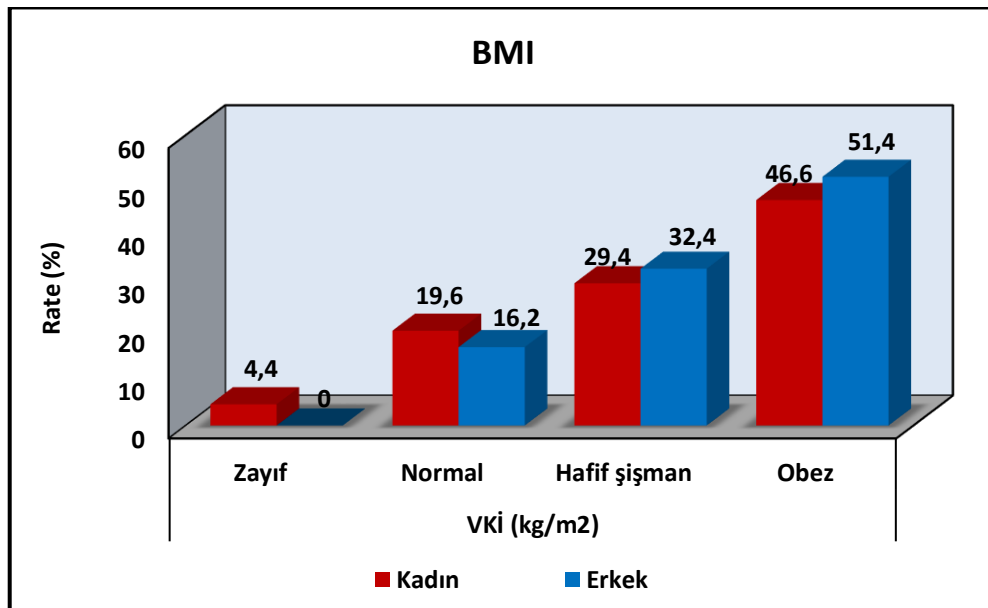


Figure 4. Distribution of BMI Levels in Female and Male

Table 4.3. Distribution of Individuals' Responses to Mindful Eating Questionnaire Items (n = 200)

<i>Questionnaire Items</i>	Never		Rarely		Sometimes		Often		Always		Ort±Ss
	N	%	N	%	n	%	N	%	N	%	
I have information about the calories of foods.	50	25,0	54	27,0	57	28,5	23	11,5	16	8,0	2,51±1,21
I can't eat my main meal without bread.	44	22,0	58	29,0	51	25,5	24	12,0	23	11,5	2,62±1,27
I swallow my donuts without chewing.	88	44,0	40	20,0	47	23,5	15	7,5	10	5,0	2,10±1,19
While I am eating one of the foods I love, I cannot realize that I am full.	35	17,5	41	20,5	56	28,0	36	18,0	32	16,0	2,95±1,32
I can't imagine a life without fast food.	93	46,5	55	27,5	32	16,0	14	7,0	6	3,0	1,93±1,08
People around me say I eat very quickly.	72	36,0	37	18,5	40	20,0	19	9,5	32	16,0	2,51±1,46
I avoid eating gaseous foods.	56	28,0	42	21,0	49	24,5	28	14,0	25	12,5	2,62±1,35
I enjoy the look and smell of food before eating.	22	11,0	25	12,5	41	20,5	44	22,0	68	34,0	3,56±1,36
I can remember what I ate last night.	4	2,0	14	7,0	42	21,0	32	16,0	108	54,0	4,13±1,10
I eat without thinking when something is served.	30	15,0	55	27,5	69	34,5	24	12,0	22	11,0	2,77±1,18
I stay away from high-calorie foods.	49	24,5	45	22,5	78	39,0	19	9,5	9	4,5	2,47±1,10
I prefer to eat foods with high protein content.	23	11,5	33	16,5	71	35,5	47	23,5	26	13,0	3,10±1,17
I notice the subtle flavors in the foods I eat.	21	10,5	33	16,5	54	27,0	49	24,5	43	21,5	3,30±1,27

Suddenly, I realize that I am very hungry and become food.	26	13,0	43	21,5	52	26,0	38	19,0	41	20,5	3,13±1,32
I enjoy every bite I eat.	11	5,5	29	14,5	61	30,5	52	26,0	47	23,5	3,48±1,16
I often diet.	51	25,5	48	24,0	47	23,5	32	16,0	22	11,0	2,63±1,32
Even if I am satiated, a food would be mind-blowing.	21	10,5	48	24,0	58	29,0	35	17,5	38	19,0	3,11±1,26
My meal times are clear.	50	25,0	35	17,5	43	21,5	40	20,0	32	16,0	2,85±1,41
I use a spoon instead of a fork while eating.	48	24,0	59	29,5	49	24,5	18	9,0	26	13,0	2,58±1,30
I eat until I can't eat any more at a meal.	50	25,0	55	27,5	54	27,0	23	11,5	18	9,0	2,52±1,24
I can't stop without eating ice cream, cookies or chips somewhere in the house.	43	21,5	50	25,0	44	22,0	26	13,0	37	18,5	2,82±1,40
When I feel down, the first thing that comes to my mind is food.	59	29,5	46	23,0	40	20,0	20	10,0	35	17,5	2,63±1,44
I eat when I'm bored.	36	18,0	48	24,0	49	24,5	26	13,0	41	20,5	2,94±1,38
I eat healthy.	23	11,5	49	24,5	77	38,5	39	19,5	12	6,0	2,84±1,06
If the food is too hot I would expect it to cool down a bit.	31	15,5	33	16,5	58	29,0	38	19,0	40	20,0	3,12±1,33
I snack without noticing that I eat.	43	21,5	42	21,0	62	31,0	31	15,5	22	11,0	2,74±1,27
I eat with small bites.	36	18,0	39	19,5	63	31,5	36	18,0	26	13,0	2,89±1,27
I eat junk food when I feel stressed.	53	26,5	46	23,0	43	21,5	18	9,0	40	20,0	2,73±1,46
I connect it to the autopilot while eating.	68	34,0	42	21,0	49	24,5	14	7,0	27	13,5	2,45±1,37
I eat chocolate to be happy.	50	25,0	43	21,5	43	21,5	16	8,0	48	24,0	2,85±1,50

The detailed distribution of individuals' responses to the mindful eating questionnaire is given in Table 4.3.

Table 4.4. Distribution of Individuals' Mindful Eating Questionnaire Items, Sub-Dimension and Total Scores

Sub dimensions and Total	Item Number	Min-Max (Median)	Mean $\pm$ SD	<3 points n (%)	≥ 3 points n (%)
Eat without thinking	5	1-5 (3,2)	3,11 $\pm$ 0,88	75 (37,5)	125 (62,5)
Emotional eating	5	1-5 (3,4)	3,21 $\pm$ 1,07	67 (33,5)	133 (66,5)
Eating control	4	1-5 (3,5)	3,46 $\pm$ 0,96	53 (26,5)	147 (73,5)
Mindfulness	5	1,6-4,8 (3,2)	3,25 $\pm$ 0,51	43 (21,5)	157 (78,5)
Eating discipline	4	1-5 (2,8)	2,83 $\pm$ 0,84	103 (51,5)	97 (48,5)
Conscious nutrition	5	1,2-4,4 (3,1)	3,05 $\pm$ 0,61	70 (35,0)	130 (65,0)
Interference	2	1-5 (3,8)	3,66 $\pm$ 0,87	29 (14,5)	171 (85,5)
Total	30	1,7-4,4 (3,2)	3,19 $\pm$ 0,52	68 (34,0)	132 (66,0)

Eating scores without thinking range from 1 to 5, with an average of 3.11 ± 0.88 ; The score of 37.5% (n = 75) of the cases is less than 3, the score of 62.5% (n = 125) is 3 or above..

Emotional eating scores range from 1 to 5, with an average of 3.21 ± 1.07 ; The score of 33.5% (n = 67) of the cases is less than 3, the score of 66.5% (n = 133) is 3 or above.

Eating control scores range from 1 to 5, with an average of 3.46 ± 0.96 ; The score of 26.5% (n = 53) of the cases is less than 3, and the score of 73.5% (n = 147) is 3 or above..

Mindfulness scores range from 1.6 to 4.8, with an average of 3.25 ± 0.51 ; The score of 21.5% (n = 43) of the cases is less than 3, and the score of 78.5% (n = 157) is 3 or above.

Eating discipline scores range from 1 to 5, with an average of 2.83 ± 0.84 ; The score of 51.5% (n = 103) of the cases is less than 3, the score of 48.5% (n = 97) is 3 or above.

Conscious nutritional scores range from 1.2 to 4.4, with an average of 3.05 ± 0.61 ; the score of 35.0% (n = 70) of the cases is less than 3, the score of 65.0% (n = 130) is 3 or above.

Interference scores range from 1 to 5, with an average of 3.66 ± 0.87 ; The score of 14.5% (n = 29) of the cases is less than 3, the score of 85.5% (n = 171) is 3 or above.

Mindful eating questionnaire total scores range from 1.7 to 4.4, with an average of 3.19 ± 0.52 ; The score of 34.0% (n = 68) of the cases is less than 3, and the score of 66.0% (n = 132) is 3 or above.

5.The Relationship and Comparison of the Mindful Eating Questionnaire Mean Points According to the Socio-Demographic Characteristics of the Individuals

Table 2.1. The Relationship Between the Age of the Individuals and the Mindful Eating Questionnaire

Sub-dimensions and Total	Age (Year)	
	R	P
Eat without thinking	0,069	0,329
Emotional eating	0,230	0,001**
Eating control	0,059	0,404
Mindfulness	0,211	0,003**
Eating discipline	-0,088	0,217
Conscious nutrition	0,028	0,698
Interference	0,178	0,012*
Total	0,155	0,028*
<i>r: Pearson Correlation Coefficient</i>		
	<i>*p<0,05</i>	<i>**p<0,01<</i>

A statistically significant correlation was found between age and emotional eating scores at the level of 0.230 (increasing score as age increases) ($r: 0.230$; $p = 0.001$; $p < 0.01$).

A statistically significant relationship was found between age and mindfulness scores at a positive level of 0.211 ($r: 0.211$; $p = 0.003$; $p < 0.01$).

A statistically significant relationship was found between age and interference scores at the positive 0.1178 level ($r: 0.187$; $p = 0.012$; $p < 0.05$). A statistically significant relationship was found between age and total scores at a positive level of 0.155 ($r: 0.155$; $p = 0.028$; $p < 0.05$).

No statistically significant relationship was found between eating and eating, eating control, eating discipline and conscious nutrition scores ($p > 0.05$).

Table 5.2. Comparison of Sub-Dimension and Total Score Means of Mindful Eating Questionnaire According to the Gender of the Individuals

Sub-dimensions and Total		Gender		Ap
		Female (n=163)	Male (n=37)	
Eat without thinking	Min-Max (Median)	1-5 (3,2)	1,2-4,4 (2,8)	0,216
	Mean $\pm$ SD	3,15 $\pm$ 0,89	2,95 $\pm$ 0,87	
	<3 points	55 (33,7)	20 (54,1)	
	$\geq$ 3 points	108 (66,3)	17 (45,9)	
Emotional eating	Min-Max (Median)	1-5 (3,4)	1,8-5 (3,4)	0,036*
	Mean $\pm$ SD	3,14 $\pm$ 1,11	3,50 $\pm$ 0,86	
	<3 points	59 (36,2)	8 (21,6)	
	$\geq$ 3 points	104 (63,8)	29 (78,4)	
Eating control	Min-Max (Median)	1-5 (3,8)	1,3-4,5 (3)	0,001**
	Mean $\pm$ SD	3,59 $\pm$ 0,93	2,89 $\pm$ 0,88	
	<3 points	36 (22,1)	17 (45,9)	
	$\geq$ 3 points	127 (77,9)	20 (54,1)	
Mindfulness	Min-Max (Median)	1,6-4,8 (3,2)	1,8-4,2 (3,2)	0,346
	Mean $\pm$ SD	3,27 $\pm$ 0,51	3,18 $\pm$ 0,53	
	<3 points	32 (19,6)	11 (29,7)	
	$\geq$ 3 points	131 (80,4)	26 (70,3)	
Eating discipline	Min-Max (Median)	1,3-5 (3)	1-4,8 (2,5)	0,015*
	Mean $\pm$ SD	2,89 $\pm$ 0,81	2,53 $\pm$ 0,89	
	<3 points	80 (49,1)	23 (62,2)	
	$\geq$ 3 points	83 (50,9)	14 (37,8)	
Conscious nutrition	Min-Max (Median)	1,2-4,4 (3,2)	2-4,2 (2,8)	0,064
	Mean $\pm$ SD	3,09 $\pm$ 0,61	2,89 $\pm$ 0,57	
	<3 points	50 (30,7)	20 (54,1)	

	≥3 points	113 (69,3)	17 (45,9)	
Interference	Min-Max (Median)	1-5 (4)	1,5-5 (3,5)	0,717
	Mean ± SD	3,67±0,89	3,61±0,77	
	<3 points	24 (14,7)	5 (13,5)	
	≥3 points	139 (85,3)	32 (86,5)	
Total	Min-Max (Median)	1,7-4,4 (3,2)	2,3-4 (3)	0,048*
	Mean ± SD	3,22±0,53	3,05±0,45	
	<3 points	51 (31,3)	17 (45,9)	
	≥3 points	112 (68,7)	20 (54,1)	
<i>aStudent t Test</i>	<i>*p<0,05</i>	<i>**p<0,01</i>		

There was no statistically significant difference between interferences scores by gender ($p > 0.05$). There was no statistically significant difference between eating scores without thinking according to gender ($p > 0.05$).

