

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

**THE RELATIONSHIP OF EATING AWARENESS
WITH BODY MASS INDEX IN INDIVIDUALS
GOING TO A SPORTS CLUB**

Master Thesis

ECEM İLERLEMEK

İstanbul-2021

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İstanbul-2021

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DECLARATION

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

13.09.2021

ECEM İLERLEMEK



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TABLE OF CONTENTS

THESIS APPROVAL FORM	ii
DECLARATION	iii
ACKNOWLEDGEMENTS	iv
TABLE OF CONTENTS.....	v
LIST OF TABLES	vii
LIST OF FIGURES.....	ix
ABBREVIATIONS	x
ABSTRACT.....	xii
ÖZET	xiii
1. INTRODUCTION AND PURPASE	1
1.1. The Purpose of Study.....	3
1.2. The Problem of Study	4
1.3. The Importance of Study	4
1.4. The Hypotheses of Study	4
1.5. The Assumption of Study	4
1.6. Definitions	5
2. LİTERATURE REVIEW	1
2.1. Sports Club	1
2.1.1. Definition of Sports	1
2.1.2. The Importance and Purpose of Sports.....	2
2.1.3. Sports Club	2
2.1.4. Sports and nutrition.....	4
2.2. Awareness	5
2.2.1. Conscious Awareness Based On Theoretical Fundamental	7
2.3. Eating Awareness	11
2.3.1. Eating Awareness and Its Effect on Nutritional Status.....	18
2.3.2. The Role of Eating Awareness in Protecting Environmental Health	19
2.3.3. Eating Awareness Practices	20
2.3.4. Principles of Eating Awareness	21
2.3.4.1. Eating Speed	21

2.3.4.2. Awareness of Hunger and Satiety Signals	22
2.4. Hunger	26
2.4.1. Physical Hunger	26
2.4.2. The Obesity	33
3. MATERIAL	36
3.1. Place and Time of the Study	36
3.2. Selection of the Research Population and Determination of the Individuals	36
3.3. Data Collection and Evaluation	36
3.3.1. Study Plan	36
3.3.2. Evaluation of Anthropometric Measurements	37
3.3.3. Eating Awareness Scale (Appendix-4)	38
3.4. Statistical Analysis	38
4. RESULT	39
5. DISCUSSION AND RESULTS	66
REFERENCES	72
7. APPENDICES	94
APPENDIX-1. Thesis Study Ethics Committee Permission	94
APPENDIX-2. Informed Voluntary Consent Form for Research Purpose	95
APPENDIX-3. Questionnaire Form	98
APPENDIX-4. Eating Awareness Scale (MEQ-30)	99
8. RESUME	100

LIST OF TABLES

Table 2.1. Awareness from Nine Session Mindfulness-Based Eating Awareness Training (MB-EAT) Program.....	16
Table 3.1. Body Mass Index (BMI) Classification.....	36
Table 4.1. The Demographic Data of The Participation.....	38
Table 4.2. MEQ-30 Total And Subscale Scores Mean And Standard Deviation	40
Table 4.3. MEQ-30 Scale and Subscale Score distribution by gender Rate ((Man-Whitney U test).....	41
Table 4.4. Comparison Of Eating Awareness Scale Total Score According To Age Distribution (Kruskal Wallis And Dunn's Post Hoc Analysis).....	42
Table 4.5. Comparison Of Disinhibition Subscale Scores According To Age Distribution (Kruskal Wallis And Dunn's Post Hoc Analysis).....	43
Table 4.6. Comparison Of Emotional Eating Subscale Scores According To Age Distribution (Kruskal Wallis And Dunn's Post Hoc Analysis).....	44
Table 4.7. Comparison Of Eating Control Subscale Scores According To Age Distribution (Kruskal Wallis And Dunn's Post Hoc Analysis).....	45
Table 4.8. Comparison Of Focus Sub-Scale Scores According To Age Distribution (Kruskal Wallis and Dunn's Post Hoc Analysis)	46
Table 4.9. Comparison Of The Eating Discipline Sub-Scale Scores According To Age Distribution (Kruskal Wallis And Dunn's Post Hoc Analysis).....	47
Table 4.10. Comparison Of Awareness Sub-Scale Scores According To Age Distribution (Kruskal Wallis And Dunn's Post Hoc Analysis).....	48
Table 4.11. Comparison Of The Interference Sub-Scale Scores According To Age Distribution (Kruskal Wallis And Dunn's Post Hoc Analysis).....	49
Table 4.12. Distribution Of Eating Scale Scores And Subscale Scores By Working Status (Man-Whitney U Test).....	50
Table 4.13. Distribution Of Eating Scale Score And Subscale Scores By Income Status (Kruskal Wallis).....	51
Table 4.14. Distribution And Comparison Of Focus Subscale Scores By Income Status (Dunn's Post Hoc Analysis)	53

Table 4.15. Distribution And Comparison Of MEQ-30 Total Score According To BMI Range (Kruskal Wallis And Dunn's Post Hoc Analysis)	53
Table 4.16. Distribution And Comparison Of The Disinhibition Subscale Score According To The BMI Range (Kruskal Wallis And Dunn's Post Hoc Analysis)	55
Table 4.17. Distribution And Comparison Of Emotional Eating Subscale Score According To BMI Range (Kruskal Wallis And Dunn's Post Hoc Analysis)	56
Table 4.18. Distribution And Comparison Of The Eating Control Subscale Score According To BMI Range (Kruskal Wallis And Dunn's Post Hoc Analysis)	58
Table 4.19. Distribution And Comparison Of Focus Subscale Score According To BMI Range (Kruskal Wallis And Dunn's Post Hoc Analysis)	59
Table 4.20. Distribution And Comparison Of The Scores Of The Eating Discipline Subscale According To The BMI Range (Kruskal Wallis And Dunn's Post Hoc Analysis).....	61
Table 4.21. Distribution And Comparison Of The Awareness Subscale Score According To BMI Range (Kruskal Wallis And Dunn's Post Hoc Analysis)	62
Table 4.22. Distribution And Comparison Of The Interference Subscale Score According To BMI Range (Kruskal Wallis And Dunn's Post Hoc Analysis)	64
Table 4.23. Correlation Analysis Of BMI Values And MEQ-30 Total And Subscale Scores (Spearman Correlation Analysis)	65

LIST OF FIGURES

Figure 2.1. Hunger Scale	23
Figure 2.2. Classification of Obesity Based on BMI	33



ABBREVIATIONS

%	Percentage
ACT	Acceptance and Commitment Therapy
ANOVA	Analysis of Variance
BED	Binge Eating Disorder
BIA	Bioelectrical Impedance Analysis
BMI	Body Mass Index
CCK	Cholecystokinin
DBT	Dialectical Behavioral Therapy
dL	Deciliter
E.g.	Exempli gratia-For example
EI	Emotional Eating
etc	Et cetera
GLP	Glucagon-like Peptide-1
HbA1C	Hemoglobin A1c
HPA	Hypothalamic-Pituitary-Adrenal
IE	Intuitive Eating
kg	Kilogram
LDL	Glucagon-like Peptide-1
m ²	Metersquare
MBCT	Mindfulness-Based Cognitive Therapy
MB-EAT	Mindfulness-Based Eating Awareness Training
MBSR	Mindfulness Based Stress Reduction
MEI	Mindful Eating Interventions
MEQ	Mindfull Eating Questionnaire
mg	Miligra
OFC	Orbital Frontal Cortex
OMX	Oxyntomodulin
PET	Positron Emission Tomography
PYY	Peptide YY
SPSS	Statistical Program for Social Sciences

Std.	Standard
TR	Turkey
TV	Television
US	United States
WHO	World Health Organization



ABSTRACT

İlerlemek, E., The Relationship between Mindfull Eating and Body Mass Index (BMI) in the Department of Going to Sports Club, Yeditepe University Institute of Health Sciences, Department of Nutrition and Diet, Istanbul, 2021.

In this study, it was aimed to evaluate the relationship between mindfull eating and BMI in participants who go to sports clubs. Data were collected from individuals between the ages of 18-45 who went to Istanbul Göztepe Academy Sports Club by face-to-face interview method. In addition to demographic information, data were obtained using the Mindfull Eating Questionnaire (MEQ)-30. 538 participants, 281 women and 257 men, participated in the study. When the MEQ-30 scores of the participants were examined according to gender, no significant difference was found between the genders in the total score, disinhibition, focus and awareness subscales. Emotional eating and interference were found to be lower in females, while eating control and eating discipline were lower in male participants. Disinhibition and emotional eating scores were found to increase with increasing age. When the MEQ-30 total scores of the participants are analyzed according to the BMI ranges, it is seen that the MEQ-30 results decrease as the BMI value increases. A weak negative correlation was found between MEQ-30 total scores and BMI values. While inhibition, focus, eating discipline, awareness and interference subscale scores were not affected by BMI, emotional eating problem was found to be higher in obese individuals compared to normal weight individuals. In our study, in which individuals who continue to do sports constitute the study population, a relationship was found between lower BMI and eating awareness.

Keywords: Mindfull Eating, Obesity, Body Mass Index

ÖZET

İlerlemek, E., Spor Kulübüne Giden Bireylerde Yeme Farkındalığının Beden Kitle İndeksi (BMI) İle İlişkisi, Yeditepe Üniversitesi Sağlık Bilimleri Enstitüsü, Beslenme ve Diyetetik Anabilim Dalı, Yüksek Lisans Tezi, İstanbul, 2021.

Bu araştırmada spor kulübüne giden bireylerde yeme farkındalığının BMI ile ilişkisinin değerlendirilmesi amaçlanmıştır. İstanbul Göztepe Akademi Spor Kulübüne giden 18-45 yaş arası bireylerden yüzyüze görüşme yöntemi ile veri toplanmıştır. Demografik bilgilerin yanı sıra Yeme Farkındalığı Ölçeği-30 kullanılarak veriler alınmıştır. Çalışmaya 281 kadın, 257 erkek olmak üzere 538 katılımcı iştirak etmiştir. Katılımcılarının MEQ-30 puanları cinsiyete göre incelendiğinde toplam skor, disinhibisyon, odaklanma ve farkındalık alt ölçeklerinde cinsiyetler arasın anlamlı fark saptanmadı. Duygusal yeme, enterferans kadınlarda daha düşük tespit edilmişken yeme kontrolü ve yeme disiplini erkek katılımcılarda düşük bulunmuştur. Disinhibisyon ve duygusal yeme puanları yaş ilerledikçe artmış saptanmıştır. Katılımcıların MEQ-30 total skorları BMI aralıklarına göre incelendiğinde BMI değeri BMI değeri arttıkça MEQ-30 sonuçlarının azaldığı görülmektedir. MEQ-30 total skorları ile BMI değerleri arasında zayıf negatif yönlü bir korelasyon saptanmıştır. Dishibisyon, odaklanma, yeme disiplini, farkındalık ve enterferans alt ölçeklerii puanları BMI'den etkilenmezken duygusal yeme sorunu obez bireylerde normal kilolulara kıyasla daha yüksek bulunmuştur. Spora devam eden bireylerin çalışma evrenini oluşturduğu araştırmamızda daha düşük BMI ve yeme farkındalığı arasında ilişki saptanmıştır.

Anahtar Kelimeler: Yeme Farkındalığı, Obezite, Beden Kitle İndeksi

1. INTRODUCTION

The main demographic variables that determine the level of physical activity are age, gender and socio-economic status. There is a decrease in the level of physical activity with increasing age (1). As a result of many factors, men are more advantageous than women in participating in physical activity (2). For instance; Situations such as the mother's taking care of a young child in need of care are among the factors affecting the physical activity level of women (3). Low economic level may negatively affect physical activity due to the fact that the services offered in sports clubs are paid (4).

The main individual factors affecting physical activity are motivation, body weight, health, diet, stress, and physical and psychological fatigue. These factors are also effective in the success of athletes engaged in sports at the beginner and professional level. Motivation is the most important factor that encourages a person to do and continue physical activity. If a person uses physical activity as a tool while reaching his goal, he increases his participation in physical activity (5, 6). When the effect of body weight on the level of physical activity was examined, it was determined that individuals with low body weight were more active in physical activity (7, 8). People who are close to their goal, such as low-weight individuals, usually do sports. However, individuals with high weight may avoid physical activity due to both lack of motivation and avoidance of going out in public.

The concept of “Conscious Awareness”, which is the exact equivalent of the word “Mindfulness”, has been expressed as “awareness aiming to consciously pay attention to the present moment”. Recently, there has been an increasing interest in the effects of mindfulness meditation (practices) on the brain and cognitive functioning. The common purpose of mindfulness meditation styles is to adopt a criterion and an observer stance in the direction of attention, self-regulation, as well as one's emotions, thoughts and body states (9). For this reason, it is thought to be beneficial in improving behavior control and getting rid of acting on impulse. In a number of studies, awareness levels were found to be inversely proportional to impulsivity levels (10-13). When “Conscious Awareness” is adapted to eating behaviors, it can be expressed as “Awareness Eating” or “Eating Awareness” (9). Mindfulness eating is an approach that focuses on individuals' emotional

awareness of food and their experiences with food. The goal in mindful eating is to focus on the present moment, to make people aware of their eating experiences and to create behavior change (9). Thanks to awareness, individuals will get rid of unconscious and uncontrolled eating behavior and therefore unnecessary food consumption and weight gain will be prevented.

Emotional eating is defined as “the tendency to overeat in response to negative emotions such as anxiety or irritability” (14). This behavior is interesting because it is consistently associated with weight concerns such as emotional eating, overweight and obesity (15, 16). Additionally, overweight individuals have been found to exhibit less effective coping skills in response to negative emotions, leading them to eat more emotionally. Difficulties with weight loss have also been associated with emotional eating. Emotional eating is the act of eating in response to negative emotions and is generally observed in individuals with normal weight as well as overweight/obese individuals (17-20). It is possible to prevent emotional eating with eating awareness. Because with the awareness of eating, the person will gain the ability to decide what, how much and when to eat, not emotionally, but physically.

It is possible to explain the reason for the increase in the interest in exercise, starting from developed countries, as a need for biological, psychological and social balancing. People involved in sports aim to improve their physical and mental health, gain self-confidence and achieve the most efficient performance (21). Recently, sports have succeeded in being a part of human life, contributing to a healthy, successful, happy and high motivation throughout life (22). In the studies, psychological issues related to the body such as the individual's satisfaction with his body, his concerns about his physical appearance, and their relationship with physical activity are frequently discussed by researchers (23). Dissatisfaction with physical appearance is a positive factor that increases physical activity. However, the individual's dissatisfaction with his body and negative reactions due to his physical appearance may be the reason for not participating in physical activity (23).

Sensitivity to physical appearance brings with it an excessive interest in healthy living and nutrition. Some people obsessively track what they eat and the calories they

burn. The individual may be too concerned with the process of the food he eats until it reaches his plate, and this may become an obsession over time.

In conscious awareness, the individual perceives the stimuli coming from outside at that moment through the sense organs and connects with reality, thanks to this connection, the person can live the moment (24). When the mind is invited to the moment with conscious awareness practices, it becomes a habit over time to be aware of the present moment. It is important to focus attention on the present moment over and over again, to stay in the moment, to be in the present and to be in the present (25). Eating awareness was developed as a precaution against eating disorders. Eating awareness has a modulating effect on automatic responses. Thanks to awareness, the effect of emotional factors on eating behavior and thus unnecessary food consumption will be reduced. Automatic eating is a condition often seen as a result of emotional triggers. The purpose of eating awareness is to savor every food ingested in each bite, for the first time, as if biting into it. It is important for the individual to use all his senses and to realize the fullness by satisfying the individual (by satisfying the individual in every way) and to provide the awareness of eating. The individual needs to determine his/her hunger-fullness, to realize what kind of hunger he/she experiences if he/she is hungry, to feed accordingly, to know when to start eating and when to stop. Being aware of the food that the individual consumes will enable him to make healthier choices (26-27). Thanks to the awareness of eating, the individual will regain his intuitive eating ability and will consume as much as he needs in line with the signals his body gives. Thus, the person will prevent malnutrition by not eating less than he needs, and obesity by not eating too much.

1.1. The Purpose of Study

In this study, it was aimed to evaluate the relationship between eating awareness and BMI in individuals who go to sports clubs. It is expected that the data obtained will shed light on new studies that will improve eating awareness and BMI values.

1.2. The Problem of Study

Eating disorders have increased in the community over the years and have been the subject of many studies in recent years. Eating awareness was developed as a precaution against eating disorders. It is estimated that individuals' awareness of eating may be related to BMI values.

1.3. The Importance of Study

Humans act intuitively from the moment they are born and this is how they are fed. In eating awareness, the focus is on listening to the body's needs, eating when hungry, and leaving when full. However, the individual's hunger-fullness mechanism is disrupted as a result of the parents' force-feeding attitude in infancy and the "if you don't finish your plate, you cry behind your back" style in childhood. Thus, the basic principle of eating awareness is lost.

It is predicted that the results to be obtained by examining the relationship between eating awareness and Body Mass Index in individuals who do sports in the sports club will contribute to increasing the social awareness of the individuals who do sports in the sports club.

1.4. The Hypotheses of Study

H0: Eating awareness is associated with BMI in individuals who go to sports clubs.

H1: Eating awareness is not associated with BMI in individuals who go to sports clubs.

1.5. The Assumption of Study

It is predicted that awareness of eating in individuals who sports clubs is related to BMI. In addition, the research will also measure whether the individual's age, gender, employment status and income level affect eating awareness.

1.6. Definitions

Sports: Sport, which is formed by the combination of the initials of the words System-Program-Organization-Record, is the activities carried out in the form of a race in order to develop the bodily-mental abilities of a person in a coordinated way in a healthy and balanced way. The aim of sports for centuries has been to be higher, stronger and faster. They are physical activities that aim to surpass the individual or his opponent, have certain principles, and are performed individually or in a team (28).

Awareness: In the language of conscious awareness, the word meaning is expressed as “deep awareness”. Mindfulness, which has its origins in Buddhism, is explained as “focusing only on what is now, without judgment” (24).

Eating Awareness: When “Conscious Awareness” is adapted to eating behaviors, it can be expressed as “Aware Eating” or “Eating Awareness” (9).

