

T.C.

YEDİTEPE UNIVERSITY

INSTITUTE OF HEALTH SCIENCES

DEPARTMENT OF NUTRITION AND DIETETICS

**FACTORS AFFECTING THE ADHERENCE OF
NUTRITION AND DIETETICS
STUDENTS TO THE MEDITERRANEAN DIET:
A CROSS-SECTIONAL STUDY**

MASTER OF SCIENCE THESIS

BERNA ŞENAY

İstanbul-2022

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DECLARATION

I declare that this thesis is my own work and 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.

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Berna Şenay



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LIST OF SYMBOLS AND ABBREVIATIONS

aMed:	Alternative Mediterranean Diet Scale
AHA:	American Heart Association
BMI:	Body Mass Index
CHD:	Coronary Heart Diseases
CRP:	C-reactive Protein
CVD:	Cardiovascular Diseases
EVOO:	Extra Virgin Olive Oil
HbA1c:	Glycated Hemoglobin
HDL-C:	High-density Lipoprotein Cholesterol
IDF:	International Diabetes Federation
MD:	Mediterranean Diet
MEDAS:	Mediterranean Diet Adherence Scale
MetS:	Metabolic Syndrome
MI:	Myocard Infarctus
NHS:	Nurses Health Study
PREDIMED:	Prevención con Dieta Mediterránea (Prevention with Mediterranean Diet)
PSQI:	Pittsburg Sleep Scale
RCT:	Randomized Controlled Trial
SCFA:	Short Chain Fatty Acid
T2DM:	Type 2 Diabetes
T-MDS:	Trichopoulou's Mediterranean Diet Scale
UNESCO:	The United Nations Educational, Scientific and Cultural Organization
WHO:	World Health Organization

ABSTRACT

Berna Şenay, Factors Affecting the Adherence of Nutrition and Dietetics Students to the Mediterranean Diet: A Cross-Sectional Study. Yeditepe University Institute of Health Sciences, Department of Nutrition and Dietetics, MSc Thesis, İstanbul, 2022.

This research was carried out with 272 students from the department of nutrition and dietetics in Yeditepe University and Istanbul Bilgi University between the dates of December 2021. The study was conducted among 261 women and 11 men students between the ages of 18-35 years after ethics committee approval. Online questionnaires including sociodemographic information, Mediterranean Diet Adherence Scale, Pittsburg Sleep Scale were used for data collection. 21% of the students had high a Mediterranean diet adherence, 32% of them had acceptable adherence and 47.1% of them had low adherence. It was found that 44.7% of the students had good sleep quality and 52.2% had poor sleep quality. There was no significant difference between the Mediterranean Diet Adherence Scale and the students' age, sex, body mass index, smoking, place of residence and economic status, sleep duration and sleep quality ($p>0.05$). The number of married was very small so we could not evaluate marital status. There was statistically significant difference between the classes, physical activity and using alcohol according to the adherence levels of the Mediterranean Diet Adherence Scale ($p<0.05$). Considering that university students are at risk in terms of unhealthy nutrition due to the dynamic environment they live in, being away from family life, friend circle, an irregular life, poor quality sleep, measures should be taken to increase their adaptation to the Mediterranean diet.

Keywords: Adherence to the Mediterranean diet, university students, PSQI sleep quality index

ABSTRACT(TURKISH)

Berna Şenay, Üniversite Öğrencilerinin Akdeniz Diyetine Uyumunu Etkileyen Faktörler: Kesitsel Bir Çalışma. Yeditepe Üniversitesi Sağlık Bilimleri Enstitüsü, Beslenme ve Diyetetik Anabilim Dalı Yüksek Lisans Tezi, İstanbul, 2022.

Bu araştırma, Yeditepe ve İstanbul Bilgi Üniversitesi Beslenme ve Diyetetik Bölümü öğrencilerinin Akdeniz diyetine uyumunu etkileyen faktörleri belirlemek ve bu faktörler doğrultusunda üniversite öğrencilerine öneriler geliştirmek amacıyla Eylül 2021-Aralık 2021 tarihleri arasında 272 öğrenci ile gerçekleştirilmiştir. Çalışma etik kurul izni sonrası Yeditepe ve İstanbul Bilgi Üniversitesi Beslenme ve Diyetetik Bölümü'nde öğrenim gören 18-35 yaş aralığında bulunan 261 kadın, 11 erkek öğrenci üzerinde yürütülmüştür. Katılımcılara sosyodemografik bilgileri, Akdeniz Diyetine Uyum Ölçeği, Pittsburg Uyku Ölçeği içeren online anket uygulanmıştır. Öğrencilerin %21'i sıkı Akdeniz diyetine sıkı uyum gösterirken, %32'sinin kabul edilebilir uyum, %47,1'inin zayıf uyum gösterdiği bulunmuştur. Öğrencilerin %44,7'sinin uyku kalitesi iyi, %52,2'sinin ise kötü uyku kalitesine sahip olduğu sonucuna ulaşılmıştır. Akdeniz Diyeti Bağlılık ölçeği ile öğrencilerin yaşları, cinsiyetleri, medeni durumları, beden kütle indeksi ve sigara kullanımları yaşadıkları yer ve ekonomik durumları, uyku süreleri ve uyku kaliteleri arasında anlamlı bir fark saptanamamıştır ($p>0.05$). Medeni hal ile Akdeniz diyet uyumu arasındaki ilişkiyi evli katılımcı sayısının çok az olması nedeniyle değerlendirilemedi. Akdeniz Diyetine uyum düzeylerine göre sınıf düzeyi, fiziksel aktivite ve alkol kullanımı arasında istatistiksel olarak anlamlı fark saptanmıştır ($p<0.05$).

Üniversite öğrencilerinin yaşadıkları dinamik çevre, aile hayatından uzak olma, arkadaş çevresi, düzensiz bir hayat, kalitesiz uyku gibi nedenlerle sağlıksız beslenme açısından risk altında olduğu göz önünde bulundurulursa Akdeniz diyetine uyumlarının artırılmasına yönelik önlemler alınmalıdır.

Anahtar Kelimeler: Akdeniz diyetine uyum, üniversite öğrencileri, PUKİ uyku kalite indeksi

1.INTRODUCTION

Many studies that provide evidence that diet can have an impact on human health have supported the impact of nutrition on human health (1-3). Today, all scientific associations, as well as the World Health Organization (WHO), accept that diet plays an important role in the prevention of chronic diseases. Inadequate and unbalanced nutrition can lead to the development of pathological results such as metabolic syndrome, coronary heart diseases, diabetes and neurodegenerative diseases (4).

University students are at risk in terms of unhealthy nutrition due to the dynamic environment they live in, being away from family life, circle of friends, an irregular life, poor quality sleep, and financial impossibilities. It is significant to identify the nutritional style of the students and to take precautions against nutritional errors to protect them from nutritional disorders and other problems that may arise in the future (5). The WHO defines a healthy diet as a diet that has a balanced calorie content, prioritizes healthy fats, is free from saturated and trans fats, and has limited industrial sugar and salt consumption (4).

A healthy diet should include a balanced and adequate amount of protein sources like fresh veggies, fruits, whole grains, pulses, nuts and seeds, low-fat milk and dairy products, eggs and lean meat (6-8). A diet suitable for the Mediterranean diet (MD), which contains all these nutrients in a sufficient and balanced manner, is connected with a healthier, higher quality and longer life. The MD is a healthy, sustainable dietary pattern that is high in unsaturated fatty acids, dietary fiber, and has potentially positive effects on diseases with low energy levels. In the study conducted by Davis et.al. show that adherence to the MD is effective in protecting against body weight gain and reducing the risk of metabolic syndrome, type 2 diabetes, cardiovascular diseases, neurodegenerative conditions and cancer (9). However, although the multiple advantages of the MD are known, in the study demonstrated that in recent years, even the individuals living in the Mediterranean region, especially young people, have gradually decreased their adherence to this diet pattern (10).

