TC.
YEDİTEPE UNIVERSITY
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Investigation of Changes in Fat Preferences According to Mindful Eating Levels of Individuals Applying to a Private Diet Clinic

MASTER THESIS

MERVE MUCUK

İSTANBUL-2023

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SUPERVISOR
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This thesis has been deemed by the jury in accordance with the relevant articles of Yeditepe University Graduate Education and Examinations Regulation and has been approved by Administrative Board of Institute with decision dated ……. and numbered ……

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Director of Institute of Health Science

DECLARATION

I hereby declare that this thesis is my own work and that, as far as I know, and believe, it does not include anything that has already been published or written by someone else, or anything that has been accepted for another degree unless it is properly cited in the text.

Merve Mucuk

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LIST OF SYMBOLS AND ABBREVIATIONS

BMI	Body Mass Index
FFA	Free Fatty Acids
ME	Mindful Eating
MEQ	Mindful Eating Questionnaire
MEQ-28	Mindful Eating Questionnaire-28
MEQ-30	Mindful Eating Questionnaire-30
MB-EAT	Mindfulness-Based Eating Awareness Training
MBSR	Mindfulness-Based Stress Reduction
TAG	Triglyceride
WHO	World Health Organization

ABSTRACT

Mucuk, M. (2023). Investigation of Changes in Fat Preferences According to Mindful Eating Levels of Individuals Applying to a Private Diet Clinic. Yeditepe University, Institute of Health Science, Department of Nutrition and Dietetics, Master's Thesis, Istanbul.

The research was conducted to examine the change in fat preferences according to the mindful eating (ME) levels of individuals who applied to a private diet clinic. For this purpose, a questionnaire study was applied to 97 participants between the ages of 18-65 who applied to a private diet clinic for online diet service. As a data collection tool, the questionnaire, including the Mindful Eating Questionnaire-30 (MEQ-30) and the Fat Preference Questionnaire, was sent to the participants online. 84.5% of the participants were women, and 15.5% were men. It has been observed that men find fatty foods more tasty than women (p=0.016). The average body mass index (BMI) values of the participants were 24.4 kg/m^2. No statistically significant difference was found between the participants' BMI values and MEQ-30 scores. Although the high BMI group (BMI≥25 kg/m^2) found the high-fat options more delicious, it was determined that they restricted dietary fat more (p= 0.008 and p= 0.016, respectively). It was observed that participants with high mindful eating levels found high-fat foods less tasty and preferred them less frequently (r=-0.291 p=0.004, r=-0.259 p=0.011). In addition, it was found that participants with high eating discipline scores restricted dietary fat more (r=0.246 p=0.015). In the study, it was observed that the mindful eating levels of individuals may have an effect on their fat preferences.

Keywords: Mindful Eating, Fat Preference, Dietary Intake

ABSTRACT (TURKISH)

Mucuk, M. (2023). Özel Bir Diyet Kliniğine Başvuran Bireylerin Yeme Farkındalık Düzeylerine Göre Yağ Tercihlerindeki Değişimin İncelenmesi. Yeditepe Üniversitesi Sağlık Bilimleri Enstitüsü, Beslenme ve Diyetetik Anabilim Dalı, Yüksek Lisans Tezi, İstanbul.

Araştırma, özel bir diyet kliniğine başvuran bireylerin yeme farkındalık düzeylerine göre yağ tercihlerindeki değişimin incelenmesi amacıyla yapılmıştır. Bu amaç doğrultusunda özel bir diyet kliniğine online diyet hizmeti almak için başvuran 18-65 yaş arası 97 katılımcıya anket çalışması uygulanmıştır. Veri toplama aracı olarak yeme farkındalık ölçeği (YFÖ-30) ve Yağ tercih anketini içeren anket çevrimiçi olarak katılımcılara gönderilmiştir. Katılımcıların %84,5 si kadın, %15,5 ü erkektir. Erkeklerin yağlı yiyecekleri kadınlara göre daha lezzetli buldukları gözlemlenmiştir (p=0.016). Katılımcıların ortalama Beden Kitle İndeksi (BKİ) değerleri 24,4 kg/m^2 dir. Katılımcıların BKİ değerleri ve YFÖ-30 puanları arasında istatistiksel olarak anlamlı bir fark bulunamamıştır. BKİ değeri yüksek olan grubun (BKİ≥ 25 kg/m^2) yüksek yağlı seçenekleri daha lezzetli buldukları halde diyet yağını daha çok kısıtladıkları saptanmıştır (sırasıyla p=0,008 and p=0,016). Yeme farkındalığı yüksek katılımcıların yüksek yağlı yiyecekleri daha az lezzetli buldukları ve daha az sıklıkta tercih ettikleri görülmüştür (r=-0,291 p=0,004, r=-0,259 p=0,011). Ayrıca yeme disiplini skoru yüksek çıkan katılımcıların daha çok diyet yağını kısıtladıkları bulunmuştur (r=0,246 p=0,015). Yapılan çalışmada bireylerin yeme farkındalık düzeylerinin yağ tercihleri üzerinde etkisinin olabileceği gözlemlenmiştir.

Anahtar Kelimeler: Yeme Farkındalığı, Yağ Tercihi, Diyet Alımı

1. INTRODUCTION AND PURPOSE

Mindfulness and mindful eating (ME) are two ideas that have become very popular in the past few years. ME is when you pay attention to how and why you eat rather than what you eat. You do this by internalizing the idea of physical hunger and fullness and being aware of how emotions and thoughts affect you, without being affected by your environment, without judging your food choices, and by focusing on the food you are eating right now (1).

Individuals may tend to compensate for their stress, which they cannot manage in a healthy way, by consuming foods with high energy density and high sugar and fat content, which they like more (2).

Adequate consumption of dietary fat is necessary owing to its significant function as a primary source of energy and its facilitation of the absorption of fat-soluble vitamins and carotenoids. Furthermore, when ingested in the proper quantities and varieties, it not only aids in the preservation of one's well-being but also enhances the taste and texture of dishes throughout the cooking process (3). The sensory attributes associated with fats in food may potentially contribute to excessive ingestion of this macronutrient (4).

The selection of food is significantly influenced by the presence of dietary fat. The establishment of dietary fat preferences often occurs from infancy and has the potential to persist into adulthood due to the sensory attributes that fat imparts, such as flavor, texture, and palatability, to various food items (5).

With the spread of Western culture, people's diets have changed. They now eat more processed foods that are low in nutrients and fiber and high in saturated fat and sugar. This has led to an increase in nutrition-related chronic diseases like cancer, diabetes, cardiovascular disease, obesity, and osteoporosis (6,7).

Globally, the incidence of obesity has reached epidemic levels. When energy intake exceeds energy expenditure on a consistent basis, the outcome is obesity, which causes extra energy to be stored as fat. Stress may play a role in this chronic dysregulation of energy balance since it is so prevalent in Western culture at high ambient levels (8). Acute stress modifies eating habits, frequency, and the number of calories consumed (9).

Emotional eating is linked to weight gain because it makes people eat more high-calorie foods like sugary and fatty snacks and fewer fruits and vegetables. As people become more aware, they eat less food that they don't need and find it easy to choose healthy foods.

Because of this, people think that mindful eating can help them lose weight in a way that lasts (10).

At a time when many people are overweight or obese, encouraging people to make good food choices is considered crucial. There have been many ideas and considerations for making better food decisions and reducing eating more unhealthy foods high in fat. Much attention is paid to the use of mindfulness methods while eating to promote healthy eating patterns and help keep weight under control (11). As people grow more mindful, they consume less unnecessary meals and find it simpler to choose foods that are better for them (10).

Allirot et al.(11) found that cutting back on high-energy foods led to lower fat and protein amounts compared to controls, while carbohydrate intake stayed the same. In another study, Timmerman et al.(12) found that a group of people who did ME meditation for two hours every week for six weeks ate less fat.

Overall, studies show that mindfulness, self-compassion, and ME help people make better decisions about their health, which can mean they eat less fat and sugar (7,13). Several studies have reported that individuals who eat more mindfully or in the ME intervention group have significantly lower fat consumption compared to the control groups (7,12,14,15).

To comprehend the role dietary fat plays in food preferences and obesity, it is crucial to examine the hedonic components of dietary fat preference and intake (16).

Although there are some studies in the literature about the amount of fat consumption of eating awareness, no study has been found that examines how the ME level of individuals affects the restriction behavior of their fat preferences.

This study aimed to examine the change in fat preferences according to the ME levels of individuals who applied to a private diet clinic.

2. LITERATURE REVIEW

2.1 Fats

Fat is the part of animal and plant cells that don't dissolve in water. Fat is the way that people, animals, and some plants store energy. Glycerol and fatty acids are the main things that make up the oil. Most of the fat is a triglyceride, which is made when three fatty acids are joined to a molecule of glycerol. When glycerol is esterified with one or two fatty acids and added molecules like carbs, protein, and phosphocholine, the fat can dissolve more easily in water (17).

In humans, fatty acids usually have even-numbered carbon atoms. They exist in the saturated or unsaturated form with a length of 16-20 carbon atoms. Unsaturated fatty acids contain one or more double bonds. Monounsaturated acids have one double bond, while polyunsaturated acids have two or more double bonds. Fatty acids are defined by the number of carbons and the position of the double bonds (18).

Short-chain fatty acids (<C: 6) are mostly sour, and longer-chain fatty acids (>C: 16) produce an unpleasant sensation called oleogustus (19).

Dietary fat supplies polyunsaturated fatty acids, which are important fatty acids that your body can't make on its own. These fatty acids are the building blocks of phospholipids, which are important parts of cell membranes and enzymes. When people don't eat enough fat, they get skin sores, lose their hair, take longer to heal wounds and have problems with how their brains, eyes, and platelets work (17).

Fats have a higher energy density (9 kcal/g) than proteins and carbohydrates (4 kcal/g) (5,20). It is difficult to specify how much fat a person should take daily. Depending on the nature of the diet, 20-45% of the daily energy intake can come from fat. Diets containing mostly animal foods have a higher fat content than those based on grains. Usually, half of the fat taken into the body is in the composition of the food and the invisible; the remaining is pure, visible fat. Today, it is recommended that the energy from fat should not exceed 30% (4,21).

2.1.1 Dietary Fats

Dietary fat is an essential component that should be taken into consideration while making meal choices because fat adds texture, taste, and palatability to meals. For example,

emulsified globules that can not be seen help give dairy goods a creamy or smooth look. Also, the way the fat binds to the water helps to give meats the right amount of juice and softness and gives baked goods the right amount of moisture. When foods are exposed to high heat, the fats in them make them hard and brittle (19).

The term "oleogustus" is suggested for fat, as is the use of the Japanese word umami, which means delicious taste (appetizing). The term oleogustus is used by those in the field to refer to fatty taste (19).

Preferences for dietary fat frequently emerge in infancy and may be sustained into adulthood. This is because fat makes foods more palatable (5,22). Fat is recognized in the diet because of how it tastes and feels in the mouth (its texture and creaminess). This causes a strong hedonic feeling, leading people to choose foods that give them energy (23).

Fat is added directly to the food or used as a cooking medium this is called frying. Fatty acid derivatives are formed during frying at high temperatures and in the presence of oxygen, adversely affecting health. Keeping the frying fat in kitchen conditions and reheating it repeatedly increases the amount of these products. Health-destroying elements may occur in foods fried in fat, especially foods with protein (24).

The qualities of the texture have a major role in how fat content is perceived. However, studies have shown that fat reduces bitterness while having less of an impact on other tastes. As a consequence, merely eliminating fat from meals is likely to result in goods with increased levels of bitterness and a possible flavor imbalance (25–27).

Due to the complex part that fat plays in our diets, sensory tests that try to measure preference for fat have been created, but their usefulness is restricted. Fat is rarely eaten on its own, and people may like certain foods because of how fat makes them tasty (5,16,28).

Foods taste with fat ingredients, but overeating fat is easy. Because it has more calories per gram (9 kcal/g) compared with protein or carbs (4 kcal/g), eating too much fat can increase the amount of energy taken (29–31). Since fat is the most concentrated source of energy, it has been reported that increased fat in the diet increases the risk of obesity independent of total calories (21). It is easier for the body to turn the calories from high-fat diets into body mass than it is for the body to turn the calories from high-carbohydrate diets into body mass (32). In addition to providing a lot of energy, dietary fat also has properties that facilitate the absorption of fat-soluble vitamins and carotenoids (3). While the amount

of fat in the diet increased, the fatty acid composition also changed. In particular, while the consumption of n-6 group fatty acids increased, the consumption of n-3 group fatty acids decreased, so the n-6/n-3 ratio increased. A balanced intake of fatty acids (n-6 and n-3) is important for health because of their opposite effects on each other in metabolism (33).