2. CONCEPTUAL FRAMEWORK

2.1. Sports Club

2.1.1. Definition of Sports

Today, sports are common activities that have economic benefits and provide an environment for competition and socialization between countries. It is known that people who do sports whenever they have the opportunity are healthier, more active and conscious than those who do not, according to this, spreading sports is effective in increasing and protecting general public health.

Doğan sports: “Based on the principle of the integrity of the organism, the education of the whole personality is complementary to and an integral part of the general education, and its purpose is to contribute to the physical, mental, spiritual and social development of people.” defined as (29).

Özbaydar sports: “It is an action that entertains or even relaxes while enjoying the body movements that require more or less punctuality, delicacy, and is generally performed by following some rules. It may or may not be competitive. If it is in the form of competition, there is also a motivation to increase interest and performance.” (30).

Fişek: “Sport is an aesthetic, technical, and aesthetic, technique, based on the use of the main skills that people have gained while fighting with nature and the methods of combating with or without tools, either individually or collectively, peacefully and through simulation, for play, distraction and distraction, depending on the increase in leisure time. Physics is a competitive and social process.” used the definition (31).

The goal in doing sports; To prevent or reduce the effects of organic, psychological and physical disorders brought about by sedentary life, to increase physiological capacity and thus to protect health for many years (32).

Negative thoughts of others about their physical appearance, pressures caused by the idealized external appearance of the society may cause them to move away from physical activities that will reduce their negative thoughts about their physical appearance

by providing their physical development (33). Motivation is the most important individual factor that enables a person to start and continue physical activity (5, 6). If the individual sees physical activity as a means to reach his goal, his orientation towards physical activity also increases.

2.1.2. The Importance and Purpose of Sports

A high level of correlation has been found between physical activity and health (34; 35). The level of physical activity is directly proportional to the quality of life, protection and improvement of mental health. Those with low physical activity have a worse quality of life than those with high physical activity (36). Internal control, conditional efficiency, social support and perceived quality of life are also directly proportional. When people are depressed or stressed, their way of perceiving life is more negative than a good psychological state. Some of the social and physiological benefits of regular sports are as follows;

- Breathing, heart, circulatory and digestive function improved
- In the section on body movement system, such as connective tissue elasticity and firmness
- Low resting heart rate and blood pressure,
- Blood lipid values, cholesterol and LDL (Low Density Lipoprotein) levels, achieving healthy values
- The ideal approach to weight
- Improvement in posture disorders,
- Psychological well-being, increase in self-confidence, improvement in social relations,
- It is to ensure success in the professional field (37).

2.1.3. Sports Club

Today, sports activities, with the shape of today's living conditions, are placed in closed spaces that are easy to control, limited, limited and have an economic dimension. The "fitness center", which is commonly used to industrialize sports, is the most common location for bodybuilding-shaping sports clubs; shopping centers or places that determine

status. Sports clubs work with continuous circulation, they were established for the consumption of different branches of sports, which provide motivation with a sense of belonging to a group with the idea of rapid use, campaigns and others doing it. As a result of the constant attraction of sports-related themes in mass media (television, social media), its recognition has increased (38).

It is thought that the increase in sharing private life with the use of social media also increases motivation in sports. In this way, people find the opportunity to draw a sportive image that gives importance to their health as a result of popular culture, even if they are not related to sports.

As the importance of physical activity is understood, the number and density of members of sports clubs that provide physical activity opportunities are increasing. This trend pushes sports club operators to follow the developments and update them (39). Sports club owners need to evaluate the data that affects physical activity in their businesses. Thus, they can provide competitive advantage by quickly and accurately solving the different motivations of people who use sports clubs (40-42). The development of technology and the increase in expectations make innovations inevitable in sports clubs. Sports centers that catch these innovations will easily achieve success.

Among the environmental factors of sports clubs, space and ease of access are important. Proximity to home, work, and affordable wages play an important role in initiating and maintaining physical activity. (43). The physical activity culture in sports clubs started with the formation of modern society towards the end of the 19th century and is developing day by day (44). The most important factor in the dynamic development of sports clubs is the continuous development of sports equipment in line with the requirements (45). The biggest factor in ensuring this development is the earnings of sports club operators (44). In general, people can provide continuity to sports clubs close to their homes, although the clubs that are far and difficult to reach are eagerly visited in the first place, they are rarely visited in the future and the money given is ignored and it is left to go to the sports club.

The relationship between physical activity and health has been frequently expressed in the last decade. It has been determined in many studies that health problems,

especially cardiovascular diseases, can be prevented or treated with physical activity. In addition, physical activity improves stress-related diseases and enables people to think more clearly (46). As people become enlightened and conscious about the importance of physical activity, the number and density of sports clubs that offer physical activity to modern society have increased (47).

2.1.4. Sports and nutrition

Food is the fuel the body uses throughout life. Nutrition; It is the use of food resources for growth, development, continuation of life and protection of health (48). Nutrition, which is one of the basic needs of human beings, is one of the important factors affecting human health. Adequate and balanced nutrition; It is also defined as taking the nutrients that people need in order to grow, develop and maintain their lives in the most economical way without losing their nutritional values, without losing their health, and using them in the body (49). Regular physical activity, adequate and balanced nutrition are two of the important factors for human health. Rapidly advancing science and technology reduce people's physical activity level and adversely affect their eating habits (50). When the history of sports is scanned, it is seen that people use some foods that they think will make them faster, stronger and more durable for centuries (51). Nutrition, which is one of the important supporters of sports sciences, is an important issue that should be considered because it affects the sports performance and general health of the athlete (52).

Sports and nutrition are an inseparable whole. Without one, the other is missing. For example, while losing weight only by dieting, the periods called the plateau period when the body resists the diet to which it is accustomed, adding sports, physical activity or increasing the current physical activity level is important in breaking the resistance and losing weight. Conscious nutrition is indispensable for achieving the targeted success in sports. When the condition of the athletes who received degrees was examined, it was seen that they had individual nutrition styles. The expected efficiency cannot be obtained in sports where nutrition is not well programmed (53). In the literature, athletes use various nutritional methods to reduce their body weight, feel vigorous, bodybuilding and reduce the effects of fatigue (54). The relationship between the body being full of energy and physical activity is also observed in terms of health risk. E.g; It has been determined

that people who have health problems as a result of smoking are less willing to start physical activity (55). There is an important relationship between the diet applied to control body size and physical activity. It has been observed that people who do physical activity approach their diet goals more than those who do not. For example, it has been observed that there is a tendency to eat less fatty meals as part of the applied diet (56, 57). This may be the result of not ignoring the effort made in the sport, thus paying more attention to health.

2.2. Awareness

“Attention” is the first condition in mindfulness, only with an attitude based on sincere intention, observing the mind, acceptance and compassion. While providing conscious awareness, the person does not interfere with his own feelings, thoughts and external stimuli. This is part of the awareness process and the goal is not to direct but to observe one's own mind. Conscious awareness is disconnected awareness that enables people to adopt resistant feelings and thoughts in a correct and balanced way (58). It is overly identified with feelings and thoughts that cannot be overcome, and it may not be easy to prevent it mentally. Conscious awareness perceives the brain as a factory that produces thoughts. According to this view, it would not be right to attribute the meaning of absolute reality to every thought that is the product of the mind, it would be beneficial for the psychological well-being of the person to understand that the product is not permanent without internalizing and judging it (59).

Jon Kabat-Zinn, the original developer of the Mindfulness-Based Stress Reduction program at the University of Massachusetts Medical School, defined "mindfulness" as "giving special attention, knowingly, in the present moment and in a non-judgmental way" (60). Individuals may not be aware of the moment they are in unconsciously and may be in a state of “mindlessness”. Their minds may be too concerned with thoughts about the past or the future, which may prevent them from focusing on the present (61).

Mindfulness is based on focusing attention on the present, on observing and accepting momentary experiences without judgment. Mindfulness, whose starting point is based on the personal development techniques of the East, has been used in

psychotherapy approaches in the West for more than thirty years. The functioning of Mindfulness-Based Therapies includes metacognition, internal exposure, affect and attention regulation. It was found that the effect of dysfunctional metacognitive beliefs decreased with the cognitive distancing method of mindfulness in the views examining awareness as the formation of metacognitive information processing (62, 63).

Mindful awareness has three main elements. The first is the state of being conscious with a focus on the present (64). The state of “being” manifests itself in the present moment, without being rooted in the present and immersed in dreams and thoughts about the past and the future (65). The second is to maintain attention both internally and externally. In order to achieve this, it is necessary to be aware of external messages while observing breathing, body perception, emotions and thoughts. The third element is acceptance with openness. It is accepting an experience exactly as it is, without judging it, without trying to fix it by getting rid of the influence of habits. For this, the individual must be free from his ideals and beliefs about his life. In this way, when the present moment is said "yes", it will be possible to understand and recognize the emotions brought by the current situation. In mindfulness practices, it is emphasized from the beginning that the goal is not to try to come to a point or to change something (66).

Germer summarizes the 3 basic components of mindfulness practices as follows:

1. Stop: First of all, slowing down and stopping the action that is being worked on prepares the ground for awareness. For example, slowing down while walking makes it easier to notice objects around you as you pass by. Stopping and breathing deeply in a heated discussion, giving attention to this breath allows you to focus on the moment and act more consciously.
2. Observe: To observe is to have close contact with the current experience. In order to realize what the individual is feeling at that moment, he should focus on his breathing and bodily feedback, and be able to understand his current emotions such as sadness, fear, anger, happiness.
3. Return: When the individual realizes that his focus has deviated, he should return to his focus gradually (67).

Germer, Siegel, and Fulton (61) gathered the experiential features of mindfulness under eight main headings:

1. Nonconceptual Mindfulness is the:awareness that occurs without going through the mental stages of the person.
2. Present-centered Mindfulness is based on focusing on the present,;not the past or the future.
3. Nonjudgmental: Expecting will prevent conscious awareness from continuing on its own, so it is necessary to live life without any expectation from the past or the future.
4. Intentionality: One of the main elements of mindfulness practices is directed attention. Bringing one's focus to the present is an expected awareness gain over time.
5. Participant observation: The person who practices awareness observes himself through the event. Mindfulness is an attitude towards the present, where one can better observe and closely examine one's body and mind, feel and touch the present moment.
6. Nonverbalspoken: Awareness experience occurs in the mind before words are. Thanks to awareness, the person automatically begins to look at his mental feelings, thoughts, people, events and situations with an attitude of improved awareness.
7. Exploratory: Conscious awareness is an approach that develops and changes throughout a person's life. Therefore, it is always aimed to discover more of the perceived part.
8. Liberating: It is aimed to focus on the moment by shaking off the burden of past experiences and future anxiety (61).

2.2.1. Conscious Awareness Based On Theoretical Fundamentals

In mindfulness-based therapies, attention regulation, metacognition, and exposure, which are among the change mechanisms in the cognitive behavioral approach, are used (68). Hayes, Strosahl, and Wilson define mindfulness-based therapies (using conceptual tools related to acceptance, insight, and awareness) as the "third wave" of

cognitive behavioral therapies (69). The basis of third generation therapies is to gain awareness about one's inner experiences (70).

In mindfulness practices, the person sits comfortably in the chair and pays attention to breathing. In the meantime, the person aims to perceive the moment he is in and to focus on the moment. This exercise forms the basis of mindfulness training and aims to increase self-control, awareness and reduce stress (71). By applying the experiences gained through exercises to their lives, people encourage them to think positively and get away from negative emotions (72). With these practices, the person gets away from the stress of life by adopting positive thoughts.

2.2.1.1. Psychodynamic Theory

The individual's ability to think about his own and other people's mental states is a conscious awareness skill. Psychodynamic psychotherapists discovered mindfulness before behaviorists. Psychoanalysis has historically had the same characteristics as mindfulness exercises. Both have interventions to explore inner life and assume that awareness and acceptance are prerequisites for change. Both approaches emphasize the importance of subconscious stages. According to psychodynamic theory, acceptance and awareness are the prerequisites for change. Being able to think about the mental state of the individual is the ability of conscious awareness. Mindful awareness practices enable the individual to gain insight and increase it (73).

2.2.1.2. Behavioral Theory

Cognitive Conscious awareness and cognitive behavioral theory have common aspects. Mindfulness from the practices of Buddhism is about finding our identity, questioning how we perceive the world and our place in it. Cognitive-based theories argue that we create the world we perceive with our thoughts. Cognitive therapies, similar to Buddhism, give direction to the individual about how his thoughts are formed and how to cope with different thoughts and expectations (73).

Buddhism and cognitive therapies base their views on "we make the world with our thoughts". Thanks to Buddhism and cognitive therapies, individuals can predict and comprehend how their thoughts are born and what their thoughts and wishes will bring.

In this way, they can establish a cause-effect relationship and cope with their wishes (74). Mindfulness and acceptance-based interventions provide insight that emotions, thoughts and feelings will not be permanent with an easy and objective approach to symptoms (75-77). The main approaches are as follows;

1. Dialectical Behavioral Therapy (DBT) (78-79).
2. Mindfulness Based Stress Reduction (MBSR) (80).
3. Mindfulness-Based Cognitive Therapy (MBCT) teaches individuals to observe their thoughts and is an application of MBSR (Consciousness-Based Stress Reduction) used for cognitive therapy and depression (81).
4. Acceptance and Commitment Therapy (ACT) directs the individual to accept their feelings of dissatisfaction rather than controlling them (82).

Cognitive psychology is an approach that argues that what we think, feel and do is the result of latent processes in the subconscious (83). The goal in therapy is to reach automatic, dysfunctional thought patterns that have not developed in the individual (84, 85).

2.2.1.3. Gestalt Theory

One of the basic concepts of Gestalt theory is awareness. Awareness requires the individual to be in communication with himself as well as interacting with his environment (86). Raising the awareness of the individual is one of the main goals in Gestalt therapies. High awareness keeps the individual in interaction with the environment, and thus, the person can make healthy choices by taking responsibility for his own thoughts, senses and behaviors (87). Mindfulness, unlike other approaches, involves being fully aware of everything that is happening now (88).

2.2.1.4. Existential Theory

This theory; argues that one of the most basic characteristics of being human is the effort to provide meaning to one's own life and the sense of feeling valuable. As a result, the individual experiences anxiety and conflicts in the face of negative situations. The individual who accepts death and has awareness, handles life holistically. Realizing

the value of life and living more efficiently, the person clings to life more tightly with the effect of the fear of death (89).

Existential approach death, freedom, isolation, meaninglessness is related to the “Five Remembering” that Buddhist philosophy recommends to be repeated every day (90, 91).

1. It's in my nature to.have.aging.and there's no way to avoid.aging.
2. It is in my nature to.to be sick.and there is no way to avoid getting sick.
3. It is in my nature to die and there is no escape from death.
4. Change is in the nature of everyone I love and value.to me. There is no way to avoid breaking up with them.
5. What I do is my only truth and I cannot escape the consequences of what I do.

These five recollections are important in accepting and making peace with our fears of aging, getting sick, being abandoned, and dying. In addition, these reminiscences allow us to sincerely appreciate everything that is here and now that life gives us (91).

2.2.1.5. Humanistic Theory

Humanistic theory values the quality of life and self-happiness of people and evaluates the individual according to the present moment, not his past (92). As in the belief of Buddhism, this theory focuses on the efficient use and development of man's natural substance. In addition, it emphasizes the necessity of learning to live with awareness by paying attention to the moment, to take responsibility for choices, to reduce anxiety and to learn to prevent it (93).

The purpose of mindfulness practices is to reduce problems about existential conditions such as illness, old age and death. Conscious awareness; It has many aspects in common with humanistic psychotherapy, which includes existential and structural approaches (94). According to Rogers, people who can fully use their capacity release their awareness in their lives (88).

2.3. Eating Awareness

The concept of “Conscious Awareness”, which is the exact equivalent of the word “Mindfulness”, has been expressed as “an awareness that involves consciously paying attention to the present moment”. When “Conscious Awareness” is adapted to eating behaviors, it can be expressed as “Awareness Eating” or “Eating Awareness” (9). Awareness reveals the sense of self by allowing the individual to separate from habitual reactions and patterns of thought, emotion and behavior (95).

It has been determined that as individuals gain awareness of eating, the level of being aware of their emotional state and coping with it increases. The concept of eating awareness was created by adapting it from mindfulness in order to define and regulate eating behavior (96).

Mindfulness eating is an approach that focuses on individuals' emotional awareness of food and their experiences with food. Eating with awareness enables making conscious food choices, listening to physical and psychological hunger-satiety signals and developing awareness (97) and thus eating healthy (98). It is conceptualized as being aware of the present moment while eating, paying attention to the effect of food on the senses, and noting physical and emotional sensations (99, 100).

Being able to listen to the signals of hunger-satiety protects the person from malnutrition or obesity by preventing over or undernutrition. If the control of this hunger-satiety mechanism is lost, this can lead to eating disorders.

The basic principle of mindfulness-based eating models is that disordered behavior patterns (incompatible eating patterns, etc.) are related to attempts to avoid negative internal experiences. Studies have shown that there is an experimental avoidance model in overweight individuals. These individuals tend to use passive coping strategies under constant exposure to stressors and often resort to eating in response to stress. Increasing the connections between emotional and impulsive eating habits is an important component of mindful eating (95). It is necessary to distinguish the emotional and impulsive messages coming from the body and eat accordingly.

Both behavioral and cognitive habits related to food intake have developed over many years and lead to habits and food choices that are becoming more and more automatic day by day. Regarding dysfunctional thoughts commonly used in overweight and obese individuals, awareness has been an important tool for more functional thoughts and healthy psychology (101). It has been observed that people with high eating awareness have more appropriate nutritional status than those who do not (102).

The focus of studies on mindful eating has been the emotional determinants of food and psychological stress. The Eating Awareness approach raises awareness for automatic and habitual patterns and can be permanently effective as it encourages long-term changes (103).

Changing the level of awareness while consuming food may cause a change in memory encoding for the eating part that affects food intake during subsequent consumption. When food is consumed while distracted, without awareness (for example, taking care of the phone, reading the newspaper), this situation is registered with a poor memory in the previous eating section. The hunger felt at the next meal and the food consumed increase. Despite this situation, when awareness about the consumed food is provided, the memory of the eating episode increases and snacking decreases (104). In the study of Mittal et al., people who consume food in a distracted way were not aware of the amount of portion they consumed. They remembered that they ate less than they consumed compared to those in the awareness group (105).