There was a statistically significant difference between emotional eating scores according to gender ($p = 0.036$; $p < 0.05$); the scores of men were higher than women's.

There was a statistically significant difference between the food control scores by gender ($p = 0.001$; $p < 0.01$); the scores of women were higher than men's.

There was no statistically significant difference between mindfulness scores by gender ($p > 0.05$).

There was a statistically significant difference between eating discipline scores according to gender ($p = 0.015$; $p < 0.05$); the scores of women were higher than men's.

While there was no statistically significant difference between conscious nutrition scores by gender ($p = 0.064$; $p > 0.05$); It is noteworthy that the scores of women were higher than men's.

A statistically significant difference was found between the total scores by gender ($p = 0.048$; $p < 0.05$); the scores of women were higher than men's.



Table 5.3. Comparison of Sub-Dimension and Total Score Means of Mindful Eating Questionnaire According to Income Levels of Individuals

Sub-dimensions and Total		Income Level				bp
		2000-3000 TL (n=65)	3001-4000 TL (n=74)	4001-5000 TL (n=33)	>5000 TL (n=28)	
Eat without thinking	Min-Max (Median)	1,4-5 (3,2)	1-5 (3,2)	1-5 (2,8)	1,6-4,6 (3,6)	0,429
	Mean ± SD	3,13±0,88	3,08±0,85	2,97±1,03	3,34±0,78	
	<3 points	22 (33,8)	28 (37,8)	17 (51,5)	8 (28,6)	
	≥3 points	43 (66,2)	46 (62,2)	16 (48,5)	20 (71,4)	
Emotional eating	Min-Max (Median)	1-5 (3,4)	1-5 (3)	1-4,8 (3,2)	1-4,8 (3,5)	0,040*
	Mean ± SD	3,37±1,05	2,95±1,12	3,20±1,07	3,53±0,87	
	<3 points	18 (27,7)	34 (45,9)	10 (30,3)	5 (17,9)	
	≥3 points	47 (72,3)	40 (54,1)	23 (69,7)	23 (82,1)	
Eating control	Min-Max (Median)	1,5-5 (3,8)	1,3-5 (3,5)	1-5 (3,5)	1,8-5 (3,5)	0,230
	Mean ± SD	3,53±0,91	3,50±0,94	3,14±1,15	3,54±0,84	
	<3 points	17 (26,2)	17 (23,0)	12 (36,4)	7 (25,0)	
	≥3 points	48 (73,8)	57 (77,0)	21 (63,6)	21 (75,0)	
Mindfulness	Min-Max (Median)	1,6-4,8 (3,2)	2,2-4,6 (3,2)	2,6-4,2 (3,2)	1,8-4,2 (3,4)	0,909
	Mean ± SD	3,27±0,54	3,22±0,51	3,25±0,44	3,29±0,53	
	<3 points	16 (24,6)	17 (23,0)	4 (12,1)	6 (21,4)	
	≥3 points	49 (75,4)	57 (77,0)	29 (87,9)	22 (78,6)	
Eating discipline	Min-Max (Median)	1,3-5 (2,8)	1,3-5 (2,8)	1,3-4,8 (3)	1-4,5 (3,3)	0,679
	Mean ± SD	2,80±0,78	2,75±0,79	2,89±0,83	3,00±1,07	
	<3 points	35 (53,8)	41 (55,4)	15 (45,5)	12 (42,9)	

	≥3 points	30 (46,2)	33 (44,6)	18 (54,5)	16 (57,1)	
Conscious nutrition	Min-Max (Median)	1,4-4,2 (3)	1,4-4,4 (3)	1,2-4,2 (3)	2-4,2 (3,2)	0,430
	Mean ± SD	3,06±0,60	3,05±0,60	2,93±0,70	3,19±0,53	
	<3 points	21 (32,3)	26 (35,1)	15 (45,5)	8 (28,6)	
	≥3 points	44 (67,7)	48 (64,9)	18 (54,5)	20 (71,4)	
interference	Min-Max (Median)	1,5-5 (4)	1,5-5 (4)	1-5 (3,5)	1,5-5 (3,8)	0,301
	Mean ± SD	3,68±0,90	3,73±0,77	3,39±0,92	3,70±0,98	
	<3 points	8 (12,3)	8 (10,8)	7 (21,2)	6 (21,4)	
	≥3 points	57 (87,7)	66 (89,2)	26 (78,8)	22 (78,6)	
Total	Min-Max (Median)	2-4,2 (3,3)	2,1-4,4 (3,2)	1,7-4,2 (3,1)	2,5-4,1 (3,3)	0,168
	Mean ± SD	3,23±0,51	3,13±0,51	3,09±0,58	3,34±0,45	
	<3 points	19 (29,2)	28 (37,8)	15 (45,5)	6 (21,4)	
	≥3 points	46 (70,8)	46 (62,2)	18 (54,5)	22 (78,6)	
<i>b</i> Oneway ANOVA Test		* <i>p</i> <0,05	** <i>p</i> <0,01			

There was no statistically significant difference between eating scores without thinking according to income level ($p > 0.05$).

There was a statistically significant difference between emotional eating scores according to income level ($p = 0.040$; $p < 0.05$). As a result of the binary comparisons made to determine which group the significant difference originated from; The scores of the group whose income is over 5000 TL were higher than the group with income of 3001-4000 TL ($p = 0.036$; $p < 0.05$). No statistically significant difference was found in other binary comparisons ($p > 0.05$).

There was no statistically significant difference between eating control scores according to income level ($p > 0.05$).

There was no statistically significant difference between mindfulness scores according to income level ($p > 0.05$).

There was no statistically significant difference between eating discipline scores according to income level ($p > 0.05$).

There was no statistically significant difference between conscious nutrition scores according to income level ($p > 0.05$).

There was no statistically significant difference between the interference points according to income level ($p > 0.05$).

There was no statistically significant difference between total scores according to income level ($p > 0.05$).

6. The Relationship Between the Anthropometric Measurements of the Individuals and the Mindful Eating Questionnaire

Table 6.1. The Relationship Between Individuals' Body Weight and Mindful Eating Questionnaire

Sub-dimensions and Total	Body weight (kg)			
	Female (n=163)		Male (n=67)	
	R	P	r	P
Eat without thinking	-0,241	0,002**	-0,021	0,900
Emotional eating	-0,100	0,205	-0,069	0,687
Eating control	-0,206	0,008**	-0,113	0,507
Mindfulness	0,283	0,001**	0,150	0,374
Eating discipline	-0,212	0,007**	-0,175	0,302
Conscious nutrition	-0,248	0,001**	0,038	0,822
Interference	0,026	0,738	0,163	0,335
Total	-0,194	0,013*	-0,048	0,778
<i>r: Pearson Correlation Coefficient *p<0,05 **p<0,01</i>				

In Female:

There was a statistically significant relationship between weight measurements and eating points without thinking negatively (score decreases as weight increases) at a level of 0.2241 (r: -0.2241; p = 0.002; p < 0.01).

There was a statistically significant relationship between weight measurements and eating control scores at the negative 0.206 level (r: -0.206; p = 0.008; p < 0.01).

There was a statistically significant relationship between weight measurements and mindfulness scores at the level of 0.28 (positive as the weight increases) (r: 0.283; p = 0.001; p < 0.01).

There was a statistically significant relationship between weight measurements and eating discipline scores at the level of negative 0.212 (r: -0.212; p = 0.007; p < 0.01).

There was a statistically significant relationship between weight measurements and conscious nutrition scores at a negative level of 0.248 ($r = -0.2248$; $p = 0.001$; $p < 0.01$).

There was a statistically significant relationship between weight measurements and total scores at a negative level of 0.194 ($r = -0.194$; $p = 0.013$; $p < 0.05$).

There was no statistically significant relationship between weight measurements and emotional eating and interference scores ($p > 0.05$).

In Male:

There was no statistically significant relationship between eating without weight, emotional eating, eating control, mindfulness, eating discipline, conscious nutrition, interference scores and total scores with weight measurements ($p > 0.05$).

Table 6.2. The Relationship Between Individual's Height Length Measurements and Mindful Eating Questionnaire

Sub-dimensions and Total	Height (m)			
	Female (n=163)		Male (n=67)	
	R	P	r	P
Eat without thinking	-0,033	0,680	0,147	0,387
Emotional eating	-0,171	0,029*	0,033	0,846
Eating control	-0,014	0,864	0,164	0,331
Mindfulness	0,038	0,631	0,018	0,916
Eating discipline	0,100	0,202	-0,042	0,807
Conscious nutrition	0,027	0,733	0,232	0,167
Interference	-0,057	0,472	0,045	0,790
Total	-0,047	0,553	0,149	0,378

r: Pearson Correlation Coefficient

**p*<0,05

In Female:

A statistically significant correlation was found between height measurements and emotional eating scores at a negative level (score decreases as height increases) at a level of 0.171 ($r: -0.171$; $p = 0.029$; $p < 0.05$).

No statistically significant relation was found between eating, eating control, mindfulness, eating discipline, conscious nutrition, interference scores and total scores without thinking through height measurements ($p > 0.05$).

In Male:

No statistically significant correlation was found between thinking, emotional eating, eating control, mindfulness, eating discipline, conscious nutrition, interference scores and total scores with height measurements ($p > 0.05$).

Table 6.3. The Relationship Between Individual's BMI Values and Mindful Eating Questionnaire

Sub-dimensions and Total	BKİ (kg/m ²)			
	Female (n=163)		Male (n=67)	
	R	p	r	P
Eat without thinking	-0,213	0,006**	-0,108	0,523
Emotional eating	-0,029	0,714	-0,075	0,657
Eating control	-0,182	0,020*	-0,190	0,259
Mindfulness	0,270	0,001**	0,169	0,319
Eating discipline	-0,235	0,003**	-0,167	0,324
Conscious nutrition	-0,241	0,002**	-0,084	0,619
Interference	0,049	0,538	0,132	0,437
Total	-0,159	0,043*	-0,123	0,467
<i>r: Pearson Correlation Coefficient *$p < 0,05$ **$p < 0,01$</i>				

In Female:

A statistically significant relationship was found between the BMI measurements and the eating scores without thinking (the score decreases as the BMI increases) at the level of 0.213 ($r: -0.213$; $p = 0.006$; $p < 0.01$).

A statistically significant relationship was found between BMI

measurements and eating control scores at a negative level of 0.182 ($r: -0.182$; $p = 0.020$; $p < 0.05$).

A statistically significant correlation was found between BMI measurements and mindfulness scores at the level of 0.270 (increasing score as BMI increases) ($r: 0.270$; $p = 0.001$; $p < 0.01$).

A statistically significant relationship was found between BMI measurements and eating discipline scores at the level of negative 0.235 ($r: -0.235$; $p = 0.003$; $p < 0.01$).

A statistically significant relationship was found between BMI measurements and conscious nutrition scores at a negative level of 0.2241 ($r: -0.2241$; $p = 0.002$; $p < 0.01$).

A statistically significant relationship was found between BMI measurements and total scores at a negative level of 0.159 ($r: -0.159$; $p = 0.043$; $p < 0.05$).

No statistically significant relationship was found between BMI measurements and emotional eating and interference scores ($p > 0.05$).