Dietary fat affects how sensitive you are to the taste of fat: eating more fat makes you less sensitive to the taste of fat, which means your fat taste levels go up. Multiple cross-sectional research has found that the more fat a person eats, the less sensitive they are to the taste of fat. This means that people who eat a lot of fat have a less sensitive sense of taste for fat. Research has proven beyond a doubt that long-term changes in the amount of fat eaten change how it tastes (34).

A study found that the probability of hypersensitivity to fatty acids among obesity-resistant individuals was 3.60 times more than among individuals prone to obesity (35).

A 4-week dietary fat cross-over experiment study found that eating less fat made people more sensitive to the taste of fat, while eating more fat made people less sensitive to the taste of fat. Overweight and obese people took part in a randomized 6-week diet program that gave them either a low-fat diet (25% fat) or a portion-control diet (33% fat). Both diets caused fat taste levels to go down (36,37).

2.1.2 Dietary Fat Preferences

The flavor and texture of meals have a big impact on dietary decisions. The preference for foods high in fat seems to be a feature shared by all people, and without any effective physiological controls on dietary fat intake, consumption seems to be solely influenced by the availability of fat in food sources (38).

Because of the satisfying oral-sensory properties of fats, fat intake is an important factor in food selection. Therefore, high-fat meals are often over-consumed, leading to weight gain and, in extreme cases, obesity (16).

Even though there is not much proof that a taste for dietary fat is natural, children are often exposed to foods high in fat from a young age, and they understand that these foods make them feel less hungry. Also, many foods high in fat are rich in salt and sugar, which kids like (39).

The oral sense of fatty acids (called "fat taste") was only recently identified as a main taste that may control how much fat people eat. Taste cells have receptors for a fat taste that

must be turned on by free fatty acids (FFA) for the fat taste to start. FFA is found in minimal quantities in fatty foods, and the hydrolysis of triglyceride (TAG) by human tongue lipases may increase the amount of FFA in the mouth. When there are a lot of them, FFA gives foods a sour taste to keep people from eating fats that have gone bad. It is important to note that FFA taste differs from the TAG sense, which gives flavor and texture aspects that are probably unrelated to fatty acid taste (40).

Obesity is the biggest public health risk that causes health problems and early deaths around the world (4,41). Since the 1980s, the number of obese people has tripled in many nations with high incomes, which include most of the World Health Organization (WHO) European Region (42). Economic and technological developments cause people to lead a more sedentary life and consume more purified, energy-dense foods (17).

Foods that are heavy in saturated fat and sugars that are high in energy make up the average diet in Western nations. This diet is a key contributor to the obesity pandemic and has been linked to a variety of chronic illnesses (43).

Obesity is linked to many diseases caused by unhealthy diets, like coronary artery disease, stroke, diabetes, and various types of cancer. In today's "obesogenic" society, it's possible that the wide range and easy access to foods high in calories is a big reason why the number of obese people is rising (16,44–46). It has been suggested that the primary attribute of human obesity is a preference for fat. Consuming foods high in fat and high in calories may easily result in excessive energy consumption and the dysregulation of the system that controls hunger (22). It was shown that regardless of what kinds of fats are ingested, consuming more fat leads to consuming more calories, which increases a person's weight (3). Compared to those of normal weight, obese people consume a higher percentage of high-fat meals (23). A better understanding of people's fat preferences and consumption is very important, given the increasing prevalence of obesity worldwide (5,22).

According to recent research on dietary variables and cardiovascular disease risk using food preference questionnaires, there is a direct association between a person's preference for fat in their diet and their waist circumference (25).

There are several variables that affect how much people eat, but sense and hedonic processes are still the most important ones. Dietary fat affects not only how food tastes but also how it feels. So, if we want to learn more about how dietary fat affects food choices and

obesity, we need to look at how it makes us feel when we eat it and why we like it (16). We don't know much about what makes people eat high-fat foods, and surprisingly little research has been done to figure out how fat taste and usage are related (22). When cooking, fats help provide a good taste and the desired texture. As a result, it is also believed that its aromatic and textural qualities are beneficial in preferring (3).

Reduced cravings for dietary fat may be beneficial for long-term weight maintenance (5). Higher amounts of the leptin hormone, which makes you feel full, have been linked to a decreased preference for fat in studies that looked at biological associations to fat preference. In line with this result, higher amounts of hunger-related hormone galanin have been linked to a preference for fat, and tests on animals have shown that food shortage makes them like fatty flavors more than sweet ones (47).

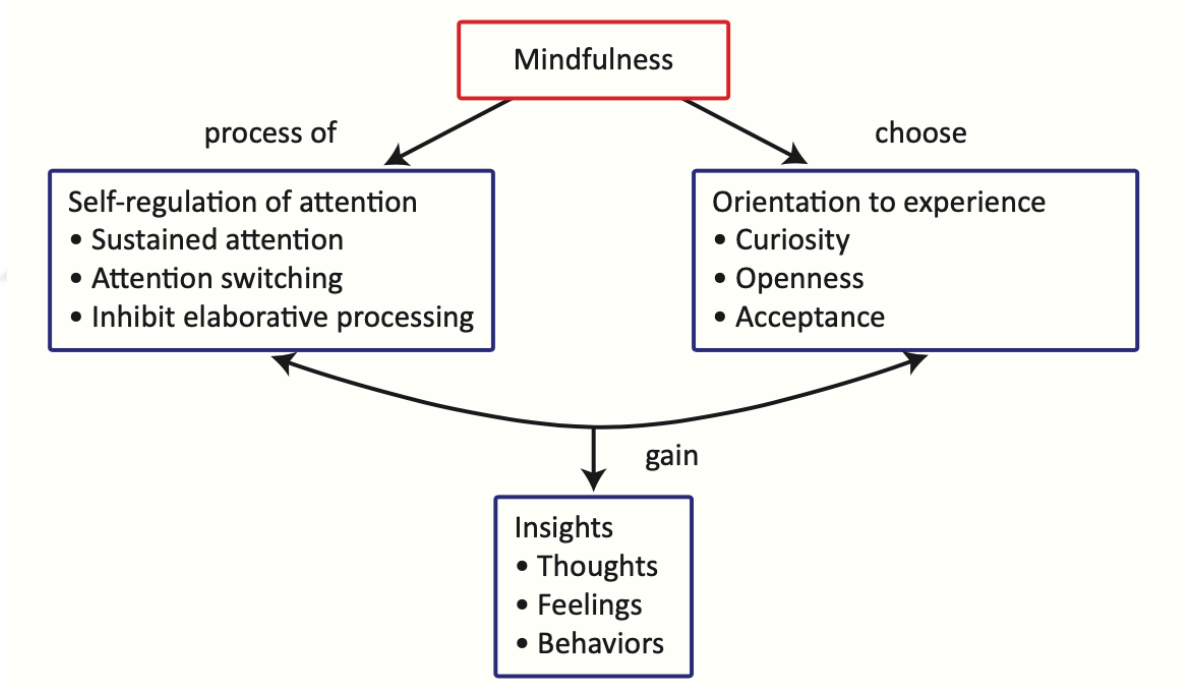
When people eat more fats, their sensors are negatively regulated, which means their sensitivity goes down. It is known that eating a lot of high-fat foods makes people less sensitive to the taste of fat (23). It has been hypothesized that obesity caused by diets in humans leads to an increase in the choice of high-fat foods over lean ones, in addition to decreasing sensitivity for fatty taste in rats (3,19,48).

Numerous studies have focused on women's high-fat meal preferences, and women rats have been found to choose more appetizing food, suggesting that sex may also play a role in food selection in relation to fat content (49–51).

2.2 Mindful Eating

Mindfulness and ME have gained significant traction in the last several years (1,52,53). For ME to make sense, it helps to know a little bit about mindfulness. 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 (54,55). Mindfulness comes from Buddhist teachings, but it has been used as a therapy or intervention since the late 1970s when Kabat-Zinn created an 8-week program named mindfulness-based stress reduction (MBSR) for helping people deal with physical sickness and worry (41,56,57). Later, in the 1990s, Kristeller and Hallet developed Mindfulness-Based Eating Awareness Training (MB-EAT), enabling the approach to be used in the treatment of eating behavior (58).

There are two main parts to mindfulness. These two parts are shown in Figure 2.1 The first includes controlling one's attention so that it is focused on the current moment's mental activities. It requires sustained focus to remain vigilant for extended periods of time. The second aspect of mindfulness is taking on a certain attitude toward the current experience, one that is open, accepting, and curious (59). The practice of mindfulness is linked to a wide variety of health problems, and it is an essential component in treating obesity-related issues such as controlling portions, emotional eating, and excessive eating (13,54). Recent years have seen a rise in interest in the application of mindfulness practices for the purpose of encouraging healthy eating patterns and assisting with weight control (11).



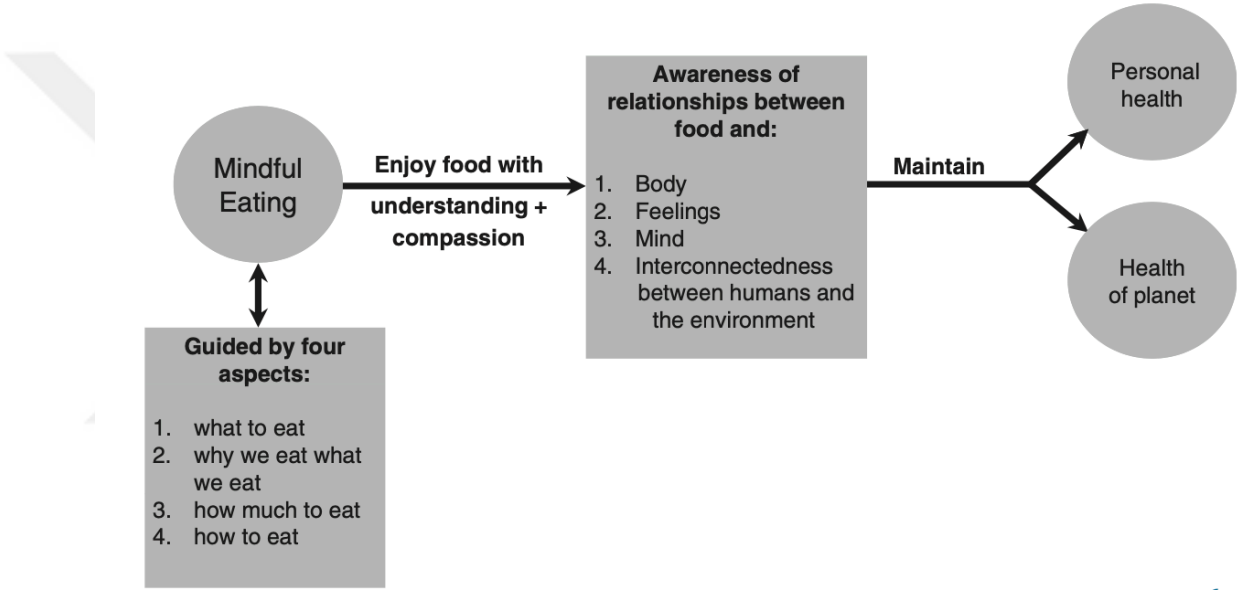
Source: Miller CK. Mindful Eating With Diabetes. Diabetes Spectrum. 2017;30(2):89-94. doi:10.2337/DS16-0039

Figure 2.1 Main components of mindfulness

The phrase ME has been used to describe a variety of approaches to eating (56). ME means being aware of the physical and emotional feelings that come with eating without judging them (60,61). The act of paying attention to food as it is being consumed and having awareness and concentrating on the experience of working with food is referred to as ME (62). "Eating by noticing how and why the eating behavior occurs rather than what is eaten, internalizing the concept of physical hunger-satiety, being aware of the effect of feelings and

thoughts, focusing on the food to be consumed here and now, without being affected by environmental factors, and without judging food choices" is how the practice of Me has been identified (63).

A ME strategy is required if people are to protect the health of the earth while also enhancing their general well-being and ensuring enough nutritious food production in the future (Figure 2.2) (64).



Source: Fung TT, Long MW, Hung P, Cheung LWY. An Expanded Model for Mindful Eating for Health Promotion and Sustainability: Issues and Challenges for Dietetics Practice. J Acad Nutr Diet. 2016;116(7):1081-1086. doi:10.1016/J.JAND.2016.03.013

Figure 2.2 Conceptual model demonstrating the use of mindful eating for sustainability and health improvement.