Automation of eating behavior, eating because it's time for a meal, focusing on distractions such as television and connecting bites to serials pave the way for eating disorders, overweight and obesity.

Mindfulness practices include observing by focusing on the moment, breathing in the moment, and actively participating in the moment (Hofmann et al, 2010). Mindful awareness has been beneficial in controlling eating disorders and food cravings (106, 107).

There are no rules in mindful eating, one's own experience is essential, because it is not possible for everyone to approach the same food in the same way. What is desired

here is to be aware of the experience of the person and focus on the moment. Suggestions are "Don't watch TV while eating.", "Be careful of portions.", "Chew and swallow 32 times." and "Sit down while you eat." It is about focusing on eating like food (60).

Mindfulness is a mind and body practice that involves observing inner experiences, in which attention is voluntarily and nonjudgmentally directed to the flow of momentary experiences. In other words, awareness; It is the ability to be aware of current perceptions, thoughts and physical sensations in an uncritical way (108). The origin of the concept of mindfulness comes from the meditation rituals practiced in Eastern religions. Mindfulness practices have been used as a therapy method within the psychotherapy approaches in the West for a long time. Jon Kabat-Zinn was one of the first researchers to incorporate mindfulness practice into medical treatment and clinical studies, with his book published in 1990. Mindfulness-Based Therapy Programs are applied for many psychological problems such as stress, chronic pain, anxiety, eating disorders and substance abuse (109). It has been found that mindfulness practice provides a significant decrease in HbA1C levels in diabetic patients and is beneficial in increasing the quality of life of patients with type 2 diabetes, as it is effective in reducing depression, anxiety and physiological symptoms. Mindfulness practices are different from cognitive behavior therapy. Because mindfulness practice does not change thoughts and does not aim to fend off negative thoughts. Instead, it supports being aware of these thoughts and accepting the thought as it is (110).

Eating awareness is the deliberate and non-judgmental awareness of emotional and physical sensations while eating or in a food-related environment. According to another definition, eating awareness means uncritical awareness of physical (hunger and satiety signs) and emotional (stress, boredom) situations while eating or in situations where there are environmental eating triggers (98).

Eating awareness generally includes non-judgmental awareness of internal and external signals that affect food desire, food choice, amount of consumption, and the way food is consumed. The increased mindfulness response to internal, physical signals (hunger-satiety) rather than emotions or environmental triggers explains in part how mindfulness leads to healthy body weight regulation and better diet quality. Mindful eaters are aware of how their food choices and eating behaviors affect them directly and

indirectly (111). It has been seen that eating awareness can be a useful strategy in positively influencing food consumption to maximize health and prevent disease. Eating awareness is an alternative approach to unhealthy eating behaviors, healthy body weight regulation and weight loss methods. Eating awareness practices in the field of dietetics were primarily used in the treatment of obesity and eating disorders (112). Jacobs et al. (113) examined the effect of 1-hour eating awareness training on awareness and food consumption in a cross-sectional study. After the training, it was reported that the participants' eating awareness scale scores increased and more than 85% made healthier food choices at lunch. The results show that eating awareness training can affect food intake and therefore support healthy body weight regulation.

Eating awareness encompasses full awareness of eating. It includes understanding the organoleptic properties of food such as texture and taste and generally slowing down the eating rate. Eating awareness approaches provide awareness of eating experiences related to food taste and attractiveness (individual's decision about when to start and when to stop eating, and food choice). Completing the satiety process by both satisfying the individual and meeting the nutritional needs of the individual in this process, where all senses must be used, constitutes an important part of eating awareness (114).

People can eat with awareness as a result of an innate ability. Triggers such as food abundance, increased stress intensity and multitasking often cause overeating and unconscious food selection. The increase in the portion sizes of the foods consumed at home or outside the home, the less observance of the act of eating at the time of food consumption (auto-pilot), the exposure to emotional and environmental factors while eating cause excessive food consumption and therefore an increase in body weight. Although there is no genetic predisposition to obesity, excessive food consumption without awareness can cause obesity (113). The main purpose of mindfulness is to reduce the "auto-pilot" state, or times during the day when people are not conscious of individual moments. Eating or making decisions about eating without awareness while autopilot is active causes excessive food consumption and increased calorie intake since there is no monitoring of how much food is consumed. Eating awareness encourages eliminating all distractions such as watching TV or studying while eating (115).

The following are attitudes about eating and living:

- Nonjudging: The first thing encountered with this experience is questioning whether the food is liked or not. Awareness of judgments is a critical element of attention.
- Patience: Patience is important in eating mindfully. It is necessary to be patient in order to focus on the moment, to slow down the chewing speed, to savor every bite, to be conscious of eating.
- Beginner approach: Pretending to have experiences for the first time (like a baby tasting a new thing, feeling an object, smelling it, and listening to it).
- Confidence: By noticing and appreciating how a person feels while consuming food and their responses to different foods, it enables him to accept himself more and thus to be more self-confident.
- Nonstriving: This is the opposite of "diet thinking", which is about striving for the goal of weight loss. It is permissible to be in the moment and fully appreciate one's experience as a consumer, as it is intended to achieve a specific outcome. It doesn't take effort to make something happen.
- Acceptance: Regardless of what happens, the person's being present with his whole being and accepting his experiences is the basis of the awareness process (116).
- Letting go: Conscious eating involves letting go of past expectations, such as eating raisins instead of eating chocolate. It requires being open to new experiences (60).

Mindful eating supports practitioners' understanding of who they are in a non-judgmental and self-accepting way. It encourages them to trust their own judgment, rather than being constrained by rules about what and when to eat. Awareness prompts practitioners to fully experience every moment and appreciate their lives as they are (117).

Mindful eating is about being aware of every bite. Thoughts about food should continue from the first bite until the last bite is swallowed, and other thoughts should not interfere (60). Achieving this will ensure that the person is aware of what the edible food will bring, so that he or she is fed consciously and in a dosed manner.

Some of the following suggestions will be helpful in teaching mindful eating:

- Before you automatically consume something, take a moment to pay attention to how you feel. Are you stressed, bored, angry or sad? Are you alone? Or are you really physically hungry? Be mindful of your responsiveness and make choices.
- If your craving is not related to hunger, do something else more appropriate for your need.
- Divert other distractions and focus on your food.
- In addition to how you experience a meal, think about what it would take for that meal to come to you. Who was involved in the growth process and production? Consider the sun and soil it uses to grow the materials, and ask yourself where on earth it came from. Appreciate everything you spend to bring it to your plate.
- After each bite, listen to your body to see how you feel. Is it enough? Do you need more? Is it time to stop? Then continue with what you have chosen (60).

Mindfulness training, or the development of present non-judgmental awareness, has been shown to increase emotional reactivity and reduce stress and improve other health behaviors.

The Mindfulness-Based Stress Reduction (MBSR) program is an 8-week, easily accessible course currently offered at over 500 sites across the US. Attention training is an effective intervention for reducing emotional eating. MBSR can offer a low-cost strategy for stress and emotion-related eating and indirectly weight loss (60).

MEI mindful eating interventions (MEI): The first session focuses on brief practices, mindfulness, and stress management strategies to improve mindfulness and greater gratitude for life. In the next three sessions, participants learn the principles of eating awareness, which includes relearning what they eat, re-learning feelings of hunger, and listening to their body to evaluate appropriate meal portions, and being grateful to their food and preparers. They need to pay attention to the food, its color, smell and aroma, eat slowly with small bites, savor every bite and pay attention to the feeling of fullness of the stomach. In addition, participants are taught to avoid automatic eating, to better control themselves in the face of high-calorie, delicious foods, and conscious

shopping skills. In each session, small anecdotes about mindfulness and mindful eating are presented from a scientific perspective.

This approach has nothing to do with nutritional elements, values and calories like diets. Diets are based on what and how much to consume in order to achieve certain results (weight loss-gain, regulating diseases). Diets are short-term solutions that often fail (60). Recently, it has been accepted that the diet applied without behavioral change does not work in the long term. Awareness has met the conditions required to change the general approach to food and has become the focus of the approach to food (60).

Table 2.1. Awareness from Nine Session Mindfulness-Based Eating Awareness Training (MB-EAT) Program (118)

Session 1	Introduction to self-regulation model, grape exercise, group practice and mindfulness meditation
Session 2	Short meditation (continues in all sessions), eating awareness; exercise (cheese and crackers); eating awareness concept, body scan concept
Session 3	Binge triggers and meditation, eating awareness exercise (sweet, high-fat foods like cake)
Session 4	Hunger cues - physiological/emotional, hunger meditation, eating practice, mindful food choices, recovery, self-care
Session 5	Taste satisfaction signals - types and levels, taste satisfaction meditation, sitting yoga
Session 6	Saturation signals - types and levels, satiety meditation, random eating
Session 7	Forgiveness - forgiveness meditation
Session 8	Inner wisdom – wisdom meditation, walking meditation
Session 9	Did you notice others? Where are you going from here?

Traditional weight loss programs calorie reduction, largely ignoring body signals related to hunger and satiety. The common thread between emotional eating and dieting is their association with ignoring or suppressed responses to internal and external cues. On the other hand, in mindful eating, individuals lead a healthier life by evaluating natural hunger-satiety signals and maintaining body-mind balance. By providing awareness on physical and emotional triggers, individuals can rely on their ability to know when and how much to eat (95).

Integrating eating awareness practices into weight loss diets will both restore people's intuitive eating ability and make the diet more sustainable and easier to navigate.

2.3.1. Eating Awareness and Its Effect on Nutritional Status

Awareness aims to develop a non-reactive attitude towards food and the emotions felt towards eating; this has been shown to have the potential to break the cycle of overconsumption and subsequent over-restriction. Studies show that eating awareness practices can reduce eating status and emotional eating in response to external factors. A review study found that dieting was a determinant of future body weight gain. In one of the included studies, it was reported that individuals who participated in the body weight loss study gained more weight within 2 years compared to the control group (119). Consistent with the principles of eating awareness, in the article of the Academy of Nutrition and Dietetics titled General Dietary Approach to Healthy Eating, it was emphasized that food cannot be classified as “good” or “bad”, instead it should be looked at its general role in a more abstract way (120).

In a study conducted with university students, it was observed that the waist circumference of the individuals who participated in the 3 sessions of eating awareness training after the training was significantly reduced compared to the control group that received traditional diet intervention. In an intervention study conducted with healthy premenopausal women, it was observed that eating awareness training resulted in lower total energy and fat intake in food consumption outside the home (121). In another study conducted on university students, it was determined that high awareness level was associated with a preference for more fruit consumption and a tendency to prefer fruit over sugar-containing snacks (122).

Psychological stress has been associated with unhealthy eating behaviors. Some clinical studies have also found an increase in food consumption under stressful conditions, although stress is not related to hunger or satiety. Under stressful conditions, food selection tends towards foods rich in sugar and fat content, and this phenomenon is observed more prominently in women than in men (123). Mindfulness practices have been shown to be effective in reducing stress. Studies have found that eating awareness significantly reduces binge eating episodes and emotional eating behavior (124). After

the training given to individuals with binge eating syndrome on awareness of internal and external stimuli regarding nutrition, it was observed that guilt and restriction behavior decreased and healthy eating habits were regained after binge eating behavior (125).

2.3.2. The Role of Eating Awareness in Protecting Environmental Health

Eating awareness practices not only improve individual health, but also aim for social benefit by securing future food production. Eating awareness provides the opportunity to fully comprehend the human and natural resources that deliver the food to the individual with the awareness of all senses at the time of eating (126). Eating awareness can affect an individual's food preferences by considering not only the effects on individual health, but also the environment, animal rights and social justice during grocery shopping, food preparation and eating (127). Eating awareness can be beneficial in reducing consumption of animal-based foods, especially red meat and processed meat products. A diet rich in plant-based foods and less consumption of animal-based foods such as red and processed meat products is negatively associated with a low incidence of chronic diseases such as cardiovascular disease and diabetes (128). Reducing the consumption of animal-derived products is associated with less use of natural resources. Concern about how food is produced also affects public health. Environmental pollution; It also threatens health and future food production. Eating awareness aims to improve overall health and secure future food production. Efforts to increase both environmental sustainability and food safety, along with healthy eating choices, are consistent with the United Nations' Sustainable Development Goals. One possible approach to achieving these goals involves raising the awareness of clients using a values-based framework that links dietary practices to the shared goals of individual health, environmental sustainability, and food security. The basic principles of mindfulness techniques can be used to encourage individuals to make dietary choices that benefit both personal health and the natural resources involved in food production. In eating awareness practices, it is aimed to make food choices that maximize the benefit while minimizing the harm to oneself, others and the environment (129).

2.3.3. Eating Awareness Practices

Most traditional body weight loss approaches focus on how much of each food to consume and have low long-term success rates. Eating awareness practices seem to have the potential to turn the problem of excessive food consumption into a self-regulating behavior. In the practice of eating awareness, it offers an alternative approach to body weight control, since internal stimuli are guided in food consumption and decisions about food intake are under the control of the individual (130). The basic elements of eating awareness practices are; focuses on raising awareness of the physical experience of hunger, taste “satisfaction” and various signals of satiety. Eating awareness practices raise awareness about the relationship between food and body, emotions and mind, and the interdependence of environmental factors related to food (131).

Mindfulness practices help heighten the sensitivity of an individual's nutritional signals and help identify how the body reflects stress (muscle tension, rapid breathing), types of emotional states (such as the distinction between anxiety and anger), or cognitive patterns that cause binge eating ("I deserve this food" or "I don't deserve this food"). Mindfulness helps to be aware. Studies carried out in recent years; shows that mindfulness training can change the functional connection between the dorsomedial prefrontal cortex, an area that regulates the perception of bodily awareness, and the posterior insula (132).

Eating awareness interventions employ methods that regulate food consumption through awareness of eating behavior stimuli and physiological signals. Awareness practices; At the same time, eating awareness exercises include sensory awareness of hunger and satiety, awareness of sensory characteristics of foods such as taste, appearance and smell, wise choice of food according to health status and personal preferences, and acceptance of emotions. Eating awareness has been used to treat obesity-related behavioral disorders, such as problematic eating behaviors and uncontrollable food cravings, and has been shown to increase positive attitudes and behaviors towards food. Mindfulness-based eating programs also include meditation practice to eliminate food and other anxieties and increase awareness about inner experiences and emotions (114).

2.3.4. Principles of Eating Awareness

The term eating awareness is defined as eating behavior accompanied by many different principles. According to Matheui (133), these principles are; It consists of 5 main topics: slowing down the speed of eating, awareness of hunger and satiety signals, eliminating distractions in the eating environment, recognizing the difference between emotional and physical hunger, contemplating how food helps nourish the body, and making use of all the senses. Albers et al. (107) also discussed similar principles such as enjoying food, discovering emotional triggers related to eating, always being aware of bodily signals while eating, not restricting food, and not categorizing foods as good or bad.

2.3.4.1. Eating Speed

One of the principles of eating awareness is to slow down the pace of eating. It is assumed that slowing the eating rate will reduce energy intake. Eating more slowly gives time for satiety signals to act in the brain (it's estimated to take about 20 minutes). Satiation is the result of a complex physical and chemical mechanism related to nutrients and nutrients before and after absorption (134). It was concluded that it provides a reduction (135). Andrade et al. (136). During the fast-eating session, participants were asked to eat quickly, using a large spoon, and without pausing. During the slow eating session, they were asked to take small bites using a small spoon, chew each bite 20 to 30 times, and place the spoon/fork they used between the bites. At the end of the study, it was found that eating slower (on average 21 minutes longer compared to fast eating) resulted in a statistically significant reduction in energy intake (~646 kcal during fast eating, ~579 kcal during slow eating).

Gastric distension is the first sign of satiety during a meal and reflects the volume of food ingested. Subsequently, either hypophagic (inhibiting food intake) or hyperphagic (stimulating food intake) intestinal hormones are released by the stomach and intestines. These hormones transmit the energy content of the consumed food to the central nervous system to regulate the energy balance. The hypophagic hormone cholecystokinin (CCK) is produced by the duodenum and jejunum and its rapid release in response to food intake suggests that it plays a role in the development of satiety. Other gut hormones, such as

glucagon-like peptide-1 (GLP-1), oxyntomodulin (OMX), peptide YY (PYY), and pancreatic polypeptide (PP), contribute to the continued feeling of fullness after eating (137). These hormones typically do not play a role in ending a meal, but rather influence when the next meal is consumed. For example, the hyperphagic hormone ghrelin takes 60-120 minutes to reach their lowest levels after a meal, and the levels of PYY and GLP-1 hormones rise approximately 30 minutes after a meal. Given the slow response of physiological signals to satiety, it is thought that rapid consumption of food reduces one's awareness of internal processes and may inhibit the ability to detect physiological indicators of satiety, particularly gastric distension and CCK release. It is predicted that eating slowly may be beneficial in increasing the individual's awareness of these early indicators, thus reducing energy intake (138).

2.3.4.2. Awareness of Hunger and Satiety Signals

Another principle of eating awareness is awareness of hunger and satiety signals associated with eating speed. The purpose of eating awareness is to make the body more aware of hunger-satiety signals. Evaluating hunger and satiety cues in addition to eating speed is important to achieve this eating awareness principle (139).

Before starting to eat, it should be evaluated whether he wants to consume food because of internal hunger signals or because of the effect of emotional states such as happiness, sadness and stress. Eating (either from stress or emotional eating) in response to positive or negative emotions has been shown to result in increased energy intake and weight gain. Studies have shown that obesity is associated with emotional reactivity and that obese individuals are more prone to emotional eating than non-obese individuals (138).

Eating awareness aims to teach that awareness of hunger and satiety signals should be taken as a guide in order to avoid overeating. It emphasizes that the mind and body are a whole in the moment, and draws the person to the present time and task with the desired result of being aware of the internal and external stimuli to eat and stop eating. Thus, it provides an effective way of losing and controlling body weight by providing benefits in reducing calorie intake. As shown in Figure 2.1, using the “Hunger Scale” to find the ideal number of meals and to distinguish physical hunger from emotional hunger can help

determine the level of hunger (129). Research shows that people tend to eat emotionally when their self-esteem is low. or to replace the lack of fulfilled basic needs. Blair et al. (57) found a positive and significant relationship between emotional eating and BMI. It was observed that individuals whose emotional eating level was high at the beginning of the study but decreased afterward, lost more weight during the study compared to those whose emotional eating level was high. The ability to control emotions and not eat in response to these emotions is important in eating awareness practices as well as body weight control (140).