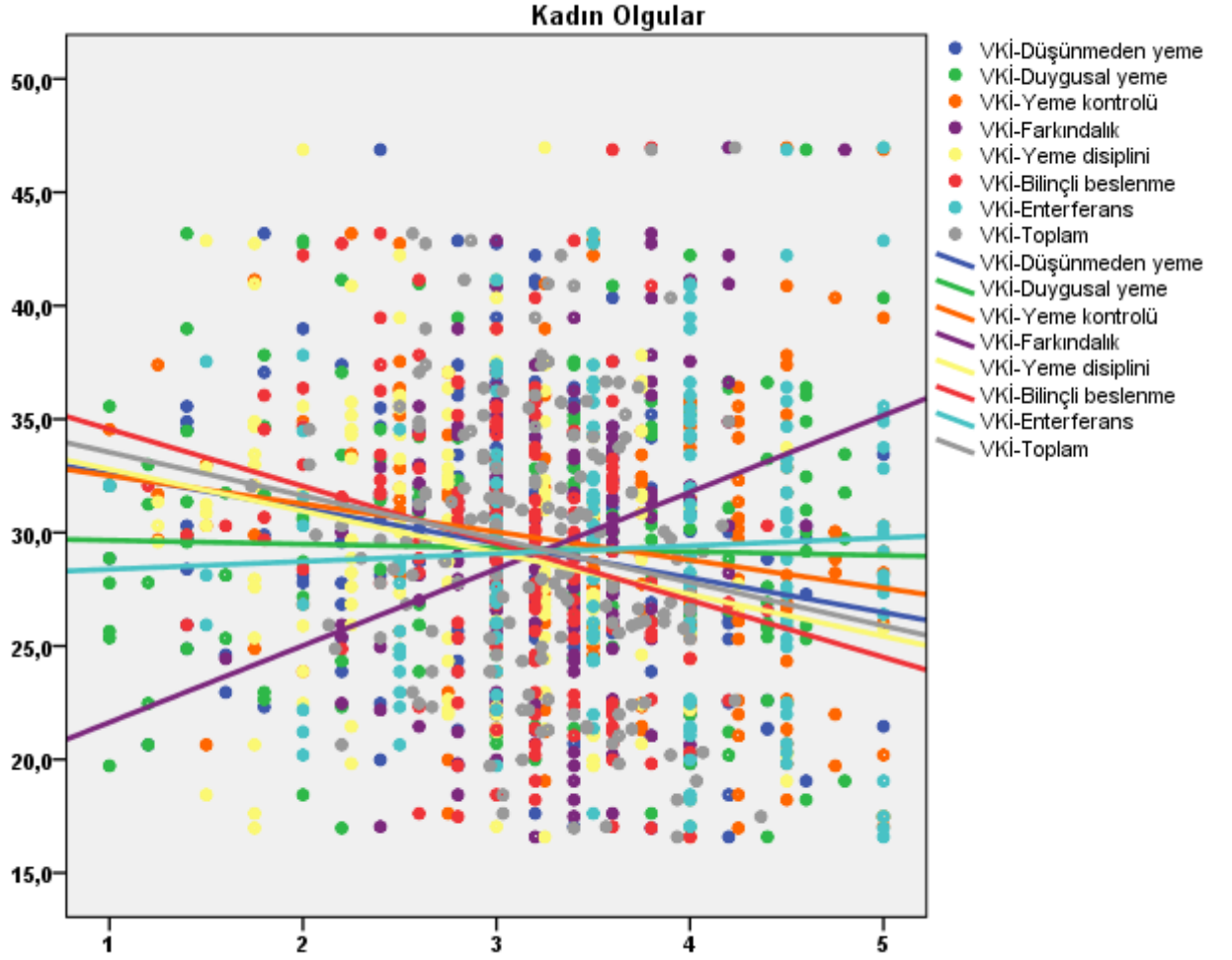


Figure 5. The Relationship Between BMI Measurements and Mindful Eating Questionnaire Sub-dimension and Total Scores in Female

In Male:

No statistically significant relation was found between thinking, emotional eating, eating control, mindfulness, eating discipline, conscious nutrition, interference scores and total scores with BMI measurements ($p > 0.05$).

Table 6.4. Comparison of the Mindful Eating Questionnaire Mean Scores of Women According to BMI Levels

Sub-dimensions and Total		BMI Level					cp
		Weak (n=7)	Normal (n=32)	Slightly Fat (n=48)	Obese (n=76)		
Eat without thinking	Min-Max (Median)	3,2-5 (4)	1,2-5 (3,1)	1-4,6 (3,4)	1-5 (3)	0,019*	
	Mean ± SD	3,97±0,59	3,21±1,01	3,19±0,98	3,03±0,75		
	<3 points	0 (0)	11 (34,4)	15 (31,3)	29 (38,2)		
	≥3 points	7 (100)	21 (65,6)	33 (68,8)	47 (61,8)		
Emotional eating	Min-Max (Median)	2-5 (4)	1-4,8 (3,1)	1-4,8 (3,6)	1-5 (3,3)	0,364	
	Mean ± SD	3,71±1,17	3,01±0,98	3,17±1,19	3,13±1,10		
	<3 points	2 (28,6)	9 (28,1)	16 (33,3)	32 (42,1)		
	≥3 points	5 (71,4)	23 (71,9)	32 (66,7)	44 (57,9)		
Eating control	Min-Max (Median)	2,8-5 (4,3)	1,5-5 (3,9)	1,3-5 (3,8)	1-5 (3,5)	0,041*	
	Mean ± SD	4,25±0,76	3,74±0,88	3,69±0,80	3,39±1,00		
	<3 points	1 (14,3)	5 (15,6)	5 (10,4)	25 (32,9)		
	≥3 points	6 (85,7)	27 (84,4)	43 (89,6)	51 (67,1)		
Mindfulness	Min-Max (Median)	2,4-3,8 (3,4)	1,6-4,2 (3,2)	2,2-4,2 (3,2)	2,2-4,8 (3,4)	0,061	
	Mean ± SD	3,23±0,48	3,14±0,51	3,15±0,40	3,39±0,54		
	<3 points	2 (28,6)	7 (21,9)	11 (22,9)	12 (15,8)		
	≥3 points	5 (71,4)	25 (78,1)	37 (77,1)	64 (84,2)		
Eating Discipline	Min-Max (Median)	1,5-5 (3)	1,8-4,5 (3,3)	1,3-5 (3)	1,3-4,5 (2,6)	0,011*	
	Mean ± SD	2,89±1,31	3,22±0,75	3,02±0,77	2,68±0,76		
	<3 points	3 (42,9)	10 (31,3)	20 (41,7)	47 (61,8)		

	≥3 points	4 (57,1)	22 (68,8)	28 (58,3)	29 (38,2)	
Conscious nutrition	Min-Max (Median)	2,6-4 (3,2)	2,2-4,2 (3,2)	1,4-4,4 (3,2)	1,2-4,4 (3)	0,007**
	Mean ± SD	3,29±0,53	3,32±0,43	3,16±0,62	2,93±0,64	
	<3 points	2 (28,6)	5 (15,6)	10 (20,8)	33 (43,4)	
	≥3 points	5 (71,4)	27 (84,4)	38 (79,2)	43 (56,6)	
Interference	Min-Max (Median)	3,5-5 (4)	2-5 (3,5)	1,5-5 (3,5)	1-5 (4)	0,073
	Mean ± SD	4,36±0,63	3,47±0,88	3,58±0,90	3,74±0,89	
	<3 points	0 (0)	9 (28,1)	7 (14,6)	8 (10,5)	
	≥3 points	7 (100)	23 (71,9)	41 (85,4)	68 (89,5)	
Total	Min-Max (Median)	3-4,4 (3,6)	2,2-4,2 (3,3)	2,1-4,1 (3,3)	1,7-4,2 (3,2)	0,107
	Mean ± SD	3,61±0,50	3,27±0,51	3,24±0,58	3,14±0,49	
	<3 points	0 (0)	8 (25,0)	15 (31,3)	28 (36,8)	
	≥3 points	7 (100)	24 (75,0)	33 (68,7)	48 (63,2)	
<i>cKruskal Wallis Test</i>		* <i>p</i> <0,05	** <i>p</i> <0,01			

In Female:

There was a statistically significant difference between eating scores without thinking according to the BMI level ($p = 0.019$; $p < 0.05$). As a result of binary comparisons to determine which group the significant difference originated from; scores of weak cases were higher than the obese group ($p = 0.022$; $p < 0.05$). No statistically significant difference was found in other binary comparisons ($p > 0.05$).

There was no statistically significant difference between emotional eating scores according to BMI level ($p > 0.05$). There was a statistically significant difference between eating control scores according to BMI level ($p = 0.041$; $p < 0.05$). As a result of binary comparisons to determine which group the significant difference originated from; the scores of weak cases were higher than the obese

group ($p = 0.047$; $p < 0.05$). No statistically significant difference was found in other binary comparisons ($p > 0.05$).

While there was no statistically significant difference between mindfulness scores according to BMI level ($p = 0.061$; $p > 0.05$); It is noteworthy that the scores of weak and obese patients are high. There was a statistically significant difference between eating discipline scores according to BMI level ($p = 0.011$; $p < 0.05$). As a result of binary comparisons to determine which group the significant difference originated from; scores of normal cases were higher than the obese group ($p = 0.013$; $p < 0.05$). No statistically significant difference was found in other binary comparisons ($p > 0.05$).

There was a statistically significant difference between conscious nutrition scores according to BMI level ($p = 0.007$; $p < 0.01$). As a result of binary comparisons to determine which group the significant difference originated from; The scores of the normal cases were higher than the obese group ($p = 0.011$; $p < 0.05$). No statistically significant difference was found in other binary comparisons ($p > 0.05$).

While there was no statistically significant difference between the interference scores according to the BMI level ($p = 0.073$; $p > 0.05$); It is noteworthy that the scores of weak cases are high.

There was no statistically significant difference between total scores according to BMI level ($p > 0.05$).

Table 6.5. A Comparison of the Mindful Eating Questionnaire Scores of Men According to BMI Levels

Sub-dimensions and Total		BMU Level				Cp
		Normal (n=6)	Slightly (n=12)	Fat	Obese (n=19)	
Eat without thinking	Min-Max (Median)	2,2-4 (3,2)	2-4,4 (2,7)		1,2-4,4 (2,8)	0,872
	Mean ± SD	3,10±0,73	2,92±0,79		2,93±0,98	
	<3 points	3 (50,0)	7 (58,3)		10 (52,6)	
	≥3 points	3 (50,0)	5 (41,7)		9 (47,4)	
Emotional eating	Min-Max (Median)	2-4,2 (3,3)	3-4,8 (3,7)		1,8-5 (3,2)	0,318
	Mean ± SD	3,33±0,78	3,82±0,59		3,35±1,00	
	<3 points	1 (16,7)	0 (0)		7 (36,8)	
	≥3 points	5 (83,3)	12 (100)		12 (63,2)	
Eating control	Min-Max (Median)	1,5-4 (3,3)	1,8-4,3 (3,1)		1,3-4,5 (2,8)	0,263
	Mean ± SD	3,04±0,93	3,19±0,76		2,66±0,92	
	<3 points	2 (33,3)	4 (33,3)		11 (57,9)	
	≥3 points	4 (66,7)	8 (66,7)		8 (42,1)	
Mindfulness	Min-Max (Median)	2,6-4 (3)	2,6-4,2 (3,1)		1,8-4,2 (3,4)	0,418
	Mean ± SD	3,03±0,51	3,18±0,51		3,22±0,57	
	<3 points	2 (33,3)	4 (33,3)		5 (26,3)	
	≥3 points	4 (66,7)	8 (66,7)		14 (73,7)	
Eating discipline	Min-Max (Median)	1,5-3,8 (3,1)	1-4 (2,5)		1,3-4,8 (2,3)	0,743
	Mean ± SD	2,79±1,04	2,46±0,97		2,49±0,81	
	<3 points	2 (33,3)	8 (66,7)		13 (68,4)	
	≥3 points	4 (66,7)	4 (33,3)		6 (31,6)	

Conscious nutrition	Min-Max (Median)	2,6-3,8 (3)	2-3,8 (2,7)	2-4,2 (2,6)	0,534
	Mean $\pm$ SD	3,07 $\pm$ 0,43	2,83 $\pm$ 0,58	2,86 $\pm$ 0,63	
	<3 points	3 (50,0)	7 (58,3)	10 (52,6)	
	$\geq$ 3 points	3 (50,0)	5 (41,7)	9 (47,4)	
Interference	Min-Max (Median)	1,5-4,5 (3,5)	2,5-4,5 (3,5)	2-5 (4)	0,573
	Mean $\pm$ SD	3,33 $\pm$ 1,03	3,54 $\pm$ 0,62	3,74 $\pm$ 0,79	
	<3 points	1 (16,7)	2 (16,7)	2 (10,5)	
	$\geq$ 3 points	5 (83,3)	10 (83,3)	17 (89,5)	
Total	Min-Max (Median)	2,5-3,6 (3,1)	2,4-3,8 (3,1)	2,3-4 (3)	0,678
	Mean $\pm$ SD	3,09 $\pm$ 0,40	3,11 $\pm$ 0,43	2,99 $\pm$ 0,49	
	<3 points	3 (50,0)	3 (25,0)	11 (57,9)	
	$\geq$ 3 points	3 (50,0)	9 (75,0)	8 (42,1)	
<i>cKruskal Wallis Test</i>					

In Male:

Eating, emotional eating, eating control, mindfulness, eating discipline, conscious nutrition, interference scores and total scores do not show statistically significant difference according to BMI level ($p > 0.05$).

Table 6.6. The Relationship Between Individual's Waist Circumference Measurement and Mindful Eating Questionnaire

Sub-dimensions and Total	Waist Circumference (cm)			
	Female (n=163)		Male (n=67)	
	R	P	R	P
Eat without thinking	-0,223	0,004**	-0,001	0,994
Emotional eating	-0,035	0,659	-0,019	0,909
Eating control	-0,191	0,015*	-0,104	0,539
Mindfulness	0,273	0,001**	0,192	0,254
Eating discipline	-0,289	0,001**	-0,206	0,221
Conscious nutrition	-0,235	0,003**	0,007	0,969
Interference	0,029	0,713	0,179	0,290
Total	-0,177	0,024*	-0,028	0,868
<i>r: Pearson Correlation Coefficient</i>		<i>*p<0,05</i>	<i>**p<0,01</i>	

In Female:

A statistically significant correlation was found between the waist circumference measurements and the eating scores without thinking (the score decreases as the waist circumference increases) (r: -0.222; p = 0.004; p <0.01).

A statistically significant correlation was found between waist circumference measurements and eating control scores at the level of negative 0.1191 (r: -0.191; p = 0.015; p <0.05)

A statistically significant relationship was found between waist circumference measurements and mindfulness scores at a positive level (the score increases as waist circumference increases) (r: 0,273; p = 0,001; p <0,01).

A statistically significant relation was found between waist circumference measurements and eating discipline scores at a negative level of 0.289 (r: -0.289; p = 0.001; p <0.01).