When more attention is paid to eating behavior, when food is internalized, and when sensitivity to feelings and thoughts while eating is reduced, it is possible to make decisions about food intake that are more conducive to good health (1,11,52).

The normal Western diet is made up of foods full of simple carbohydrates and saturated fats with a lot of calories. This diet is a major cause of the growing obesity epidemic and is linked to a number of long-term diseases, such as cardiovascular disease and diabetes (57). Stress, anxiety, and sadness make people feel hungry and want to eat more high-fat and sweet foods (64). ME has been linked to healthy eating, and mindfulness-based programs have been shown to lower blood glucose levels, reduce food intake, and help people lose

weight. However, not much has been studied about whether mindful eating leads to lower fat and sugar intake (43).

A recent review study found that teaching people to be more mindful of what they eat is more successful at preventing weight gain than managing obesity. When people learn about nutrition, their eating habits, food choices, and the amount and size of the food they eat change for the better (65).

In a study exploring the relationship between people's daily attention and the amount of energy-dense food they ate, 171 adults from South Australia were used as a sample group to look at the association between daily mindfulness and ME. The negative relationship between daily focus and portion size seemed to be fully mediated by ME (66).

According to researchers, ME can serve as a useful strategy for preventing overeating. Participants from a fitness center, prep school, software firm, and non-profit organization were shown to have negative relationships between ME and BMI (61).

ME training might be enough to stop people from overeating and help them control the amount of high-calorie foods they eat (11).

2.2.1 Mindful Eating Principles

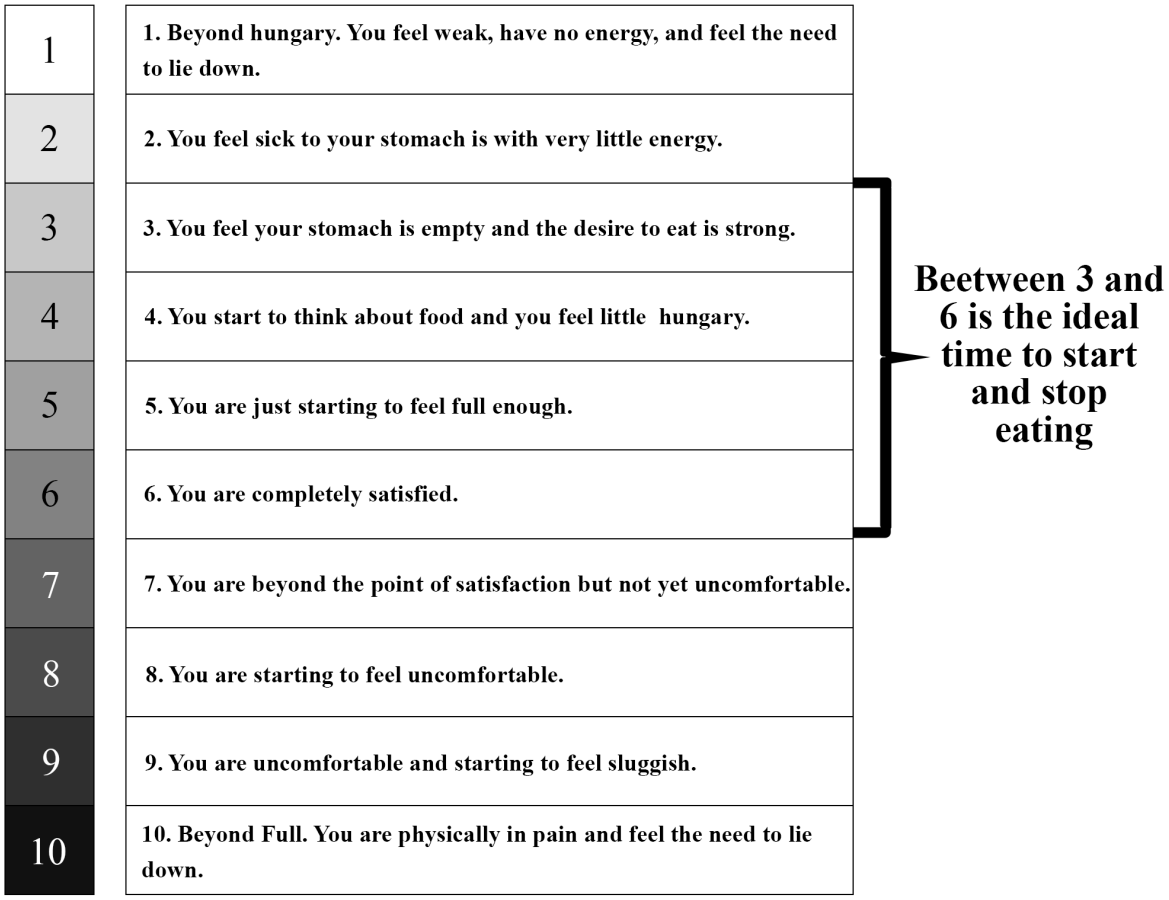
The food itself, how people have had experiences with food, and their social and economic environments are all things that affect how and what people eat (67).

ME is based on a set of principles given in Table 2.1 (68). Some of the most important ones are slowing down while eating, figuring out when you're hungry and when you're full, cutting down on portions, avoiding distractions while consuming food, and enjoying food (2,68).

The first principle of ME is to slow down how quickly you eat. Scientists think that slowing down how fast you eat can help you eat less because it gives your brain time to realize that you're full, which is thought to require about 20 minutes (68,69). When people eat more slowly, they take in a lot less food (70). One study 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) (71).

The second principle of ME is being aware of hunger and satiety, which has to do with how fast you eat. Eating awareness aims to make the body more aware of hunger-satiety signals (69,72). The end of a meal is decided by how full the stomach is and by different

hormones in the gut (68). Emotional or stress-related eating, which means eating in reaction to either good or bad feelings, has been linked to eating too many calories and gaining weight (73). ME and staying at a healthy weight both depend on being able to keep your feelings in check and not use food as a way to deal with them. A hunger scale like the one in Figure 2.3 may be utilized for assessing one's state of hunger (68).



Source: Monroe JT. Mindful Eating: Principles and Practice. Am J Lifestyle Med. 2015;9(3):217-220. doi:10.1177/1559827615569682

Figure 2.3 A Scale to Assess Hunger Level

The third principle of ME is to reduce the size of portions. The researchers found that people use outward cues (like how much food is left on a plate) to tell when they are full, but they need to use their own hunger and fullness signals (74). People with higher results on the eating awareness measure are more likely to be able to reduce their portion sizes, eat less energy-dense foods, and eat less when they are upset or stressed out (69).

Reduce the number of distractions you have while you are eating. This is the fourth principle of ME. Research has shown that watching television during eating leads to an increase in the ingesting of high-fat foods, the number of meals taken, and the total number of calories taken during the day (69,75). Distractions while eating make it harder to pay attention to internal cues like taste and fullness, which may cause eating too much (68).

The fifth and final principle of ME is to take pleasure in the experience of eating simply. When it comes to selecting enjoyable meals, it is essential to make use of all of one's senses, including taste, smell, sight, and feel (76). The acceptability and consumption of food may be influenced, according to research, by an individual's environment and the setting in which they find themselves (68).

Table 2.1 Basic Mindful Eating Principles

Basic Mindful Eating Principles	
Principle	**How to Apply**
1. Reduce eating rate	Chew thoroughly before swallowing, take smaller bites, pause between bites and/ or drink water between bites.
2. Assess hunger and satiety cues	Assess reason for eating (emotions vs hunger) and use a hunger scale (Figure 1) to assess level of hunger.
3. Reduce portion sizes	Serve less food, use smaller dishes, order smaller portions at restaurants
4. Reduce distractions while eating	Turn off television and music, sit at a table, focus on enjoying food.
5. Savor food	Make eating pleasurable, use all senses to enjoy food, and create a positive, pleasant environment to eat.

Source: Monroe JT. Mindful Eating: Principles and Practice. Am J Lifestyle Med. 2015;9(3):217-220. doi:10.1177/1559827615569682

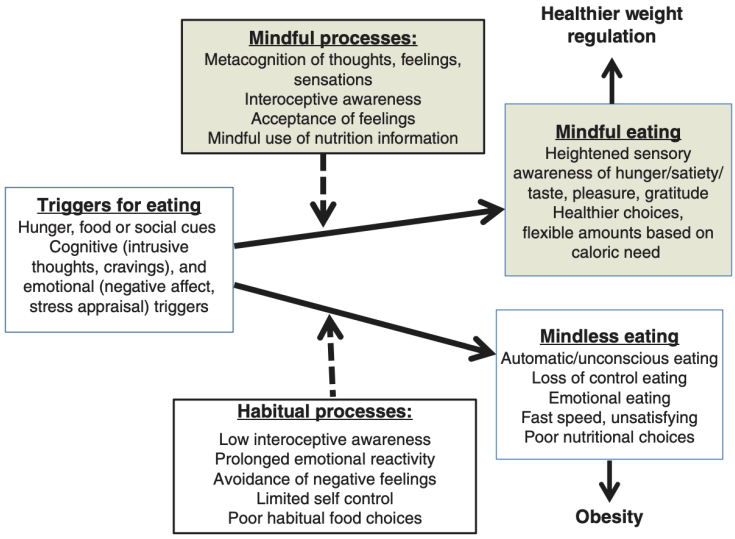
2.2.2 The Effect of Mindful Eating on Dietary Fat Intake

Obesity is connected with a number of nutrition-related disorders, including stroke, cardiovascular disease, and some kinds of cancer, as well as diabetes and cardiac difficulties. Obesity also raises the chance of developing type 2 diabetes. The current "obesogenic" environment is likely to be one of the most important contributing factors to growing obesity

rates. This environment is characterized by a broad range of energy-dense meals that are also rich in sugar and fat (16,43).

In recent times, there has been a lot of emphasis focused on the application of ME practices with the goals of encouraging good eating habits and helping with weight control (11). ME isn't just about being aware of what we eat; it's also about being aware of why and how we eat (67). The goal of ME is to select foods based on your body's signals. However, few thorough reviews have examined how these methods affect dietary intake, described as energy intake (calorie intake) or the quality of the food eaten (62).

When becoming mindless, we depend on subconscious processing, where prior experiences or actions heavily influence the present and render the situation nearly invisible. As a result, inflexible behaviors like overeating develop. Figure 2.4 illustrates how responses to natural feeding cues, such as emotion, hunger, or cognition, may be conscious or mindless. Hunger is a trigger for eating, as well as other internal and external signals such as social cues, smelling or seeing food, and feeling stressed or depressed (72). Psychological stress has been related to unhealthy eating behaviors (2). Although stress is unrelated to hunger or satiety, several clinical trials have discovered an increase in food consumption under stressful circumstances. Food choices in stressful circumstances tend to be high in sugar and fat content, and this is more pronounced in women than in men (2,8,43). Mindfulness practices have been shown to be effective in reducing stress (69). Researchers think that awareness, self-compassion, and thoughtful eating help people make better health decisions, which could mean that they eat less sugar and fat (43).



Source: Kristeller JL, Epel E. Mindful Eating and Mindless Eating: The Science and the Practice. The Wiley Blackwell Handbook of Mindfulness. 2014;1-2:913-933. doi:10.1002/9781118294895.CH47

Figure 2.4 Mindful or mindless eating and weight control.

Timmerman and Brown evaluated the effectiveness of a group intervention that focused on reducing calorie and fat intake, reducing emotional eating, and increasing mindful eating. They randomized 35 women who reported eating at restaurants at least three times a week to six weekly two-hour sessions designed to address barriers to weight management while dining out. The intervention group lost significantly more weight, had lower daily calorie and fat intake, and increased dietary self-efficacy. Because ME is only one component of this therapy, it is unclear how much ME education contributes to weight loss, and more research is needed. Additionally, Timmerman and Brown did not measure improvements in ME following the mindful eating intervention. It is, therefore, unclear whether treatment gains are due to increased ME (12).

Studies have shown that people who eat mindfully eat less energy-dense foods than those who don't. There is also a negative relationship between ME and fat and sugar intake, and people ate less snacking for two hours after eating mindfully during a meal (43,77,78). Another study that looked at a ME intervention found that people with diabetes who did the ME intervention ate a reduced amount of fat, fiber, and sugar than those who did the diabetes self-management education intervention (14).