Figure 2.1. Hunger Scale

- Beyond hunger: You may have a headache. You may experience dizziness and a lack of concentration. Your body may feel completely drained of energy and you may need to lie down. This condition can also develop during restrictive dieting you may
- Along with being sluggish, feel irritable and cranky or even feel nauseous.
- Your stomach started rumbling. You are very hungry and want to eat. Your coordination began to weaken.
- You start thinking about food. Your body is giving you the signal that you want to eat. You're starting to get hungry.
- You are neither hungry nor full. Your body is sufficiently nourished to continue and you begin to feel satisfied physically and psychologically.
- You are full, you feel the fullness in your stomach.

- You are full but still looking for a place to eat some more. Your body says no to eating more, but your mind says yes. That's why you're thinking of eating a few more bites.
- Your stomach started to hurt from eating. You probably know that you shouldn't eat more, but you loved the taste of the food you ate.
- You are really uncomfortable now and you feel heavy, tired and bloated.
- Think of it like a holiday meal. You ate too much, now you regret it. It was a point you didn't want to come to. You cannot or do not want to move.

It is ideal that your hunger level is 3 or 4 before you start eating, and your satiety level is 5 or 6 after finishing the meal. If food is not eaten for a long time while hungry, and if the hunger status is at 1 and 2 levels, the probability of consuming too much food in a short time increases. As a result, the possibility of regretting the food consumed increases. The hunger scale will help control eating behaviors. If there is no disease condition that causes blood glucose level irregularity such as diabetes or reactive hypoglycemia, scoring the hunger status according to the hunger scale before starting to eat and scoring (141).

2.3.4.3. The Size of Portion

Reducing portion size is another principle of eating awareness. Increasing portion sizes over time contribute to the increase in obesity prevalence. In a cross-sectional study, it was reported that mindfulness training improves a person's sense of control and decision-making about portion size. It has been reported that individuals with higher eating awareness scale scores are more successful in reducing portion size, consume less energy-dense foods, and decrease their emotional and stress-related food consumption (142).

Wansink et al. (143), half of the participants were served soup in six-hole refillable bowls. As the soup in the bowl decreases, soup is supplemented from the bottom, and the control group drank soup from normal bowls. It was observed that the participants who continued to drink the soup in the bottomless bowl until the end of the study consumed an average of 73% more soup than the control group at the end of the study. It was determined by the researchers that the participants relied on external signals (amount of

food left on the plate, etc.) instead of internal hunger and satiety signals in determining their satiety. Reducing the amount of food consumed by taking less food on the plate, using smaller plate sizes and ordering smaller portions in restaurants offers an effective way to prevent body weight gain caused by excess energy intake (144).

2.3.4.4. Distraction

The fourth principle of eating awareness involves reducing distraction while eating. Studies have shown that watching television while eating increases the consumption of high-fat foods, meal frequency, and daily energy intake (145). It has also been observed that distractions such as watching television while eating reduce the ability to evaluate sensory cues such as satiety and taste perception, and increase the consumption of high energy-dense food. In eating awareness, the individual is aware of internal and external stimuli while eating. This improves one's ability to manage their emotions while eating. The practitioner of eating awareness performs the act of eating without any distractions in the environment and without haste. Thus, it can detect the taste, appearance, smell, sound and tactile sensation of the food (146).

2.3.4.5. Enjoying Food

Using all of one's senses (sight, smell, taste, and touch) is key to choosing pleasing foods. Research has shown that an individual's eating-related environment can affect food intake and acceptance. In addition, it is known that social norms and the way the food is presented affect the quality/characteristics of consumption while eating. Methods of making food an enjoyable experience (preparing a pleasant table and environment for dining even if you are alone) will contribute to enjoying the meal (146).

2.3.4.6. Evaluation of Eating Awareness

In order to evaluate the level of eating awareness, Framson et al. (27), consisting of 28 items, the Mindful Eating Questionnaire (MEQ) measures the main constructs of eating awareness (disinhibition, external cues, emotional response, awareness and distraction) and is used in clinical studies and research. Individuals who score high on this scale are considered to be aware of and responsive to the physiological indicators of hunger and satiety. They also pay attention to the characteristics of the consumed foods

such as texture and taste, overeating triggers and external stimuli. The scale was adapted to Turkish by Köse et al. (147) after conducting a validity and reliability study of the scale.

2.4. Hunger

2.4.1. Physical Hunger

The decrease in the energy stored in the body increases the desire to eat and provides homeostatic balance (148). The decrease in glucose in the blood and the increase in free fatty acids provide a feeling of hunger. The body's plasma glucose should be at the level of 70-110 mg/dL. In fasting, glycogenolysis, glucose synthesis from lipid and protein is provided in the liver. The feeling of satiety occurs as a result of the body meeting the energy it needs, with the effect of insulin release, leptin, ghrelin, and blood glucose levels. It is physical hunger eight hours after food consumption. Leptin and stomach-derived ghrelin hormones synthesized in white adipose tissue are important hormones that regulate the hunger-satiety mechanism. Leptin crosses the blood-brain barrier and binds to its receptors in the hypothalamus, activating the signals suppresses food intake and increases energy expenditure. Ghrelin, on the other hand, is a stomach-derived peptide that has an opposite effect on leptin (149).

PYY (3-36) is a hormone that stops food consumption by providing a feeling of satiety. The level of PYY (3-36) rises 15 minutes after food consumption and peaks within 90 minutes. It stays at these levels for 6 hours. The increase in PYY(3-36) is directly proportional to the food intake (De Silva, 2012). Medium-term satiety is metabolically controlled by gut peptide hormones such as GLP-1, CCK and PYY, which have food processing roles as well as their passage through the gastrointestinal tract and food intake arresting effect (150, 151).

The stomach and intestines provide feedback on the amount of food consumed, post-digestion information through physical signals of yawning/removal as well as osmotic load. The feeling of satiety lasts until the food is digested, the absorption signals decrease, and hunger starts the next feeding batch (150, 151).

One type of adaptive behavior called intuitive eating (IE) is generally defined as eating in response to physiological signals of hunger and satiety rather than external and/or emotional cues. In industrialized societies, increased food attractiveness, increased energy density and portion sizes, eating habits acquired by parents at the beginning of life (152), and multiple energy-restricting diets can disrupt the biological mechanism in the body (153).

Diet, conscious food restrictions may cause an increase in food consumption in the long run (154-156). It has been shown that diet can cause weight gain over a 5-year period (157) and increases the activation of brain regions responsible for attention and reward in response to food (158). As a result, a non-dietary approach called intuitive eating (IE) has been developed (159).

IE encourages eating according to hunger and satiety cues, as opposed to emotionally or externally triggered eating. It takes the focus from body weight, encourages abandonment of the idea of "forbidden" or "bad" foods, and gives unconditional consent to eating which food is desired when (159, 160). Prohibition-free dieting is a more attractive way for dieters, and intuitive eating is an important way to restore health in overweight individuals.

2.4.1.1. Hungry Brain

Famous British scientist JZ Young said, "It is an important clue that the brain and mouth are both at the same end of the body." and "No animal can live without food. Food then has the most important influence in determining the organization of the brain." emphasized the importance of nutrition for the brain (161). Some studies have suggested that the brain evolved in animals as a means of controlling the gut's food intake, thereby increasing their chances of survival and reproduction (162). It has also been stated that the brain plays an important role in guiding cortical development by determining which foods to take into the body and which harmful (for example, poisonous) foods to avoid (163).

The brain is the body's most energy-consuming organ, with a blood flow rate of 25%. It has been found that this rate is higher in the newborn human, where the brain

absorbs two-thirds of the energy consumed in the developing organism. The human brain has, evolutionarily, learned to enjoy (with a reward system) the food it will consume in order to survive. In addition, physiological responses (hungry etc.) prepare our body to receive these foods (164).

Recent regular exposure to virtual foods and the associated set of neural, physiological and behavioral responses can negatively affect our physiological hunger. This is the result of food media becoming more and more successful in the digital age.

2.4.1.2. Hedonic Hunger

The limbic system regulates behavior, emotion and controls hedonic perception. Mesolimbic dopaminergic neurons have a significant effect on the reward and addiction of consumed foods. As a result of studies, the effect of dopamine on the motivational dimension of food consumption as well as emotional eating has been proven. The reward perceived with the consumed food activates the cortical and limbic areas of the individual's brain, resulting in an increase in dopamine in the nucleus accumbens (165). Wang et al. interpreted that the reason for overeating was to normalize the decreased dopamine levels (166).

Hedonic eating can be expressed as hedonistic (for pleasure) eating. After eating and reaching satiety, a very popular food, "I am full, but I eat." Non-rejection is an example of hedonic feeding. Hedonic hunger leads the individual to consume high-calorie, delicious foods (167). It is now known that hedonic brain systems can override the hypothalamic systems that regulate energy balance, and the variety of high carbohydrate and fatty foods is a strong stimulus for these systems (168). Avoiding high-energy, low-nutrient foods as much as possible ensures that the hypothalamic systems are not disturbed, so that the body can continue to eat intuitively in its normal routine.

2.4.1.3. Visual Hunger

"Visual hunger" can be defined as the natural desire for images or impulses, the set of neural, physiological and behavioral responses that occur as a result of human exposure to images of food. Regular exposure to virtual foods may unduly increase our

physiological hunger due to the neural, physiological and behavioral responses associated with seeing food (161).

One of the main tasks of the brain is to facilitate finding and feeding (169). It has been suggested that trichromatic (color) vision may have originally developed in primates as an adaptation that facilitates the selection of energy-rich (and possibly red) fruits in the dark green forest canopy (170).

Finding nutritious food sources is important for providing the necessary physiological cycle, attention, pleasure and reward systems for human existence and survival (171). It is not surprising, then, that visual appeal has a significant impact on the overall pleasure that food elicits (172). This may explain the inability to say no to visually rich foods even if they are full.

2.4.1.3.1. Nerve Substrates Underlying the Visual Processing of Food

In the PET study conducted by Wang et al. a 24% increase in brain activity was observed with the sight of appetizing food and the sense of smell (173).

In obese individuals, increased neural activation has been observed in areas known to be associated with reward expectation during prolonged fasting (such as fasting). This suggests that the state of hunger exerts a significant influence on the brain's reward response to food. Petit et al. In their study, participants reported that individuals with high BMI had more activation in the relevant brain areas when they thought about the pleasures they could get when they saw food photos and when they ate (174). When people with a higher BMI saw the same images while considering the health benefits, less activity was observed in the same brain areas than those with a lower BMI. These results show that individuals with higher BMI tend to deny health benefits (175).

2.4.1.3.2. The Effect of Images in Psychology / Physiology Images of Food

Food can not only cause significant changes in attention areas, but also affect neural activity in the brain network, leading to salivation. In a study in which participants were shown images of high-calorie foods and low-calorie foods, it was evaluated that the

taste of high-calorie foods, based on electrical activity in the brain regions, gave significantly more pleasure than images of low-calorie foods (176).

This may be due to the fact that high-calorie foods are prepared much more deliciously than low-calorie healthy foods, that they contain addictive substances, and that high-calorie foods are generally more palatable by previous experience.

2.4.1.3.3. Virtual World

Recently, cookbooks and social media pages have come across with foods with high resolution and attractive images (175). Over the years, the resolution and color quality of the cameras are constantly improving, making the photos taken more attractive and aesthetically pleasing. Social media accounts that post photos of high-energy foods not only offer an alternative source of pleasure, but also indirectly encourage overconsumption and pleasure. “External food cues, such as the sight of appetizing food, can induce the urge to eat even when full,” Passamonti et al. “(177). The way a food is presented is effective on the person's perception of taste and on the choice of food in the next meals (178).

In society in general, the desire of people to take pictures of the food they order in restaurants and the number of chefs who want to make tasteful presentations for food is increasing day by day. It is understood that people spend more time looking at virtual images of appetizing food than real food consumed. When most people consume food while unquestioningly watching screens (TV, smartphone), they consume more calories of food because they eat without focusing their attention on feeling full. The pleasure of seeing virtual food while eating has, in a sense, replaced the pleasure of seeing real food (179). This situation can also be used in reverse. E.g; Young children's love of vegetables can be increased by exposing them to pictures of these vegetables (180). In this way, since healthy eating habits are gained at a young age, it will not be difficult to turn a healthy life into a lifestyle in adulthood.

Recently, it has been stated that more television cooking programs have been watched than ever before (179). A direct proportional relationship was found between BMI and TV watching hours in individuals (181).

2.4.1.4. Emotional Hunger

The emotional states of individuals can affect food consumption. The term emotional eating was coined by Bayles and Ebaugh in 1950 (182). Emotional eating has been defined as “Eating behavior is a response to negative emotions such as anxiety, depression, anger and loneliness” (183). The success of weight loss-oriented eating restrictions depends on the control of emotions. Detecting which emotions eat under the influence of eating is effective in controlling emotional eating (184-186).

2.4.1.4.1. The Emotional Eating Mechanisms

Stress, negative emotions can interfere with self-control in terms of restricting food intake while dieting. The body cannot distinguish applied food restriction from real food shortage and acts as if it is in starvation mode. Metabolic rate slows down, hunger and appetite increase. This can be especially true in times of stress. Therefore, diet is considered a risk factor for an increased tendency towards emotional eating. Another consequence of dieters' constant struggle against feelings of hunger (acting on the signals of hunger and satiety) is that it creates an additional risk factor for the development of emotional eating. Physiological stress reactions mimic the inner feelings associated with nutritional satiation (187-188).

Emotional eating can also occur independently of diet. Poor interoceptive awareness, confusion of hunger and satiety states, and physiological symptoms associated with emotions may be the result of alexithymia (emotional deafness) or poor emotion regulation strategies (189). Alternatively, emotional eating has also been associated with an adverse stress response of the HPA (hypothalamic-pituitary-adrenal) axis (blind rather than the typical high cortisol response to stress) (190).

Emotional eating tends to occur with external eating (attractive external factors such as smell, appearance). In a neuroimaging study in women on a sustained diet, increased activity in the Orbital Frontal Cortex (OFC) was associated with an increase in appetitive food cues reward value. A later study found that this increase predicted weight gain after 6 months (190).

One of the important differences between eating out and emotional eating is that in eating out, as opposed to emotional overeating, it has been considered an evolutionary adaptive response. It is argued that evolution favored genetic adaptations that enable humans to survive periods of food shortage when food is available (190).

Many people maintain their normal weight despite their emotional eating. Compensatory behaviors may explain the lack of weight gain in these emotional eaters (191). Studies have shown that exercise contributes to weight maintenance in emotional eaters (190). However, the quantitative design of such studies did not allow determining what motivates these individuals to exercise and whether exercise directly works. Compensatory eating behaviors may also be related to emotional eating and weight loss. For example, the ability to monitor internal hunger and satiety cues also played a role in regulating eating behaviors and reducing food consumption. However, the specific ways in which normal-weight emotional eaters might rely on these cues to regulate their eating and weight are unknown (Hayes, 192).

Engaging in regular physical activity has been shown to protect against weight gain, as well as reduce depression and other forms of negative effects that can lead to emotional effects. Later dimensional studies have shown the importance of physical activity for emotional eaters. The relationship between physical activity, emotional eating and weight gain over time was found to be moderate. Dohle et al. similarly found that emotional eaters who exercised more frequently had lower BMIs for 1 year than those who exercised less (190). Physical activity can help compensate for overeating and thus prevent the weight gain typically observed in emotional eaters.

2.4.1.4.2. Compensatory Eating Behaviors and Emotional Eating

Emotional eating has been associated with decreased awareness of internal hunger and satiety signals because stress alters one's ability to be aware of internal cues (193). In addition, they stated that individuals with Binge Eating Disorder engage in emotional eating because they cannot suppress their food consumption. However, emotionally fed normal-weight individuals have been found to consume less food in response to negative emotions than individuals with overweight or obesity (191). Therefore, it is possible that

normal-weight individuals are more aware of internal hunger and satiety cues, even under stress.

Other compensatory eating behaviors are associated with eating disorders and disordered eating behaviors. For example, fasting is a result of body dissatisfaction, internalization of fine ideals and restricted eating (194). Purging is also associated with eating disorders such as Bulimia and Binge Eating Disorder (190).

2.4.2. The Obesity

The obesity and overweight cause shortening of life expectancy and increase in metabolic diseases. Obesity, which is a serious and common health problem that has increased in the last 10-15 years, causes premature deaths due to medical complications (195). It is thought that overweight and obesity are important public health threats in developed and developing countries, reaching a serious level for young and future generations (196)

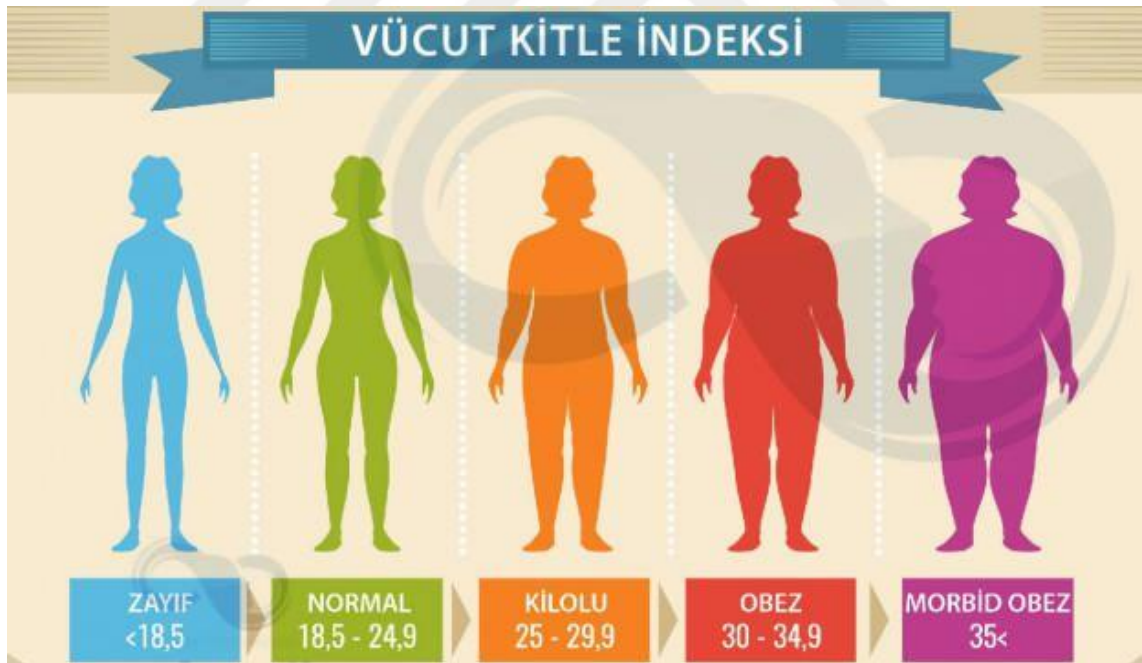


Figure 2.2. Classification of Obesity Based on BMI (195).