Although Nutrition and Dietetics students are a group with high nutritional awareness; it is thought that the adaptation of these students to the MD will be affected by factors such as age, class level, marital status, gender, place of residence, economic situation, exercise, smoking and alcohol use, sleep duration and sleep quality. In our country, there are studies that determine the adaptation of university students studying

Nutrition and Dietetics to the MD. In these studies, the relationship between the general information, food consumption, anthropometric measurements and physical activities of the participants and the adherence with the MD were examined (11,12). However, studies conducted to date have not investigated the relationship between the sleep quality and duration of Nutrition and Dietetics students and their adherence with the MD. In this study, in addition to other parameters, sleep duration and quality are emphasized. This study hypothesized that the age, gender, marital status, body mass index, grade level, exercise, smoking and alcohol use, place of residence, economic status, sleep duration and sleep quality of Nutrition and Dietetics students are effective in their adherence with the MD.



2. GENERAL INFORMATION

2.1. Definition and General Characteristics of The Mediterranean Diet

The MD is the predominant dietary pattern among people from the 1960s Mediterranean basin where olive oils were grown. MD; emphasis on keywords and the positive effect of general nutrition of a single diet and its antagonistic effects are positive effects on health. It is among the healthiest nutrition systems (13). High amounts of olive oil, olives, fruits and vegetables, whole grains, legumes and nuts and seeds; with moderate levels of eggs, fish, poultry and dairy products; low intake of red meat and meat products is the main feature of this diet. It also includes moderate consumption of wine. The foods recommended to be consumed in the MD are rich in various vitamins and minerals, dietary fiber and bioactive components. In the Mediterranean style diet, olive oil is used in the preparation of the meal, and the intake of saturated and trans fats is limited. Like fish and seafood, it has rich content of omega 3 fatty acids. The MD consists of a vegetable-based cuisine (9). The MD entered the medical literature following the publication of the results of the 'Seven Country Study' initiated by Ancel Keys and colleagues in the late 1950s. (14).

When the MD is examined, it is observed that there is no single type of diet. It is emphasized that various dietary habits related to the MD may vary between countries and within the same country (15). For example, the total amount of fat from the diet is 40% of the total energy in Greece, while it is 30% in Italy. In any case, however, used olive oil is high in beneficial monounsaturated fat as opposed to non-beneficial saturated lipids, due to its high monounsaturated content (16,17). The two main differences of the MD from other healthy diets are that it recommends abundant consumption of healthy fats from extra virgin olive oil, nuts and oily fish, and allows moderate wine consumption (18).

Urban and technological advances, globalization in food production and consumption, and changes in dietary habits have led to changes in the MD. The MD has been updated due to emerging new lifestyles, nutritional, sociocultural, environmental and health problems, and the increase in low-income societies, especially in cardiovascular diseases (19).

The Revised MD guideline, developed in 2010, has been updated based on the regional, socio-economic and cultural diversity of the Mediterranean region countries, based on both defining foods and specifying the amount and periodicity of food consumptions. As a result of the meeting with the Mediterranean Diet Foundation

Scientific Committee, an expert staff was formed, and preliminary preparations were started with a declaration at the 3rd International Inter-University Center for Mediterranean Food Culture Studies meeting held in Parma in 2009. Under the auspices of the Mediterranean Diet Foundation, Mediterranean food culture was discussed at length with different scientific committees, and the revised MD draft was announced in a closed meeting at the 8th International Mediterranean Diet Congress in Barcelona. Later, the MD pyramid was adapted both to the community and from Spain to Morocco, from France to Italy, by offering portion amounts and local food diversity with the 2010 edition. The purpose of the pyramid is designed to stay healthy and maintain sustainable health in adults aged 18-65. It has also been stated that it is necessary to make adjustments in specific risk groups by taking these basic principles into account (20).

At the international conference in Italy in 2009 MD has been defined as a sustainable diet model due to its nutritional, environmental, economic and sociocultural dimensions (21). In the "Biodiversity and Sustainable Diets" international scientific symposium in 2010, sustainable diet criteria were determined as: nutrition, health and lifestyle, biodiversity and environment, economy, society and culture (10). Current Mediterranean Diet United Nations Education, Science and Culture It was recognized as the "Intangible Cultural Heritage of Humanity" by the Organization (UNESCO) in 2010. In US News & World Report 2022, the MD was ranked 1st among the world's top 40 diet models (22).

2.1.1.Mediterranean Diet Score

The MD score was developed to understand the role of the MD in epidemiological studies. The first scoring systems were the Mediterranean Diet Scale (T-MDS) and the Alternative Mediterranean Diet Scale (aMed), created in 1995 by Trichopoulou et al. T-MDS and the Alternative aMed don't calculate non-traditional MD foods (23).

Scoring systems created after the current MD pyramid was published in 2010 usually applied these recommendations as a base for food group consumption cuts, including more food/food groups as negative components, and some included diet and lifestyle behaviors (24).

Later, in the study directed by Martínez-González et al., in the PREDIMED study in which Mediterranean-style eating habits were investigated, the Mediterranean Diet Adherence Scale consisting of 14 questions was used, and then the questionnaire form created by Schröder H et al. was validated (25, 26).

2.1.2.Mediterranean Diet Pyramid

First, the MD pyramid was formulated in the early 1960s based on the typical Cretan diet. In 1993, the MD pyramid was published in cooperation with the Harvard Public Health Oldways Preservation and Exchange Trust and the WHO. Commonly, the number of servings is planned so that the largest portions of the pyramid are the largest. However, the traditional MD pyramid lacks portion size, the average value of portion size, and specific recommendations (tea, coffee, salt, sugar, honey, sauces, spices). In 1999, the Greek Dietary Guidelines presented nutritional recommendations for the traditional MD. In 2009, the pyramid from 1993 was revised (27).

In 2010, the new, renovated MD pyramid was published (9). This pyramid shows the quantitative and qualitative selection of foods, the adjustment of the amounts and the frequency of portion consumption of the main food groups. And food selection, cooking, how it should be consumed, the amount of portion in each meal and the composition of the food group that should be present in the meal, the importance of the meals, the correct planning of the daily energy intake, and the definition of the foods that should be consumed daily, weekly and rarely. Unlike previous years; It was also emphasized that the food should be consumed in a social environment such as the family environment, the use of healthy cooking methods and adequate rest (28).

2.2.The Mediterranean Diet and Health

The MD, with its high unsaturated fat content and low saturated fat content. And so, it is important result of the Seven Country Study based on ecological evidence that Mediterranean countries, MD has been related with a lower blood cholesterol and coronary heart disease incidence (29). However, subsequent studies have shown that the Traditional MD is not only a cholesterol-lowering diet but also has many other beneficial effects on health (30). Consistent with the findings of the landmark Lyon Dietary Heart Study and the five-year Prevención con Dieta Mediterránea study, several long-term observational studies have also approved the protective role of the MD against noncommunicable diseases (31, 32). Collectively, these studies showed inverse associations of the MD with coronary heart disease, frequency of thrombotic stroke, and total mortality (33). In addition, it has been reported that the MD is inversely associated with diabetes, breast and colorectal cancer. Alpha-linolenic acid is thought to be a key factor in demonstrating health benefits in randomized trials of the MD. But PREDIMED research emphasizes extra virgin olive oil and nuts for their health benefits (31).

2.2.1.Mediterranean Diet and Obesity

Obesity is a chronic disease that can occur due to genetic disorders, excessive or unbalanced diet, sedentary lifestyle, psychological problems and many other factors. Its incidence is increasing day by day in many countries, regardless of whether it is developed or underdeveloped. At this point, it is of great importance in preventive health that positive changes in the diet will be effective in preventing the formation of obesity. In addition, if obesity has occurred, important steps can be taken in the management of obesity with adherence with the appropriate nutrition model (34).

Among the nutritional models, one of the models with the highest potential for the prevention or management of obesity is the MD. At this point, researchers have conducted many studies on how obesity will affect the outcome of adherence to the MD (35).

In Spain, several sub-studies within the PREDIMED clinical trial found that adherence to a MD was related with a lower level of inflammation (36) and total body weight, waist circumference, body mass. index and blood pressure were found to decrease more (37,38). In addition, increased levels of high-density lipoprotein (HDL cholesterol) have been observed (35).

On the contrary, it is seen that insufficient adherence to the MD, the increase in the proportion of the obese population, and increased medical expenditures are associated with each other (39). The result of low adherence to the MD is considered to be a major factor in the spread of the obesity epidemic, particularly in Southern Europe, where a Western diet with high caloric content, rich in saturated fats and simple carbohydrates, is followed (40).