One study also found no change in the amount of fiber, extra sugar, or fatty fat people ate. The results of this study do not support other studies showing that ME causes people to eat less (79).

ME can be a method of raising awareness about eating that occurs without hunger, and it can also help individuals choose not to eat after observing that they are not hungry (80).

3. MATERIALS AND METHODS

The study was conducted among healthy individuals aged 18-65 years who applied to a private diet clinic for online counseling. In order to carry out the study, "Ethics Committee Approval" was obtained from Yeditepe University Non-interventional Clinical Research Ethics Committee on 08/04/2022. The ethics committee application number is 202203Y0196. Between 01.04.2022 and 31.07.2022, individuals were reached through online interviews, and then, after giving information about the purpose and importance of the study, data were collected by the online survey method. Participation in the research was done on a voluntary basis.

The universe of the study consisted of 120 individuals, accordingly, the sample size was calculated as a minimum of 92 participants at the 95% confidence level. The research universe was determined approximately by considering 40 first-time applicants per month. Between April 2022 and July 2022, 102 healthy individuals between the ages of 18-65 who applied to a private diet clinic for online diet counseling were reached. 5 participants who left the questionnaire incomplete were excluded.

Participants in the research completed a questionnaire that included three parts. In the first part of the data collection form, demographic characteristics such as age and gender were questioned, the weight (kg) and height (cm) measurements declared by the participants were recorded, and the BMI (kg/m^2) was calculated and classified according to WHO criteria.

In order to determine the ME levels of the participants, The Mindful Eating Questionnaire-30 (MEQ-30), which was adapted into Turkish by Köse et al. (1) was used (Cronbach's alpha value: 0.733).

Finally, the fat preferences of the participants, Ledikwe et al. (5) It was determined by using the "Fat Preference Questionnaire" developed in 2007. Okan Bakır et al. (3) translated and adapted the scale into Turkish in 2021.

3.1 Mindful Eating Questionnaire

The MEQ-30 consisting of 30 questions, was used to evaluate the ME levels of individuals. Köse et al. translated it into Turkish after performing a validity and reliability analysis (1). The original Mindful Eating Questionnaire (MEQ), which included 28 items and five sub-factors assessed using a 4-point Likert scale, was created in 2009 by Framson et al. (54). According to the published guidelines by Gözüm and Aksayan, the scale was

initially translated into Turkish as Mindful Eating Questionnaire-28 (MEQ-28) (81). However, the English-to-Turkish translation results in certain changes in meaning. The updated 30-question scale was built by adding new questions in place of the non-working ones in accordance with expert suggestions after the pilot application conducted in 2016 revealed that the questionnaire's Cronbach's alpha value was 0.422. The MEQ-30 scale's reliability-Cronbach's alpha value was discovered to be 0.733 (1).

Considering the sub-factors of the scale, it is distributed into 7 factors Disinhibition, Emotional Eating, Eating Control, Focus, Eating Discipline, Awareness, and Interference (54). The factors on the scale give more information about the group that was used for the study:

1. Disinhibition (5 items): 4, 14, 17, 20, 26
2. Emotional eating (5 items): 21, 22, 23, 28, 30
3. Eating control (4 items): 3, 6, 27, 29
4. Focusing (5 items): 8, 9, 12, 13 15
5. Eating discipline (4 items): 1, 18, 24, 25
6. Mindfulness (5 items): 2, 7, 11, 16, 19
7. Interference (Influenced by external factors) (2 items): 5, 10

There are 20 reverse items on the scale. Questions 1, 7, 9, 11, 13, 15, 18, 24, 25, and 27 are scored straight. The remaining questions are scored in reverse.

When a person gets a high score on each sub-dimension of the scale, it means that they have the trait being measured by that sub-dimension. A total score for eating knowledge is also given by the scale. The average of the sub-dimensions and the total number are used to score the scale (1).

3.2 Fat Preference Questionnaire

The fat preferences of the participants were determined by using the "Fat Preference Questionnaire" developed by Ledikwe et al. in 2007 (5). The scale was validated in 2021 by Okan Bakır et al. translated and adapted into Turkish. For some food groups that are difficult to understand due to cultural differences, some items have been exemplified while adapting to Turkish to make them more understandable, while others have been replaced with more familiar and more commonly consumed food groups within the same food groups in Turkey (3).

The questionnaire consists of 19 food sets and 2-3 food alternatives with different fat content allowing the individual's fat preference to be evaluated (5). For instance, the cheese things have both low-fat and high-fat choices. Participants have to choose which food from each set tastes more tasty and which food they would like to eat more often. The proportion of high-fat items chosen from the food sets that were said to "taste better" (TASTE) is one of the three ratings provided by the Fat Preference Questionnaire. The variance between chosen food and foods consumed more often (DIFF), as well as the proportion of high-fat meals in the food sets that were chosen as being "eaten more often" (FREQ). This DIFF score demonstrates fat-specific dietary limitations (16). Each score was determined in accordance with the guidelines provided by the original writers.

3.3 Evaluation of the Data

Continuous and normally distributed baseline characteristics are presented as mean ± standard deviation with minimum and maximum. Non-normally distributed variables are presented as median with interquartile range (25^{th} percentile (Q1) and 75^{th} percentile (Q3)). Normal distribution was checked with the Shapiro-Wilk test. In the analysis of the Difference between the numerical data of the two groups, the Independent Samples t-test was used when the data was distributed to the normal distribution, and the Mann-Whitney U test was used when it did not distribute normally. Spearman's rank correlation coefficient, a non-parametric correlation coefficient, was used to examine the relationship between two continuous variables. Statistical analysis was performed using the SPSS statistical package, version 25.0 (IBM Corp., Armonk, NY, USA). A p-value <0.05 was considered statistically significant.

4. RESULTS

Of the 97 volunteers participating in the study, 84.5% were women, and 15.5% were men (Table 4.1).

Table 4.1 Descriptive statistics by gender

	Gender	
	n	**%**
Women	82	84.5
Men	15	15.5

The mean age of these people is 31.6±7.1 (19-57). The mean BMI is 24.4±4.1 kg/m^2 (16.6-42.9) (Table 4.2).

Table 4.2 Descriptive statistics for age and BMI

	n	**Mean**	**SD**	**Minimum**	**Maximum**
Age	97	31.6	7.1	19	57
BMI (kg/m^2)	97	24.4	4.1	16.6	42.9

SD; Standard Deviation

Table 4.3 shows the frequencies and percentages of BMI groups. 3.1% of the volunteers participating in the study were underweight, 64.9% were normal weight, 23.7% were pre-obese, and 8.2% were in obesity class I is located.

Table 4.3 Descriptive statistics for BMI group

	BMI group		
	BMI (kg/m^2)	**n**	**%**
Underweight	<18.5	3	3.1
Normal weight	18.5-24.9	63	64.9
Pre obesity	25.0-29.9	23	23.7
Obesity class I	≥30.0	8	8.2

As seen in Table 4.4, 24.7% of the 97 volunteers participating in the study were diagnosed with at least one disease, and 75.3% did not have any disease. 2.1% of the volunteers with a diagnosed disease have hypertension. 1% of the volunteers with a diagnosed disease have sleep apnea. 6,2% of the volunteers with a diagnosed disease have thyroid. 4,1% of 24 volunteers with a diagnosed disease have PCOS. 1% of the volunteers with a diagnosed disease have sacroiliitis. 1% of the volunteers with a diagnosed disease have reactive arthritis. 3,1% of the volunteers with a diagnosed disease have asthma. 1% of the volunteers with a diagnosed disease have COPD. 1% of the volunteers with a diagnosed disease have herniated disc. 1% of the volunteers with a diagnosed disease have migraine. 1% of the volunteers with a diagnosed disease have allergic rhinitis. 2.1% of the volunteers with a diagnosed disease have insulin resistance. And finally, 2.1% of the volunteers with the diagnosed disease have reflux.

Table 4.4 Descriptive statistics for disease group and no disease group

		Disease Group and No Disease Group	
		n	**%**
Do you have a diagnosed disease?	**No**	73	75.3
	Yes	24	24.7
Hypertension	**No**	95	97.9
	Yes	2	2.1
Sleep apnea	**No**	96	99
	Yes	1	1
Thyroid	**No**	91	93.8
	Yes	6	6.2
PCOS	**No**	93	95.9
	Yes	4	4.1
Sacroiliitis	**No**	96	99
	Yes	1	1
Reactive arthritis	**No**	96	99
	Yes	1	1
Asthma	**No**	94	96.9
	Yes	3	3.1
COPD	**No**	96	99
	Yes	1	1
Herniated disc	**No**	96	99
	Yes	1	1
Migraine	**No**	96	99
	Yes	1	1
Allergic rhinitis	**No**	96	99
	Yes	1	1
Insulin resistance	**No**	95	97.9
	Yes	2	2.1
Reflux	**No**	95	97.9
	Yes	2	2.1

In Table 4.5, the subscales and total scale scores of the participants are compared according to gender. As seen in Table 4.5, only the eating control subscale is statistically significant ($p=0.016$). The eating control subscale values of the women are higher than men. There were no statistical differences between the subscales according to the groups ($p>0.05$).

Table 4.5 Comparisons of the subscales and total scale score according to gender

	Gender	n	Mean±SD (Min-Max)	Median (Q1-Q3)	p
Disinhibition	**Women**	82	3.19 ± 0.85 (1-4.6)	3.3 (2.6-3.8)	0.305[2]
	Men	15	3.00 ± 0.80 (1.6-4.4)	2.8 (2.4-3.8)	
Emotional Eating	**Women**	82	3.04 ± 1.13 (1-5)	3.2 (2.2-3.8)	0.242[1]
	Men	15	3.34 ± 1.12 (1.6-5)	3.4 (2.4-4.6)	
Eating Control	**Women**	82	3.52 ± 1.02 (1-5)	3.75 (2.5-4.5)	0.016[2]
	Men	15	2.85 ± 0.94 (1.5-4.5)	2.75 (2-3.75)	
Focusing	**Women**	82	3.29 ± 0.41 (2.4-4.6)	3.2 (3-3.6)	0.331[2]
	Men	15	3.15 ± 0.35 (2.4-3.6)	3.2 (2.9-3.4)	
Eating Discipline	**Women**	82	2.76 ± 0.49 (1.6-3.8)	2.8 (2.4-3.2)	0.721[2]
	Men	15	2.70 ± 0.55 (1.6-3.4)	2.8 (2.2-3.2)	
Mindfulness	**Women**	82	3.25 ± 0.55 (1.8-4.6)	3.4 (3-3.6)	0.714[2]
	Men	15	3.25 ± 0.4 (2.6-3.8)	3.2 (2.9-3.8)	
Interference	**Women**	82	3.71 ± 0.85 (1-5)	4 (3.37-4.5)	0.744[2]
	Men	15	3.67 ± 0.90 (1.5-5)	3.5 (3.5-4)	
Mindful Eating	**Women**	82	3.3 ± 0.51 (1.93-4.1)	3.37 (3.07-3.7)	0.499[1]
	Men	15	3.2 ± 0.48 (2.53-4)	3.1 (2.87-3.8)	

[1]; Independent samples *t*-test, [2]; Mann Whitney U test was used. SD; Standard deviations, Q1; 25th percentiles and Q3; 75th percentiles. $p < 0.05$ statistically significant.

In Table 4.6, the patients' subscales and total scale scores are compared according to BMI. There were no statistical differences between each subscale according to the BMI groups ($p > 0.05$).

Table 4.6 Comparisons of the subscales and total scale score according to BMI

	BMI (kg/m^2)	n	Mean±SD (Min-Max)	Median (Q1-Q3)	p
Disinhibition	**<25**	66	3.22 ± 0.79 (1-4.6)	3.3 (2.8-3.85)	0.321[2]
	≥25	31	3.40 ± 0.95 (1.2-4.6)	3.0 (2.2-3.8)	
Emotional Eating	**<25**	66	3.25 ± 1.01 (1-5)	3.4 (2.6-4)	0.056[1]
	≥25	31	2.78 ± 1.29 (1-5)	2.6 (1.6-3.6)	
Eating Control	**<25**	66	3.49 ± 1.02 (1-5)	3.75 (2.69-4.31)	0.282[2]
	≥25	31	3.26 ± 1.04 (1.75-5)	3 (2.25-4.25)	
Focusing	**<25**	66	3.26 ± 0.39 (2.4-4.4)	3.2 (3-3.4)	0.820[2]
	≥25	31	3.27 ± 0.43 (2.4-4.6)	3.4 (3-3.6)	
Eating Discipline	**<25**	66	2.74 ± 0.48 (1.6-3.8)	2.8 (2.4-3.2)	0.599[2]
	≥25	31	2.77 ± 0.54 (1.6-3.6)	2.8 (2.4-3.2)	
Mindfulness	**<25**	66	3.32 ± 0.53 (2-4.6)	3.4 (3-3.8)	0.104[2]
	≥25	31	3.12 ± 0.51 (1.8-3.8)	3.2 (2.8-3.4)	
Interference	**<25**	66	3.80 ± 0.81 (1-5)	4 (3.5-4.5)	0.100[2]
	≥25	31	3.50 ± 0.92 (1-5)	3.5 (3-4)	
Mindful Eating	**<25**	66	3.35 ± 0.49 (1.93-4.1)	3.37 (3.07-3.8)	0.086[1]
	≥25	31	3.16 ± 0.51 (2.1-4.03)	3.13 (2.8-3.57)	

1: Independent samples t test, 2: Mann Whitney U test was used. SD: Standard deviations, Q1:25th percentiles, and Q3:75th percentiles. $p<0.05$ statistically significant.