Medical treatment and lifestyle changes are applied in the treatment of obesity. As a risk-free, inexpensive treatment method, lifestyle changes are quite successful in increasing mental health and quality of life. In this respect, it is important to take

precautions for individuals who have not been diagnosed with obesity and who are in the overweight class yet, in terms of protecting public health.

Today, the most important reasons behind the increase in obesity are; hormonal, metabolic, genetic, psychological factors, increase in accessibility to foods, increase in economic intake, change in eating style, increase in packaged and ready-to-eat food consumption, change in work conditions and entertainment habits, increase in time spent with smartphones and tablets, and decrease in physical activity (197). In addition, there are reasons such as age, gender, education level, socio-cultural and factors, income status, cigarette-alcohol use, low-calorie diet at short intervals, some drugs used, number of births and time between births (195).

Although obesity is considered only as a result of overeating among the public, there are many underlying causes and the solution lies in identifying them and addressing them as a whole.

2.4.2.1. The Obesity and Awareness

Most people don't want to diet because they often have an emotional attachment to food. Mindful eating is advantageous because it is more realistic, feasible and sustainable for patients by increasing body acceptance, regardless of calorie count. Various studies and meta-analysis reviews show that eating mindfulness can be an important tool in losing and maintaining weight without counting calories, as recommended by the Academy of Nutrition and Dietetics (198). Eating awareness practices ensure that the feeling of guilt is noticed when the diet is abandoned; It has been found that it prevents eating attacks and eating episodes between meals (199).

Although the aim is not to lose weight like diets, those who practice mindful eating style are likely to lose weight. Mindful Restaurant Eating has been found to be effective in preventing weight gain and reducing daily calorie and fat intake. Although the purpose of the application is not weight loss, the majority of the participants (69%) stated that they lost an average of 1.7 kg in 6 weeks as a result of the study (60).

Eating awareness, eating carelessly and automatically, can inhibit the response to stimuli that stimulate food consumption (200). Automatic eating can include eating

foremotional, impulsive and habitual (201). A healthier and controlled eating period can be provided by preventing the individual from reacting to stimuli suddenly and without thinking.

It has been proven that mindfulness training aimed at hedonic eating for obese individuals will be more effective than energy restriction (202). It has been found that mindfulness training works in healthy food selection but does not affect portion control (203). Despite this, eating awareness encourages healthier eating behaviors, and choosing healthy food is an important step in the fight against obesity. Therefore, practices aimed at raising awareness for obese or overweight individuals will be useful.

There are three main keys to treatment in overweight and obese individuals;

1. Experiential acceptance as a positive coping skill to control responses to psychological stress
2. Regulation with awareness of emotional and physical cues related to food,
3. Self development of compassion, self-acceptance and body satisfaction (95).

3. METHODOLOGY

3.1. Place and Time of the Study

This study collected data from individuals between the ages of 18-45 who went to Istanbul Göztepe Academy Sports Club between 10 July 2021 and 31 July 2021 by face-to-face interview method. The study was carried out with the Ethics Committee Approval No. 15 dated 08.07.2021 (Appendix-1) by the Rectorate of TR Bezmi Alem Vakıf University, Non-Interventional Ethics Committee.

3.2. Selection of the Research Population and Determination of the Individuals

The population of the research; Between the dates 10.07.2021 and 31.07.2021, male and female individuals, aged between 18-45, who went to Istanbul Göztepe Academy Sports Club, without any health problems, were formed. A total of 538 individuals, aged between 18-45, who went to Istanbul Göztepe Sports Club between 10.07.2021 and 31.07.2021, and who did not have any health problems that would affect the study, voluntarily agreed to participate in the study. The scope and objectives of the study were explained in detail to the individuals included in the study, and the consent form was filled in voluntarily (Appendix-2). Individuals younger than 18 years of age and older than 45 years of age, who applied before or after the specified dates, and who were diagnosed with any health problems before or during the study were not included in the study.

3.3. Data Collection and Evaluation

3.3.1. Study Plan

The study started with the Ethics Committee Approval (Appendix-1) dated 08.07.

In order to determine the personal characteristics of the participants, a questionnaire containing general information (Appendix-3) was applied. The questionnaire contains information on the demographic characteristics of individuals (age, educational status, employment status, etc.).

For eating awareness, the eating awareness test (Appendix-4) was applied to the participants by the one-on-one interview technique by the researcher.

Height and body weight from the anthropometric measurements of the participants, Bioelectrical impedance analysis (BIA) and body composition were determined with Tanita BC-418, and BMI was calculated.

3.3.2. Evaluation of Anthropometric Measurements

Participants' body weight, height and body composition were measured.

Body weight and height: Participants' body weight was without shoes and socks using a bioelectrical impedance analyzer, Tanita Body Composition Analyzer BC-418. The height of the participants was measured in an upright position in the Frankfort plane, with the feet side by side, with the heel and occipital region touching the wall, using an ADE brand MZ10023 model height meter.

Body mass index: BMI was calculated by dividing body weight by height in meters squared, body weight (kg) / height² (m). In Table 3.1, the body mass index was evaluated according to the World Health Organization (WHO) classification.

Table 3.1. Body Mass Index (BMI) Classification

CLASSIFICATION	BMI (Kg/m ²)
Underweight	<18.50
Very thin	<16.00
Underweight	16.00-16.99
Slightly underweight	17.00-18.49
Normal	18.50-24.99
Overweight (obese)	≥25.00
Pre-obese	25.00-29.99
Obese	≥30.00
Obese I	30.00-34.99
Obese II	35.00-39.99
Obese III	≥40.00

3.3.3. Eating Awareness Scale (Appendix-4)

Five items in the Eating Awareness Scale were taken from the Mindfulness Eating Awareness Scale (MEQ-28), while the remaining items were adapted by being inspired by the same scale

and a new scale was created with a total of 30 questions. When likert-type scales are included in studies, it generally uses a 5-point scale as the number of options, as Likert (1932) did. Therefore, a 5-point Likert scale (1: never, 2: rarely, 3: sometimes, 4: often, 5: always) was used in the adapted new scale. Given the scale of the sub-factors disinhibition, emotional eating, eating Control, Focus, Food and discipline, as awareness and interference are distributed over 7 factors.

3.4. Statistical Analysis

Data, Statistics Software Package for Social Sciences 26.0 (Statistical Program for Social Sciences-SPSS for Windows 26.0) and analyzed using has been done. The normal distribution test of the variables (numerical data) of the participants was evaluated with the Kolmogorov Smirnov or Kurtosis-Skewness test. Participants' gender, age, class information, and all descriptive statistics (relevant means, deviations, ranges, etc.) were obtained. Difference between groups for normally distributed numerical variables Student's t-test, ANOVA, and Tukey and Scheffe multiple comparisons for post-hoc analysis with test; For numerical variables that do not show normal distribution, the difference between the groups was determined by the Mann-Whitney U test, Kruskal Wallis one-way analysis of variance and Dunn's multiple comparison test. The correlation between the variables was obtained with the help of correlation coefficients.

4. FINDINGS

The 538 participants who participated in our study, 281 (52.2%) were female and 257 (47.8%) were male. 182 participants (33.8%) are between the ages of 18-23, 106 people (19.7%) are between the ages of 24-29, 105 people (19.5%) are between the ages of 30-35, 92 people (17.1%) are It is between the ages of 36-41 and 53 people (9.9%) are between the ages of 42-45. BMI values of 29 participants (5.4%) were less than 18, 298 (55.4%) were between 18 and 24.9, 138 participants (25.7%) had a BMI between 25 and 29.9, 55 (10.2%) between 30 and 34.9, 13 (2.4%) between 35 and 40, and 5 (0.9%) over 40. While 227 people (42.2%) among the participants are working, 311 people (57.8%) are not working. The income of 234 participants (43.5%) is less than their expenses, the income of 215 (40%) participants is equal to their expenses, and the income of 89 (16.5%) participants is more than their expenses. The demographic data of the participants are presented in Table 4.1.

Table 4.1. The Demographic Data of The Participation

		Frequency	Percentage %
Gender	Female	281	52,2
	Male	257	47,8
Age Range	18-23	182	33,8
	24-29	106	19,7
	30-35	105	19,5
	36-41	92	17,1
	42-45	53	9,9
BMI Range	Less than 18	29	5,4
	18-24,9	298	55,4
	25-29,9	138	25,7
	30-34,9	55	18,2
	35-40	13	2,4
	Greater than 40	5	0,9

Job Status	Employed	227	42,2
	Unemployed	311	57,8
Income Status	Income Less Than Expenditure	234	43,5
	Income Equal to Expenditure Income	215	40
	More Than Expense	89	16,5

MEQ-30 total score in our study The average was found to be 92.40. When the subgroups were examined, the mean of Disinhibition was 14.88, Emotional Eating 13.89, Eating Control 12.49, Focus 19.49, Eating Discipline 12.81, Awareness 13.66, Interference 5.16. The mean and standard deviation of the participants' MEQ-30 total and subscale scores are shown in Table 4.2.

Table 4.2. MEQ-30 Total And Subscale Scores Mean And Standard Deviation

	N	Minimum	Maximum	Mean	Std. Deviation
Disinhibition	538	5,00	25,00	15,11	4,87
Emotional Eating	538	5,00	25,00	16,10	5,84
Ingestion Control	538	5,00	20,00	12,31	2,89
Focus	538	6,00	25,00	16,23	2,20
Eating Discipline	538	4,00	20,00	12,81	3,33
Awareness	538	5,00	25,00	16,36	2,51
Interference	538	2,00	10,00	6,83	2,00
Total Score	538	36,00	150,00	99,63	13,61

MEQ-30 scores of the participants were analyzed by gender, no significant difference was found between genders in the total score, disinhibition, focus and awareness subscales. The emotional eating subscale score was 15.06 for women and 17.23 for men ($p: 0.000$). The emotional eating subscale score was 15.06 for women and 17.23 for men ($p: 0.000$). The Eating Control subscale score was 12.60 for females and 12.00 for males ($p: 0.015$). The Eating Discipline Scale score was 13.16 for females and

12.42 for males (p: 0.010). The interference subscale score was 6.64 for females and 7.04 for males (p: 0.021). The distribution of MEQ-30 Scale Scores and Subscale Scores by gender is presented in Table 4.3.

Table 4.3. MEQ-30 Scale and Subscale Score distribution by gender Rate ((Man-Whitney U test)

	Gender	N	Mean	Std. Deviation	p-value
Total Score	Female	281	98,7046	13,95995	0,096
	Male	257	100,6615	13,17632	
Disinhibition	Women	281	14,8612	4,85415	0,207
	Male	257	15,3930	4,88992	
Emotional Eating	Female	281	15,0676	6,01359	0,000*
	Male	257	17,2335	5,45292	
Eating Control	Female	281	12,6085	2,80748	0,015*
	Male	257	12,0039	2,96397	
Focus	Female	281	16,2776	2,20093	0,679
	Male	257	16,1984	2,22282	
Eating Discipline	Female	281	13,1673	3,22221	0,010*
	Male	257	12,4280	3,41694	
Awareness	Female	281	16,1993	2,75865	0,104
	Male	257	16,5486	2,20762	
Interference	Female	281	6,6441	2,01105	0,021*
	Male	257	7,0428	1,98089	

p value is significant at 0.05.

When the participants' MEQ-30 scores are analyzed by age groups, the total score 97.49 for the 18-23 age group, 98.169 for the 24-29 age group, 99.31 for the 30-35 age group, 103.53 for the 36-41 age group, and 103.83 for the 42-45 age group. found 18 A significant difference was found between the total scores of the participants in the age range of -23 and the scores of the participants in the 36-41 age range and 42-45 age range (p: 0.004 and p: 0.022). There was a significant difference between the scores of the participants aged 24-29 and the scores of the participants aged 36-41 (p: 0.042).

Comparison of MEQ-30 Scale Scores according to age distribution is presented in Table 4.4.

Table 4.4. Comparison Of Eating Awareness Scale Total Score According To Age Distribution (Kruskal Wallis And Dunn's Post Hoc Analysis)

Age Range	Age Range	Mean Difference	Std.Error	Sig.
18-23 Age	24-29 Age	-,67531	1,64081	,994
	30-35 Age	-1,81978	1,64574	,804
	36-41 Age	-6,03810*	1,71790	,004*
	42-45 Age	-6,33568*	2,09610	,022*
24-29 Age	18-23 Age	,67531	1,64081	,994
	30-35 Age	-1,14447	1,84903	,972
	36-41 Age	-5,36280*	1,91354	,042*
	42-45 Age	-5,66038	2,25922	,091
30-35 Age	18-23 Age	1,81978	1,64574	,804
	24-29 Age	1,14447	1,84903	,972
	36-41 Age	-4,21832	1,91777	,181
	42-45 Age	-4,51590	2,26280	,269
36-41 Age	18-23 Age	6,03810*	1,71790	,004*
	24-29 Age	5,36280*	1,91354	,042*
	30-35 Age	4,21832	1,91777	,181
	42-45 Age	-,29758	2,31581	1,000
42-45 Age	18-23 Age	6,33568*	2,09610	,022*
	24-29 Age	5,66038	2,25922	,091
	30-35 Age	4,51590	2,26280	,269
	36-41 Age	,29758	2,31581	1,000

p value is significant at 0.05.

When the participants' MEQ-30 Disinhibition subscale scores were analyzed according to age groups, the average score was 14.54 for the 18-23 age group, 13.92 for the 24-29 age group, 14.92 for the 30-35 age group, and 36-41 age group. It was found to be 16.89 for the 42-45 age group, and 16.71 for the age group. A significant difference

was found between the total scores of the participants aged 18-23 and the scores of the participants aged 36-41 and those aged 42-45 (p: 0.002 and p: 0.031). There was a significant difference between the scores of the participants aged 24-29 and the scores of the participants aged 36-41 and those aged 42-45 (p: 0.000 and p: 0.006). There was also a significant difference between the scores of the participants in the 30-35 age range and the scores of the participants in the 36-41 age range (p: 0.036). The comparison of disinhibition subscale scores according to age distribution is presented in Table 4.5.

Table 4.5. Comparison Of Disinhibition Subscale Scores According To Age Distribution (Kruskal Wallis And Dunn's Post Hoc Analysis)

Age Range	Mean	Age Range	Mean Difference	Std. Error	Sig.
18-23 Age	14,54	24-29 Age	,59662	,58293	,845
		30-35 Age	-,37436	,58468	,968
		36-41 Age	-2,32011*	,61032	,002*
		42-45 Age	-2,16753*	,74468	,031*
24-29 Age	13,952	18-23 Age	-,59662	,58293	,845
		30-35 Age	-,97098	,65691	,577
		36-41 Age	-2,91674*	,67982	,000*
		42-45 Age	-2,76415*	,80263	,006*
30-35 Age	14,92	18-23 Age	,37436	,58468	,968
		24-29 Age	,97098	,65691	,577
		36-41 Age	-1,94576*	,68132	,036*
		42-45 Age	-1,79317	,80391	,170
36-41 Age	16,89	18-23 Age	2,32011*	,61032	,002*
		24-29 Age	2,91674*	,67982	,000*
		30-35 Age	1,94576*	,68132	,036*
		42-45 Age	,15258	,82274	1,000
42-45 Age	16,71	18-23 Age	2,16753*	,74468	,031*
		24-29 Age	2,76415*	,80263	,006*
		30-35 Age	1,79317	,80391	,170
		36-41 Age	-,15258	,82274	1,000

p value is significant at 0.05.

When the participants' MEQ-30 Emotional Eating Sub-Scale scores were analyzed according to age groups, it was found that 15.12 for the 18-23 age group, 15.00 for the 24-29 age group, 15.79 for the 30-35 age group, and average for the 36-41 age group. The score was 18.08, and 18.81 for the 42-45 age group. There was a significant difference between the total scores of the participants aged 18-23 and the scores of the participants aged 36-41 and those aged 42-45 (p: 0.001 and p: 0.000). There was a significant difference between the scores of the participants aged 24-29 and the scores of the participants aged 36-41 and those aged 42-45 (p: 0.002 and p: 0.001). There was also a significant difference between the scores of the participants aged 30-35 and the scores of the participants aged 36-41 and those aged 42-45 (p: 0.040 and p: 0.015). The comparison of Emotional Eating Subscale scores according to age distribution is presented in Table 4.6.

Table 4.6. Comparison Of Emotional Eating Subscale Scores According To Age Distribution (Kruskal Wallis And Dunn's Post Hoc Analysis)

Age Range	Mean	Age Range	Mean Difference	Std. Error	Sig.
18-23 Age	15,12	24-29 Age	,11694	,69621	1,000
		30-35 Age	-,66410	,69830	,877
		36-41 Age	-2,96058*	,72892	,001*
		42-45 Age	-3,68495*	,88939	,000*
24-29 Age	15,00	18-23 Age	-,11694	,69621	1,000
		30-35 Age	-,78104	,78456	,857
		36-41 Age	-3,07752*	,81193	,002*
		42-45 Age	-3,80189*	,95861	,001*
30-35 Age	15,79	18-23 Age	,66410	,69830	,877
		24-29 Age	,78104	,78456	,857
		36-41 Age	-2,29648*	,81373	,040*
		42-45 Age	-3,02084*	,96013	,015*
36-41 Age	18,08	18-23 Age	2,96058*	,72892	,001*
		24-29 Age	3,07752*	,81193	,002*
		30-35 Age	2,29648*	,81373	,040*

		42-45 Age	-,72436	,98262	,948
		18-23 Age	3,68495*	,88939	,000*
42-45 Age	18,81	24-29 Age	3,80189*	,95861	,001*
		30-35 Age	3,02084*	,96013	,015*
		36-41 Age	,72436	,98262	,948

p value is significant at 0.05.