A statistically significant relationship was found between waist measurements and conscious nutritional scores at a negative level of 0.235 ($r: -0.235$; $p = 0.003$; $p < 0.01$).

A statistically significant relationship was found between waist circumference measurements and total scores at a negative level of 0.177 ($r: -0.177$; $p = 0.024$; $p < 0.05$).

A statistically significant correlation was found between the waist circumference measurements and the eating scores without thinking (the score decreases as the waist circumference increases) ($r: -0.222$; $p = 0.004$; $p < 0.01$).

A statistically significant correlation was found between waist circumference measurements and eating control scores at the level of negative 0.1191 ($r: -0.191$; $p = 0.015$; $p < 0.05$).

A statistically significant relationship was found between waist circumference measurements and mindfulness scores at a positive level (the score increases as waist circumference increases) ($r: 0.273$; $p = 0.001$; $p < 0.01$).

A statistically significant relation was found between waist circumference measurements and eating discipline scores at a negative level of 0.289 ($r: -0.289$; $p = 0.001$; $p < 0.01$).

A statistically significant relationship was found between waist measurements and conscious nutritional scores at a negative level of 0.235 ($r: -0.235$; $p = 0.003$; $p < 0.01$).

A statistically significant relationship was found between waist circumference measurements and total scores at a negative level of 0.177 ($r: -0.177$; $p = 0.024$; $p < 0.05$).

A statistically significant relationship was not found between waist circumference measurements and emotional eating and interference scores.

In Male:

There was not a statistically significant relationship between the waist circumference measurements without thinking, eating, emotional eating, eating control, mindfulness, eating discipline, conscious nutrition, interference scores and total scores ($p > 0.05$).

Table 6.7. The Relationship Between Individual's Hip Perimeter and Mindful Eating Questionnaire

Sub-dimensions and Total	Hip circumference (cm)			
	Women (n=163)		Men (n=67)	
	R	P	r	P
Eat without thinking	-0,280	0,001**	0,035	0,835
Emotional eating	-0,118	0,134	0,024	0,889
Eating control	-0,236	0,002**	-0,086	0,611
Mindfulness	0,251	0,001**	0,150	0,376
Eating discipline	-0,245	0,002**	-0,153	0,367
Conscious nutrition	-0,293	0,001**	0,009	0,958
interference	-0,040	0,609	0,189	0,261
Total	-0,247	0,002**	0,010	0,955

r: Pearson Correlation Coefficient

****** $p < 0,01$

In Women:

A statistically significant relationship was found between the hip circumference measurements and the eating scores without thinking (the score decreases as the hip circumference increases) at the level of 0.280 (r : -0.280; p = 0.001; $p < 0.01$).

A statistically significant relationship was found between the hip circumference measurements and eating control scores at the level of negative 0.236 (r : -0.236; p = 0.002; $p < 0.01$).

There was a statistically significant correlation between hip circumference measurements and mindfulness scores (increasing score as hip circumference increased) at the level of 0.251 (r : 0.251; p = 0.001; $p < 0.01$).

A statistically significant correlation was found between the hip circumference measurements and eating discipline scores at the 0.25 level ($r: -0.224$; $p = 0.002$; $p < 0.01$).

A statistically significant relationship was found between the hip circumference measurements and conscious nutritional scores at the level of negative 0.2293 ($r: -0.297$; $p = 0.001$; $p < 0.01$).

A statistically significant relationship was found between the hip circumference measurements and the total scores at the negative 0.24 level ($r: -0.247$; $p = 0.002$; $p < 0.01$).

No statistically significant correlation was found between hip circumference measurements and emotional eating and interference scores ($p > 0.05$).

In Men:

No statistically significant relation was found between thinking, emotional eating, eating control, mindfulness, eating discipline, conscious nutrition, interference scores and total scores with hip circumference measurements ($p > 0.05$).

Table 6.8. The Relationship Between Individuals' Waist-Hip Ratio and Mindful Eating Questionnaire

Sub-dimensions and Total	Waist-Hip ratio			
	Women (n = 163)		Men (n = 67)	
	R	p	r	P
Eat without thinking	-0,104	0,184	-0,077	0,652
Emotional eating	0,050	0,528	-0,066	0,696
Eating control	-0,085	0,281	-0,120	0,478
Mindfulness	0,202	0,010*	0,225	0,181
Eating discipline	-0,264	0,001**	-0,248	0,139
Conscious nutrition	-0,092	0,244	-0,020	0,904
Interference	0,090	0,252	0,131	0,441
Total	-0,061	0,438	-0,088	0,603

r: Pearson Correlation Coefficient

* $p < 0,05$

** $p < 0,01$

In Women:

A statistically significant relationship was found between waist-hip ratios and mindfulness scores at the level of 0.202 (the point with increasing waist-hip ratio increased) (r : 0.202; $p = 0.010$; $p < 0.05$).

A statistically significant correlation was found between waist-hip ratios and eating discipline scores at the level of 0.264 (negative score decreases as waist-hip ratio increases) (r : -0.264; $p = 0.001$; $p < 0.01$).

No statistically significant correlation was found between waist-hip ratios and thinking, emotional eating, eating control, conscious nutrition, interference scores, and total scores ($p > 0.05$).

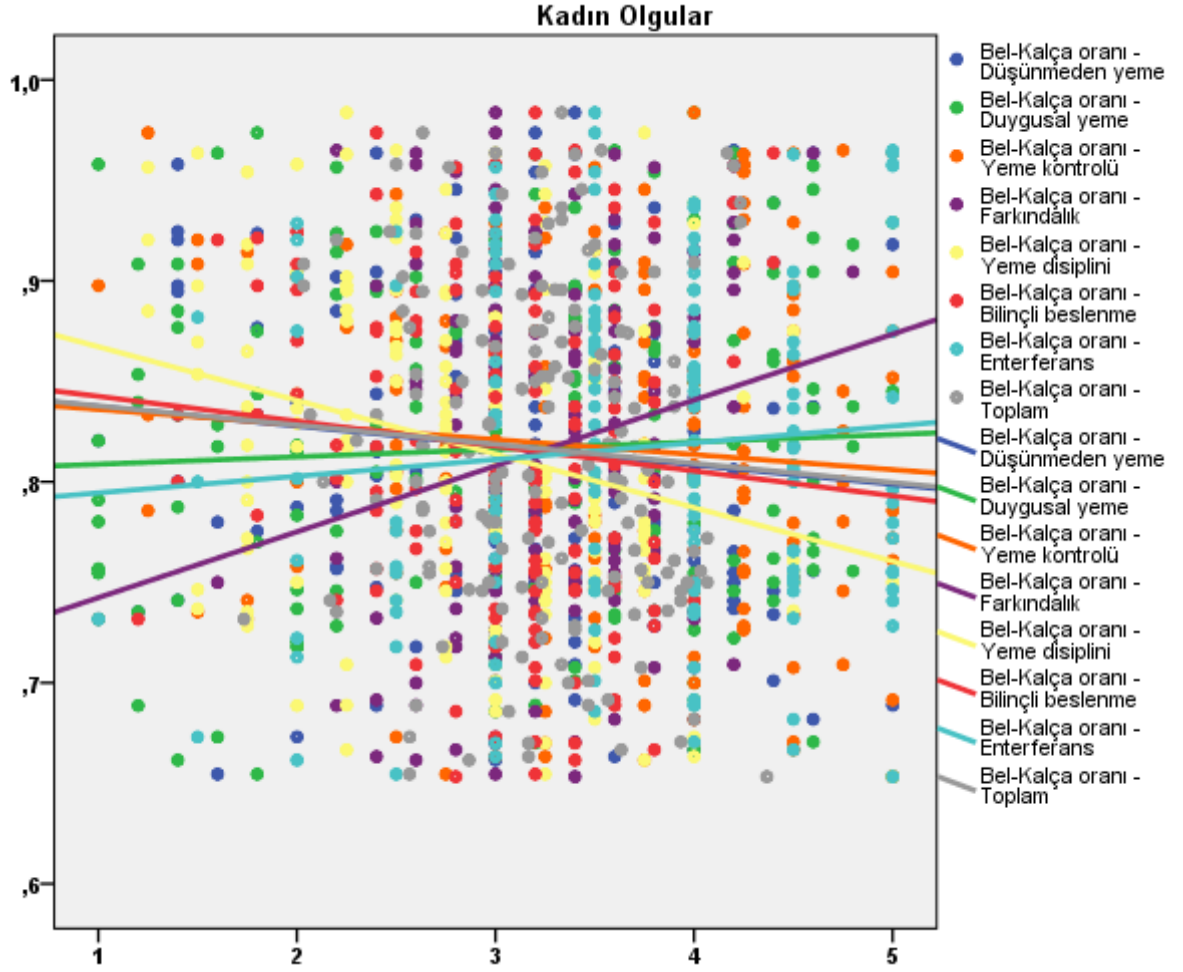


Figure 6. The Relationship Between Waist-Hip Ratios and Mindful Eating Questionnaire Sub-Dimension and Total Scores in Women

In Men

Bel-Kalça oranları ile düşünmeden yeme, duygusal yeme, yeme kontrolü, farkındalık, yeme disiplini, bilinçli beslenme, enterferans puanları ve toplam puanlar arasında istatistiksel olarak anlamlı ilişki saptanmamıştır ($p>0,05$).

5.DISCUSSION

Obesity has been associated with eating attitudes and mindful eating for many years. In cases where food is used to deal with emotions, emotional eating and obesity associated with it, and binge eating disorder inevitably emerge. The concept of emotional eating, which emerged according to the results of research conducted in recent years, is an answer to negative emotions. It has been observed that emotional eating due to psychological stress has increased especially in binge eating disorder and the trainings given accordingly have been shown to be beneficial in body weight loss. In order to ensure long-term effectiveness in diet programs targeting body weight loss, coping with emotional states has gained importance in recent years (2).

5.1. Discussion of Findings Related to Mindful Eating Questionnaire Score Average According to Socio-Demographic Characteristics of Individuals

In this study, it was found that as the age, one of socio-demographic characteristics, increases, total mindful eating increases and this relationship is statistically significant. ($P < 0.05$). According to the study conducted by Köse (2) in university students, the mindful of eating increases significantly as the ages of the students increase ($r = 0.133$, $p < 0.05$). In the study of Özmumcu (61) evaluating the effect of mindful eating and physical activity on the quality of life, it was found that the MEQ score increased with increasing age. In the study of Işıklar (62) examining the effect of regular exercise on mindful eating and healthy lifestyle behaviors, no significant relationship was found between mindful eating scale scores and age. This result was interpreted as mindful eating levels independent of age. In this study, it is thought that there may be a significant difference due to the wider age range.

According to the results of this research, a positive and statistically significant relationship was found between age and emotional eating, mindfulness, interference, and total mindful eating scores. No statistically significant relationship was found between eating and eating, eating control, eating discipline and conscious nutrition scores ($p > 0.05$). Considering the relationship between MEQ-30 sub-dimension scores in Köse's study (2), as the ages of the students increase, the sub-dimension of disinhibition, emotional eating, eating discipline, mindfulness and interference increases, and the sub-dimensions of eating control

and focus decrease. It was found statistically significant that the level of emotional eating increases as the age of the students increases ($r = 0.191$, $p < 0.01$), the relationship of the students with the other sub-dimensions is insignificant ($p > 0.05$).

In this study, a statistically significant difference was found between total scores by gender ($p < 0.05$); women's scores were higher than men's. In the study of Köse (2), when the MEQ-30 average of the students was compared according to their gender, the difference between the averages of 98.44 ± 13.92 for men and 98.01 ± 13.80 for women was not statistically significant ($p > 0.05$). When Anderson et al.'s study on 125 men and women aged 18-24 is examined, there was no significant relationship between mindful eating and gender (61). In the study of Akpınar (63) evaluating mindful eating in obesity and diabetes, when the relationship between MEQ score average and gender is examined, in contrast to the results of this study, no significant relationship was found between gender and MEQ score. In this study, it was interpreted that there was a significant difference and women had higher mean scores and that women showed more emotional behavior than men.

In this study, a statistically significant difference was found between emotional eating scores by gender ($p < 0.05$); the scores of men were higher than women. Framson et al. (12) investigated the emotional eating sub-dimensions of women and found lower scores than men ($p < 0.01$). Based on this, they argued that women can respond differently than men in case of emotional stress.

In his study that Özkan (64) examined the relationship between intuitive eating and mindful eating and nutritional status in adult individuals aged 19-45, mindful eating total score of men and women individuals was found to be 104.4 ± 12.02 and 103 ± 11.06 , respectively ($p > 0.05$). In this study, the total scores of Mindful eating questionnaire ranged between 1.7 and 4.4, and the average was 3.19 ± 0.52 ; The score of 34.0% ($n = 68$) of the cases is less than 3, and the score of 66.0% ($n = 132$) is 3 or above. According to this, 66% of them have the mindful of eating can be commented.