In Table 4.7, subscales and total scale scores of the patients are compared according to disease, yes or no. As you can see in Table 4.7, there were no statistical differences between the subscales according to the groups ($p > 0.05$).

Table 4.7 Comparisons of the subscales and total scale score according to disease yes or no

	Disease Yes or No	n	Mean±SD (Min-Max)	Median (Q1-Q3)	p
Disinhibition	**No**	73	3.16 ± 0.85 (1-4.6)	3.2 (2.6-3.8)	0.927[2]
	Yes	24	3.17 ± 0.84 (1.6-4.2)	3.4 (2.5-3.9)	
Emotional Eating	**No**	73	3.14 ± 1.1(1-5)	3.4 (2.4-4)	0.458[1]
	Yes	24	2.95 ±1.16 (1.2-5)	3 (2-3.8)	
Eating Control	**No**	73	3.39 ± 1 (1-5)	3.5 (2.5-4.25)	0.740[2]
	Yes	24	3.48 ± 1.13 (1.5-5)	3.5 (2.5-4.5)	
Focusing	**No**	73	3.25 ± 0.43 (2.4-4.6)	3.2 (3-3.4)	0.599[2]
	Yes	24	3.28 ± 0.3 (2.6-3.8)	3.2 (3.1-3.5)	
Eating Discipline	**No**	73	2.70 ± 0.48 (1.6-3.8)	2.6 (2.4-3.1)	0.076[1]
	Yes	24	2.91 ± 0.51 (1.8-3.6)	3 (2.5-3.2)	
Mindfulness	**No**	73	3.23 ± 0.57 (1.8-4.6)	3.2 (2.8-3.6)	0.664[2]
	Yes	24	3.31 ± 0.37 (2.4-4)	3.4 (3.1-3.5)	
Interference	**No**	73	3.62 ± 0.88 (1-5)	4 (3-4)	0.151[2]
	Yes	24	3.94 ± 0.73 (2.5-5)	4 (3.5-4.5)	
Mindful Eating	**No**	73	3.27 ± 0.53 (1.93-4.1)	3.33 (2.93-3.7)	0.663[1]
	Yes	24	3.33 ± 0.43 (2.5-3.97)	3.37 (3-3.7)	

1: Independent samples t test, 2: Mann Whitney U test was used. SD: Standard deviations, Q1:25th percentiles and Q3:75th percentiles. $p<0.05$ statistically significant.

Table 4.8 TASTE, FREQ, and DIFF Scores

Fat Preference Questionnaire Scores					
	n	**Mean**	**SD**	**Min**	**Max**
TASTE	97	52.52	18.73	15.78	94.73
FREQ	97	33.23	17.01	0	73.68
DIFF	97	19.28	18.49	-10.05	72.81

In Table 4.9, the TASTE, FREQ, and DIFF scores of the participants are compared according to gender. As you can see in Table 4.9, only the TASTE score is statistically significant (p=0.016). The TASTE scores of the women are lower than the men. There was no statistical difference between FREQ scores according to the groups (p= 0.075) and no statistical difference between DIFF scores according to gender groups (p = 0.593).

Table 4.9 Comparisons of the TASTE, FREQ, and DIFF scores according to gender

	Sex	n	Mean±SD (Min-Max)	Median (Q1-Q3)	p
TASTE	**Women**	82	50.58 ± 18.47 (15.78-89.47)	50.00 (41.3-63.15)	0.016[1]
	Men	15	63.13 ± 16.97 (27.77-94.73)	63.15 (52.63-73.68)	
FREQ	**Women**	82	31.91 ±16.52 (0-73.68)	30.63 (20-42.85)	0.075[1]
	Men	15	40.42 ± 18.35 (0-68.42)	46.66 (28.57-47.05)	
DIFF	**Women**	82	18.66 ± 17.89 (-10.05-72.81)	13.64 (5.26-31.58)	0.593[2]
	Men	15	22.71 ± 21.84 (-4.95-64.73)	12.69 (7.84-39.85)	

1:Independent samples t test, 2:Mann Whitney U test was used. SD: Standard deviations, Q1:25th percentiles and Q3:75th percentiles. p<0.05 statistically significant.

In Table 4.10, the TASTE, FREQ, and DIFF scores of the participants are compared according to BMI groups. As seen in Table 4.10, only the FREQ score is not statistically significant (p=0.837).

TASTE and DIFF scores were statistically different according to BMI groups (respectively p= 0.008 and p=0.016). In TASTE scores, the low BMI group (BMI<25 kg/m^2) scores are lower than the high BMI group (BMI≥25 kg/m^2). When we examine DIFF scores, the scores of the low BMI group (BMI<25 kg/m^2) are lower than the other group.

Table 4.10 Comparisons of the TASTE, FREQ, and DIFF scores according to BMI groups

	BMI (kg/m^2)	n	Mean±SD (Min-Max)	Median (Q1-Q3)	p
TASTE	**<25**	66	49.10 ± 17.15 (15.78-84.21)	48.68 (38.37-63.15)	0.008[1]
	≥25	31	59.79 ± 20.12 (15.78-94.73)	57.89 (47.05-767.77)	
FREQ	**<25**	66	32.98 ± 16.57 (0-68.42)	31.41 (20.79-46.75)	0.837[1]
	≥25	31	33.75 ± 18.17 (0-73.68)	30 (21.42-44.44)	
DIFF	**<25**	66	16.11 ± 17.06 (-10.05-65.27)	11.96 (5.26-26.90)	0.016[2]
	≥25	31	26.04 ± 19.86 (0-72.81)	21.05 (10.52-41.23)	

1:Independent samples t test, 2:Mann Whitney U test was used. SD: Standard deviations, Q1:25th percentiles and Q3:75th percentiles. p<0.05 statistically significant.

In Table 4.11, TASTE, FREQ, and DIFF scores were compared according to whether or not the respondents had a disease. Accordingly, there is no statistical difference in the TASTE, FREQ, and DIFF scores of the participants according to the presence or absence of disease (p= 0.976, p=0.052, and p= 0.115, respectively).

Table 4.11 Comparisons of the TASTE, FREQ, and DIFF scores according to disease yes or no

	Disease Yes or No	n	Mean ± SD (Min-Max)	Median (Q1-Q3)	p
TASTE	**No**	73	52.55 ± 17.99 (15.78-94.73)	52.63 (42.1-63.15)	0.976[1]
	Yes	24	52.42 ± 21.25 (15.78-89.47)	52.63 (38.16-67.98)	
FREQ	**No**	73	35.15 ± 16.46 (0-73.68)	35.29 (23.30-47.05)	0.052[1]
	Yes	24	27.40 ± 17.10 (0-68.42)	25.66 (12.94-39.61)	
DIFF	**No**	73	17.40 ± 17.13 (-5.26-72.81)	12.69 (5.26-27.76)	0.115[2]
	Yes	24	25.01 ± 21.50 (-10.05-63.15)	19.10 (6.89-43.23)	

1:Independent samples t test, 2:Mann Whitney U test was used. SD: Standard deviations, Q1:25th percentiles and Q3:75th percentiles. p<0.05 statistically significant.

In Table 4.12, the relationship between the TASTE, FREQ, and DIFF scores of the participants and their age, height, weight, and BMI values was examined. There was a statistically significant positive and weak correlation between the TASTE scores of the participants and their weight and BMI values (r=0.331 p<0.001 and r=0.3320, p=0.001, respectively). There was a statistically significant positive and weak correlation between the DIFF scores of the participants, their weight, and BMI values (r=0.272 p<0.007 and r=0.279 p=0.006, respectively).

Table 4.12 Comparisons of the TASTE, FREQ, and DIFF scores according to age, height (cm), weight (kg), and BMI

		Age	Height (cm)	Weight (kg)	BMI (kg/m^2)
TASTE	**r**	-0.008	0.096	0.331**	0.320**
	p	0.939	0.348	0.001	0.001
	n	97	97	97	97
FREQ	**r**	-0.178	0.039	0.082	0.052
	p	0.081	0.703	0.427	0.616
	n	97	97	97	97
DIFF	**r**	0.152	0.089	0.272**	0.279**
	p	0.138	0.374	0.007	0.006
	n	97	97	97	97

Spearman's rank correlation coefficient was used. r: Correlation coefficient, *: Correlation is significant at the 0.05 level. **: Correlation is significant at the 0.01 level.

In Table 4.13, the relationship between the TASTE, FREQ, and DIFF scores of the participants and their ME scores, and the scores of their sub-dimensions was examined. There is a statistically significant, negative, and very weak relationship between the TASTE scores of the participants and the values of eating control, eating discipline, mindfulness, interference, and ME (r=-0.223 p=0.028, r=-0.234, p=0.021, r=-0.287 p=0.004, r=-0.313 p=0.002 and r=-0.291 p=0.004, respectively). There is no statistical difference between the TASTE scores and the disinhibition, emotional eating, and focusing scores of the participants (r=-0.197 p=0.053, r=-0.153 p=0.135, and r=0.060 p=0.559, respectively).

There was a statistically significant negative and weak correlation between the FREQ scores of the participants and their eating discipline scores (r=-0.566 p=0.001). A statistically significant negative and very weak correlation existed between the participants' FREQ scores and their mindfulness, interference, and ME scores (r=-0.275 p=0.006, r=-0.223 p=0.028, and r=-0.259 p=0.011, respectively). There is no statistical difference between the FREQ scores of the participants and the scores of disinhibition, emotional eating, eating control, and focusing (r=-0.154 p=0.132, r=-0.037 p=0.722, r=-0.157 p=0.151 and r=-0.109 p=0.286, respectively). There is a statistically significant, positive, and very weak correlation between the DIFF scores of the participants and their eating discipline scores (r=0.246 p=0.015).

Table 4.13 Comparisons of the TASTE, FREQ, and DIFF scores according to MEQ-30 subscales scores and MEQ-30 scores

	Disinhibition	**Emotional Eating**	**Eating Control**	**Focusing**	**Eating Discipline**	**Mindfulness**	**Interference**	**Mindful Eating**
	-0.197	-0.153	-0.223*	0.060	-0.234*	-0.287*	-0.313*	-0.291*
TASTE	0.053	0.135	0.028	0.559	0.021	0.004	0.002	0.004
	97	97	97	97	97	97	97	97
	-0.154	-0.037	-0.147	-0.109	-0.566**	-0.275*	-0.223*	-0.259*
FREQ	0.132	0.722	0.151	0.286	<0.001	0.006	0.028	0.011
	97	97	97	97	97	97	97	97
	-0.11	-0.167	-0.020	0.122	0.246*	0.031	-0.109	-0.044
DIFF	0.917	0.102	0.846	0.234	0.015	0.760	0.286	0.669
	97	97	97	97	97	97	97	97

Spearman's rank correlation coefficient was used. r: Correlation coefficient, *: Correlation is significant at the 0.05 level. **: Correlation is significant at the 0.01 level.

5. DISCUSSION AND CONCLUSION

5.1 Discussion

A total of 97 people who applied to a private diet clinic participated in the study. The proportion of women participants in the study was observed to be higher. The reason for the high number of women participants may be due to the fact that people who apply to private clinics are generally women. In a study, it was determined that women (52.7%) who participated in the study followed the news about nutrition in the written and visual media more than men (34.7%), and the level of knowledge and belief about fat and dietary fiber intake was higher in women than in men (82). In this study, the BMI of participants was calculated from their self-reported height and weight. The mean BMI values of the participants were 24.4 kg/m^2.