When the participants' MEQ-30 Eating Control Sub-Scale scores are analyzed according to age groups, it is seen that the average is 11.93 for the 18-23 age group, 12.10 for the 24-29 age group, 12.40 for the 30-35 age group, and average for the 36-41 age group. The score was 13.01 and 12.75 for the 42-45 age group. A significant difference was found between the total scores of the participants aged 18-23 and the scores of the participants aged 36-41 (p: 0.027). Comparison of Eating Control Subscale scores according to age distribution is presented in Table 4.7.

Table 4.7. Comparison Of Eating Control Subscale Scores According To Age Distribution (Kruskal Wallis And Dunn's Post Hoc Analysis)

Age Range	Mean	Age Range	Mean Difference	Std. Error	Sig.
18-23 Age	11,93	24-29 Age	-,18070	,35172	,986
		30-35 Age	-,47692	,35278	,659
		36-41 Age	-1,08779*	,36824	,027*
		42-45 Age	-,83164	,44931	,345
24-29 Age	12,10	18-23 Age	,18070	,35172	,986
		30-35 Age	-,29623	,39635	,945
		36-41 Age	-,90710	,41018	,177
		42-45 Age	-,65094	,48428	,664
30-35 Age	12,40	18-23 Age	,47692	,35278	,659
		24-29 Age	,29623	,39635	,945
		36-41 Age	-,61087	,41109	,572
		42-45 Age	-,35472	,48505	,949
36-41 Age	13,01	18-23 Age	1,08779*	,36824	,027*
		24-29 Age	,90710	,41018	,177

42-45 Age	12,75	30-35 Age	,61087	,41109	,572
		42-45 Age	,25615	,49641	,986
	12,75	18-23 Age	,83164	,44931	,345
		24-29 Age	,65094	,48428	,664
		30-35 Age	,35472	,48505	,949
		36-41 Age	-,25615	,49641	,986

p value is significant at 0.05.

When the participants' MEQ-30 Focus Subscale scores were analyzed according to age groups, the average score was 15.84 for the 18-23 age group, 16.59 for the 24-29 age group, 16.27 for the 30-35 age group, and 16 for the 36-41 age group. It was found to be 44, 16.23 for the 42-45 age group. There was a significant difference between the total scores of the participants aged 18-23 and the scores of the participants aged 24-29 (p: 0.044). The comparison of Focus Subscale scores according to age distribution is presented in Table 4.8.

Table 4.8. Comparison Of Focus Sub-Scale Scores According To Age Distribution (Kruskal Wallis and Dunn's Post Hoc Analysis)

Age Range	Mean	Age Range	Mean Difference	Std. Error	Sig.
18-23 Age	15,84	24-29 Age	-,74819*	,26851	,044*
		30-35 Age	-,43004	,26931	,500
		36-41 Age	-,59950	,28112	,208
		42-45 Age	-,60668	,34301	,393
24-29 Age	16,59	18-23 Age	,74819*	,26851	,044*
		30-35 Age	,31815	,30258	,831
		36-41 Age	,14869	,31314	,990
		42-45 Age	,14151	,36971	,995
30-35 Age	16,27	18-23 Age	,43004	,26931	,500
		24-29 Age	-,31815	,30258	,831
		36-41 Age	-,16946	,31383	,983
		42-45 Age	-,17664	,37029	,989
36-41 Age	16,44	18-23 Age	,59950	,28112	,208

42-45 Age	16,23	24-29 Age	-,14869	,31314	,990
		30-35 Age	,16946	,31383	,983
		42-45 Age	-,00718	,37897	1,000
		18-23 Age	,60668	,34301	,393
		24-29 Age	-,14151	,36971	,995
		30-35 Age	,17664	,37029	,989
		36-41 Age	,00718	,37897	1,000

p value is significant at 0.05.

When the participants' MEQ-30 Eating Discipline Sub-Scale scores were analyzed by age groups, it was 12.34 for the 18-23 age group and 12 for the 24-29 age group. The mean score was found to be .44, 13.19 for the 30-35 age group, 13.41 for the 36-41 age group, and 13.39 for the 42-45 age group. The scores of the participants were not significantly affected by the age distribution. The comparison of the Eating Discipline Sub-Scale scores according to age distribution is presented in Table 4.9.

Table 4.9. Comparison Of The Eating Discipline Sub-Scale Scores According To Age Distribution (Kruskal Wallis And Dunn's Post Hoc Analysis)

Age Range	Mean	Age Range	Mean Difference	Std. Error	Sig.
18-23 Age	12,34	24-29 Age	-,10274	,40472	,999
		30-35 Age	-,84982	,40594	,224
		36-41 Age	-1,07238	,42373	,085
		42-45 Age	-1,05557	,51702	,248
24-29 Age	12,44	18-23 Age	,10274	,40472	,999
		30-35 Age	-,74708	,45608	,474
		36-41 Age	-,96965	,47199	,242
		42-45 Age	-,95283	,55726	,429
30-35 Age	13,19	18-23 Age	,84982	,40594	,224
		24-29 Age	,74708	,45608	,474
		36-41 Age	-,22257	,47303	,990
		42-45 Age	-,20575	,55814	,996
36-41 Age	13,41	18-23 Age	1,07238	,42373	,085

42-45 Age	13,39	24-29 Age	,96965	,47199	,242
		30-35 Age	,22257	,47303	,990
		42-45 Age	,01682	,57122	1,000
		18-23 Age	1,05557	,51702	,248
		24-29 Age	,95283	,55726	,429
		30-35 Age	,20575	,55814	,996
		36-41 Age	-,01682	,57122	1,000

p value is significant at 0.05.

When the participants' MEQ-30 Awareness Sub-Scale scores were analyzed according to age groups, it was 16.36 for the 18-23 age group, 16 for the 24-29 age group, and 16 for the 24-29 age group. The mean score was found to be 16.18 for the 40, 30-35 age group, 16.58 for the 36-41 age group, and 16.23 for the 42-45 age group. The scores of the participants were not significantly affected by the age distribution. The comparison of Awareness Sub-Scale scores according to age distribution is presented in Table 4.10.

Table 4.10. Comparison Of Awareness Sub-Scale Scores According To Age Distribution (Kruskal Wallis And Dunn's Post Hoc Analysis)

Age Range	Mean	Age Range	Mean Difference	Std. Error	Sig.
18-23 Age	16,36	24-29 Age	-,04302	,30797	1,000
		30-35 Age	,18168	,30889	,977
		36-41 Age	-,22432	,32243	,957
		42-45 Age	,07962	,39342	1,000
24-29 Age	16,40	18-23 Age	,04302	,30797	1,000
		30-35 Age	,22471	,34705	,967
		36-41 Age	-,18130	,35915	,987
		42-45 Age	,12264	,42404	,998
30-35 Age	16,18	18-23 Age	-,18168	,30889	,977
		24-29 Age	-,22471	,34705	,967
		36-41 Age	-,40600	,35995	,792
		42-45 Age	-,10207	,42471	,999
36-41 Age	16,58	18-23 Age	,22432	,32243	,957

42-45 Age	16,23	24-29 Age	,18130	,35915	,987
		30-35 Age	,40600	,35995	,792
		42-45 Age	,30394	,43466	,957
		18-23 Age	-,07962	,39342	1,000
		24-29 Age	-,12264	,42404	,998
		30-35 Age	,10207	,42471	,999
		36-41 Age	-,30394	,43466	,957

p value is significant at 0.05.

When the participants' MEQ-30 Interference Sub-Scale scores were analyzed by age groups, it was 6.71 for the 18-23 age group, 6 for the 24-29 age group, and 6 for the 24-29 age group. 51, 6.52 for the 30-35 age group, 7.38 for the 36-41 age group, 7.52 for the 42-45 age group. A significant difference was found between the total scores of the participants aged 24-29 and the scores of the participants aged 36-41 and those aged 42-45 (p: 0.020 and p: 0.021). There was also a significant difference between the scores of the participants aged 30-35 and the scores of the participants aged 36-41 and those aged 42-45 (p: 0.021 and p: 0.022). The comparison of the Interference Subscale scores according to age distribution is presented in Table 4.11.

Table 4.11. Comparison Of The Interference Sub-Scale Scores According To Age Distribution (Kruskal Wallis And Dunn's Post Hoc Analysis)

Age Range	Mean	Age Range	Mean Difference	Std. Error	Sig.
18-23 Age	6,71	24-29 Age	,20091	,24150	,921
		30-35 Age	,19597	,24222	,928
		36-41 Age	-,66065	,25284	,069
		42-45 Age	-,80852	,30851	,068
24-29 Age	6,51	18-23 Age	-,20091	,24150	,921
		30-35 Age	-,00494	,27214	1,000
		36-41 Age	-,86157*	,28164	,020*
		42-45 Age	-1,00943*	,33251	,021*
30-35 Age	6,52	18-23 Age	-,19597	,24222	,928
		24-29 Age	,00494	,27214	1,000

		36-41 Age	-,85663*	,28226	,021*
		42-45 Age	-1,00449*	,33304	,022*
36-41 Age	7,38	18-23 Age	,66065	,25284	,069
		24-29 Age	,86157*	,28164	,020*
		30-35 Age	,85663*	,28226	,021*
		42-45 Age	-,14787	,34084	,993
42-45 Age	7,52	18-23 Age	,80852	,30851	,068
		24-29 Age	1,00943*	,33251	,021*
		30-35 Age	1,00449*	,33304	,022*
		36-41 Age	,14787	,34084	,993

p value is significant at 0.05.

MEQ-30 Total and subscale scores of the participants were analyzed according to their working status, the total score was found to be 101.34 in the working participants and 98.39 in the non-working participants. A statistical significance was found between the scores of the working and non-working participants (p: 0.012). While the emotional patch score was 16.95 in working participants, it was 15.48 in non-working participants. A statistical significance was found between the scores of the working and non-working participants (p: 0.004). The distribution of Eating Scale Scores and Subscale Scores according to working status is presented in Table 4.12.

Table 4.12. Distribution Of Eating Scale Scores And Subscale Scores By Working Status (Man-Whitney U Test)

	Job Status	N	Mean	Std.Deviation	p-value
Total	Work	227	101,3436	12,77775	0,012*
	Does not Work	311	98,3955	14,08343	
Disinhibition	Work	227	15,3348	4,85751	0,373
	Does not Work	311	14,9550	4,88756	
Emotional Eating	Work	227	16,9515	5,87723	0,004*
	Does not Work	311	15,4823	5,75793	
Eating Control	Work	227	12,1366	2,74649	0,211
	Does not Work	311	12,4534	2,99843	

Focus	Work	227	16,2687	2,06167	0,795
	Does not Work	311	16,2186	2,31484	
Eating Discipline	Work	227	13,0176	3,25599	0,227
	Does not Work	311	12,6656	3,38746	
Awareness	Work	227	16,5595	2,35927	0,128
	Does not Work	311	16,2251	2,61648	
Interference	Work	227	6,9339	1,93936	0,327
	Does not Work	311	6,7621	2,05127	

p value is significant at 0.05.

When the scale scores were analyzed according to income status, while the Total score, Disinhibition, Emotional Eating, Eating Control, Eating Discipline, Awareness and Interference subscales were not affected by income status, a significant difference was found between the groups in the Focus subscale. The distribution of Eating Scale Score and Subscale Scores according to income status is presented in Table 4.13.

Table 4.13. Distribution Of Eating Scale Score And Subscale Scores By Income Status (Kruskal Wallis)

		N	Mean	Std.Deviation	p-value
Total	Income < Expenses	234	99,1410	12,99692	0,494
	Income = Expense	215	100,4884	13,90316	
	Income > Expenses	89	98,8989	14,51492	
	Total	538	99,6394	13,61386	
Disinhibition	Income < Expenses	234	15,0684	4,97242	0,492
	Income = Expense	215	15,3628	4,83354	
	Income > Expenses	89	14,6404	4,72240	
	Total	538	15,1152	4,87399	
Emotional Eating	Income < Expenses	234	15,7521	5,86604	0,078
	Income = Expense	215	16,7814	5,75380	
	Income > Expenses	89	15,3820	5,92665	
	Total	538	16,1022	5,84839	

Eating Control	Income < Expenses	234	12,2906	2,93143	0,977
	Income = Expense	215	12,3488	2,72136	
	Income > Expenses	89	12,3258	3,22904	
	Total	538	12,3197	2,89642	
Focus	Income < Expenses	234	15,8547	2,33380	0,001*
	Income = Expense	215	16,4884	2,11991	
	Income > Expenses	89	16,6517	1,93121	
	Total	538	16,2398	2,20971	
Eating Discipline	Income < Expenses	234	12,5128	3,23902	0,176
	Income = Expense	215	13,0837	3,44957	
	Income > Expenses	89	12,9551	3,26799	
	Total	538	12,8141	3,33410	
Awareness	Income < Expenses	234	16,3932	2,51845	0,877
	Income = Expense	215	16,3023	2,48110	
	Income > Expenses	89	16,4494	2,60686	
	Total	538	16,3662	2,51434	
Interference	Income < Expenses	234	6,9231	2,09292	0,139
	Income = Expense	215	6,8977	1,94281	
	Income > Expenses	89	6,4494	1,88903	
	Total	538	6,8346	2,00478	

p value is significant at 0.05.

The Focus Subscale scores were found to be 15.85 for the participants whose income is less than their expenses, 16.4884 for the participants whose income is equal to their expenses, and 16.6517 for those whose income is more than their expenses. There is a statistically significant difference between the focus scale scores of the participants whose income is less than their expenses and whose income is equal to their expenses and whose income is more than their expenses (p: 0.006 and p: 0.010). The distribution and comparison of Focus Subscale Scores according to income status is presented in Table 4.14.

Table 4.14. Distribution And Comparison Of Focus Subscale Scores By Income Status (Dunn's Post Hoc Analysis)

Income Status	Income Status	Mean Difference	Standard Error	p-value
Income < Expenses	Income = Expense	-,63367*	,20661	,006*
	Income > Expenses	-,79698*	,27237	,010*
Income = Expense	Income < Expenses	,63367*	,20661	,006*
	Income > Expenses	-,16331	,27566	,824
Income > Expenses	Income < Expenses	,79698*	,27237	,010*
	Income = Expense	,16331	,27566	,824

p value is significant at 0.05.

When the MEQ-30 total scores of the participants were analyzed according to the BMI ranges, the mean score of the participants with a BMI value below 18 was 100.17, those between 18 and 24.9 were 101.06, those between 25 and 29.9 were 99.37, 30 and 34.9. 95.87 of those between 35 and 40, 92.87 of those between 35 and 40, and 78.40 of those over 40. Participants with a BMI greater than 40 had a statistically lower score on MEQ-30, and participants with a BMI below 18, between 18 and 24.9, and between 25 and 29.9 (p:0.011; p: 0.003 and p: 0.008). The distribution and comparison of MEQ-30 Total Score according to BMI Range is presented in Table 4.15.

Table 4.15. Distribution And Comparison Of MEQ-30 Total Score According To BMI Range (Kruskal Wallis And Dunn's Post Hoc Analysis)

BMI Range	Mean	BMI Range	Mean Difference	Std Error	p value
Less than 18 (Weak)	100,17	18-24,9	-,89470	2,60245	,999
		25-29,9	,79560	2,73298	1,000
		30-34,9	4,29969	3,07026	,727
		35-40	7,55703	4,46550	,537

		Greater than 40	21,77241*	6,47846	,011*
18-24,9 (Overweight Normal))	101,06	Less than 18	,89470	2,60245	,999
		25-29,9	1,69030	1,37756	,824
		30-34,9	5,19439	1,96343	,088
		35-40	8,45173	3,79068	,226
		Greater than 40	22,66711*	6,03316	,003*
25-29,9 (Slightly Overweight)	99,37	Less than 18	-,79560	2,73298	1,000
		18-24,9	-1,69030	1,37756	,824
		30-34,9	3,50408	2,13341	,571
		35-40	6,76143	3,88145	,505
		Greater than 40	20,97681*	6,09060	,008*
30-34,9 (Class 1 Obesity)	95,87	Less than 18	-4,29969	3,07026	,727
		18-24,9	-5,19439	1,96343	,088
		25-29,9	-3,50408	2,13341	,571
		35-40	3,25734	4,12589	,969
		Greater than 40	17,47273	6,24922	,060
35-40 (Class 2 Obesity)	92,61	Less than 18	-7,55703	4,46550	,537
		18-24,9	-8,45173	3,79068	,226
		25-29,9	-6,76143	3,88145	,505
		30-34,9	-3,25734	4,12589	,969
		Greater than 40	14,21538	7,04038	,333
Greater than 40 (Class 3 Obesity)	78,40	Less than 18	-21,77241*	6,47846	,011*
		18-24,9	-22,66711*	6,03316	,003*
		25-29,9	-20,97681*	6,09060	,008*
		30-34,9	-17,47273	6,24922	,060
		35-40	-14,21538	7,04038	,333

p value is significant at 0.05.

When the participants' MEQ-30 Disinhibition subscale scores were analyzed according to their BMI ranges, the mean score of the participants with a BMI value below 18 was 15.55, those between 18 and 24.9 were 15.63, those between 25 and 29.9 were 14.51, 30 and 34. It was determined that those between .9 were 14.56, those between 35 and 40 were 12.61 and those over 40 were 10.60. No significant difference was found between the groups. The distribution and comparison of MEQ-30 Disinhibition subscale scores according to BMI Range is presented in Table 4.16.