Moving away from the MD and returning to Western culture in terms of nutrition is quite evident today, especially among the younger generations (41). According to the WHO, children with low adherence to the MD are more obese compared to those who follow the MD, which includes more fish and vegetables from a young age and they say that they generally make them less healthy. This situation may increase the risk of chronic diseases by inviting an unhealthy life for their future lives for young people who adopt an unhealthy diet from an early age (42).

It has been a matter of curiosity whether the positive effects of adherence to the MD in the prevention or management of obesity can also be achieved by adherence to other dietary models. For this, some studies have investigated whether the MD is superior to other nutrition models in obesity by comparing different nutrition models with the MD.

An intervention study published in 2015 showed that increased adherence to the MD promoted greater weight loss in obese individuals compared to a low-fat diet model (43).

A recent meta-analysis of 18 randomized controlled trials comparing control diets with the MD to examine outcomes in abdominal obesity reported that adherence to the MD resulted in higher decrease in waist circumference and visceral fat in comparison with control diets (44).

One study has also proven that the MD is one of the most effective dietary patterns among other dietary patterns in preventing obesity-related diseases (45).

2.2.2.Mediterranean Diet and Metabolic Syndrome

Metabolic syndrome is a serious condition that occurs as a combination of some health problems such as waist circumference wider than the ideal range, low high density lipoprotein cholesterol, hypertension, and impaired fasting blood sugar. A healthy diet plays a significant role in the basis of the components that cause metabolic syndrome (46).

Many observational studies be considered the links between the MetS and the MD. In a meta-analysis of observational studies, including 4 prospective and 8 cross-sectional studies with 33,847 individuals and 6,342 cases of MetS, greater adherence to the MD was observed at a 19% lower risk for MetS. There were inverse associations with blood pressure, waist circumference, and lower HDL-C levels in relation to the individual components of MetS. (47).

A meta-analysis of two RCTs found that among participants with MetS, those who followed the MD had a 49% higher possibility of remission from the MetS during a follow-up of 2-5 years, compared with those on the control diet (48).

2.2.3.Mediterranean Diet and Diabetes

The number of people with diabetes in the world is increasing day by day. It is estimated by the International Diabetes Federation (IDF) that diabetes will affect 700 million people by 2045 (49). There are a significant number of publications on specific components of the MD that have been informed to reduce the rate of diabetes in the community.

In the PREDIMED study, high consumption of total polyphenols was related with a reduced risk of diabetes in elderly individuals at high CVD risk (50).

Higher olive oil consumption was associated with a less risk of diabetes in a cohort of women with 22 years of follow-up. The authors explained that the use of

different types of fat (for example, margarine, butter, and mayonnaise) instead of olive oil was inversely correlated with disease onset (51).

Some evidence from prospective studies has come to the conclusion that adherence to the MD is inversely related to diabetes risk (52). Bonaccio et al. showed that high adherence to the MD was associated with a 34% risk reduction for CVD mortality in patients with T2DM (53)

In a meta-analysis that included 8 cohort studies with a total of 122,810 individuals, it was found that the risk of developing type 2 diabetes may be 19% lower due to higher adherence to the Mediterranean diet, emphasizing the long-term protective effects of the Mediterranean diet (54). In addition, the Mediterranean diet reduced visceral obesity. It can reduce the risk of obesity-related chronic diseases such as T2DM (44).

5 randomized controlled trials and 8 meta-analysis reviews investigated the efficacy of the Mediterranean diet in the treatment of prediabetic and diabetic conditions. It determined that adherence to the Mediterranean diet in diabetic individuals was connected to lower glycated hemoglobin levels and a better cardiovascular risk factor profile compared with control diets with a low-fat diet composition (48).

Various studies have investigated the effect of certain components such as olive oil, as well as the general Mediterranean diet style. In a randomized, crossover study, it was observed that regular moderate daily intake of extra virgin olive oil for 8 weeks reduced fasting plasma glucose and HbA1c in overweight and T2DM patients (55).

In addition to studies examining the effect of the MD alone on diabetes, there are many studies on how it can affect their rates compared to other dietary interventions. In a meta-analysis of 5 Randomized Controlled Trials, the MD provided better glycemic control in patients with type 2 diabetes and prediabetes compared to control diets, including low-fat diets (56). In other studies, it has been reported that adherence to the MD reduces the levels of HbA1c, C-reactive protein, and adiponectin in diabetic patients (57). A systematic review and meta-analysis comparing different diets in a population of approximately 1.5 million people found that the Mediterranean diet was effective in reduction of risk of diabetes (52).

2.2.4.Mediterranean Diet and Cardiovascular Diseases

Cardiovascular diseases are one of the most frequent causes of morbidity and mortality in societies, regardless of ethnicity, race or sex. Coronary heart disease, coronary artery disease, hypertension, ischemic heart, stroke and rheumatic heart disease are common cardiovascular diseases. The diet style of individuals is one of the main

factors determining cardiovascular health. At this point, there are studies on the effect of MD on CVD.

One of the largest studies on the MD was a prospective cohort study of 74,886 women from the Nurses' Health Study (NHS) followed for up to 20 years. This study found that a higher level of adherence to the MD was related with a 29% lower risk of CHD incidence and a 13% lower risk of stroke in women, as given by a better aMED score (58).

A recent systematic review and meta-analysis of 38 cohorts compared the highest and lowest categories of MD adherence; MD was shown to be inversely correlated with CVD mortality, stroke incidence, stroke mortality, CHD incidence, CHD mortality, and myocard infarctus (MI) rate (59).

Thanks to the nutrients and bioactive components in the MD model, it is thought to support cardiovascular health and, as a result, have a protective effect in terms of CVD risk. A RCT compared the effects on microvascular function status of a high-polyphenol diet containing 6 servings of fruit and vegetables per day and less than 2 servings per day in hypertensive participants. After eight weeks, participants who consumed the diet with a high polyphenol content, which was associated with higher serum polyphenol levels, had a better endothelial function (60).

Estruch et al. reported that the MD accompanied with extra virgin olive oil or hazelnuts, instead of the low-fat diet suggested by the American Heart Association (AHA), was effective in protecting individuals with a high risk of CVD from CVD (61).

One study of CVD has demonstrated improved endothelial function in various vascular beds as well as impacts on lipid metabolism and platelet aggregation towards cardioprotective profiles related to the MD (62).

Whether the MD is more effective in those with a high or low risk of CVD is a controversial issue. Some studies have been carried out to clarify this situation. One study concluded that adopting a healthy diet as similar as possible to the Mediterranean diet is beneficial for people at low CVD risk (63).

A meta-analysis of 20 studies by Grosso et al with data from 888,257 individuals found that increased adherence to the MD was connected with a 40% reduced risk for CVD incidence (64).

2.2.5.Mediterranean Diet and Cancer

Cancer is one of the main causes of death worldwide. It was recorded that almost 9.6 million people died due to cancer in 2018 alone. This shows that cancer has a large

share in total mortality. Risk factors for cancer incidence in the population are mainly related to environmental and individual characteristics (hereditary characteristics, clinical conditions such as exposure to harmful substances at certain levels or hormonal imbalances) or people's lifestyles. Physical activity, diet and psychological factors play a very important role at this point. If the dietary factor, which plays an essential role in the formation of cancer, is not managed correctly, the increase in cancer incidence may be inevitable. At this point, there are many studies on the effect of MD on cancer types (65).

Numerous scientific studies have shown a higher level of adherence to the MD; It has been reported to be inversely associated with overall cancer mortality and risk of breast, stomach, head and neck, liver, colorectal, gallbladder, and bile duct cancers (66). Another review focused on the link between the MD and cancer of the entire digestive tract except for pancreatic cancer. He speaks of a reduced risk of cancers with adherence to the Mediterranean diet (67).

A comprehensive meta-analysis of 117 studies with a total of 3,202,496 participants was published recently. In the observational studies in this meta-analysis, greater adherence to the MD was reported to be inversely associated with cancers of the breast, colorectal, head and neck, respiratory tract, gastric, bladder, and liver. In addition, the highest adherence to the MD was inversely related to overall cancer mortality and all-cause mortality among cancer survivors (68).