The health status of the participants was questioned in order to understand whether there was a disease that could prevent their fat intake. 24.7% of 97 volunteers participating in the study were diagnosed with at least one disease, and 75.3% did not have any diagnosed disease. It was understood that the participants did not have a disease that would limit their fat intake, such as coronary heart disease. One study did not confirm that fat preference differed significantly between a group diagnosed with coronary heart disease compared with a healthy control group. Regardless of health status, the study found that full-fat meals were preferred over low-fat meals (25).

Eating while paying attention to the food or drink that one is consuming is the most straightforward way to explain the concept of mindful eating (54). The MEQ-30 scale was used to determine the mindful eating levels of the participants. The scale, originally called the MEQ, was developed by Framson et al. (61) in 2009, and the correlations between eating behavior, awareness, and emotional state can be carefully questioned.

The participants' MEQ subscales and total ME scores were compared according to gender. Only the eating control subscale is statistically significant. The eating control subscale values of the women group are higher than the men. There is no statistically significant difference between other subscales according to gender. In the study of Framson et al. (61), women's emotional eating sub-factors were examined and found lower scores than men. Based on this, they argued that women can respond differently than men in case of emotional stress. In the study by Köse et al. (54) when the MEQ-30 mean score was

compared according to the gender of the students, the difference between the men's and the women's mean scores was not statistically significant.

The participants' MEQ subscales and total ME scores were compared according to their BMI. There were no statistical differences between each subscale according to the BMI groups in this study. Köse et al. (54) examined the relationship between students' anthropometric data and their MEQ-30 factor scores and observed that emotional eating and eating discipline factors increased as BMI increased. On the other hand, disinhibition, eating control, focus, awareness, and interference factors decrease. In comparison, body weight and BMI increased, eating control decreased, and this relationship was found to be statistically significant. Beshara, Hutchinson, and Wilson (78) found that MEQ scores were negatively related to body weight and that emotional eating and disinhibition factors were also negatively related. The study by Framson et al. (61), which was similar to this one, found that BMI values and all sub-factors were linked negatively. In addition, studies conducted in Turkey found a negative relationship between BMI and MEQ-30 scores (83,84). Also, some studies show that a drop in BMI could be caused by a rise in mindful eating (85,86). The results of the studies suggest that mindful eating may play an important role in long-term weight maintenance.

When the subscale and total scale scores of the MEQ-30 were compared according to the yes or no status of the disease, no statistical difference was found between each subscale according to whether the participants had the disease or not.

The mean TASTE score of the participants was 52.52, the FREQ score was 33.23, and the mean DIFF score obtained by subtracting the FREQ score from the TASTE score was 19.28. When the TASTE, FREQ, and DIFF scores of the participants were compared according to gender, only the TASTE score was statistically significant. The TASTE scores of the women group are lower than men. The women group had lower FREQ and DIFF scores than men, but this difference was not statistically significant ($p=0.075$ and $p=0.593$). In the Bakır et al. (3) study, women had lower TASTE scores than men (59.9% vs. 62.5%), but the difference was not statistically significant. In the same way, high-fat foods were eaten much more often by men (55.4%) than by women (46.2%). Men limited their fat intake by 13.9% and women by only 7.8%, but a comparison of the two groups showed that women were much more careful about their fat intake than men. In the study by Day et al. (16), there were

differences between men and women regarding TASTE and FREQ scores. This shows that men (men; 60.6% and women; 53.9%) rated high-fat foods as having significantly better taste than low-fat foods. Men (52.5%) ate low-fat foods a lot more often than women (41.6%). This is why low-fat options were picked more by men. According to the results of these studies, we can say that men find fatty foods more tasty.

TASTE, FREQ, and DIFF scores of the participants were compared according to BMI groups. TASTE scores and DIFF scores were statistically different according to BMI groups (respectively p=0.008 and p=0.016). In TASTE scores, the low BMI group (BMI<25 kg/m^2) is lower than the high BMI group (BMI≥25 kg/m^2). When we examine DIFF scores, the scores of the low BMI group (BMI<25 kg/m^2) are lower than the other group. No statistically significant difference was found between the participants' BMI and FREQ scores. In the study conducted by Bakır et al. (3), no correlation was observed between the BMI of the participants and the fat preference questionnaire scores. Ledikwe et al. (5), found no evidence of a significant link between BMI and subscales of the fat preference questionnaire in overweight and dieting women. Additionally, there were significant negative relationships between BMI and the TASTE and FREQ scores in the study by Day et al. (16) BMI and DIFF scores were also shown to be positively correlated and the positive relationship between BMI and DIFF scores suggested that increased body mass was associated with specific restrictions on fat consumption. In this study, it was observed that as the BMI value of the participants increased, the DIFF value increased; that is, the rate of fat restriction was higher in individuals with high BMI. This may be because participants with high BMI applied to a special diet clinic because they wanted to lose weight. These people may have been following a low-fat weight loss diet during the time they filled out the questionnaire, and therefore they may have reduced their fat intake. Another study found that individuals with a high BMI tended to consume higher-fat foods (87). This difference between the results of the studies highlights the important differences in the study populations.

We know that excessive fat consumption plays a role in increasing the risk of developing many chronic diseases, including cardiovascular diseases and obesity. When the TASTE, FREQ, and DIFF scores of the participants were compared according to whether they had any disease or not, there was no statistically significant difference in the fat preference questionnaire scores, depending on whether the participants had any disease or

not. The FREQ scores of the participants with the disease are lower than the scores of the participants without the disease but there is no statistically significant difference.

When the relationship between the TASTE, FREQ, and DIFF scores of the participants and their age was examined, no statistically significant relationship was found between the participants' fat preference questionnaire scores and their age.

Recently, a lot of attention has been placed on applying ME practices, aiming to promote healthy eating habits and aiding with weight management (11). These goals can be found in the previous sentence. Eating mindful involves being conscious not just of the food we consume but also of the reasons we eat and the manner in which we consume it. When practicing ME, the focus is on making meal choices in accordance with the cues provided by the body. However, only a few in-depth studies have investigated how these strategies influence dietary intake, also known as energy intake (calorie intake), or the quality of the food consumed (62,67). In particular, no study has been found that investigates how people's ME levels affect their fat preferences. This study aims to examine the effects of participants' ME levels on their fat preferences.

The relationship between the TASTE, FREQ, and DIFF scores of the participants in the study and their ME subscales scores and total mindful eating scores were examined. A very weak correlation was found between the participants' TASTE scores and the values of eating control, eating discipline, mindfulness, interference, and ME values. There is no statistical difference between the participants' TASTE and disinhibition, emotional eating, and focusing scores. In the research by Allirot et al. (11), differences between groups in the quantity of food consumed were not explained by differences in food taste. Before the research began, all of the volunteers affirmed that they like all of the meals that would be provided. The taste of the foods that were actually consumed throughout the trial did not vary across the groups Using ME techniques, Hong et al. (88) showed that previously hated or avoided meals may now be consumed and tasted more appetizingly and it has been proposed that baseline food preferences may have an impact on how ME affects food preferences.

When the FREQ scores of the participants were compared with the eating discipline scores, a statistically significant and negative correlation was found between them. In addition, a statistically significant and negative correlation was found between the FREQ scores of the participants and the mindfulness, interference, and mindful eating scores. One

study showed that there was a strong correlation between mindfulness levels and less fat and sugar consumption (43).

There was a statistically significant but very weak positive association between the participants' DIFF scores and their scores on eating discipline. Researchers have discovered that mindful eating interventions that focus specifically on eating behaviors can help participants improve their binge eating and external eating behaviors, increase their cognitive restriction on food, and provide healthier dietary options by consuming less fat and sugar (11,12,14,89–91).

Some studies have seen an increase in the food consumption of individuals under stressful conditions and especially in stressful situations, food choices were mostly in favor of foods rich in sugar and fat content and this rate was found to be higher in women (2,8,43). In the study by Timmerman and Brown, the intervention group that received ME therapy lost more weight than the control group, and it was seen that they reduced their daily calorie and fat intake (12). Persons who eat with awareness consume far less of the kinds of foods that are high in calories. People ate less when snacking over the next two hours after eating consciously during a meal, and there is a negative association between ME and the amount of fat and sugar that is consumed (43,77,78). Another study of people with diabetes found that people with diabetes who received a ME intervention consumed less fat than people who received diabetes education (59). Contrary to these studies, another study did not find a significant difference between participants' mindful eating levels and their fat consumption (79).

According to the results of the study, the frequency of choosing high-fat foods decreased as the participants' ME levels increased. In addition, the decrease in the eating discipline of people and their less mindfulness may increase the frequency of fat preference. It was observed that when people's eating discipline increases, they restrict their fat intake more.

5.2 Conclusion

The ME level of individuals is one of the important factors affecting healthy and balanced nutrition. As the ME level increases, it is seen that individuals make healthier food choices. It can be ensured that individuals make healthier fat choices by increasing their ME levels. The aim of this study is to observe the change in fat preferences according to the ME

levels of individuals who apply to a private diet clinic and to determine the direction of this difference. The study was conducted on individuals between the ages of 18-65 who applied to a private diet clinic. Since the research was conducted with individuals who applied to a private diet clinic to receive online diet services, these individuals may generally be inclined to follow a healthy eating routine. As a result of the study, it was seen that individuals with high BMI levels restricted their fat intake more. This may be because these individuals followed a low-fat weight loss diet at the time of the survey.

Since the research was conducted with individuals who applied to a private diet clinic to receive online diet services, these individuals may generally be inclined to follow a healthy eating routine. Some of the people who participated in the research have been receiving counseling for a while, while others applied for the first time. Since people who have received counseling for a while may be inclined to eat healthier, it can be worked with people who apply for counseling for the first time in order to achieve more accurate results in future studies. Most of the participants in the study are women. Women have higher levels of eating control than men, and it has been observed that they find high-fat foods less tasty than men. In future studies, a larger and more diverse population can be studied for more accurate results. There are fewer studies, especially on men.

Although the high BMI group (BMI≥25 kg/m^2) finds high-fat options more delicious, it is seen that they restrict dietary fat more. This may be because these individuals followed a low-fat weight loss diet and were in the process of losing weight during the survey. In future studies, the fat preferences of two groups, those who do not diet and those who do, can be looked at.

In general, when the ME levels of the participants were examined, it was seen that the participants with high ME levels found high-fat foods less tasty and preferred them less frequently. This result supports the hypothesis of the study. Individuals with high eating discipline scores had more dietary fat restriction rates.

In this study, the participants' educational and physical activity status was not questioned. Educational status and income levels can also affect individuals' ME levels and fat preferences. Therefore, in future studies, individuals' education level and physical activities can also be questioned.