Table 4.16. Distribution And Comparison Of The Disinhibition Subscale Score According To The BMI Range (Kruskal Wallis And Dunn's Post Hoc Analysis)

BMI Range	Mean	BMI Range	Mean Difference	Std Error	p value
Less than 18 (Weak)	15,55	18-24,9	-,08250	,93997	1,000
		25-29,9	1,02999	,98712	,903
		30-34,9	,98809	1,10894	,949
		35-40	2,93634	1,61288	,453
		Greater than 40	4,95172	2,33994	,280
18-24,9 (Overweight Normal))	15,63	Less than 18	,08250	,93997	1,000
		25-29,9	1,11249	,49756	,223
		30-34,9	1,07059	,70917	,658
		35-40	3,01884	1,36915	,237
		Greater than 40	5,03423	2,17910	,192
25-29,9 (Slightly Overweight)	14,51	Less than 18	-1,02999	,98712	,903
		18-24,9	-1,11249	,49756	,223
		30-34,9	-,04190	,77056	1,000
		35-40	1,90635	1,40193	,751
		Greater than 40	3,92174	2,19985	,478
30-34,9	14,56	Less than 18	-,98809	1,10894	,949

(Class 1 Obesity)			18-24,9	-1,07059	,70917	,658
			25-29,9	,04190	,77056	1,000
			35-40	1,94825	1,49022	,781
			Greater than 40	3,96364	2,25714	,495
35-40 (Class 2 Obesity)	12,61		Less than 18	-2,93634	1,61288	,453
			18-24,9	-3,01884	1,36915	,237
			25-29,9	-1,90635	1,40193	,751
			30-34,9	-1,94825	1,49022	,781
			Greater than 40	2,01538	2,54290	,969
Greater than 40 (Class 3 Obesity)	10,60		Less than 18	-4,95172	2,33994	,280
			18-24,9	-5,03423	2,17910	,192
			25-29,9	-3,92174	2,19985	,478
			30-34,9	-3,96364	2,25714	,495
			35-40	-2,01538	2,54290	,969

p value is significant at 0.05.

When the participants' MEQ-30 Emotional Eating subscale scores were analyzed according to the BMI ranges, the mean score of the participants with a BMI value below 18 was 15.86, 16.81 of those between 18 and 24.9, 15.79 of those between 25 and 29.9, 14.24 of those between 30 and 34.9, 13.46 of those between 35 and 40, and 10.20 of those over 40. The scores of the participants with a BMI between 18 and 24.9 and those with a BMI between 30-35 were found to be statistically different. (p:0.035).

Table 4.17. Distribution And Comparison Of Emotional Eating Subscale Score According To BMI Range (Kruskal Wallis And Dunn's Post Hoc Analysis)

BMI Range	Mean	BMI Range	Mean Difference	Std Error	p value
Less than 18 (Weak)	15,86	18-24,9	-,95672	1,12336	,957
		25-29,9	,06497	1,17970	1,000
		30-34,9	1,57116	1,32529	,844

			35-40	2,40053	1,92755	,814
			Greater than 40	5,86207	2,79645	,291
			Less than 18	,95672	1,12336	,957
			25-29,9	1,02169	,59463	,520
			30-34,9	2,52788*	,84752	,035*
18-24,9 (Overweight Normal))	16,81		35-40	3,35725	1,63626	,315
			Greater than 40	6,81879	2,60424	,095
			Less than 18	-,06497	1,17970	1,000
			18-24,9	-1,02169	,59463	,520
			30-34,9	1,50619	,92089	,575
25-29,9 (Slightly Overweight)	15,79		35-40	2,33556	1,67544	,731
			Greater than 40	5,79710	2,62903	,237
			Less than 18	-1,57116	1,32529	,844
			18-24,9	-2,52788*	,84752	,035*
			25-29,9	-1,50619	,92089	,575
30-34,9 (Class 1 Obesity)	14,29		35-40	,82937	1,78096	,997
			Greater than 40	4,29091	2,69750	,605
			Less than 18	-2,40053	1,92755	,814
			18-24,9	-3,35725	1,63626	,315
			25-29,9	-2,33556	1,67544	,731
35-40 (Class 2 Obesity)	13,46		30-34,9	-,82937	1,78096	,997
			Greater than 40	3,46154	3,03901	,865
			Less than 18	-5,86207	2,79645	,291
			18-24,9	-6,81879	2,60424	,095
			25-29,9	-5,79710	2,62903	,237
Greater than 40 (Class 3 Obesity)	10		30-34,9	-4,29091	2,69750	,605
			35-40	-3,46154	3,03901	,865

p value is significant at 0.05.

When the participants' MEQ-30 Eating control subscale score is analyzed according to BMI ranges, the mean score of the participants whose BMI value is below 18 is 13 12.53 of those between .06, 18 and 24.9, 12.22 of those between 25 and 29.9,

11.81 of those between 30 and 34.9, 9.76 of those between 35 and 40 and 10.20 of those over 40 detected. Participants with a BMI between 35 and 40 had a statistically lower score on MEQ-30, with a BMI below 18, between 18 and 24.9, and between 25 and 29.9 (p:0.008; p: 0.009 and p: 0.038). The distribution and comparison of the Eating Control subscale score according to BMI Range is presented in Table 4.18.

Table 4.18. Distribution And Comparison Of The Eating Control Subscale Score According To BMI Range (Kruskal Wallis And Dunn's Post Hoc Analysis)

BMI Range	Mean	BMI Range	Mean Difference	Std Error	p value
Less than 18 (Weak)	13,06	18-24,9	,53876	,55645	,928
		25-29,9	,84433	,58436	,699
		30-34,9	1,25078	,65648	,400
		35-40	3,29973*	,95480	,008*
		Greater than 40	2,86897	1,38521	,304
18-24,9 (Overweight Normal)	12,53	Less than 18	-,53876	,55645	,928
		25-29,9	,30556	,29455	,905
		30-34,9	,71202	,41981	,535
		35-40	2,76097*	,81051	,009*
		Greater than 40	2,33020	1,28999	,462
25-29,9 (Slightly Overweight)	12,22	Less than 18	-,84433	,58436	,699
		18-24,9	-,30556	,29455	,905
		30-34,9	,40646	,45616	,949
		35-40	2,45541*	,82992	,038*
		Greater than 40	2,02464	1,30228	,629
30-34,9 (Class 1 Obesity)	11,81	Less than 18	-1,25078	,65648	,400
		18-24,9	-,71202	,41981	,535
		25-29,9	-,40646	,45616	,949
		35-40	2,04895	,88219	,187
		Greater than 40	1,61818	1,33619	,831
35-40	9,76	Less than 18	-3,29973*	,95480	,008*
		18-24,9	-2,76097*	,81051	,009*

(Class 2 Obesity)		25-29,9	-2,45541*	,82992	,038*
		30-34,9	-2,04895	,88219	,187
		Greater than 40	-,43077	1,50535	1,000
Greater than 40 (Class 3 Obesity)	10,20	Less than 18	-2,86897	1,38521	,304
		18-24,9	-2,33020	1,28999	,462
		25-29,9	-2,02464	1,30228	,629
		30-34,9	-1,61818	1,33619	,831
		35-40	,43077	1,50535	1,000

p value is significant at 0.05.

When the participants' MEQ-30 Focus subscale scores were analyzed according to BMI ranges, the mean score of the participants with a BMI value below 18 was 16.56, 16.13 of those between 18 and 24.9, 16.10 of those between 25 and 29.9, 16.56 of those between 30 and 34.9, 17.46 of those between 35 and 40 and 18.20 of those over 40. No significant difference was found between the groups. The distribution and comparison of MEQ-30 Focus subscale scores according to BMI Range is presented in Table 4.19.

Tablo 4.19. Distribution And Comparison Of Focus Subscale Score According To BMI Range (Kruskal Wallis And Dunn's Post Hoc Analysis)

BMI Range	Mean	BMI Range	Mean Difference	Std Error	p value
Less than 18 (Weak)	16,55	18-24,9	,42085	,42756	,923
		25-29,9	,44303	,44900	,922
		30-34,9	,02445	,50441	1,000
		35-40	-,90981	,73363	,817
		Greater than 40	-1,64828	1,06434	,633
18-24,9 (Overweight Normal))	16,13	Less than 18	-,42085	,42756	,923
		25-29,9	,02218	,22632	1,000
		30-34,9	-,39640	,32257	,823
		35-40	-1,33067	,62277	,270
		Greater than 40	-2,06913	,99118	,295
25-29,9	16,10	Less than 18	-,44303	,44900	,922
		18-24,9	-,02218	,22632	1,000

(Slightly Overweight)			30-34,9	-,41858	,35050	,840
			35-40	-1,35284	,63768	,278
			Greater than 40	-2,09130	1,00062	,294
30-34,9 (Class 1 Obesity)	16,52		Less than 18	-,02445	,50441	1,000
			18-24,9	,39640	,32257	,823
			25-29,9	,41858	,35050	,840
			35-40	-,93427	,67784	,740
			Greater than 40	-1,67273	1,02668	,579
35-40 (Class 2 Obesity)	17,46		Less than 18	,90981	,73363	,817
			18-24,9	1,33067	,62277	,270
			25-29,9	1,35284	,63768	,278
			30-34,9	,93427	,67784	,740
			Greater than 40	-,73846	1,15666	,988
Greater than 40 (Class 3 Obesity)	18,20		Less than 18	1,64828	1,06434	,633
			18-24,9	2,06913	,99118	,295
			25-29,9	2,09130	1,00062	,294
			30-34,9	1,67273	1,02668	,579
			35-40	,73846	1,15666	,988

p value is significant at 0.05

When the participants' MEQ-30 Eating Discipline subscale scores are analyzed according to BMI ranges, the mean score of the participants with a BMI value below 18 was 12.57, 12.88 of those between 18 and 24.9, 13.06 of those between 25 and 29.9, 12.23 of those between 30 and 34.9, 11.92 of those between 35 and 40 and 10.60 of those over 40. No significant difference was found between the groups. The distribution and comparison of MEQ-30 Eating Discipline subscale scores according to BMI Range is presented in Table 4.20.

Table 4.20. Distribution And Comparison Of The Scores Of The Eating Discipline Subscale According To The BMI Range (Kruskal Wallis And Dunn's Post Hoc Analysis)

BMI Range	Mean	BMI Range	Mean Difference	Std Error	p value
Less than 18 (Weak)	12,75	18-24,9	-,12729	,64812	1,000
		25-29,9	-,30660	,68062	,998
		30-34,9	,52226	,76462	,984
		35-40	,83554	1,11209	,975
		Greater than 40	2,15862	1,61340	,764
18-24,9 (Overweight Normal))	12,88	Less than 18	,12729	,64812	1,000
		25-29,9	-,17931	,34307	,995
		30-34,9	,64954	,48897	,769
		35-40	,96283	,94403	,911
		Greater than 40	2,28591	1,50250	,651
25-29,9 (Slightly Overweight)	13,06	Less than 18	,30660	,68062	,998
		18-24,9	,17931	,34307	,995
		30-34,9	,82885	,53131	,625
		35-40	1,14214	,96664	,846
		Greater than 40	2,46522	1,51681	,582
30-34,9 (Class 1 Obesity)	12,23	Less than 18	-,52226	,76462	,984
		18-24,9	-,64954	,48897	,769
		25-29,9	-,82885	,53131	,625
		35-40	,31329	1,02752	1,000
		Greater than 40	1,63636	1,55631	,900
35-40 (Class 2 Obesity)	11,92	Less than 18	-,83554	1,11209	,975
		18-24,9	-,96283	,94403	,911
		25-29,9	-1,14214	,96664	,846
		30-34,9	-,31329	1,02752	1,000
		Greater than 40	1,32308	1,75334	,975
Greater than 40	10,60	Less than 18	-2,15862	1,61340	,764
		18-24,9	-2,28591	1,50250	,651

(Class 3 Obesity)	25-29,9	-2,46522	1,51681	,582
	30-34,9	-1,63636	1,55631	,900
	35-40	-1,32308	1,75334	,975

p value is significant at 0.05.

When the participants' MEQ-30 Awareness subscale scores were analyzed according to the BMI ranges, the mean score of the participants with a BMI value below 18 was 16.41, It was determined that those between 18 and 24.9 were 16.50, those between 25 and 29.9 were 16.16, those between 30 and 34.9 were 16.18, those between 35 and 40 were 16.46 and 15 of those over 40. No significant difference was found between the groups. The distribution and comparison of MEQ-30 Awareness subscale scores according to BMI Range is presented in Table 4.21.

Table 4.21. Distribution And Comparison Of The Awareness Subscale Score According To BMI Range (Kruskal Wallis And Dunn's Post Hoc Analysis)

BMI Range	Mean	BMI Range	Mean Difference	Std Error	p value
Less than 18 (Weak)	16,41	18-24,9	-,09292	,48974	1,000
		25-29,9	,24713	,51430	,997
		30-34,9	,23197	,57777	,999
		35-40	-,04775	,84033	1,000
		Greater than 40	1,41379	1,21913	,856
18-24,9 (Overweight Normal))	16,50	Less than 18	,09292	,48974	1,000
		25-29,9	,34004	,25923	,779
		30-34,9	,32489	,36948	,951
		35-40	,04517	,71334	1,000
		Greater than 40	1,50671	1,13533	,770
25-29,9 (Slightly Overweight)	16,16	Less than 18	-,24713	,51430	,997
		18-24,9	-,34004	,25923	,779
		30-34,9	-,01515	,40147	1,000
		35-40	-,29487	,73042	,999

		Greater than 40	1,16667	1,14614	,912
		Less than 18	-,23197	,57777	,999
30-34,9		18-24,9	-,32489	,36948	,951
(Class 1	16,18	25-29,9	,01515	,40147	1,000
Obesity)		35-40	-,27972	,77642	,999
		Greater than 40	1,18182	1,17599	,916
		Less than 18	,04775	,84033	1,000
35-40		18-24,9	-,04517	,71334	1,000
(Class 2	16,46	25-29,9	,29487	,73042	,999
Obesity)		30-34,9	,27972	,77642	,999
		Greater than 40	1,46154	1,32487	,880
Greater than 40		Less than 18	-1,41379	1,21913	,856
		18-24,9	-1,50671	1,13533	,770
(Class 3	15	25-29,9	-1,16667	1,14614	,912
Obesity)		30-34,9	-1,18182	1,17599	,916
		35-40	-1,46154	1,32487	,880

p value is significant at 0.05.

When the participants' MEQ-30 Interference subscale scores are analyzed according to the BMI ranges, the mean score of the participants with a BMI value below 18 is 6.86, 18 between 7 and 24.9, 6.67 between 25 and 29.9, 6.32 between 30 and 34.9, 7.30 and 5.40 among those between 35 and 40. No significant difference was found between the groups. The distribution and comparison of MEQ-30 Interference subscale scores according to BMI Range is presented in Table 4.22.

Table 4.22. Distribution And Comparison Of The Interference Subscale Score According To BMI Range (Kruskal Wallis And Dunn's Post Hoc Analysis)

BMI Range	Mean	BMI Range	Mean Difference	Std Error	p value
Less than 18 (Weak)	6,86	18-24,9	-,14129	,38820	,999
		25-29,9	,18816	,40767	,997
		30-34,9	,53480	,45799	,852
		35-40	-,44562	,66611	,985
		Greater than 40	1,46207	,96638	,656
18-24,9 (Overweight Normal))	7	Less than 18	,14129	,38820	,999
		25-29,9	,32944	,20549	,597
		30-34,9	,67608	,29288	,192
		35-40	-,30434	,56545	,995
		Greater than 40	1,60336	,89996	,479
25-29,9 (Slightly Overweight)	6,67	Less than 18	-,18816	,40767	,997
		18-24,9	-,32944	,20549	,597
		30-34,9	,34664	,31824	,886
		35-40	-,63378	,57899	,883
		Greater than 40	1,27391	,90853	,726
30-34,9 (Class 1 Obesity)	6,32	Less than 18	-,53480	,45799	,852
		18-24,9	-,67608	,29288	,192
		25-29,9	-,34664	,31824	,886
		35-40	-,98042	,61545	,604
		Greater than 40	,92727	,93219	,920
35-40 (Class 2 Obesity)	7,30	Less than 18	,44562	,66611	,985
		18-24,9	,30434	,56545	,995
		25-29,9	,63378	,57899	,883
		30-34,9	,98042	,61545	,604
		Greater than 40	1,90769	1,05020	,456
Greater than 40		Less than 18	-1,46207	,96638	,656
		18-24,9	-1,60336	,89996	,479

(Class 3 Obesity)	5,40	25-29,9	-1,27391	,90853	,726
		30-34,9	-,92727	,93219	,920
		35-40	-1,90769	1,05020	,456

In the correlation analysis of BMI values and MEQ-30 total and subscale scores, MEQ-30 total value, Disinhibition, Emotional Eating, Eating Control subscale In the scales, a very low negative correlation was found with the BMI values of the participants.

Correlation analysis of BMI values and MEQ-30 total and subscale scores are presented in Table 4.23.

Table 4.23. Correlation Analysis Of BMI Values And MEQ-30 Total And Subscale Scores (Spearman Correlation Analysis)

	coefficient R	p value
MEQ-30 Total value	-0,171	0,000*
Disinhibition	-0,118	0,006*
Emotional Eating	-0,135	0,002*
Food Control	-0,173	0,000*
Focus	0,081	0,061
Eating Discipline	-0,061	0,158
Awareness	-0,064	0,136
Interference	-0,073	0,091

Correlation is significant at the 0.001 level.

5. DISCUSSION AND RESULTS

Mindfulness refers to a non-judgmental state that focuses on the moment and allows for the recognition and evaluation of internal and external experiences without the pressure to change the moment or take immediate action. Mindfulness has temperament-like characteristics, but can also be learned and developed through education (204). In theory, mindfulness is expected to be inversely related to eating disorders because focusing on the present, recognizing the individual's intrinsic appetitive cues of hunger and satiety, and encourage the ability to respond effectively to them (88). Also, attention to the present moment should support differentiation between physiological hunger signals and other internal or external stimuli for eating, such as negative emotions or food availability (117). In almost all existing studies characterizing the cross-sectional relationship of dispositional awareness with unrestricted eating, awareness in healthy adults was found to be inversely related to self-reported eating in response to emotions or external cues (205). demonstrated that mindfulness-based interventions improve eating behaviors, weight management, and metabolic health. After 6 to 12 months of follow-up, the studies found that participants in the mindfulness arm continued to reduce their sweet food intake compared to participants in the control arm (100, 126).

Since it has become important to determine eating behaviors and types recently, Framson et al. (27) developed the MEQ to evaluate eating awareness. In our study, it was aimed to determine the eating awareness of the individual in various age groups and social status, and the eating awareness of the participants was evaluated according to the BMI values.