In Özkan's (64) study, it was found that in emotional eating, which is one of the sub-dimensions of MEQ-30, men had higher scores than women ($p < 0.05$) and

women in the “eating discipline” sub-dimension had higher scores than men ($p < 0.05$). In this study, "emotional eating" scores ranged from 1 to 5, with an average of 3.21 ± 1.07 ; the score of 33.5% ($n = 67$) of the cases is less than 3, the score of 66.5% ($n = 133$) is 3 or above. Accordingly, it can be interpreted that 66.5% of them have mindful about emotional eating. Eating discipline scores range from 1 to 5, with an average of 2.83 ± 0.84 ; the score of 51.5% ($n = 103$) of the cases is less than 3, the score of 48.5% ($n = 97$) is 3 or above. Accordingly, it can be interpreted that 48.5% of them have mindful about eating discipline.

5.2. Discussion of Findings Related to Mindful Eating Questionnaire Mean Scores According to Anthropometric Properties of Individuals

In this study, a negative statistically significant relation was found between body weight and BMI and total mindful eating scores in women ($p < 0.05$). In parallel with the results of this study, in the study of Köse (2), while the body weight and BMI of the students increase, the risk of eating disorder increases ($r = 0.112$, $p < 0.05$ and $r = 0.139$, $p < 0.05$). While body weight and BMI increased, mindful eating decreased but this relationship was found statistically insignificant ($p > 0.05$). Similar to the results of Köse's study, as the BMI value increases, the MEQ score decreases in parallel with the research of Framson et al. (12). In another study, Grinnell et al. (50) reported that mindfulness increased as BMI value decreased. Beshara, Hutchinson and Wilson (27) found that MEQ scores were negatively correlated with body weight ($p < 0.05$). In addition, it found negative relationship with emotional eating and disinhibition sub-dimension. In a study conducted by Mason et al. (65), the participants with high BMI were found to have a lower MEQ score as well as an emotional eating score. Moor et al. (48) found a negative relationship between BMI and MEQ scores in their study. The importance of measuring mindful eating was emphasized in the research and it was proved that body weight management could be provided more effectively by increasing mindfulness. Mindful eating sessions were continued by meeting with the participants in a study conducted by Kearney et al. with 48 men participants for 4 months. When the data obtained before, after and four months after the intervention were evaluated with the food mindfulness questionnaire, it was observed that the food mindfulness increased significantly, but the BMI values of the participants also increased (61). In the study of Akpınar (63), no statistically

significant difference was found between mindful eating score and BMI. Contrary to most studies, this study was interpreted as the fact that the education levels of the participants were much lower, and thus the result of the participants' understanding of what they read less, might have caused this result. In this study, similar to the results of Akpınar, no statistically significant difference was found between mindful eating score and BMI in men. It is thought that the reason for this may be due to the small number of men individuals in the study. In the study of Işıklar, unlike the studies in the literature, no significant relationship was found between BMI and mindful eating in both groups. It was interpreted that the result of this was due to the high BMI averages of both groups (regular exercise group 29.76 ± 3.60 ; irregular exercise group 31.62 ± 5.65) (62).

In this study, while women body weight increased while thinking, eating, eating control, eating discipline, conscious nutrition and total mindful eating score decreased and a statistically significant relationship was found between them. There was no statistically significant relationship between weight measurements and emotional eating and interference scores ($p > 0.05$). In men cases, no statistically significant relation was found between eating, emotional eating, eating control, mindfulness, eating discipline, conscious nutrition, interference scores and total scores without thinking with body weight ($p > 0.05$). Eating, eating control, eating discipline, conscious nutrition and total MEQ score decrease without thinking of increasing BMI in women cases, and these relationships were found statistically significant. In the study of Köse (2), when the relationship between students' anthropometric information and MEQ-30 sub-dimension scores is increased, body weight and BMI increase, while emotional eating and eating discipline average scores increase. On the other hand, the mean scores of disinhibition, eating control, focus, mindfulness and interference are decreasing. As body weight and BMI increased, eating control mean scores decreased and this relationship was found statistically significant ($r = -0.252$, $p < 0.01$ and $r = -0.208$, $p < 0.01$), and its relationship with other sub-dimensions was statistically insignificant ($p > 0.05$). In the study of Framson et al. (12), BMI values and all sub-dimensions were found to be negatively related ($p < 0.001$).

In the study of Kuseyri (66) examining the effect of mindful eating and intuitive eating behavior on the nutritional status of university students, 70.3% of

the students were in the normal BMI group. The frequency of men students in the obese and obese group (21.7%; 8.7%, respectively) was statistically higher than the frequency of women students (8.0%; 1.7%, respectively) ($p < 0.05$). In this study, 4.4% of women are in the weak, 19.6% of them are in the normal BMI group, while 29.4% are in the light fat group and 46.6% are in the obese group. 16.2% of men are in the normal BMI group while 32.4% are in the light fat group and 51.4% are in the obese group. While the number of individuals with normal BMI is high due to Kuseyri's work on students, the number of individuals with obese BMI levels is higher than that of other groups because this study was performed on people with weight problems.

In the study of Kuseyri (66), it was found that there was a statistically significant relationship between mindful eating scale general average score, disinhibition and eating control subscales mean scores and BMI classification. According to the BMI classification, the general eating mean of mindful eating (2.95 ± 0.40) of the obese students was found to be statistically lower than the weak students (3.39 ± 0.44) ($p < 0.01$). In this study, according to the BMI level in the assessment of the sub-dimension and total scores of the food mindfulness questionnaire according to BMI levels in women cases eating without thinking ($p = 0.019$; $p < 0.05$), eating control ($p = 0.041$; $p < 0.05$), eating discipline ($p = 0.011$; $p < 0.05$), conscious nutrition ($p = 0.007$; $p < 0.01$), there was a statistically significant difference between the scores. As a result of binary comparisons to determine which group the significant difference originated from; the scores of the normal cases were higher than the obese group. No statistically significant difference was found between total mindful eating scores according to BMI level ($p > 0.05$).

According to Özmumcu's (61) study, the relationship between BMI and MEQ was found to be significant. In patients with a BMI less than 25, the MEQ score was higher than those with a higher BMI. In this study, a statistically significant difference was found between eating scores without considering the BMI level in women cases ($p = 0.019$; $p < 0.05$). As a result of bilateral comparisons to determine which group the meaningful difference originated from, the scores of the weak cases were higher than the obese group ($p = 0.022$; $p < 0.05$). No statistically significant difference was found in other binary

comparisons ($p > 0.05$). There was a statistically significant difference between eating control scores according to BMI level ($p = 0.041$; $p < 0.05$). As a result of bilateral comparisons to determine which group the significant difference originated from, the scores of weak cases were higher than the obese group ($p = 0.047$; $p < 0.05$). No statistically significant difference was found in other binary comparisons ($p > 0.05$). While there was no statistically significant difference between mindfulness scores according to BMI level ($p = 0.061$; $p > 0.05$); It is noteworthy that the scores of weak and obese patients are high. There was a statistically significant difference between eating discipline scores according to BMI level ($p = 0.011$; $p < 0.05$). As a result of the binary comparisons made to determine which group the significant difference originated from, the scores of the normal cases were higher than the obese group ($p = 0.013$; $p < 0.05$). No statistically significant difference was found in other binary comparisons ($p > 0.05$). There was a statistically significant difference between conscious nutrition scores according to BMI level ($p = 0.007$; $p < 0.01$). As a result of the pairwise comparisons to determine which group the significant difference originated from, the scores of the normal cases were higher than the obese group ($p = 0.011$; $p < 0.05$). No statistically significant difference was found in other binary comparisons ($p > 0.05$). While there was no statistically significant difference between the interference scores according to the BMI level ($p = 0.073$; $p > 0.05$); It is noteworthy that the scores of weak cases are high. There was no statistically significant difference between the total scores according to the BMI level ($p > 0.05$). Eating, emotional eating, eating control, mindfulness, eating discipline, conscious nutrition, interference scores and total scores do not differ statistically in men cases without thinking according to BMI level ($p > 0.05$).

According to Özkan's (64) study, the “eating control” score, which is one of the sub-dimensions of food mindfulness according to the BMI classification, was found to be statistically significantly higher than that of normal and obese individuals ($p < 0.05$). In the sub-dimensions of “disinhibition” and “eating discipline”, it was found that normal individuals had higher scores than obese individuals ($p < 0.05$). In this study, a statistically significant difference was found between the “eating control” scores, which is one of the sub-dimensions of food mindfulness according to the BMI classification ($p = 0.041$; $p < 0.05$). As a result of binary comparisons to determine which group the significant difference

originated from; the scores of weak cases were higher than the obese group ($p = 0.047$; $p < 0.05$). A statistically significant difference was found between eating and disinhibition scores according to the BMI level ($p = 0.019$; $p < 0.05$). As a result of binary comparisons to determine which group the significant difference originated from; the scores of weak cases were higher than the obese group ($p = 0.022$; $p < 0.05$). There was a statistically significant difference between eating discipline scores according to BMI level ($p = 0.011$; $p < 0.05$). As a result of binary comparisons to determine which group the significant difference originated from; scores of normal cases were higher than the obese group ($p = 0.013$; $p < 0.05$).

In Özkan's (64) study, a significant negative relationship was determined between MEQ-30 score and BMI ($p < 0.05$). As individuals' MEQ-30 scores increase, their BMI decreases. Body weight, waist circumference and BMI values decrease as the disinhibition and eating control scores of the MEQ-30 subscales increase. As the participants' eating discipline score increases, their body weight decreases. In this study, a statistically significant relation was found between BMI measurements of women patients and MEQ-30 score ($r: -0.159$; $p = 0.043$; $p < 0.05$). Body weight, waist circumference and BMI values decrease as the disinhibition and eating control scores of MEQ-30 subdimensions of women cases increase.

Waist circumference measurement is used as an indicator of cardiometabolic risk factors and BMI as an indicator of obesity (64). In the study by Turkey Obesity Research Association (TOAD), 13,878 individuals aged 20 and over participated in our country, it was determined that waist circumference in men aged 20-29, 30-39 and 40-49 was 90.1 ± 10.4 cm, 96.2 ± 11.1 cm and 99.0 ± 10.7 cm, respectively. In the same order, it was determined that women had 83.2 ± 11.9 cm, 94.6 ± 13.3 cm and 98.5 ± 12.9 cm. In a study on individuals living in the Eastern Anatolia region, according to waist circumference results, 4.9% of men are at metabolic risk and 2.2% are at high metabolic risk, while 10.5% of women are at metabolic risk and 2.5% are at high metabolic risk. In the study of Özkan, waist circumference of men and women was found as 89.7 ± 10.75 cm and 72.6 ± 8.69 cm, respectively. In addition, in the study, 33.8% of men and 17.0% of women were at metabolic risk ($p < 0.05$). In this study, waist circumference in women ranged from 49 to 131 cm, average is 91.89 ± 17.06 cm.

In men cases, waist circumference measurements vary between 74 and 143 cm, average is 104.86 ± 16.08 cm.

In the study of Kıtıl (67) on the evaluation of mindful eating, quality of life and nutritional habits of women in the premenopausal and postmenopausal period, the mean of mindful eating of premenopausal women was 101.9 ± 14.9 while the average of postmenopausal women was 105.1 ± 16.1 . The average of the postmenopausal group was higher than the premenopausal group, but this difference was not statistically significant ($p = 0.292$). When the food mindfulness sub-components of individuals were analyzed according to their BMI values, it was found that the average scores of all sub-components decreased as the BMI increased. However, the BMI values of the postmenopausal group are moderately negative in the sub-components between disinhibition ($r = -0.313$, $p = 0.021$), focus ($r = -0.357$, $p = 0.009$), eating discipline ($r = -0.495$, $p = 0.000$). a significant relationship was found. A negative relationship was found between BMI values and mindful eating and was found statistically significant ($r = -0.276$; $p = 0.005$). Similarly, a negative relationship was found between waist circumference and mindful eating and was found statistically significant ($r = -0.212$; $p = 0.031$). It has been reported that waist circumference measurements of individuals with mindful eating increase may decrease (67).

In this study, eating without considering the sub-dimensions of mindful eating ($r: -0.213$; $p = 0.006$), eating control ($r: -0.182$; $p = 0.020$), eating discipline ($r: -0.235$; $p = 0.003$) and conscious nutrition ($r: -0.241$; $p = 0.002$) and a negative statistically significant relationship was determined. In parallel with the study of Kıtıl, a negative correlation was found between BMI values and mindful eating, and it was found statistically significant ($r: -0.159$; $p = 0.043$; $p < 0.05$). In parallel, a negative correlation was found between waist circumference measurements and total mindful eating scores ($r: -0.177$; $p = 0.024$; $p < 0.05$).

6. CONCLUSION AND RECOMMENDATIONS

6.1. CONCLUSION

The following results were determined in this study, which was carried out with the participation of 200 healthy individuals in order to examine the relationship between mindful eating behavior and anthropometric measurements in individuals who applied to the Nutrition and Diet Polyclinic of a private hospital in the European side of Istanbul:

1. When the socio-demographic characteristics of individuals are examined;

- a) It was determined that 81.5% (n = 163) women and 18.5% (n = 37) men individuals between the ages of 18-68 participated.
- b) The average age was found to be 30.52 ± 10.01 .
- c) It has been determined that 32.5% of income levels are 2000-3000 TL, 37.0% is 3001-4000 TL, 16.5% is 4001-5000 TL and 14.0% is over 5000 TL (Table 4.1).