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7. APPENDICES

7.1 Ethical Approval

YEDİTEPE ÜNİVERSİTESİ
GİRİŞİMSEL OLMAYAN KLİNİK ARAŞTIRMALAR
ETİK KURULU

Versiyon No 2.0
13.02.2022
Sayfa 1 / 2

KARAR FORMU

8.04.2022

ETİK KURUL BİLGİLERİ	Etik Kurulun Adı	Yeditepe Üniversitesi Girişimsel Olmayan Klinik Araştırmalar Etik Kurulu
	Açık Adres	Yeditepe Üniversitesi Kayışdağı Kampüsü, Tıp-Mühendislik Binası, Sağlık Bilimleri Enstitüsü, İnönü Mah. Kayışdağı Cad. 326A, 26 Ağustos Yerleşimi 34755 Ataşehir, İstanbul
	İnternet Sayfası	http://goetik.yeditepe.edu.tr/
	Telefon	
	E-posta	goetik@yeditepe.edu.tr

DEĞERLENDİRİLEN BELGELER	Islak imzalı başvuru dosyası, CD'si ve elektronik başvuru	☒
	Araştırma başlığı ve araştırmacıların isimleri	☒
	Başvuru dilekçesi	☒
	Başvuru Formu- Araştırmanın;	☒
	• Niteliği	☒
	• Önemi ve özgün değeri	☒
	• Amaç ve hedefleri	☒
	• Yöntemi	☒
	• Yönetimi	☒
	• Yaygın etkisi	☒
	• Araştırma bütçesi (Mevcutsa)	☒
	• Süresi ve uygunluğu (Zaman cetveli)	☒
	• Kaynakları	☒
	Bilgilendirilmiş Gönüllü Olur Formu (yapılan araştırmaya özel olarak hazırlanmış)	☒
	Taahhütname-1 Araştırmanın yapılacağı kurumdan izin alma sorumluluğunun araştırmacılara ait olduğuna dair taahhüt	☒
	Taahhütname-2 Dünya Tıp Birliği Helsinki Bildirgesinin son versiyonunun ve Sağlık Bakanlığı'nın ilgili tüm kılavuzlarının okunmasına dair taahhüt	☒
	Taahhütname-3 Daha önce yapılmış etik kurul başvuruları mevcut olup olmadığına dair taahhüt	☒
	Taahhütname-4 Araştırma sırasında araştırma bütçesinde yer almayan ve gönüllünün kendisine veya Sosyal Güvenlik Kurumuna ek yük getirecek hiçbir işlem uygulanmayacağına dair taahhüt	☒
	Taahhütname-5 COVID-19 hastalarında tedavi yaklaşımları ve bilimsel araştırmalar genelgesi okunmasına dair taahhüt	☒
	Taahhütname-6 Milli Eğitim Bakanlığı Araştırma Uygulama İzinleri konulu yazının okunmasına dair taahhüt	☒
	Araştırmacıların her birisine ait özgeçmiş formu	☒
	Ek belgeler (Varsa kullanılan ölçek izinleri vb.)	☒

KARAR BİLGİLERİ	Başvuru Numarası	202203Y0196
	Toplantı Tarihi	11.03.2022
	Toplantı Yeri	Çevirim içi (Google Meet)
	Karar No	10

BAŞVURU NUMARASI: 202203Y0196

8.04.2022

KARAR

☒**KABUL**	☐ **RET** ☐ *KAPSAM DIŞI (GİRİŞİMSEL)* ☐ *BİLİMSEL VE/VEYA ETİK KURALLARA AYKIRI* ☐ *BİR SORUMLU ARAŞTIRMACININ (TEZ İSE DANIŞMAN), BİR TOPLANTIYA **İKİ (2) ADETTEN FAZLA ÇALIŞMA BAŞVURUSUNDA** BULUNMASI* ☐ *KURUM İÇİ BAŞVURULARINDA **KURUMSAL E-POSTA HESABI** İLE GİRİŞ YAPILMAMIŞ OLMASI* ☐ *ŞARTLI KABULDE BELİRTİLEN REVİZYONLARIN ZAMANINDA VE/VEYA İSTENİLDİĞİ ŞEKİLDE YAPILMAMIŞ OLMASI*

Yeditepe Üniversitesi Girişimsel Olmayan Klinik Araştırmalar Etik Kurulu adına
Prof.Dr.Didem Özdemir ÖZENEN
Başkan

Araştırmanın Başlığı	Özel Bir Diyet Kliniğine Başvuran Bireylerin Yeme Farkındalık Düzeylerine Göre Yağ Tercihlerindeki Değişimin İncelenmesi
Araştırmacılar	Dyt.Merve Mucuk,Dr.Öğr.Üyesi İrem Kaya Cebioğlu

7.2 Permission Slip

T.C. YEDİTEPE ÜNİVERSİTESİ
GİRİŞİMSEL OLMAYAN KLİNİK ARAŞTIRMALAR
ETİK KURULU

Versiyon No
1.0

EK 1. ARAŞTIRMA İZİN BELGESİ

2 Mart 2022

T.C. YEDİTEPE ÜNİVERSİTESİ

GİRİŞİMSEL OLMAYAN KLİNİK ARAŞTIRMALAR ETİK KURULU BAŞKANLIĞI' NA,

Sorumlu araştırmacısı olan **Özel Bir Diyet Kliniğine Başvuran Bireylerin Yeme Farkındalık Düzeylerine Göre Yağ Tercihlerindeki Değişimin İncelenmesi** başlıklı araştırma önerisinin veri toplama kısmı kurumumuzda yapılacaktır.
Gereğini arz ederim.

Kurum Bilgileri

Adı	Anabilim Dalı / Bölüm Adı
Melike Corut Beslenme ve Diyet Danışmanlığı Merkezi	Metin girmek için tıklayın

Kurum Yetkilisi

Unvanı, Adı - Soyadı	Görevi	İmza
Melike Corut	Diyetisyen	

7.3 Questionnaire Form

Özel Bir Diyet Kliniğine Başvuran Bireylerin Yeme Farkındalık Düzeylerine Göre Yağ Tercihlerindeki Değişimin İncelenmesi

Sayfa 1

BİLGİLENDİRİLMİŞ GÖNÜLLÜ OLUR FORMU

Sayın Katılımcı,

Katıldığınız bu çalışma bilimsel nitelikte bir araştırma olup konusu "Özel Bir Diyet Kliniğine Başvuran Bireylerin Yeme Farkındalık Düzeylerine Göre Yağ Tercihlerindeki Değişimin İncelenmesi" dir. Bu araştırma, Yeditepe Üniversitesi Sağlık Bilimleri Enstitüsü Beslenme ve Diyetetik Anabilim Dalı'nda yürütülmekte olunan araştırmacı Merve Mucuk'un yüksek lisans tezi kapsamında yapılmaktadır. Bu çalışma, Beslenme ve Diyetetik Anabilim Dalı'nda, Dr. Öğretim Üyesi İrem Kaya Cebioğlu sorumluluğu altındadır. Bu çalışmanın amacı, özel bir diyet kliniğine başvuran bireylerin yeme farkındalık düzeylerine göre yağ tercihlerindeki değişimi incelemektir. Bu araştırma, özel bir diyet kliniğine başvuran 18 yaş ve üzeri gönüllü olarak katılmak isteyen bireyler ile yapılacaktır. Bu araştırmaya tahmini olarak 92 gönüllü katılacaktır. Araştırmaya katılmak için gönüllü olduğunuz takdirde, araştırmacı tarafından iletilen anket formunu doldurmanız istenmektedir. Soruları cevaplamanız yaklaşık olarak 15 dakika sürecektir. Bunun size ve yakınlarınıza hiçbir zararı olmayacaktır. Genel olarak yeme farkındalık düzeyiniz ve yağ tercihleriniz incelenecektir. Araştırmada alınacak tüm bilgiler araştırma kapsamı dışında hiçbir kişiyle kesinlikle paylaşılmayacaktır. Bu çalışmaya katılmak gönüllülük esasına dayanmaktadır. Çalışmaya katılmama ve çalışmanın herhangi bir aşamasında, hiçbir cezaya/yaptırıma maruz kalmaksızın, çalışmadan ayrılma hakkına sahipsiniz. Çalışmada kesinlikle kişisel kimlik bilgileriniz sorulmayacak; katılımınız için sizden herhangi bir ücret istenmeyecek ve katılımınız karşılığında size herhangi bir ücret ödenmeyecektir. Girişimsel hiçbir işlem uygulanmayacaktır. Araştırma hakkında daha fazla bilgi almak için araştırmacı Merve Mucuk'a başvurabilir, araştırmacıya numaralı cep telefonundan veya e-posta adresi üzerinden ulaşabilirsiniz.

ÇALIŞMAYA KATILMA ONAYI *

◯ Onam formunu okudum, araştırmaya katılmayı KABUL EDİYORUM.

◯ Onam formunu okudum, araştırmaya katılmayı KABUL ETMİYORUM.

1) DEMOGRAFİK BİLGİLER

Yaş *

Cinsiyet *

◯ Kadın

◯ Erkek

Boy Uzunluğu (cm) *

Ağırlık (kg) *

Tanısı konmuş bir hastalığınız var mı? Varsa belirtiniz. *

7.4 Mindful Eating Questionnaire (MEQ-30) and Scoring

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 Hiç	2 Nadiren	3 Bazen	4 Sık sık	5 Her zaman

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

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

PUANLAMA YÖNERGESİ

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

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

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

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

İzin için iletişim adresi: drgizemkose@gmail.com

7.5 Fat Preference Questionnaire

3) YAĞ TERCİH ANKETİ (FAT PREFERENCE QUESTIONNAIRE©)

Size 19 grup besin sunulacaktır. Her grup için lütfen:
a. Her bir madde için Evet veya Hayır işaretleyerek besinleri daha önceden hiç tüketip tüketmediğinizi belirtiniz.
b. Daha lezzetli olduğunu düşündüğünüz besini işaretleyiniz
c. Daha sık yediğiniz besini işaretleyiniz
Hangi besinlerin daha lezzetli olduğunu ve hangi besinleri daha sık yediğinizi seçerken güncel tercihlerinizi dikkate alınız.
Aksi belirtilmedikçe tüm besinlerin kalori, şeker veya yağ içeriği açısından değişikliğe uğratılmamış olduğunu varsayınız.

1. Çikolata veya Şeker
a. Daha önce hiç yediniz mi? *

Eğer aşağıdaki tüm maddelere 'Hayır' cevabını verdiyseniz, lütfen 2. soruya geçiniz.

	Evet	Hayır
Çikolata?	◯	◯
Şeker?	◯	◯

b. Hangi besin daha lezzetli?
(Bir tanesini işaretleyiniz)

◯ Çikolata

◯ Şeker

c. Hangi besini daha sık tüketirsiniz? (Bir tanesini işaretleyiniz)

◯ Çikolata

◯ Şeker

◯ Artık bu besinlerin hiçbirini tüketmiyorum

2. Krem Peynirli Simit veya Sade Simit
a. Daha önce hiç yediniz mi? *

Eğer aşağıdaki tüm maddelere 'Hayır' cevabını verdiyseniz, lütfen 3. soruya geçiniz.

	Evet	Hayır
Normal krem peynirli, tereyağlı veya margarinli simit?	◯	◯
Az yağlı krem peynirli, tereyağlı veya margarinli simit?	◯	◯
Sade simit?	◯	◯

b. Hangi besin daha lezzetli?
(Bir tanesini işaretleyiniz)

◯ Normal krem peynirli, tereyağlı veya margarinli simit

◯ Az yağlı krem peynirli, tereyağlı veya margarinli simit

◯ Sade simit

c. Hangi besini daha sık tüketirsiniz? (Bir tanesini işaretleyiniz)

- ◯ Normal krem peynirli, tereyağlı veya margarinli simit
- ◯ Az yağlı krem peynirli, tereyağlı veya margarinli simit
- ◯ Sade simit
- ◯ Artık bu besinlerin hiçbirini tüketmiyorum

3. Fırın Patates veya Kızarmış Patates

a. Daha önce hiç yediniz mi? *

Eğer aşağıdaki tüm maddelere 'Hayır' cevabını verdiyseniz, lütfen 4. soruya geçiniz.

	Evet	Hayır
Krema veya tereyağlı fırın patates?	◯	◯
Kızarmış patates?	◯	◯
Yağı azaltılmış sosla fırın patates?	◯	◯
Sade fırın patates?	◯	◯

b. Hangi besin daha lezzetli?
(Bir tanesini işaretleyiniz)

- ◯ Krema veya tereyağlı fırın patates
- ◯ Kızarmış patates
- ◯ Yağı azaltılmış sosla fırın patates
- ◯ Sade fırın patates

c. Hangi besini daha sık tüketirsiniz? (Bir tanesini işaretleyiniz)

- ◯ Krema veya tereyağlı fırın patates
- ◯ Kızarmış patates
- ◯ Yağı azaltılmış sosla fırın patates
- ◯ Sade fırın patates
- ◯ Artık bu besinlerin hiçbirini tüketmiyorum

4. Dondurma veya Sorbe (Buzlu, Meyveli Dondurma)
a. Daha önce hiç yediniz mi? *

Eğer aşağıdaki tüm maddelere 'Hayır' cevabını verdiyseniz, lütfen 5. soruya geçiniz.

	Evet	Hayır
Dondurma?	◯	◯
Sorbe?	◯	◯

b. Hangi besin daha lezzetli?
(Bir tanesini işaretleyiniz)

- ◯ Tam yağlı dondurma
- ◯ Sorbe

c. Hangi besini daha sık tüketirsiniz? (Bir tanesini işaretleyiniz)

- ◯ Tam yağlı dondurma
- ◯ Sorbe
- ◯ Artık bu besinlerin hiçbirini tüketmiyorum

5. Kremalı Çorbalar veya Berrak (Şehriye, Pirinç, Konsome, Tavuk Suyu vb. Şeffaf) Çorbalar
a. Daha önce hiç yediniz mi? *

Eğer aşağıdaki tüm maddelere 'Hayır' cevabını verdiyseniz, lütfen 6. soruya geçiniz.