The various ingredients in the MD contain bioactive elements that have been recently researched specifically for antitumor effects (69). For example, in peanuts, grapes, strawberries, extra virgin olive oil (EVOO), etc. polyphenolic compounds such as those found have been associated with DNA methylation of several cancer-associated genes and are important tumor suppressors and promoters (70).

The positive association between the MD and cancer is due to the MD's high content of antioxidants and anti-inflammatory nutrients found in many foods (beans, fresh fruit or nuts, vegetables, fish, and olive oil). These conditions have a protective effect in the fight against the degeneration and proliferation of cancer cells (71).

2.2.6.Mediterranean Diet and Microbiota

Diet is one of the main regulators of metabolite production and shaping the profile of the gut microbiota, which is associated with the incidence and progression of different types of intestinal and extraintestinal diseases (72-74). Some studies evaluating the effects of the MD on the microbiota content and structure show that a diet suitable for

the MD reveals the microbiota composition and microbial diversity as well as the production of SCFAs (75-77).

A high level of adherence to the MD was associated with an increase in Firmicutes and Bacteroidetes bacteria and fecal short chain fatty acid. In contrast, low adherence to the MD was associated with increased *L-Ruminococcus* and *Streptococcus* bacteria and higher urinary trimethylamine N-oxide concentrations. This situation can be accepted as an indicator of increased CVD risk (75).

Another important distinguishing feature of the MD is its high fiber content (78). High dietary fiber intake has been shown to promote modifications of the gut microbiota in both humans and rodents, with decreased Firmicutes, increased Bacteroidetes, and SCFA production associated with different types of autoimmune, inflammatory and allergic diseases (79).

2.2.7.Mediterranean Diet and Depression

A systematic review of experimental and observational studies in the MD examining the effects of existing polyphenols on symptoms of depression found evidence suggesting that there may be a link between polyphenol consumption and the risk of depression, as well as those polyphenols may be effective in significantly reducing depressive symptoms (66).

2.2.8.Mediterranean Diet and Liver Health

Some data from short-term prospective studies have linked high adherence to the Mediterranean diet with a protective effect against non-alcoholic liver disease, lower hepatic steatosis severity, and reduced alanine-aminotransferase levels (80).

2.2.9.Mediterranean Diet and Mortality

In parallel with the increase in chronic diseases, there is an increase in the incidence of mortality. At this point, we can reduce the risk of mortality by getting to the root of the problem, that is, by preventing the formation of chronic diseases or by adopting appropriate treatment if they occur. Many factors that should be considered in the formation and treatment of chronic diseases. One of these factors is the nutrition model applied. With the right nutrition model, we can prevent chronic diseases and subsequently reduce the risk of mortality. When we look at the studies, we come across the MD, which is one of the right nutrition models to be chosen in reducing the risk of mortality.

In some of the studies, it is seen that the MD is associated with the intake of certain nutrients, such as polyphenols, which have a positive effect on mortality. Analyzes

from 21,302 participants of the Mediterranean Moli-sani cohort, followed for an average of 8 years, found that those in the highest quintile of various polyphenol intakes had a significantly lower risk of all-cause death compared to these at lowest consumption group (81).

In the PREDIMED study, those who received high polyphenols, particularly from stilbenes and lignans, showed a greater reduction in overall risk of death compared to those who received lower levels. The main source of polyphenols in PREDIMED participants is coffee and fruit. Also, the most prominent distinguishing factor relative to other populations is the intake of olive oil polyphenols (82-84).

There are one study showing that the MD not only has a polyphenol-based benefit, but also slows down the aging process and reduces the risk of mortality with its effects on DNA. At this point, a meta-analysis of 8 original cross-sectional studies and 13,733 participants from 5 countries showed a positive correlation among adherence to the MD and telomere length (61).

As seen in these studies, higher adherence to the MD is linked to longer life expectancy or lesser risk of all-cause mortality, due to some of the nutrients in the MD. However, some studies did not find a clear effect of the MD on mortality.

Data from intervention studies have been inconsistent, although some observational studies have shown an inverse relationship between adherence to the MD and a low risk of death from all causes. In the PREDIMED study, in which total mortality was reasoned a secondary outcome, the MD interventions were found to have an effect on all-cause mortality and the trial was stopped for ethical reasons (85).

A published meta-analysis that included 5 RCTs also found no evidence of the benefits of the MD on overall mortality (86).

2.3.Factors Affecting Adherence to The Mediterranean Diet

2.3.1.Relationship Between Social, Environmental, Demographic and Lifestyle Related Factors and Adherence to The Mediterranean Diet

Studies demonstrated that many factors can take an active part in ensuring adherence to the MD. These factors include age, gender, education level, socioeconomic status, physical activity, and geographic location. Because these situations differ between individuals, some people have a higher level of commitment to MD, while others have a lower level of commitment to MD (87,88).

In the study published in the journal *Nutrition and Metabolism* in 2020, high adherence to the MD was high in vegetables, fruits, fish, cereals, olive oil; It has been revealed that it is characterized by low meat and milk consumption. This high adherence to the MD in the adult population of Casablanca City has been associated with various factors such as gender, marital status, higher education level, luxury housing, alcohol consumption and overweight. As a consequence of the study, it was found that more research is needed to fully measure the link between maintaining the MD model, which is important for public health, and these relationships. In the study, adherence to the MD was found to be higher in men, married people, living in more luxurious houses, those with higher education levels and those who consumed wine. In overweight participants, adherence to the Mediterranean diet was reported to be lower. In addition, no meaningful relationship was found between age, smoking, occupation and adherence to the MD (89).

The study, published in the journal *Nutrients* in 2021, investigated the relationship between socioeconomic status and MD commitment in 4671 adult people from Dalmatia, Croatia. In addition, the connection between adherence to the Mediterranean diet and body mass index was examined. Higher rates of commitment to MD were noted among women, older individuals, those with higher education levels, physically active individuals, and those with better financial status (90).

In a study conducted with 761 university students in Spain, published in the *British Journal of Nutrition*, the relationship between MD adherence and BMI, physical activity, sleep hours, sociodemographic factors, self-esteem and academic performance was evaluated. It was concluded that 49% of the students had high MD adherence. In addition, a direct relationship was found between students' health-related quality of life, self-esteem, physical activity, aerobic capacity, night sleep hours, academic performance, high socioeconomic status and MD adherence. An inverse relationship was reported between age and adherence to the Mediterranean diet, but no significant relationship was found with body mass index (91).

In the study, which included 42,000 Italian adults, investigating the relationship of individual lifestyles and habits with high/low adherence to the MD model, it was examined whether there was a relationship between the healthy and environmental behaviors of individuals and their level of adherence with MD. The results summarize that MD is part of a sustainability-oriented lifestyle and show that both income and education have a positive impact on MD commitment. Future policy aimed at countering the gradual disappearance of MD emphasized the sustainable dimension of MD, while

emphasizing the need to reduce socio-economic inequalities between different population segments (92).

2.3.2.Relationship Between Sleep Duration and Quality and Adherence to a Mediterranean Diet

Nutrition style is main factor affecting sleep quality and duration. A correct nutrition plan to be adopted naturally forms the basis of a healthy sleep pattern. A review of 29 studies found that those who consumed healthy foods had better sleep quality; It has been concluded that those who consume more processed foods and foods rich in sugar have worse sleep quality (93). A study published in 2016 reported that a high-quality diet improves sleep duration, while sleep deprivation was shown to rise appetite for high-calorie foods (94).

In another study conducted in that context, higher adherence to the MD model was related with better sleep quality, either for a direct impact on health or for indirect effects through improved weight status (95). The relationship between adherence to MD and certain aspects of sleep, such as insomnia symptoms, was investigated and found a positive effect with adherence to the MD model (96).

In parallel with these results, in a cross-sectional study directed with 503 university students with an average age of 22, it was revealed that students with a high adherence to the MD were more probably to have a good sleep quality. In addition, according to the regression analysis, a significant correlation was found with better subjective sleep quality, less sleep delay, less sleep disturbance and less daytime dysfunction in students with high adherence to the Mediterranean diet (97).