2. When anthropometric measurements of individuals are examined;

- a) It was determined that the average body weight in women is 75.85 ± 15.65 kg, the average height measurement is 1.61 ± 0.06 , whereas in men the average body weight is 95.12 ± 17.34 kg, the average height measurement is 1.79 ± 0.07 m.
- b) It was found that the average BMI value in women was 29.30 ± 6.34 kg / m², 4.4% of women were weak, 19.6% are normal, 29.4% were slightly obese and 46.6% were obese, the mean BMI in men was 29.76 ± 5.10 kg / m², 16.2% of men were normal, 32.4% were slightly obese and 51.4% were obese
- c) It was found the average waist circumference in women was 91.89 ± 17.06 cm, the average of hip circumference was 111.89 ± 13.48 cm, mean waist circumference in men was 104.86 ± 16.08 cm; hip circumference average was 111.54 ± 11.14 cm.
- d) It was found that the average waist-hip ratio in women was 0.82 ± 0.08 , and the average waist-hip ratio in men was 0.94 ± 0.07 (Table 4.2).

3. When Mindful Eating Questionnaire sub-dimension and total scale scores are examined;

- a) It was determined that the mean score of eating sub-dimensions was 3.11 ± 0.88 and 37.5% of the individuals had a mean score less than 3, and 62.5% were 3 and above. According to this finding, 62.5% of individuals have mindfulness about “eating without thinking”.
- b) Emotional eating subdimension mean score was 3.21 ± 1.07 and 33.5% of the individuals had a mean score less than 3, and 66.5% had a point average of 3 and above. According to this finding, 66.5% of individuals have mindfulness about “emotional eating”.
- c) It was determined that the mean score of eating control subscale was 3.46 ± 0.96 and 26.5% of the individuals had a mean score less than 3, and 73.5% had a point average of 3 and above. According to this finding, 73.5% of individuals have mindfulness about “eating control”.
- d) The mindfulness sub-dimension was found to be 3.25 ± 0.51 on average, and 21.5% of individuals had a mean score less than 3, and 78.5% had a point average of 3 and above. According to this finding, it was determined that 78.5% of the individuals had the characteristics evaluated by the “mindfulness” sub-dimension.
- e) It was determined that the mean of eating discipline was 2.83 ± 0.84 , and 51.5% of the individuals had a mean score less than 3, 48.5% had a point average of 3 and above. According to this finding, 48.5% of individuals have mindfulness about “eating discipline”.
- f) It was determined that the mean score of the conscious nutrition sub-dimension was 3.05 ± 0.61 , and the average score of 35.0% of the individuals was less than 3 and the average score of 65.0% was 3 and above. According to this finding, it was determined that 65.0% of the individuals had mindfulness about "conscious nutrition".
- g) It was determined that the mean score of the interference sub-dimension was 3.66 ± 0.87 and the average score of 14.5% of the individuals was less than 3, and the average score of 85.5% was 3 and above. According to this finding, it can be said that 85.5% of the individuals had mindfulness of "interference".

h) It was determined that the total score average of the Mindful eating questionnaire was 3.19 ± 0.52 and the average score of 34.0% of the individuals was less than 3, and the average score of 66.0% was 3 and above.

i) In this study, it was determined that the MEQ Cronbach's Alpha coefficient was 0.819 and the scale was reliable (Table 4.4).

4. When the MEQ score averages of individuals are analyzed according to their socio-demographic characteristics;

a) A positive ($p < 0.05$) statistically significant correlation ($p < 0.05$) was found between individuals' mean scores on emotional eating, mindfulness, interference sub-dimensions and total scale scores.

However, it was found that there was no statistically significant relationship between age and the mean scores of impulsive eating, eating control, eating discipline and conscious nutrition sub-dimensions ($p > 0.05$) (Table 5.1).

b) It was found that there is a statistically significant difference between the mean scores of the emotional eating sub-dimension according to gender ($p = 0.036$; $p < 0.05$) and the mean score of men is higher than that of women. It was found that there was a statistically significant difference between the mean scores in the eating control sub-dimension ($p = 0.001$; $p < 0.01$) and the mean score of women was higher than that of men. It was found that there was a statistically significant difference between the mean scores of eating discipline ($p = 0.015$; $p < 0.05$) and again, the mean scores of women were higher than men. A statistically significant difference was found between the mean MEQ total scores ($p = 0.048$; $p < 0.05$); It was found that the scores of women were higher than men. According to gender, no statistically significant difference was found between the mean scores of the other sub-dimensions of IAS (conscious eating, eating without thinking, mindfulness, interference sub-dimension) ($p > 0.05$) (Table 5.2).

5. A statistically significant difference was found between emotional eating sub-dimension scores according to income level ($p = 0.040$; $p < 0.05$). As a result of the paired comparisons (Oneway ANOVA test) made in order to determine which group caused this significant difference, it was found that the difference between the average scores of those whose income is over 5000 TL and those whose

income is 3001-4000 TL ($p = 0.036$; $p < 0.05$). According to income level, no statistically significant difference was found between the other sub-dimensions of MEQ (thinking without thinking, eating control, mindfulness, eating discipline, conscious nutrition, interference) and total scale score averages ($p > 0.05$) (Table 5.3).

6. When the MEQ score averages of individuals are examined according to their anthropometric characteristics;

a.) While a statistically significant negative correlation was found between body weight measurements and eating without thinking, eating control, eating discipline, conscious nutrition scores and total mindful eating scores in women ($p < 0.05$); A positive statistically significant correlation was found between body weight measurements and mindfulness scores ($p < 0.01$). There was no statistically significant relationship between body weight measurements and emotional eating and interference scores ($p > 0.05$). There was no statistically significant relationship between body weight measurements and impulsive eating, emotional eating, eating control, mindfulness, eating discipline, mindfulness nutrition, interference scores and total scores in mens ($p > 0.05$) (Table 6.1).

b.) A statistically significant negative correlation was found between height measurements and emotional eating scores in women ($p < 0.05$). There was no statistically significant relationship between height measurements and impulsive eating, eating control, mindfulness, eating discipline, conscious nutrition, interference scores and total scores ($p > 0.05$). There was no statistically significant relationship between height measurements and impulsive eating, emotional eating, eating control, mindfulness, eating discipline, mindfulness nutrition, interference scores and total scores in mens ($p > 0.05$) (Table 6.2).

c.) In women, a statistically significant negative correlation (score decreases with increasing BMI) was found between BMI measurements and eating without thinking, eating control, eating discipline, conscious nutrition sub-dimensions and total scale scores ($p < 0.05$). A statistically significant positive correlation

was found between BMI measurements and mindfulness scores ($p < 0.01$). There was no statistically significant relationship between BMI measurements and emotional eating and interference scores ($p > 0.05$). There was no statistically significant correlation between BMI measurements and eating without thinking, emotional eating, eating control, mindfulness, eating discipline, conscious nutrition, interference scores and total scores in men ($p > 0.05$) (Table 6.3).

- d.) A statistically significant difference was found between the scores of eating without thinking according to BMI level in women ($p < 0.05$). As a result of paired comparisons made in order to determine which group caused the significant difference; The scores of the lean cases were higher than the obese group ($p < 0.05$). No statistically significant difference was found in other paired comparisons ($p > 0.05$). There was no statistically significant difference between emotional eating scores according to BMI level ($p > 0.05$). A statistically significant difference was found between eating control scores according to BMI level ($p < 0.05$). As a result of paired comparisons made in order to determine which group caused the significant difference; The scores of the lean cases were higher than the obese group ($p < 0.05$). No statistically significant difference was found in other paired comparisons ($p > 0.05$). While there was no statistically significant difference between mindfulness scores according to BMI level ($p > 0.05$); It is remarkable that the scores of the weak and obese cases are high. A statistically significant difference was found between eating discipline scores according to the BMI level ($p < 0.05$). As a result of paired comparisons made to determine which group caused the significant difference, the scores of the subjects who were normal were found to be higher than the obese group ($p < 0.05$). No statistically significant difference was found in other paired comparisons ($p > 0.05$). A statistically significant difference was found between the conscious nutrition scores according to the BMI level ($p < 0.01$). As a result of paired comparisons made in order to determine which group caused the significant difference; The scores of the normal cases were higher than the obese group ($p < 0.05$). No statistically significant difference was found in other paired comparisons ($p > 0.05$). While no statistically significant difference was found between the

interference scores according to the BMI level ($p > 0.05$), it is striking that the scores of the underweight patients were high. There was no statistically significant difference between the total scores of women according to their BMI level ($p > 0.05$) (Table 6.4).

- e.) According to the BMI level in men, there is no statistically significant difference between thinking without thinking, emotional eating, eating control, mindfulness, eating discipline, conscious nutrition, interference scores and total scores ($p > 0.05$) (Table 6.5).
- f.) In women, a statistically significant negative correlation (the score decreases as the waist circumference increases) was found between the waist circumference measurements and the scores of mindless eating, eating control, eating discipline, conscious nutrition sub-dimension and total scores ($p < 0.05$). A statistically significant positive correlation was found between waist circumference measurements and mindfulness scores ($p < 0.01$). There was no statistically significant relationship between waist circumference measurements and emotional eating and interference scores ($p > 0.05$). There was no statistically significant relationship between waist circumference measurements and impulsive eating, emotional eating, eating control, mindfulness, eating discipline, mindfulness nutrition, interference scores and total scores in men ($p > 0.05$) (Table 6.6)
- g.) In women, a statistically significant negative correlation (the score decreases as the hip circumference increases) was found between the hip circumference measurements and the scores of mindless eating, eating control, eating discipline, conscious nutrition sub-dimension and total scores ($p < 0.01$). A statistically significant positive correlation was found between the hip circumference measurements and mindfulness scores ($p < 0.01$). There was no statistically significant correlation between hip circumference measurements and emotional eating and interference scores ($p > 0.05$). No statistically significant correlation was found between hip circumference measurements in men and thoughtful eating, emotional eating, eating control, mindfulness, eating discipline, conscious nutrition, interference scores and total scores ($p > 0.05$) (Table 6.7).
- h.) In women, a statistically significant positive correlation was found between waist-hip ratios and mindfulness scores (the score increases as the waist-hip

ratio increases) ($p < 0.05$). A statistically significant negative correlation was found between waist-hip ratios and eating discipline scores (the score decreases as the waist-hip ratio increases) ($p < 0.01$). There was no statistically significant relationship between waist-hip ratios and eating without thinking, emotional eating, eating control, conscious nutrition, interference scores and total scores ($p > 0.05$). There was no statistically significant relationship between waist-hip ratios in men and eating without thinking, emotional eating, eating control, mindfulness, eating discipline, conscious nutrition, interference scores and total scores ($p > 0.05$) (Table 6.8).

6.2. RECOMMENDATIONS

1. According to the results of the research, as individuals get older, their mindfulness of eating increases. For this reason, it is recommended to give trainings by separating individuals into age groups in trainings on food mindfulness.
2. Since mindful eating score averages vary according to gender, it is recommended to divide individuals into separate groups according to their gender in the training to be given on food mindfulness.
3. Since the mindful eating scores of women are higher than men, it is recommended that the training to be given to men should be planned in more detail.
4. In the treatment of obesity, it seems that developing mindful eating behavior in addition to calorie restriction can lead to a reduction in body weight. For this reason, it is recommended to include mindful eating practice in diet treatment.

7.REFERENCES

1. Özkan, N., & Bilici, S. (2018). Yeme Davranışında Yeni Yaklaşımlar: Sezgisel Yeme ve Yeme Farkındalığı. Gazi Sağlık Bilimleri Dergisi, 3(2), 16-24.
2. Köse, G. (2017). Üniversite öğrencilerinin yeme farkındalığının üzerine bir araştırma.
3. Köse, G., Tayfur, M., Birincioğlu, İ., & Dönmez, A. (2016). Yeme Farkındalığı Ölçeği'ni Türkçeye Uyarlama Çalışması, 3: 125-134.
4. Warren, J. M., Smith, N., & Ashwell, M. (2017). A structured literature review on the role of mindfulness, mindful eating and intuitive eating in changing eating behaviours: effectiveness and associated potential mechanisms. Nutrition Research Reviews, 30(02), 272–283.
5. Çolak H., Aktaç Ş. Ağırlık Yönetimine Yeni Bir Yaklaşım: Yeme Farkındalığı. Adnan Menderes Üniversitesi Sağlık Bilimleri Fakültesi Dergisi. 2019;3(3):212-222.
6. Fuentes Artiles, R., Staub, K., Aldakak, L., Eppenberger, P., Rühli, F., & Bender, N. (2019). Mindful eating and common diet programs lower body weight similarly: Systematic review and meta-analysis.
7. Dunn, C., Haubenreiser, M., Johnson, M., Nordby, K., Aggarwal, S., Myer, S., & Thomas, C. (2018). Mindfulness Approaches and Weight Loss, Weight Maintenance, and Weight Regain. Current Obesity Reports, 7(1), 37–49.
8. CDC. Data and statistics: overweight and obesity. Adult Obesity Facts. Prevalence of Obesity and Severe Obesity Among Adults: United States, 2017–2018. <https://www.cdc.gov/obesity/data/adult.html>
9. Nelson, J. B. (2017). Mindful Eating: The Art of Presence While You Eat. Diabetes Spectrum, 30(3), 171-174.
10. Kabat-Zinn, J. (2019). Yeni Başlayanlar için Farkındalık. (S. S. Tezcan, Çev.). İstanbul, Pegasus. (Orijinal eserin yayın tarihi 2006).
11. Black, M. (2018). Mindful Eating for Weight Loss: Try Before You Buy. The Journal of Clinical Endocrinology & Metabolism, 104(3), 864–866.