In our study, when the MEQ-30 scores of the participants were examined by gender, no significant difference was found between the genders in the total score, disinhibition (eating without thinking), focusing and awareness subscales. In the study of Üstündağ (190), no gender difference was found in the total score between the participants who do and do not do sports. In the study of Köse (207), the MEQ-30 scores of university students were evaluated and no difference was found between men and women. In our study, the emotional eating subscale score was found to be 15.06 in women and 17.23 in men ($p: 0.000$). In the study where Framson et al. developed the mindfulness

scale, women's emotional eating subscale scored lower than men's. Researchers have argued that women may respond differently than men in case of emotional stress. Contrary to these studies, in the study of Üstündağ (190), emotional eating, eating control and conscious eating scores were found to be higher in women. Similarly, in Orbatu's (207) study with high school students, when the relationship between emotional eating scores and gender was examined, it was determined that male gender scored higher in this area determined ($p: 0.021$). In other words, the problem of being affected by external factors is less for men. Similar to our study, in Orbatu's (207) study, interference was found to be higher in men, while in Üstündağ's study, the interference scale was found to be higher in women in non-sports participants. In our study, Eating Control and Eating Discipline scales were found to be higher in women. It is assumed that girls have better eating control and eating discipline due to their tendency to be in the kitchen with their mothers and to be in closer contact with food from an early age (201). In the studies of Orbatu (207) and Mantzios ve Wilson (201), eating control and discipline subscales were found to be higher in males. In the study of Üstündağ (190), it was determined that the concerns about healthy eating were higher in males in individuals who do sports in the gym. In the study of Köse (206), it was stated that women are at risk of eating disorders compared to men, according to the results of their eating attitude.

In our study, a significant difference, increasing with age, was found between the total scores of the participants aged 18-23 and the scores of the participants aged 36-41 and those aged 42-45 ($p: 0.004$ and $p: 0.022$). A significant difference was found between the scores of the participants aged 24-29 and the scores of the participants aged 36-41, positively related to age ($p: 0.042$). Disinhibition and emotional eating scores increase with age. In the study of Üstündağ (190), it was found that eating awareness scores increased with age, although uncontrolled eating was more common in participants under the age of 30. Similarly, in the study of Köse (206) and Framson et al. (27), awareness increased with age, while in the study of Sayın et al. (208), MEQ-30 scores were found to be proportional to age.

When the working status of the individuals participating in our study was examined closely, the total MEQ-30 score and emotional eating scores were found to be higher in working individuals. In Üstündağ's (190) study, emotional eating scores were

not affected by the occupational groups or working status of the participants. Emotional eating is eating more than normal due to some emotional changes; uncontrolled eating, eating more than normal as a result of loss of control in food consumption; cognitive restriction, on the other hand, refers to the conscious restriction of food intake for control of individuals' body weight (209). In the study of Güneşer et al. (210), it was determined that work stress causes emotional eating disorder. In general, the emotional patch emerges as a reaction to the stress situation (211). Demirçi (212) emphasized in his study that shift work triggers stress and increases the frequency of emotional eating disorder related to it. In our study, it is predicted that the stress related to unemployment decreases the awareness of emotional eating.

When the MEQ-30 total scores of the participants are examined according to the BMI ranges, it is seen that the MEQ-30 results decrease as the BMI value increases. A weak negative correlation was found between MEQ-30 total scores and BMI values. In their study, Üstündağ (190) determined that the eating awareness scale scores of non-obese participants who do sports are significantly higher than the scores of the obese (2nd grade) participants who do sports. In another similar study, Köse (206), in which students were examined, while BMI increased, MEQ-30 scores decreased. While Framson et al. (27) found a negative relationship between BMI and mindfulness, a similar negative relationship was found in a study without using the MEQ-30 scale (213). In the study of Mantzios et al. (203) with students, the relationship between BMI, eating disorder and mindfulness was shown. Moor et al.'s (214) study found that overall, mindful eating and BMI were negatively correlated among university students, suggesting that students with a lower BMI are more mindful eaters.

While the scores of inhibition, focus, eating discipline, awareness and interference subscales were not affected by BMI, emotional eating problem was found to be higher in obese individuals compared to normal weight individuals. A statistically significant correlation was found between the mean scores of the disinhibition and eating control subscales and BMI groups. Moor et al. (214) also found a relationship between emotional eating subscale and BMI. The negative correlation between emotional eating subscale score and body mass index is similar to the results of the study conducted with the Emotional Appetite Questionnaire. As BMI increases, emotional eating is negatively

affected (215). Emotional, uncontrolled, and restrictive eating are problematic eating behaviors characterized by food intake independent of feelings of hunger and satiety, respectively, but are more based on emotional stimuli. In general, problematic eating behaviors lead to a loss of natural and intuitive eating and difficulties in distinguishing various emotions from hunger or satiety, which causes the eating response when faced with any emotional stimulus. For this reason, obesity is expected to be more common in people with emotional eating problems (216). Evidence shows that deficits in emotion regulation disorder and high levels of negative emotions play an important role in the development and maintenance of obesity. Because of their effects on emotional regulation, emotional self-awareness, and affective coping, interventions using mindfulness and mindful eating techniques have proven effective in reducing binge eating episodes, depressive symptoms, and emotional eating, as well as improving intuitive eating (217, 218). The relationship between food addiction and obesity was examined in the study of Baran et al. It was determined that 36.8% of those with food addiction and no diabetes were in the 1st degree class and 26.3% in the 2nd degree obese class. Although food addiction is not always associated with obesity, it is seen 2-3 times more frequently in obese individuals (219).

This study has several limitations. Although the findings show the relationship between decreased awareness of eating and BMI, larger studies are needed to detect a high correlation. Among the individuals participating in the study, the most normal weight individuals were found and the number of participants with high BMI was found to be low. This situation may have affected the high significance of the results. Participants may have been affected by seasonal differences during the survey period.

The following results were obtained in our study, which investigated the relationship between BMI and eating awareness in individuals attending the gym;

- In our study, when the MEQ-30 scores of the participants were examined by gender, no significant difference was found between the genders in the total score, disinhibition (eating without thinking), focusing and awareness subscales.
- The emotional eating subscale score was 15.06 for women and 17.23 for men.

- The interference (affected by external factors) subscale score was found to be 6.64 for females and 7.04 for males. In other words, the problem of being affected by external factors is less for men.
- In our study, Eating Control and Eating Discipline scales were found to be higher in women.
- In our study, a significant difference was found between the total scores of the participants in the 18-23 age range and the scores of the participants in the 36-41 age range and the participants in the 42-45 age range, increasing with age.
- Disinhibition and emotional eating scores increase with age.
- Focus subscale scores were found to be 15.85 in participants with less income than their expenses, 16.4884 in participants with equal income and expenses, and 16.6517 in participants with a higher income than expenses. There is a statistically significant difference between the focus scale scores of the participants whose income is less than their expenses and whose income is equal to their expenses and whose income is more than their expenses.
- When the working conditions of the individuals participating in our study were closely examined, the total MEQ-30 score and emotional eating scores were found to be higher in working individuals
- A weak negative correlation was found between MEQ-30 total scores and BMI values.
- While inhibition, focus, eating discipline, awareness and interference subscale scores were not affected by BMI, emotional eating problem was found to be higher in obese individuals compared to normal weight individuals.

In our study, in which individuals who continue to do sports constitute the study population, a relationship was found between lower BMI and eating awareness. Lower BMI is also associated with the ability to stop eating, staying full, and avoiding food in response to negative emotions. These results indicated that eating mindfulness is a useful concept to further explore and that there is a complex relationship between eating awareness, BMI, and physical activity. A better understanding of these complexities will

help develop more effective intervention strategies. Along with the use of eating mindfulness techniques in an intervention for overweight or obese individuals, it is important to include other techniques that can reduce emotion dysregulation and negative affect.



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7. APPENDICES

APPENDIX-1. Thesis Study Ethics Committee Permission

Evrak Tarih ve Sayısı: 27.07.2021-24786



T.C.
BEZMİALEM VAKIF ÜNİVERSİTESİ REKTÖRLÜĞÜ
Girişimsel Olmayan Araştırmalar Etik Kurulu

Sayı : E-54022451-050.05.04-24786
Konu : Etik Kurul Kararı - Hülya DEMİR

27.07.2021

Sayın Doç. Dr. Hülya DEMİR
Yeditepe Üniversitesi Gıda Mühendisliği

2021/293 numaralı "Spor Klübüne Giden Bireylerde Yeme Farkındalığının Beden Kitle İndeksi (BKİ) ile İlişkisi" başlıklı başvurunuz Üniversitemiz Etik Kurullar Birimi' nin 08.07.2021 tarihli, 15 sayılı Girişimsel Olmayan Araştırmalar Etik Kurul toplantısında değerlendirilmiş olup, mevcudun oybirliğiyle onaylanmasına karar verilmiştir.

Gereğini ve bilgilerinizi arz/rica ederim.

Prof.Dr. İsmail MERAL
Başkan

Bu belge, güvenli elektronik imza ile imzalanmıştır.

Doğrulama Kodu :BSC44UHNTZ Pin Kodu :33803

Belge Takip Adresi : <https://turkiye.gov.tr/ebd?cK=5394&cD=BSC44UHNTZ&cS=24786>

Bezmialem Vakıf Üniversitesi Adnan Menderes Bulvarı (Vatan Caddesi) Fatih /
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APPENDIX-2. Informed Voluntary Consent Form for Research Purpose

 BEZMİÂLEM VAKIF ÜNİVERSİTESİ	BİLGİLENDİRİLMİŞ GÖNÜLLÜ OLUR FORMU			
	Doküman Kodu: ÜNV-GOAEK-FRM-002	Yayın Tarihi: 17.09.2019	Revizyon No: 01	Revizyon Tarihi: 19.02.2020
Sayfa 1 / 3				

ÇALIŞMANIN ADI: Spor Kulübüne Giden Bireylerde Yeme Farkındalığının Beden Kitle İndeksi (BKİ) ile ilişkisi

Aşağıda bilgileri yer almakta olan bir araştırma çalışmasına katılmanız istenmektedir. Çalışmaya katılıp katılmama kararı tamamen size aittir. Katılmak isteyip istemediğinize karar vermeden önce araştırmanın neden yapıldığını, bilgilerinizin nasıl kullanılacağını, çalışmanın neleri içerdiğini, olası yararları ve risklerini ya da rahatsızlık verebilecek yönlerini anlamanız önemlidir. Lütfen aşağıdaki bilgileri dikkatlice okumak için zaman ayırınız. Eğer çalışmaya katılma kararı verirsiniz, **Çalışmaya Katılma Onayı Formu**'nu imzalayınız. Çalışmadan herhangi bir zamanda ayrılmakta özgürsünüz. Çalışmaya katıldığınız için size herhangi bir ödeme yapılmayacak ya da sizden herhangi bir maddi katkı/malzeme katkısı istenmeyecektir. Araştırmada kullanılacak tüm malzemeler ve yapılabilecek tüm harcamalar araştırmacı tarafından karşılanacaktır.

ÇALIŞMANIN KONUSU VE AMACI

Bu araştırmada , spor kulübüne giden bireylerde yeme farkındalığının beden kitle indeksi (BKİ) ile ilişkisi araştırılacaktır.

Bu verilerden elde edilen bilgiler ile yeme farkındalığı ve beden kitle indeksi (BKİ) değerlerini iyileştirecek yeni çalışmaların yapılmasına ışık tutmak amaçlanmaktadır.

Bu çalışmaya 500 kişinin katılması planlanmaktadır , yüz yüze görüşme yöntemi ile yeme farkındalığı ölçeği anketi kullanılarak yapılacaktır.

ÇALIŞMA İŞLEMLERİ

Bu çalışma , İstanbul Göztepe Akademi Spor Kulübüne giden 18-45 yaş arası kadın ve erkek bireyler ile yeme farkındalığı ölçeği anketi kullanılarak yapılacaktır.

Bu çalışmada , bireylerin yeme farkındalığını artırmak ve bundan sonraki çalışmalara ışık tutmak amaçlanmaktadır.

Çalışmamızda herhangi bir risk bulunmamaktadır.

ÇALIŞMADA YER ALMAMIN YARARLARI NELERDİR?

Bu çalışmada yer alacak bireylerde yeme farkındalığının artırılması amaçlanmaktadır.

Yeme farkındalığının artırılması; kişilerin bedenleri hakkında farkındalık kazanmalarına, açlık ve tokluklara daha fazla uyum sağlamalarına, yemek için dışsal ipuçlarını tanıma, öz-duyarlılık kazanma, yeme isteklerini azaltma, problemleri yeme ile ilişkili faktörleri azaltma gibi konularda başarılı olmalarına ve ödül odaklı yemenin azalmasına yardımcı olabilmektedir. Yeme farkındalığı meditasyonlarının haricinde günlük hayatta basit bir yeme farkındalığı pratiği uygulamak da obezite ile ilişkili olumsuz davranışları azaltmada yardımcı olmaktadır. Yavaş ve acıktığında yemek, doyduğunda durmak, porsiyon boyutlarını azaltmak, yemek sırasında dikkat dağıtıcı etkenleri azaltmak ve yemekten zevk almak, bu pratiğin temel beslenme ilkeleridir.



BİLGİLENDİRİLMİŞ GÖNÜLLÜ OLUR FORMU

Doküman Kodu: UNV-GOAEK-FRM-002

Yayın Tarihi: 17.09.2019

Revizyon No: 01

Revizyon Tarihi: 19.02.2020

Sayfa 1 / 3

BU ÇALIŞMAYA KATILMAMIN MALİYETİ NEDİR?

Çalışmaya katılmakla parasal yük altına girmeyeceksiniz ve size de herhangi bir ödeme yapılmayacaktır.

ÇALIŞMAYA KATILMALI MIYIM?

Bu çalışmada yer alıp almamak tamamen size bağlıdır. Şu anda bu formu imzalarsanız bile istediğiniz herhangi bir zamanda bir neden göstermeksizin çalışmayı bırakmakta özgürsünüz. Eğer katılmak istemezseniz veya çalışmadan ayrılırsanız, araştırmacı tarafından sizin için en uygun tedavi planı uygulanacaktır. Aynı şekilde çalışmayı yürüten araştırmacı çalışmaya devam etmenizin sizin için yararlı olmayacağına karar verebilir ve sizi çalışma dışı bırakabilir, bu durumda da sizin için en uygun tedavi seçilecektir.

KİŞİSEL BİLGİLERİM NASIL KULLANILACAK?

Çalışma araştırmacınız kişisel bilgilerinizi, araştırmayı ve istatistiksel analizleri yürütmek için kullanacaktır ancak kimlik bilgileriniz gizli tutulacaktır. Yalnızca gereği halinde, sizinle ilgili bilgileri etik kurullar ya da resmi makamlar inceleyebilir. Çalışmanın sonunda, kendi sonuçlarınızla ilgili bilgi istemeye hakkınız vardır. Çalışma sonuçları çalışma bitiminde tıbbi literatürde yayınlanabilecektir ancak kimliğiniz açıklanmayacaktır.

SORU VE PROBLEMLER İÇİN BASVURULACAK KİŞİLER:

ADI : Ecem İlerlemek
GÖREVİ : Araştırma Sorumlusu
TELEFON : [REDACTED]

ÇALIŞMAYA KATILMA ONAYI

Yukarıdaki bilgileri ilgili araştırmacı ile ayrıntılı olarak tartıştım ve kendisi bütün sorularımı cevapladı. Bu bilgilendirilmiş olur belgesini okudum ve anladım. Bu araştırmaya katılmayı kabul ediyorum ve bu onay belgesini kendi hür irademle imzalıyorum. Bu onay, ilgili hiçbir kanun ve yönetmeliği geçersiz kılmaz. Araştırmacı, saklamam için bu belgenin bir kopyasını bana teslim etmiştir.

Gönüllü Adı Soyadı	[REDACTED]	Tarih ve İmza	[REDACTED]
Telefon	[REDACTED]		

Vasi (var ise) Adı Soyadı	-	Tarih ve İmza	[REDACTED]
Telefon	[REDACTED]		



BİLGİLENDİRİLMİŞ GÖNÜLLÜ OLUR FORMU

Doküman Kodu: ÜNV-GOAEK-FRM-002

Yayın Tarihi: 17.09.2019

Revizyon No: 01

Revizyon Tarihi: 19.02.2020

Sayfa 1 / 3

Görüşme Tanığı Adı Soyadı

Tarih ve İmza

Telefon

Araştırmacı Adı Soyadı

Tarih ve İmza

Telefon

APPENDIX-3. Questionnaire Form

Sosyo-Demografik Özellikleri

1. Cinsiyet

a) Kadın

B) Erkek.....

2. Yaş: a)18-23 b)24-29 c)30-35 d)36- 41 e)42-45

3. Boy:.....

4. Kilo:.....

5. BKİ ..

6. İş Durumu:

a) Çalışıyor

b) Çalışmıyor

7. Gelir Seviyesi

a) Geliri Giderinden fazla

b) Geliri Giderine eşit

c) Geliri Giderinden az

APPENDIX-4. Eating Awareness Scale (MEQ-30)

YEME FARKINDALIĞI ÖLÇEĞİ (YFÖ-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 çiğnmeden yutarım.					
4.	Sevdiğim yiyeceklerden birini yerken, doyumumu fark edemem.					
5.	Fast food olmayan bir hayat düşünmüyorum.					
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 bilsam yiyecek duruma gelirim.					
15.	Yediğim her lokmanın tadına varırım.					
16.	Sık sık diyet yaparım.					
17.	Tok olsam bile bir yiyeceğin aklıma geldiği 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.					

Türkçe Kaynak: Köse G, Tayfur M, Birinciöğlü 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 etkilene) (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: Ölçeğin her bir alt boyutundan alınan yüksek puan bireyin ilgili alt boyutun değerlendirdiği özelliğe sahip olduğunu göstermektedir. Ölçek ayrıca toplam yeme farkındalığı puanı vermektedir. Ölçek puanlanırken alt boyutların ve toplam puanın ortalaması alınmaktadır.

İzin için iletişim adresi: drgizemkose@gmail.com

8. RESUME

A. EDUCATIONAL INFORMATION

Graduated University/ Faculty: Yeditepe University / Faculty of Health Sciences–
Nutrition and Dietetics

Potgraduate Education Information: Yeditepe University/ Health Institute of Sciences
– Nutrition and Dietetics (continued)

B. PROFESSIONAL EXPERIENCE

Diyetisten Ecem İlerlemek Sağlıklı Beslenme ve Andulasyon Merkezi, Samsun.