In another study, insufficient and excessive sleep duration was associated with lower quality diets in adult populations. A study involving 2169 people examined the relationship between weekday sleep duration and discrepancies between weekday and weekend sleep duration and adherence to the MD in Costa Rica adults. Short, usual, and long sleep duration were defined as <7 hours, 7–9 hours, and >9 hours, respectively, and inconsistent weekday-weekend sleep duration was defined as a difference of more than 1 hour. Among women, less than 7 hours of sleep per night was associated with a lower aMED score compared to those with the suggested sleep time. A significant association was found between unclassified models, inconsistent weekday-weekend sleep and lower aMED scores that did not change by gender. As a result, it has been reported that short and inconsistent sleep duration has an effect on the eating pattern (98).

A study examining indicators of sleep duration and quality in adults reported that increased adherence to the MD was associated with improved sleep quality and a lower risk of a change in sleep duration over 2 hours (99).

In another study of 432 women, higher baseline MD adherence scores were associated with better sleep quality, higher sleep efficiency, and fewer sleep disturbances (100).

A study published in 2020 showed that adequate sleep duration and quality were positively associated with lower BMI and waist circumference and MD commitment. As a result, it was thought that poor sleep was more common in obese people. In addition, it has been reported that providing the MD diet regimen instead of consuming a single food will have a beneficial effect on sleep quality (101).

In a cross-sectional study on Italian students, the association between body mass index and behavioral factors was examined. As a result of the study, no difference was found between lifestyle variables and BMI groups. However, adherence to the MD and sleep habits were associated. It has been reported that the sleep duration is sufficient in the MD groups in moderate and high adherence. However, it was concluded that there were important contradictions between adherence to MD categories and daytime sleepiness, and students with lower adherence to MD had higher drowsiness (102).

2.4.Nutritional Habits of University Students

College years represent the transition to adulthood, but there are concerns about health and behavior. A significant feature is associated with healthy eating. There is evidence that university students may consume low-quality diets with potential long-term effects on healthy body weight, academic achievement, and health (5).

Young adulthood is an essential period for food choices and weight gain. With the transition from adolescence to young adulthood and increased independence, young adults may have difficulty making healthy food choices. Along with unhealthy eating behaviors, behaviors related to weight gain such as excessive alcohol consumption and lack of physical activity may also develop during this period (103).

According to the results of the research conducted on students studying at Cornell University, time constraints, stress, high prices of healthy foods and easy access to junk food were reported as the main barriers to healthy eating among university students. In contrast, advanced food knowledge and education, meal planning, participation in meal preparation, and being physically active were explained as enabling factors for healthy behavior (104).

The study, which was conducted with 1448 students studying at King's College London, investigating their dietary habits and sociodemographic and lifestyle antecedents, revealed the diet analyzes of the students and four main diet patterns. 'Vegetarian'; 'snack'; 'health conscious'; and "practice, red meat and alcohol". The "health conscious" model was considered as the model with the most appropriate nutrient profile. While female students chosen the "vegetarian" model, male students chosen the "convenience, red meat and alcohol" model. More culinary students tended towards "vegetarian" and "health-conscious" stereotypes. The 'convenience, red meat and alcohol' model was associated with higher weekly food expenditure; this pattern was also identified most consistently among universities. Smoking, low physical activity, and consumption of ready-to-eat foods were found to be positively associated with less healthy eating patterns. Food intake differed among university students. A significant proportion of students followed health-promoting diets with good nutrient profiles that eliminated the need for dietary intervention. But some students consumed poor diets and practiced negative lifestyle behaviors that could develop long-term health effects. The authors suggested that target policy should include improving the nutrition of university students, encouraging student participation in cooking and meal preparation, and increasing the availability of lower-cost healthier foods to university students (105).

In a quantitative, cross-sectional study with a descriptive design on the nutritional habits and needs of university students, it was stated that the students had sufficient knowledge about fast food, soda and processed foods, additives, and nutritional needs. However, it has been reported that the food choices are not generally healthy, the meals are easily accessible in terms of cost and the taste comes to the fore (106).

3.MATERIAL AND METHODS

3.1.Participants and Data Collection

This research was carried out with 272 students between September 2021 and December 2021 to determine the factors affecting the adherence of Yeditepe and Istanbul Bilgi University Nutrition and Dietetics Department students to the Mediterranean diet and develop recommendations for university students in line with age, sex, marital status, BMI, grade levels, regular physical activity status, alcohol consumption, smoking, place of residence and economic status, sleep duration and sleep quality.

Participants were selected from Yeditepe and Bilgi University Nutrition and Dietetics students between the ages of 18 and 65. There are a total of 675 students enrolled in the relevant departments of both universities. The sample size was calculated as 246 with 95% confidence level and 5% acceptable error. It is planned to reach at least 260 participants by considering the 10% waste. The data collection period did not coincide with the exam period.

An online questionnaire including sociodemographic information, Mediterranean Dietary Adherence Scale (MEDAS), Pittsburg Sleep Scale (PSQI) was applied to the students. Inclusion criteria were being between the ages of 18 – 65, being a student of the Department of Nutrition and Dietetics, being a volunteer, not having a disease that requires a special dietary restriction, no perception and communication problems while exclusion criteria were not to be between the ages of 18 – 65, not being a student of the Department of Nutrition and Dietetics, not being a volunteer, having a disease that requires a special dietary restriction, having a perception and communication problems.

A total of 346 participants took the questionnaire. 3 participants with diabetes and 1 participant with ulcerative colitis were not included in the study because they had a disease requiring dietary restriction. A participant with diabetes and hypertension was not included in the study because he did not agree to approve the consent form at the same time. However, 15 people were excluded from the study because they did not agree to approve the consent form. A total of 20 people were not included in the study. 54 people were not included in the study because they did not complete the form. As a result, the study was completed with 272 participants.

The dependent variable of this study was adherence to the Mediterranean diet. And independent variables are age, BMI, class level, marital status, sex, place of

residence, economic status, physical activity, smoking status, alcohol use, sleep duration, sleep quality.

For BMI classification was made according to the Centers for Disease Control and Prevention (107). And also based on the activity recommendations of the WHO according to the age group, physical activity was categorized as adequate and insufficient. Adults aged 18-65 years WHO recommends must do minimum 150-300 minutes of moderated intense aerobic activity; or minimum 75-150 minutes of strenuous activity; or an equivalent combining of moderate to vigorous-intensity activity over the week (108).

3.1.1.Mediterranean Diet Adherence Score

Mediterranean Diet Adherence Scale was created by Martínez-González et al. in 2012 (109). Turkish validity and authenticity Pehlivanoğlu et al. It was done in 2019 (110). Mediterranean Diet Adherence Scale is a questionnaire consisting of 14 questions, the type of basic oil used by the patients in meals, the amount of olive oil consumed daily, fruit and vegetable portions, margarine-butter and red meat consumption, weekly consumption of wine, pulses, fish-seafood, snacks, nuts, cake, olive oil tomato sauce consumption and whether white meat is preferred more than red meat. 1 or 0 points are taken for each question asked based on the amount of consumption, and the total score is estimated. A total score of 7 and above indicates that the individual has an acceptable adherence to the MD, and a score of 9 and above indicates that the individual has a high adherence to the MD (111).

3.1.2.Pittsburgh Sleep Quality Index

The Pittsburgh Sleep Quality Index was developed by Buysse in 1989 (112). Turkish validity and authenticity Agargun et al. It was made in 1996 (113).

PSQI consists of a total of 24 questions. The first 19 questions of the scale are answered by the individual. The last 5 questions of the scale are answered by the room or bed partner of the individual and applied only for clinical data and are not included in the score calculation. When calculating the PSQI score, it is grouped into 7 components. These components are; subjective sleep quality (component 1), sleep latency (component 2), sleep duration (component 3), sleep efficiency (component 4), sleep disturbance (component 5), drug use (component 6) and daytime functions (component 7) provides information. Each component gets a score between 0-3 according to the answers to the questions. The sum of the calculated scores of the seven components gives the PSQI score. The result obtained is between 0-21 with a PSQI score. If the score is 5 and less

than 5, the sleep quality is 'good', score of more than 5 is considered 'poor' sleep quality (114).