12. Framson, C., Kristal, A. R., Schenk, J. M., Littman, A. J., Zeliadt, S., & Benitez, D. (2009). Development and Validation of the Mindful Eating Questionnaire. *Journal of the American Dietetic Association*, 109(8), 1439–1444.
13. Giannopoulou, Kotopoulela-Nikolaïdi, Daskou, Martyn, & Patel. (2020). Mindfulness in Eating Is Inversely Related to Binge Eating and Mood Disturbances in University Students in Health-Related Disciplines. *Nutrients*, 12(2), 396.
14. Lofgren, I. E. (2015). Mindful Eating: An emerging approach for healthy weight management. *American Journal of Lifestyle Medicine*, 9(3), 212–216.
15. Monroe, J. T. (2015). Mindful Eating. *American Journal of Lifestyle Medicine*, 9(3), 217–220.
16. Ruffault, A., Czernichow, S., Hagger, M. S., Ferrand, M., Erichot, N., Carette, C., ... Flahault, C. (2017). The effects of mindfulness training on weight-loss and health-related behaviours in adults with overweight and obesity: A systematic review and meta-analysis. *Obesity Research & Clinical Practice*, 11(5), 90–111.
17. Camilleri GM, Mejean C, Bellisle F, Hercberg S, Peneau S. Association between mindfulness and weight status in a general population from the NutriNet-Sante study. *PLoS ONE* 2015;10.
18. Katterman, S. N., Kleinman, B. M., Hood, M. M., Nackers, L. M., & Corsica, J. A. (2014). Mindfulness meditation as an intervention for binge eating, emotional eating, and weight loss: A systematic review. *Eating Behaviors*, 15(2), 197–204.
19. Dalen, J., Smith, B. W., Shelley, B. M., Sloan, A. L., Leahigh, L., & Begay, D. (2010). Pilot study: Mindful Eating and Living (MEAL): Weight, eating behavior, and psychological outcomes associated with a mindfulness-based intervention for people with obesity. *Complementary Therapies in Medicine*, 18(6), 260–264.
20. Timmerman, G. M., & Brown, A. (2012). The Effect of a Mindfulness Restaurant Eating Intervention on Weight Management in Women. *Journal of Nutrition Education and Behavior*, 44(1), 22–28.

21. Mantzios M, Wilson JC. Exploring mindfulness and mindfulness with self compassion-centered interventions to assist weight loss: theoretical considerations and primary results of a randomized pilot study. *mindfulness*. 2015;6:824–35.
22. Miller CK, Kristellar JL, Headings A, Nagaraja H, Miser F. Comparative effectiveness of a mindful eating intervention to a diabetes self-management intervention among adults with type 2 diabetes: a pilot study. *J Acad Nutr Diet*. 2012;112(11):1835–42.
23. Daubenmier J, Moran PJ, Kristeller J, Acree M, Bacchetti P, Kemeny ME, et al. Effects of a mindfulness-based weight loss intervention in adults with obesity: a randomized clinical trial. *Obesity*. 2016;24:794–804.
24. Durukan, A., & Gül, A. (2019). Mindful eating: Differences of generations and relationship of mindful eating with BMI. *International Journal of Gastronomy and Food Science*, 18, 100172.
25. Alberts, H.J., Thewissen, R., Raes, L. (2012). Dealing with problematic eating behavior. The effects of a mindfulness-based intervention on eating behavior, food cravings, dichotomous thinking and body image concern, *Appetite*, 58(3), 847–51.
26. Forman, E. M., Butryn, M. L., Juarascio, A. S., Bradley, L. E., Lowe, M. R., Herbert, J. D., & Shaw, J. A. (2013). The mind your health project: a randomized controlled trial of an innovative behavioral treatment for obesity. *Obesity*, 21(6), 1119-1126.
27. Beshara, M., Hutchinson, A. D., & Wilson, C. (2013). Does mindfulness matter? Everyday mindfulness, mindful eating and self-reported serving size of energy dense foods among a sample of South Australian adults. *Appetite*, 67, 25-29.
28. Alberts HJ, Mulken S, Smeets M, et al. (2010) Coping with food cravings investigating the potential of a mindfulness based intervention. *Appetite* 55, 160–163.
29. Corsica, J., Hood, M. M., Katterman, S., Kleinman, B., & Ivan, I. (2014). Development of a novel mindfulness and cognitive behavioral intervention for stress-eating: A comparative pilot study. *Eating Behaviors*, 15(4), 694–699.

30. Daubenmier, J., Kristeller, J., Hecht, F. M., Maninger, N., Kuwata, M., Jhaveri, K., ... Epel, E. (2011). Mindfulness Intervention for Stress Eating to Reduce Cortisol and Abdominal Fat among Overweight and Obese Women: An Exploratory Randomized Controlled Study. *Journal of Obesity*, 2011, 1–13.
31. Mantzios, M., & Wilson, J. C. (2013). Making concrete construals mindfulness: A novel approach for developing mindfulness and self-compassion to assist weight loss. *Psychology & Health*, 29(4), 422–441.
32. Soleimaninanadegani, M., & Shahmohammadi, N. (2013). The Impact of Mindfulness-based Cognitive Therapy on Anthropometric Indices Balance in High-School Obese Girls' Students in Iran. *Procedia - Social and Behavioral Sciences*, 84, 542–548.
33. Cavanagh, K., Vartanian, L. R., Herman, C. P., & Polivy, J. (2014). The effect of portion size on food intake is robust to brief education and mindfulness exercises. *Journal of Health Psychology*, 19(6), 730–739.
34. Higgs, S., & Donohoe, J. E. (2011). Focusing on food during lunch enhances lunch memory and decreases later snack intake. *Appetite*, 57(1), 202–206.
35. Hong, P. Y., Lishner, D. A., & Han, K. H. (2012). Mindfulness and Eating: An Experiment Examining the Effect of Mindfulness Raisin Eating on the Enjoyment of Sampled Food. *Mindfulness*, 5(1), 80–87.
36. Jacobs J, Cardaciotto L, Block-Lerner J, et al. (2013) A pilot study of a single-session training to promote mindful eating. *Adv Mind Body Med* 27, 18–23.
37. Jordan C, Wanga W, Donatoni L, et al. (2014) Mindful eating: trait and state mindfulness predict healthier eating behavior. *Pers Individ Diff* 68, 107–111.
38. Kearney, D. J., Milton, M. L., Malte, C. A., McDermott, K. A., Martinez, M., & Simpson, T. L. (2012). Participation in mindfulness-based stress reduction is not associated with reductions in emotional eating or uncontrolled eating. *Nutrition Research*, 32(6), 413–420.

39. Courbasson, C. M., Nishikawa, Y., & Shapira, L. B. (2010). Mindfulness-Action Based Cognitive Behavioral Therapy for Concurrent Binge Eating Disorder and Substance Use Disorders. *Eating Disorders*, 19(1), 17–33.
40. Kidwell, B., Hasford, J., & Hardesty, D. M. (2015). Emotional Ability Training and Mindful Eating. *Journal of Marketing Research*, 52(1), 105–119.
41. Marchiori, D., & Papies, E. K. (2014). A brief mindfulness intervention reduces unhealthy eating when hungry, but not the portion size effect. *Appetite*, 75, 40–45.
42. Woolhouse, H., Knowles, A., & Crafti, N. (2012). Adding mindfulness to CBT Programs for Binge Eating: A Mixed-Methods Evaluation. *Eating Disorders*, 20(4), 321–339.
43. O'Reilly, G. A., Cook, L., Spruijt-Metz, D., & Black, D. S. (2014). mindfulness-based interventions for obesity-related eating behaviours: a literature review. *Obesity Reviews*, 15(6), 453–461.
44. Levin ME, Dalrymple K, Himes S, et al. (2014) Which facets of mindfulness are related to problematic eating among patients seeking bariatric surgery? *Eat Behav* 15, 298–305.
45. Ouwens, M. A., Schiffer, A. A., Visser, L. I., Raeijmaekers, N. J. C., & Nyklíček, I. (2015). Mindfulness and eating behaviour styles in morbidly obese mens and womens. *Appetite*, 87, 62–67.
46. Robinson, E., Kersbergen, I., & Higgs, S. (2014). Eating “attentively” reduces later energy consumption in overweight and obese womens. *British Journal of Nutrition*, 112(04), 657–661.
47. Pidgeon, A., Lacota, K., & Champion, J. (2012). The Moderating Effects of mindfulness on Psychological Distress and Emotional Eating Behaviour. *Australian Psychologist*, 48(4), 262–269.
48. Moor, K. R., Scott, A. J., & McIntosh, W. D. (2013). Mindful eating and its relationship to body mass index and physical activity among university students. *Mindfulness*, 4(3), 269–274.
49. Caldwell, K., Baime, M., & Wolever, R. (2012). Mindfulness based approaches to obesity and weight loss maintenance. *Journal of Mental Health Counseling*, 34(3), 269-282.

50. Grinnell, S., Greene, G., Melanson, K., Blissmer, B., & Lofgren, I. E. (2011). Anthropometric and Behavioral Measures Related to mindfulness in College Students. *Journal of American College Health*, 59(6), 539–545.
51. Olson, K. L., & Emery, C. F. (2015). Mindfulness and Weight Loss. *Psychosomatic Medicine*, 77(1), 59–67.
52. Carrière, K., Khoury, B., Günak, M. M., & Knäuper, B. (2017). Mindfulness-based interventions for weight loss: a systematic review and meta-analysis. *Obesity Reviews*, 19(2), 164–177.
53. Carpenter, K. M., Vickerman, K. A., Salmon, E. E., Javitz, H. S., Epel, E. S., & Lovejoy, J. C. (2017). A Randomized Pilot Study of a Phone-Based mindfulness and Weight Loss Program. *Behavioral Medicine*, 1–11.
54. Miller, C. K., Kristeller, J. L., Headings, A., & Nagaraja, H. (2014). Comparison of a Mindful Eating Intervention to a Diabetes Self-Management Intervention Among Adults With Type 2 Diabetes. *Health Education & Behavior*, 41(2), 145–154.
55. Ruffault, A., Czernichow, S., Hagger, M. S., Ferrand, M., Erichot, N., Carette, C., ... Flahault, C. (2017). The effects of mindfulness training on weight-loss and health-related behaviours in adults with overweight and obesity: A systematic review and meta-analysis. *Obesity Research & Clinical Practice*, 11(5), 90–111.
56. Rogers, J. M., Ferrari, M., Mosely, K., Lang, C. P., & Brennan, L. (2016). Mindfulness-based interventions for adults who are overweight or obese: a meta-analysis of physical and psychological health outcomes. *Obesity Reviews*, 18(1), 51–67.
57. Mason, A. E., Epel, E. S., Aschbacher, K., Lustig, R. H., Acree, M., Kristeller, J., ... Daubenmier, J. (2016). Reduced reward-driven eating accounts for the impact of a mindfulness-based diet and exercise intervention on weight loss: Data from the SHINE randomized controlled trial. *Appetite*, 100, 86–93.

58. Smith, B. W., Shelley, B. M., Sloan, A. L., Colleran, K., & Erickson, K. (2017). A Preliminary Randomized Controlled Trial of a Mindful Eating Intervention for Post-menopausal Obese Women. *Mindfulness*, 9(3), 836–849.
59. Godfrey, K. M., Gallo, L. C., & Afari, N. (2014). Mindfulness-based interventions for binge eating: a systematic review and meta-analysis. *Journal of Behavioral Medicine*, 38(2), 348–362.
60. Godsey, J. (2013). The role of mindfulness based interventions in the treatment of obesity and eating disorders: An integrative review. *Complementary Therapies in Medicine*, 21(4), 430–439.
61. Özmumcu, S. B. (2019). Isparta İli Bir Üniversite Hastanesi İdari Personeli Yeme Farkındalığı ve Fiziksel Aktivitelerinin Yaşam Kalitesine Etkisi. Yayımlanmamış Yüksek Lisans Tezi, Süleyman Demirel Üniversitesi, Isparta.
62. Işıklar, H. (2019). Düzenli Egzersizin Yeme Farkındalığı ve Sağlıklı Yaşam Biçimi Davranışlarına Etkisi. Yayımlanmamış Yüksek Lisans Tezi, Bilgi Üniversitesi, İstanbul.
63. Akpınar, B. (2019). Obezite ve Diyabette Yeme Farkındalığı. Yayımlanmamış Yüksek Lisans Tezi, Okan Üniversitesi, İstanbul.
64. Özkan, N. (2018). Yetişkin Bireylerde Sezgisel Yeme ve Yeme Farkındalığının Beslenme Durumu ile İlişkisi. Yayımlanmamış Yüksek Lisans Tezi, Gazi Üniversitesi, Ankara.
65. Mason AE, Epel ES, Kristeller J, Moran PJ, Dallman M, Lustig RH. Effects of a mindfulness-based intervention on mindful eating, sweets consumption, and fasting glucose levels in obese adults: data from the SHINE randomized controlled trial. *Journal of Behavioral Medicine* 39(2): 201-213, 2016.
66. Kuseyri, G., & Kızıltan, G. (2019). Üniversite Öğrencilerinde Yeme Farkındalığı ve Sezgisel Yeme Davranışının Beslenme Durumu Üzerine Etkisi. *Başkent Üniversitesi Sağlık Bilimleri Fakültesi Dergisi-BÜSBİD*, 4(3).