	Evet	Hayır
Kremalı çorbalar?	◯	◯
Berrak çorbalar?	◯	◯

b. Hangi besin daha lezzetli?
(Bir tanesini işaretleyiniz)

◯ Kremalı çorbalar

◯ Berrak çorbalar

c. Hangi besini daha sık tüketirsiniz? (Bir tanesini işaretleyiniz)

◯ Kremalı çorbalar

◯ Berrak çorbalar

◯ Artık bu besinlerin hiçbirini tüketmiyorum

6. Sote/kızarmış Sebze veya Buharda Pişmiş Sade Sebze
a. Daha önce hiç yediniz mi? *

Eğer aşağıdaki tüm maddelere 'Hayır' cevabını verdiyseniz, lütfen 7. soruya geçiniz.

	Evet	Hayır
Sote veya kızarmış sebze?	◯	◯
Buharda pişmiş sade sebze?	◯	◯

b. Hangi besin daha lezzetli?
(Bir tanesini işaretleyiniz)

◯ Sote veya kızarmış sebze

◯ Buharda pişmiş sade sebze

c. Hangi besini daha sık tüketirsiniz? (Bir tanesini işaretleyiniz)

◯ Sote veya kızarmış sebze

◯ Buharda pişmiş sade sebze

◯ Artık bu besinlerin hiçbirini tüketmiyorum

7.Mayonezli Sandviçler veya Mayonezsiz Sandviçler
a. Daha önce hiç yediniz mi? *

Eğer aşağıdaki tüm maddelere 'Hayır' cevabını verdiyseniz, lütfen 8. soruya geçiniz.

	Evet	Hayır
Normal mayonezli sandviç?	◯	◯
Yağı azaltılmış mayonezli sandviç?	◯	◯
Mayonezsiz sandviç?	◯	◯

b. Hangi besin daha lezzetli?
(Bir tanesini işaretleyiniz)

◯ Normal mayonezli sandviç

◯ Yağı azaltılmış mayonezli sandviç

◯ Mayonezsiz sandviç

c. Hangi besini daha sık tüketirsiniz? (Bir tanesini işaretleyiniz)

- ◯ Normal mayonezli sandviç
- ◯ Yağı azaltılmış mayonezli sandviç
- ◯ Mayonezsiz sandviç
- ◯ Artık bu besinlerin hiçbirini tüketmiyorum

8. Tam Yağlı Peynir veya Az Yağlı Peynir
a. Daha önce hiç yediniz mi? *

Eğer aşağıdaki tüm maddelere 'Hayır' cevabını verdiyseniz, lütfen 9. soruya geçiniz.

	Evet	Hayır
Tam yağlı peynir?	◯	◯
Az yağlı peynir?	◯	◯

b. Hangi besin daha lezzetli?
(Bir tanesini işaretleyiniz)

- ◯ Tam yağlı peynir
- ◯ Az yağlı peynir

c. Hangi besini daha sık tüketirsiniz? (Bir tanesini işaretleyiniz)

- ◯ Tam yağlı peynir
- ◯ Az yağlı peynir
- ◯ Artık bu besinlerin hiçbirini tüketmiyorum

9. Tereyağ/Margarin Sürülmüş Hamurişi (Yufka, Bazlama, Pişi, Gözleme, Pide vb.) veya Tereyağsız/Margarinsiz Hamurişi

a. Daha önce hiç yediniz mi? *

Eğer aşağıdaki tüm maddelere 'Hayır' cevabını verdiyseniz, lütfen 10. soruya geçiniz.

	Evet	Hayır
Tereyağ/margarin sürülmüş hamurişi?	◯	◯
Yağı azaltılmış margarin sürülmüş hamurişi?	◯	◯
Tereyağsız/margarinsiz hamurişi?	◯	◯

b. Hangi besin daha lezzetli?
(Bir tanesini işaretleyiniz)

◯ Tereyağ/margarin sürülmüş hamurişi

◯ Yağı azaltılmış margarin sürülmüş hamurişi

◯ Tereyağsız/margarinsiz hamurişi

c. Hangi besini daha sık tüketirsiniz? (Bir tanesini işaretleyiniz)

◯ Tereyağ/margarin sürülmüş hamurişi

◯ Yağı azaltılmış margarin sürülmüş hamurişi

◯ Tereyağsız/margarinsiz hamurişi

◯ Artık bu besinlerin hiçbirini tüketmiyorum

10. Fırın /Buğulama/Izgara Balık veya Kızarmış Balık

a. Daha önce hiç yediniz mi? *

Eğer aşağıdaki tüm maddelere 'Hayır' cevabını verdiyseniz, lütfen 11. soruya geçiniz.

	Evet	Hayır
Fırın, buğulama veya ızgara balık?	◯	◯
Kızarmış balık?	◯	◯

b. Hangi besin daha lezzetli?
(Bir tanesini işaretleyiniz)

◯ Fırın, buğulama veya ızgara balık

◯ Kızarmış balık

c. Hangi besini daha sık tüketirsiniz? (Bir tanesini işaretleyiniz)

◯ Fırın, buğulama veya ızgara balık

◯ Kızarmış balık

◯ Artık bu besinlerin hiçbirini tüketmiyorum

11. Hamburger veya Izgara Tavuklu Sandviç
a. Daha önce hiç yediniz mi? *

Eğer aşağıdaki tüm maddelere 'Hayır' cevabını verdiyseniz, lütfen 12. soruya geçiniz.

	Evet	Hayır
Hamburger?	◯	◯
Izgara tavuklu sandviç?	◯	◯

b. Hangi besin daha lezzetli?
(Bir tanesini işaretleyiniz)

◯ Hamburger

◯ Izgara tavuklu sandviç

c. Hangi besini daha sık tüketirsiniz? (Bir tanesini işaretleyiniz)

◯ Hamburger

◯ Izgara tavuklu sandviç

◯ Artık bu besinlerin hiçbirini tüketmiyorum

12. Tam Yağlı Salata veya Az Yağlı Salata
a. Daha önce hiç yediniz mi? *

Eğer aşağıdaki tüm maddelere 'Hayır' cevabını verdiyseniz, lütfen 13. soruya geçiniz.

	Evet	Hayır
Tam yağlı salata?	◯	◯
Az yağlı salata?	◯	◯

b. Hangi besin daha lezzetli?
(Bir tanesini işaretleyiniz)

◯ Tam yağlı salata

◯ Az yağlı salata

c. Hangi besini daha sık tüketirsiniz? (Bir tanesini işaretleyiniz)

◯ Tam yağlı salata

◯ Az yağlı salata

◯ Artık bu besinlerin hiçbirini tüketmiyorum

13. Domates Soslu Makarna veya Kremalı/Peynirli Makarna
a. Daha önce hiç yediniz mi? *

Eğer aşağıdaki tüm maddelere 'Hayır' cevabını verdiyseniz, lütfen 14. soruya geçiniz.

	Evet	Hayır
Domates soslu makarna?	◯	◯
Kremalı veya peynirli makarna?	◯	◯

b. Hangi besin daha lezzetli?
(Bir tanesini işaretleyiniz)

◯ Domates soslu makarna

◯ Kremalı veya peynirli makarna

c. Hangi besini daha sık tüketirsiniz? (Bir tanesini işaretleyiniz)

◯ Domates soslu makarna

◯ Kremalı veya peynirli makarna

◯ Artık bu besinlerin hiçbirini tüketmiyorum

14. Normal Peynirli Pizza veya Etli (Sucuk, Sosis, Salam, Pastırma) veya İlave Peynirli Pizza *

Eğer aşağıdaki tüm maddelere 'Hayır' cevabını verdiyseniz, lütfen 15. soruya geçiniz.

	Evet	Hayır
Normal peynirli pizza?	◯	◯
Etli veya ilave peynirli pizza?	◯	◯

b. Hangi besin daha lezzetli?
(Bir tanesini işaretleyiniz)

◯ Normal peynirli pizza

◯ Etli veya ilave peynirli pizza

c. Hangi besini daha sık tüketirsiniz? (Bir tanesini işaretleyiniz)

◯ Normal peynirli pizza

◯ Etli veya ilave peynirli pizza

◯ Artık bu besinlerin hiçbirini tüketmiyorum

15. Sade Çiğ Sebze veya Sosa Bandırılmış (Yoğurt/Mayonez/Zeytinyağı vb. yağ içeren soslar) Çiğ Sebze
a. Daha önce hiç yediniz mi? *

Eğer aşağıdaki tüm maddelere 'Hayır' cevabını verdiyseniz, lütfen 16. soruya geçiniz.

	Evet	Hayır
Sade çiğ sebze?	◯	◯
Az yağlı sosa bandırılmış çiğ sebze?	◯	◯
Tam yağlı sosa bandırılmış çiğ sebze?	◯	◯

b. Hangi besin daha lezzetli?
(Bir tanesini işaretleyiniz)

◯ Sade çiğ sebze
◯ Az yağlı sosa bandırılmış çiğ sebze
◯ Tam yağlı sosa bandırılmış çiğ sebze

c. Hangi besini daha sık tüketirsiniz? (Bir tanesini işaretleyiniz)

◯ Sade çiğ sebze
◯ Az yağlı sosa bandırılmış çiğ sebze
◯ Tam yağlı sosa bandırılmış çiğ sebze
◯ Artık bu besinlerin hiçbirini tüketmiyorum

16. Tam Yağlı Bisküvi veya Yağı Azaltılmış (Light/Diyet) Bisküvi
a. Daha önce hiç yediniz mi? *

Eğer aşağıdaki tüm maddelere 'Hayır' cevabını verdiyseniz, lütfen 17. soruya geçiniz.

	Evet	Hayır
Yağı azaltılmış bisküvi?	◯	◯
Tam yağlı bisküvi?	◯	◯

b. Hangi besin daha lezzetli?
(Bir tanesini işaretleyiniz)

◯ Yağı azaltılmış bisküvi

◯ Tam yağlı bisküvi

c. Hangi besini daha sık tüketirsiniz? (Bir tanesini işaretleyiniz)

◯ Yağı azaltılmış bisküvi

◯ Tam yağlı bisküvi

◯ Artık bu besinlerin hiçbirini tüketmiyorum

17. Kızarmış Tavuk veya Haşlama/Fırın/Izgara Tavuk
a. Daha önce hiç yediniz mi? *

Eğer aşağıdaki tüm maddelere 'Hayır' cevabını verdiyseniz, lütfen 18. soruya geçiniz.

	Evet	Hayır
Kızarmış tavuk?	◯	◯
Haşlama, fırın veya ızgara tavuk?	◯	◯

b. Hangi besin daha lezzetli?
(Bir tanesini işaretleyiniz)

◯ Kızarmış tavuk

◯ Haşlama, fırın veya ızgara tavuk

c. Hangi besini daha sık tüketirsiniz? (Bir tanesini işaretleyiniz)

◯ Kızarmış tavuk

◯ Haşlama, fırın veya ızgara tavuk

◯ Artık bu besinlerin hiçbirini tüketmiyorum

18. Az Yağlı Patates Cipsi veya Tam Yağlı Patates Cipsi
a. Daha önce hiç yediniz mi? *

Eğer aşağıdaki tüm maddelere 'Hayır' cevabını verdiyseniz, lütfen 19. soruya geçiniz.

	Evet	Hayır
Az yağlı patates cipsi?	◯	◯
Tam yağlı patates cipsi?	◯	◯

b. Hangi besin daha lezzetli?
(Bir tanesini işaretleyiniz)

◯ Az yağlı patates cipsi

◯ Tam yağlı patates cipsi

c. Hangi besini daha sık tüketirsiniz? (Bir tanesini işaretleyiniz)

◯ Az yağlı patates cipsi

◯ Tam yağlı patates cipsi

◯ Artık bu besinlerin hiçbirini tüketmiyorum

19. Yağsız Süt veya Yarım Yağlı Süt veya Tam Yağlı Süt
a. Daha önce hiç yediniz mi? *

Eğer aşağıdaki tüm maddelere 'Hayır' cevabını verdiyseniz, anketi bitiriniz.

	Evet	Hayır
Yağsız süt?	◯	◯
%1 yağlı süt?	◯	◯
Yarım yağlı süt?	◯	◯
Tam yağlı süt?	◯	◯

b. Hangi besin daha lezzetli?
(Bir tanesini işaretleyiniz)

◯ Yağsız süt
◯ %1 yağlı süt
◯ Yarım yağlı süt
◯ Tam yağlı süt

c. Hangi besini daha sık tüketirsiniz? (Bir tanesini işaretleyiniz)

◯ Yağsız süt
◯ %1 yağlı süt
◯ Yarım yağlı süt
◯ Tam yağlı süt
◯ Artık bu besinlerin hiçbirini tüketmiyorum

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