3.2.Statistics

Number Cruncher Statistical System 2007 (Kaysville, Utah, USA) program was used for statistical analysis. Detailed statistical methods (mean, standard deviation, median, frequency, percentage, minimum, maximum) were used to evaluate the study data. The conformity of the quantitative data to the normal distribution was tested with the Shapiro-Wilk test and graphical examinations. One-way analysis of variance and binary evaluations with Bonferroni correction were used for comparisons between groups of more than two normally distributed quantitative variables. Kruskal-Wallis test and Dunn-Bonferroni test were used for comparisons between groups of more than two quantitative variables that did not show normal distribution. Fisher-Freeman-Halton exact test was used to compare qualitative data. Spearman correlation analysis was used to assess the connections between quantitative variables. Statistical significance was accepted as $p < 0.05$.

3.3.Ethics

Before starting the study, the necessary permission for the execution of the thesis was obtained from the Yeditepe and Bilgi University. And also Yeditepe University Non-interventional Clinical Researches Ethics Committee dated 15.10.21 and the application number of 202108086 (Appendix).

4.RESULTS

A total of 272 cases, 96% (n=261) female and 4% (n=11) male. The ages of the cases were between 18 and 35, with a mean age of 20.99 ± 2.19 years. General characteristics of the participants is given in Table 4.1.

Table 4.1: Distribution of Descriptive Features

		n (%)
Sex	Women	261 (96.0)
	Men	11 (4.0)
Age	<i>Meant±Ss</i>	20.99±2.19
	<i>Median (Min-Max)</i>	21 (18-35)
Marital Status	Single	269 (98.9)
	Married	3 (1,1)
Weight(kg)	<i>Mean±Ss</i>	58.38±9.59
	<i>Median (Min-Max)</i>	57 (41-102)
Height	<i>Mean±Ss</i>	166.68±6.88
	<i>Median (Min-Max)</i>	165 (146-188)
BMI	<i>Mean±Ss</i>	20.97±2.81
	<i>Median (Min-Max)</i>	20,4 (15-32.8)
	Underweight	45 (16.5) (<18.5)
	Normal weight	201 (73.9) (18.5-24.9)
	Overweight	23 (8.5) (25-29.9)
	Obese	3 (1.1) (>30)

1.1% (n=3) of the participants in the study were married. The BMI measurements of the cases ranged between 15 and 32.8 kg/m², and the mean BMI measurement was determined as 20.97 ± 2.81 kg/m². 16.5% (n=45) of the cases were underweight, 73.9% (n=201) were normal weight, 8.5% (n=23) were overweight, 1.1% (n =3) 1st degree obese. Figure 4.1 shows BMI distribution of participants.

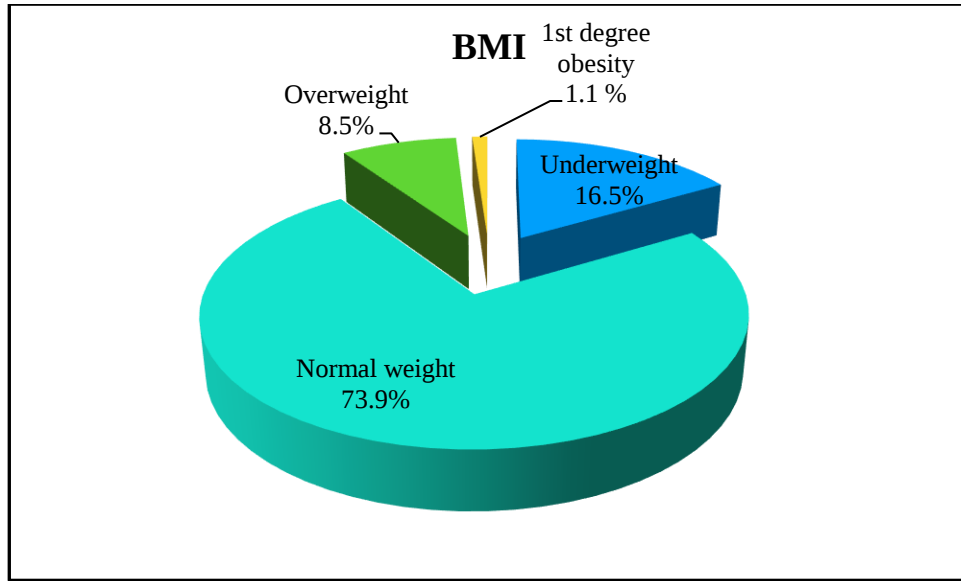


Figure 4. 1: BMI Distribution of Participants

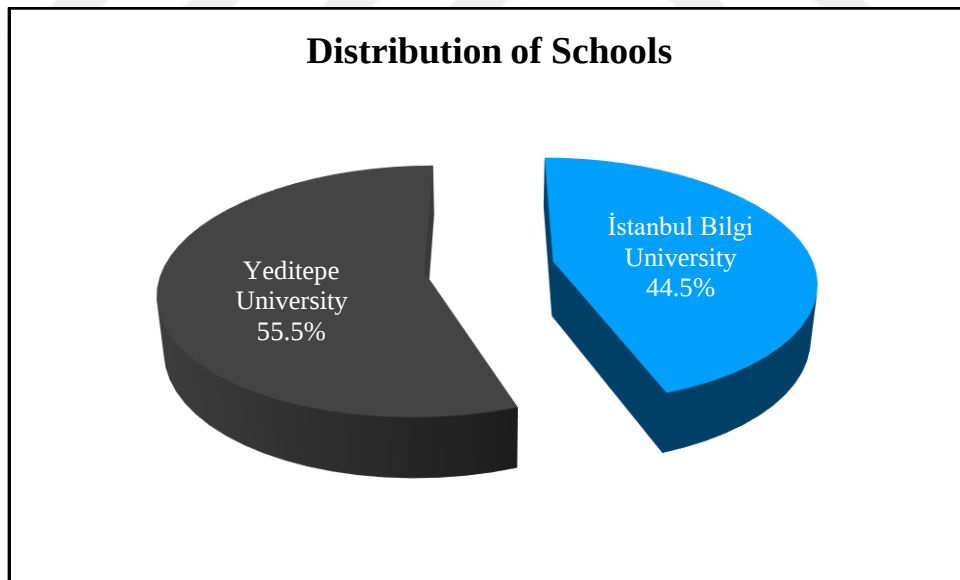
44.5% (n=121) of the participants studied at Istanbul Bilgi University, 55.5% (n=151) at Yeditepe University, 33.5% (n=91) were in their first year, 19.9% (n=54) were 2nd grade, 18% (n=49) were 3rd grade, 28.7% (n=78) were 4th grade students. 30.5% (n=83) of the participants in the study do regular physical activity. 90.4% (n=75) of those who do physical activity do adequate physical activity. 28.3% of the cases (n=77) were smokers. 39.3% (n=107) of the cases use alcohol. It is seen that 8.8% (n=24) of the cases have chronic disease. 50% (n=136) of the participants live at home with their families, 32% (n=87) live with friends/alone in a student house, and 18% (n=49) live in a dormitory.

When their economic status was examined, it was found that the income of 23.9% (n=65) of the cases was less than their expenses, the income of 51.1% (n=139) of them was equal to their expenses, and the income of 25% (n=68) of them was more than their expenses. Distribution of descriptive characteristics of the participants is given in Table 4.2.

Figure 4.2 shows distribution of students by schools, Figure 4.3 shows distribution of students by classes, Figure 4.4 shows distribution of students by economic status.