67. Kıtıl, B.(2019). Premenopoz ve Postmenopoz Dönemdeki Kadınların Yeme Farkındalığı, Yaşam Kalitesi ve Beslenme Alışkanlıklarının Değerlendirilmesi. Yayımlanmamış Yüksek Lisans Tezi, Okan Üniversitesi, İstanbul.



8. APPENDICES

APPENDIX 1: Ethical Approval

APPENDIX 2: Informed Consent Form

APPENDIX 3: Questionnaire Form

APPENDIX 4: Mindful Eating Questionnaire (MEQ-30)

APPENDIX 5: Curriculum Vitae



APPENDIX 1: Ethical Approval



Sayı : 37068608-6100-15- 1791
Konu: Klinik Araştırmalar
Etik kurul Başvurusu hk.

05/12/2019

İlgili Makama (Elif Bozycel)

Yeditepe Üniversitesi Sağlık Bilimleri Fakültesi Beslenme ve Diyetetik Bölümü Dr. Öğr. Üyesi Hülya Demir'in sorumlu araştırmacı olduğu **"İstanbul'un Etiler Semtinde Özel Bir Hastanenin Diyet Polikliniğine Başvuran Bireylerin Yeme Farkındalığı Davranışları ile Antropometrik Ölçümleri Arasındaki İlişkinin İncelenmesi"** isimli araştırma projesine ait Klinik Araştırmalar Etik Kurulu (KAERK) Başvuru Dosyası (1776) kayıt Numaralı KAERK Başvuru Dosyası, Yeditepe Üniversitesi Klinik Araştırmalar Etik Kurulu tarafından **04.12.2019** tarihli toplantıda incelenmiştir.

Kurul tarafından yapılan inceleme sonucu, yukarıdaki isimle belirtilen çalışmanın yapılmasının etik ve bilimsel açıdan uygun olduğuna karar verilmiştir (**KAERK Karar No: 1135**).

Prof. Dr. Turgay ÇELİK
Yeditepe Üniversitesi
Klinik Araştırmalar Etik Kurulu Başkanı

APPENDIX 2: Informed Consent Form

 T.C. YEDİTEPE ÜNİVERSİTESİ	KLİNİK ARAŞTIRMALAR ETİK KURULU BİLGİLENDİRİLMİŞ GÖNÜLLÜ OLUR FORMU	TARİH: VERSİYON:
--	--	---------------------------------------

Değerli katılımcı,

Yeditepe Üniversitesi Sağlık Bilimleri Enstitüsü Beslenme ve Diyetetik Bölümü'nden mezun olmak için yüksek lisans tez çalışmamı yapmaktayım. "İstanbul'un Esenler Semtinde Özel Bir Hastanenin Diyet Polikliniğine Başvuran Bireylerin Yeme Farkındalığı Davranışları ile Antropometrik Ölçümleri Arasındaki İlişkinin İncelenmesi" başlıklı yüksek lisans tez çalışmamın anket bölümüne katılmak üzere davet edilmiş bulunmaktasınız.

Bu çalışmada yer almayı kabul etmeden önce, çalışmanın ne amaçla yapılmak istendiğini anlamanız ve kararınızı bu bilgilendirme çerçevesinde özgürce vermeniz gerekmektedir.

Aşağıdaki bilgileri lütfen dikkatlice okuyunuz, sorularınız olursa sorunuz ve açık yanıtlar isteyiniz.

Bu çalışma, 18-65 yaş arası bireylerin yeme farkındalığı davranışının vücut kütle indeksleri, bel-kalça oranları üzerine etkisini saptamak amacıyla yapılmıştır. Çalışmanın bu kısmı yüz yüze anket yöntemi ile yapılacak olup, yalnızca anket formunu doldurmanız yeterli olacaktır.

Bu araştırmada gönüllülük esas olduğundan bu araştırmaya katılımınız isteğe bağlı olup, hiçbir şekilde katılma zorunluluğunuz asla bulunmamaktadır. Araştırmaya katılmış, anket formunu doldurmuş olsanız dahi istediğiniz zaman vazgeçme hakkına sahipsiniz. Araştırmaya katılmayı reddettiğiniz veya araştırmadan çekildiğinizde herhangi bir cezaya veya yaptırıma maruz kalmayacak, hiçbir hakkınızı kaybetmeyeceksiniz. Doldurduğunuz anketin iptalini gerçekleştirmek istediğinizde aşağıdaki ilgili kişilerle iletişime geçebilirsiniz.

Ayrıca anket formuna yazmış olduğunuz kimliğinizi ortaya çıkaracak bilgilerin gizli tutulacağı, kamuoyuna açıklanmayacağı, araştırma sonuçları yayımlansa dahi kimlik bilgilerinizin gizli kalacağını tarafınıza beyan ederim.

Çalışmanın bu araştırma kısmında yer almayı kabul ediyorsanız lütfen aşağıdaki bölümü doldurunuz. Katıldığınız için şimdiden teşekkür ederim.

 T.C. YEDİTEPE ÜNİVERSİTESİ	KLİNİK ARAŞTIRMALAR ETİK KURULU BİLGİLENDİRİLMİŞ GÖNÜLLÜ OLUR FORMU	TARİH: VERSİYON:
--	--	-------------------------

Lütfen aşağıda yazılmış olan cümleleri eksiksiz bir şekilde kendi el yazınız ile yazınız.

Bilgilendirilmiş gönüllü olur formundaki tüm açıklamaları okudum. Bana yukarıda konusu ve amacı belirtilen araştırma ile ilgili yazılı ve sözlü açıklama aşağıda adı belirtilen hekim tarafından yapıldı. Araştırmaya gönüllü olarak katıldığımı, istediğim zaman gerekçeli veya gerekçesiz olarak araştırmadan ayrılabileceğimi biliyorum.

Söz konusu araştırmaya, hiçbir baskı ve zorlama olmaksızın kendi rızamla katılmayı kabul ediyorum.

GÖNÜLLÜNÜN

Adı ve soyadı (doldurulması zorunlu değil):

İmza:

Tarih:

SORUMLU ARAŞTIRMACININ

Adı ve soyadı:

Telefon numarası:

Adres:

İmza:

YARDIMCI ARAŞTIRMACININ

Adı ve soyadı:

Telefon numarası:

Adres:

İmza:

Sorumlu Araştırmacı
Dr. Öğr. Üyesi Hülya DEMİR

Yardımcı Araştırmacı
Dyt. Elif BOZYEL

APPENDIX 3: Questionnaire Form

A.) KİŞİSEL BİLGİLER

1.AD SOYAD:

2.DOĞUM TARİHİ:

3.CİNSİYET a)Kadın b)Erkek

4.KİLO:

5.BOY:

6.BKİ:

7.BEL:

8.KALÇA:

9.GELİR SEVİYESİ

a.) 2.000-3.000

b.) 3.000-4.000

c.) 4.000-5.000

d.)5.000 ve üzeri

B.) YEME FARKINDALIĞI ÖLÇEĞİ (MEQ-30)

Değerli katılımcı, bu anket sizin yeme alışkanlıklarınız ve farkındalığınız ile ilgilidir.

Lütfen her bir soruyu dikkatlice okuyunuz ve size uygun gelen kutunun içine X işareti koyunuz.

1	2	3	4	5
Hiç	Nadiren	Bazen	Sık sık	Her zaman

		1	2	3	4	5
1.	Besinlerin kalorileri hakkında bilgim vardır.					
2.	Ana öğünümü ekmeksiz yiyemem.					
3.	Lokmalarımı çiğnemedem yutarım.					
4.	Sevdiğim yiyeceklerden birini yerken, doydüğümü fark edemem.					
5.	Fast food olmayan bir hayat düşünemiyorum.					
6.	Çevremdekiler çok hızlı yemek yediğimi söyler.					
7.	Gaz yapan yiyecekleri yemekten kaçınırım.					
8.	Yemeden önce yiyeceklerin görüntüsü ve kokusundan keyif alırım.					
9.	Dün akşam ne yediğimi hatırlayabilirim.					
10.	Bir şey ikram edildiğinde düşünmeden yerim.					
11.	Yüksek kalorili besinlerden uzak dururum.					
12.	Protein içeriği yüksek besinleri yemeyi tercih ederim.					
13.	Yediğim besinlerdeki ince tatları fark ederim.					
14.	Birden bire çok acıktığımı fark edip ne bulsam yiyecek duruma gelirim.					
15.	Yediğim her lokmanın tadına varırım.					
16.	Sık sık diyet yaparım.					
17.	Tok olsam bile bir yiyeceğin aklımı çeldiği olur.					
18.	Öğün saatlerim bellidir.					
19.	Yemek yerken çatal yerine kaşık kullanırım.					
20.	Bir öğünde daha fazla yiyemeyecek hale gelene kadar yerim.					
21.	Evin bir yerlerinde dondurma, kurabiye ya da cips varken yemeden duramam.					
22.	Moralim bozulunca ilk aklıma gelen şey yemek olur.					
23.	Canım sıkılınca yerim.					
24.	Sağlıklı beslenirim.					
25.	Yemek çok sıcak ise biraz soğumasını beklerim.					
26.	Yediğimi fark etmeden atıştırırım.					
27.	Küçük lokmalarla yerim.					
28.	Stresli hissettiğimde abur cubur yerim.					
29.	Yerken otomatik pilota bağlarım.					
30.	Mutlu olmak için çikolata yerim.					

APPENDIX 4: Mindful Eating Questionnaire (MEQ-30)

YEME FARKINDALIĞI ÖLÇEĞİ (MEQ-30)

Değerli katılımcı, bu anket sizin yeme alışkanlıklarınız ve farkındalığınız ile ilgilidir. Lütfen her bir soruyu dikkatlice okuyunuz ve size uygun gelen kutunun içine X işareti koyunuz.

	1	2	3	4	5
	Hiç	Nadiren	Bazen	Sık sık	Her zaman
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

Türkçe Kaynak: Köse G, Tayfur M, Birincioğlu İ, Dönmez A. Adaptation Study of the Mindful Eating Questionnaire (MEQ) into Turkish, Journal of Cognitive-Behavioral Psychotherapy and Research, 2016; 5(3): 125-134, doi: 10.5455/JCBPR.250644.

Orijinal Kaynak: Framson C, Kristal AR, Schenk JM, Littman AJ, Zeliadt S, Benitez D. Development and validation of the mindful eating questionnaire. Journal of the American Dietetic Association. 2009;109(8):1439-44.

PUANLAMA YÖNERGESİ

Alt boyut ve madde sayısı: 7 alt boyut ve 30 madde

1. Düşünmeden Yeme (5 madde) : 4, 14, 17, 20, 26
2. Duygusal Yeme (5 madde): 21, 22, 23, 28, 30
3. Yeme Kontrolü (4 madde): 3, 6, 27, 29
4. Farkındalık (5 madde): 8, 9, 12, 13 15
5. Yeme Disiplini (4 madde): 1, 18, 24, 25
6. Bilinçli Beslenme (5 madde): 2, 7, 11, 16, 19
7. Enterferans (Dış etmenlerden etkilenme) (2 madde): 5, 10

Ölçeğin bulunan ters maddeler: Ölçekte 20 ters madde bulunmaktadır. 1, 7, 9, 11, 13, 15, 18, 24, 25 ve 27.sorular düz puanlandırılmaktadır. Geriye kalan sorular ters* puanlandırılmaktadır. {*Ters Puanlama (1=5, 2=4, 3=3, 4=2, 5=1)}

Ölçeğin Değerlendirilmesi: Ölçek puanlanırken alt boyutların ve toplam puanın aritmetik ortalaması alınmaktadır. Ölçeğin her bir alt boyutundan alınan 3 ve üzeri puan bireyin ilgili alt boyutun değerlendirdiği özelliğe sahip olduğunu göstermektedir. Ölçek ayrıca toplam yeme farkındalığı puanı vermektedir.

İzin için iletişim adresi: dr.gizemkose@gmail.com

APPENDIX 5: Curriculum Vitae

Kişisel Bilgiler

Adı	ELİF	Soyadı	BOZYEL
Doğum Yeri	FATİH	Doğum Tarihi	24.09.1994
Uyruğu	TC	TC Kimlik No	14663634182
E-mail	bozyelelif@gmail.com	Tel	05320582294

Öğrenim Durumu

Derece	Alan	Mezun Olduğu Kurumun Adı	Mezuniyet Yılı
Doktora			
Yüksek Lisans	Beslenme ve Diyetetik	Yeditepe Üniversitesi	2020
Lisans	Beslenme ve Diyetetik Hemşirelik	Yeditepe Üniversitesi Yeditepe Üniversitesi	2018 2017
Lise	Sayısal	Haluk Ündeğer Anadolu Lisesi	2012

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

Bildiği Yabancı Dilleri	Yabancı Dil Sınav Notu (#)

İş Deneyimi (Sondan geçmişe doğru sıralayın)

Görevi	Kurum	Süre (Yıl - Yıl)
Diyetisyen	Özel Ensar Hastanesi	2019-halen
		-

Bilgisayar Bilgisi

Program	Kullanma becerisi
Microsoft Office (Word, Excel, Power Point)	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)