Table 4.2:Distribution of Descriptive Characteristics

		n (%)
Living Place	With my family	136 (50.0)
	With my friend/alone in house	87 (32.0)
	Dormitory	49 (18.0)
Regular Physical activity	No	189 (69.5)
	Yes	83 (30.5)
Physical activity adequacy	Not enough	8 (9.6)
	Enough	75 (90.4)
Smoking	No	195 (71.7)
	Yes	77 (28.3)
Alcohol	No	165 (60.7)
	Yes	107 (39.3)

**Figure 4.2:** Distribution of Students by Schools

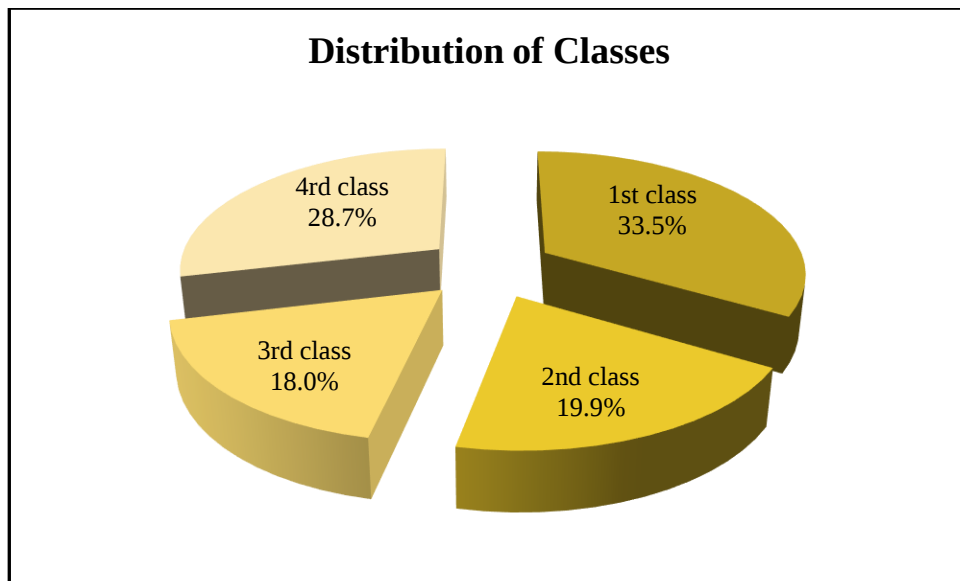


Figure 4.3: Distribution of Students by Classes

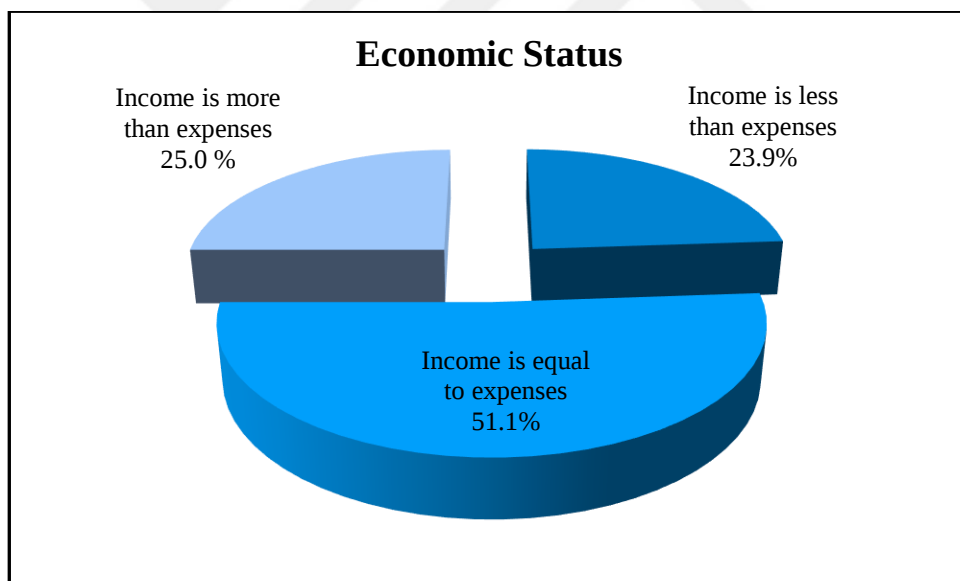


Figure 4.4: Distribution of Students by Economic Status

Participants distribution regarding their answers to the Mediterranean diet adherence scale questions are shown in Table 4.3. 80.1% of the cases (n=218) use olive oil at least 2 times a week in salads, vegetables, meat or fish dishes. 39.7% of the cases (n=108) consume more than 48 g (3.5 tablespoons) olive oil per day. 36.4% (n=99) of the participants in the study consume 2 servings or more of vegetables per day. 24.6% (n=67) of the participants consume 3 servings or more of fruit per day. 78.3% of the cases (n=213) consume less than 100 grams of red meat per day. It was observed that 75.7% (n=206) of the cases consumed less than 1 tablespoon of butter or margarine per day. 62.1% (n=169) of the cases consume less than 1 serving of sugary or sweetened beverage per day. 4.4 (n=12) of the participants in the study consume 7 glasses of wine or more per week. 46.3% (n=3) of the participants consume 3 servings or more of pulses per week. 12.9% of the cases (n=35) consume 3 servings or more of fish/seafood per week. 55.1% of the cases (n=150) consume processed sweets or pastries less than 3 times a week. 39.3% of the cases (n=107) consume 3 servings or more of nuts (including peanuts) per week. White meat consumption was higher than red meat consumption in 51.5% of the cases (n=140). 64.7% of the participants (n=176) add olive oil with tomato, garlic, onion or leek sauce to their boiled vegetables, pasta, rice or other meals 2 times a week or more.

Table 4.3: Distribution of Responses to the Mediterranean Diet Adherence Scale Questions

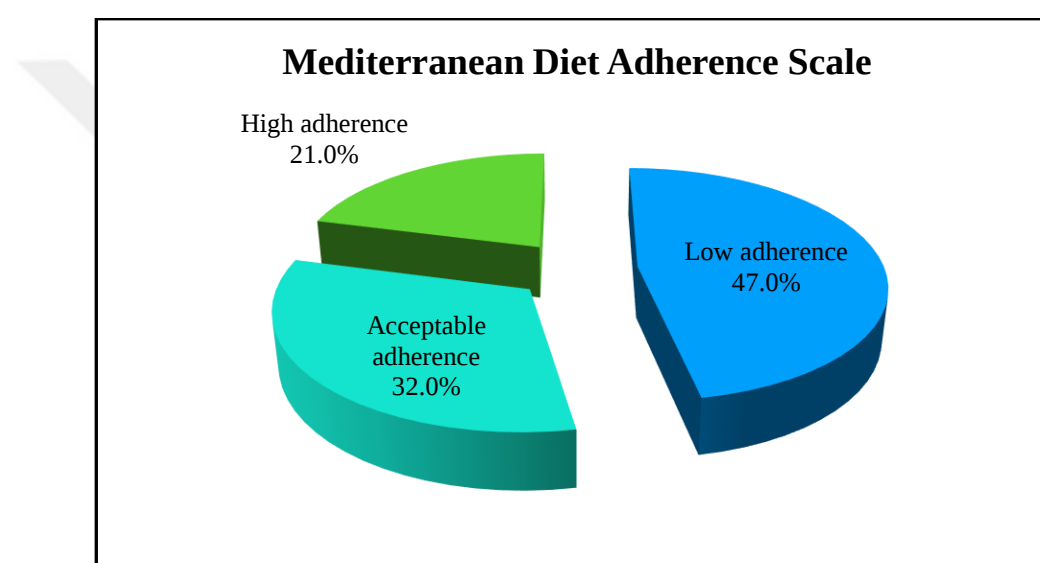
		n (%)
Question 1	Less than 2 times a week	54 (19.9)
	at least 2 times a week	218 (80.1)
Question 2	Less than 48 g(3.5 tbsp)	164 (60.3)
	More than 48 g(3.5 tbsp)	108 (39.7)
Question 3	Less than 2 servings per day	173 (63.6)
	2 servings or more per day	99 (36.4)
Question 4	Less than 3 serving per day	205 (75.4)
	3 servings or more per day	67 (24.6)
Question 5	100 grams or more per day	59 (21.7)
	Less than 100 grams per day	213 (78.3)
Question 6	1 tbsp or more per day	66 (24.3)
	Less than 1 tbsp per day	206 (75.7)
Question 7	1 serving or more per day	103 (37.9)
	Less than 1 serving per day	169 (62.1)
Question 8	Less than 7 glasses per week	260 (95.6)
	7 glasses or more per week	12 (4.4)
Question 9	Less than 3 servings per week	146 (53.7)
	3 servings or more per week	126 (46.3)
Question 10	Less than 3 servings per week	237 (87.1)
	3 servings or mor eper week	35 (12.9)
Question 11	3 or more per week	122 (44.9)
	Less than 3 times a week	150 (55.1)
Question 12	Less than 3 servings per week	165 (60.7)
	3 servings or more per week	107 (39.3)
Question 13	No	132 (48.5)
	Yes	140 (51.5)
Question 14	Less than 2 per week	96 (35.3)
	2 times a week or more	176 (64.7)

The total scores of the subjects from the Mediterranean Diet Adherence Scale ranged from 2 to 12, and the mean score was determined as 6.71 ± 2.12 points. (Table 4.4)

Table 4.4: Distribution of Mediterranean Diet Adherence Scale Scores

Mediterranean Diet	<i>Mean±Ss</i>	6.71±2.12
Adherence Scale	<i>Median (Min-Max)</i>	7 (2-12)
Low adherence		128 (47.0)
Acceptable adherence		87 (32.0)
High adherence		57 (21.0)

Figure 4.5 shows distribution by Mediterranean diet adherence scale.

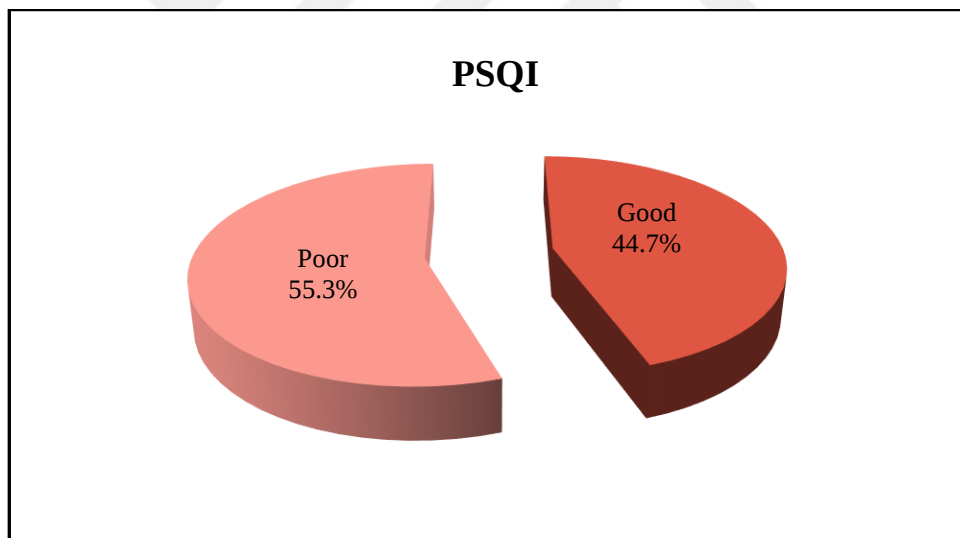
**Figure 4.5:** Distribution by Mediterranean Diet Adherence Scale

The scores of the subjects in the Subjective Sleep Quality sub-dimension of the PSQI Scale ranged from 0 to 3 points, with a mean of 1.30 ± 0.66 ; The scores they got from the Sleep Latency sub-dimension ranged from 0 to 3 points, with a mean of 1.32 ± 0.84 ; The scores they got from the Sleep Duration sub-dimension ranged from 0 to 3 points, with a mean of 0.57 ± 0.62 ; The scores they got from the Sleep Efficiency sub-dimension ranged from 0 to 2 points, with a mean of 0.09 ± 0.32 ; The scores they got from the Sleep Disorder sub-dimension ranged from 0 to 3 points, with a mean of 1.40 ± 0.61 ; The scores they got from the Drug Use sub-dimension ranged from 0 to 3 points, with a mean of 1.36 ± 0.96 ; The scores they received from the total of PSQI ranged from 1 to 15 points, with an average of 6.21 ± 2.59 . The PSQI Scale was determined as good in 44.7% (n=115) of the cases and as poor in 52.2% (n=142) of the cases. (Table 4.5)

Table 4.5: Distribution of PSQI Scale Scores

	<i>Mean±Ss</i>	<i>Median (Min-Max)</i>
Subjective Sleep Quality	1.30±0.66	1 (0-3)
Sleep Latency	1.32±0.84	1 (0-3)
Sleep Time	0.57±0.62	1 (0-3)
Sleep Activity	0.09±0.32	0 (0-2)
Sleep Disorder	1.40±0.61	1 (0-3)
Drug Use	0.17±0.61	0 (0-3)
Day Functions	1.36±0.96	0 (0-3)
PSQI Total	6.21±2.59	6 (1-15)
		n (%)
Good		115 (44.7)
Poor		142 (55.3)

Figure 4.6 shows distribution by PSQI sleep quality.

**Figure 4.6:**Distribution by PSQI Sleep Quality

The sex, age and BMI levels of the cases did not differ statistically according to the adherence levels of the Mediterranean Diet Adherence Scale ($p>0.05$). The number of married was very small, we could not evaluate. (Table 4.6)

Table 4.6: Evaluations by Mediterranean Diet Adherence Scale Score

		Mediterranean Diet Adherence Scale			<i>p</i>
		High adherence	Acceptable adherence	High adherence	
Sex	Woman	125 (97.7)	82 (94.3)	54 (94.7)	^a 0.366
	Man	3 (2.3)	5 (5.7)	3 (5.3)	
Age	<i>Mean±Ss</i>	20.82±2.04	20.93±2,12	21.47±2,56	^b 0.146
	<i>Medyan (Min-Max)</i>	20 (18-33)	21 (18-30)	21 (18-35)	
BMI	Underweight	25 (19.5)	13 (14.9)	7 (12.3)	^a 0.764
	Normal wieght	90 (70.3)	66 (75.9)	45 (78.9)	
	Overweight and obese	13 (10.2)	8 (9.2)	5 (8.8)	

^aFisher Freeman Halton Test^bKruskal Wallis Test^cOneway ANOVA Test

There was statistically significant difference between the classes of the cases according to the adherence levels of the Mediterranean Diet Adherence Scale ($p=0.006$; $p<0.01$). (Table 4.7)

Table 4.7:Evaluations by Mediterranean Diet Adherence Scale Score

		Mediterranean Diet Adherence Score			<i>p</i>
		Low adherence	Acceptable adherence	High adherence	
Grade	1st class	54 (42.2)	25 (28.7)	12 (21.1)	^a 0.006**
	2nd class	24 (18.8)	20 (23.0)	10 (17.5)	
	3rd class	16 (12.5)	23 (26.4)	10 (17.5)	
	4rd class	25 (43,9)	19 (21.8)	34 (26,6)	
Living place	With my family	53 (41.4)	51 (58.6)	32 (56.1)	^a 0.057
	With my friend/alone in house	45 (35.2)	23 (26.4)	19 (33.3)	
	Dormitory	30 (23.4)	13 (14.9)	6 (10.5)	
Economical Situation	Income is less than expenses	30 (23.4)	20 (23)	15 (26.3)	^a 0.986

	Income is equal to expenses	65 (50.8)	46 (52.9)	28 (49.1)	
	Income is more than expenses	33 (25.8)	21 (24.1)	14 (24.6)	
Regular physical activity	No	97 (75.8)	60 (69.0)	32 (56.1)	^a 0.030*
	Yes	31 (24.2)	27 (31.0)	25 (43.9)	
Physical activity adequacy	Not enough	4 (12.5)	2 (7.7)	2 (8.0)	^a 0.811
	Enough	28 (87.5)	24 (92.3)	23 (92.0)	
Smoking	No	88 (68.8)	62 (71.3)	45 (78.9)	^a 0.377
	Yes	40 (31.3)	25 (28.7)	12 (21.1)	
Alcohol	No	88 (68.8)	49 (56.3)	28 (49.1)	^a 0.022*
	Yes	40 (31.3)	38 (43.7)	29 (50.9)	

^aFisher Freeman Halton Test

* $p < 0.05$

** $p < 0.01$

While the rate of low adherence was higher than the rate of acceptable and high adherence in 1st graders, the rate of acceptable adherence in 3rd graders was higher than the rate of low adherence, and the rate of high adherence in 4th graders was higher than the rate of acceptable adherence and low adherence. (Figure 4.7)

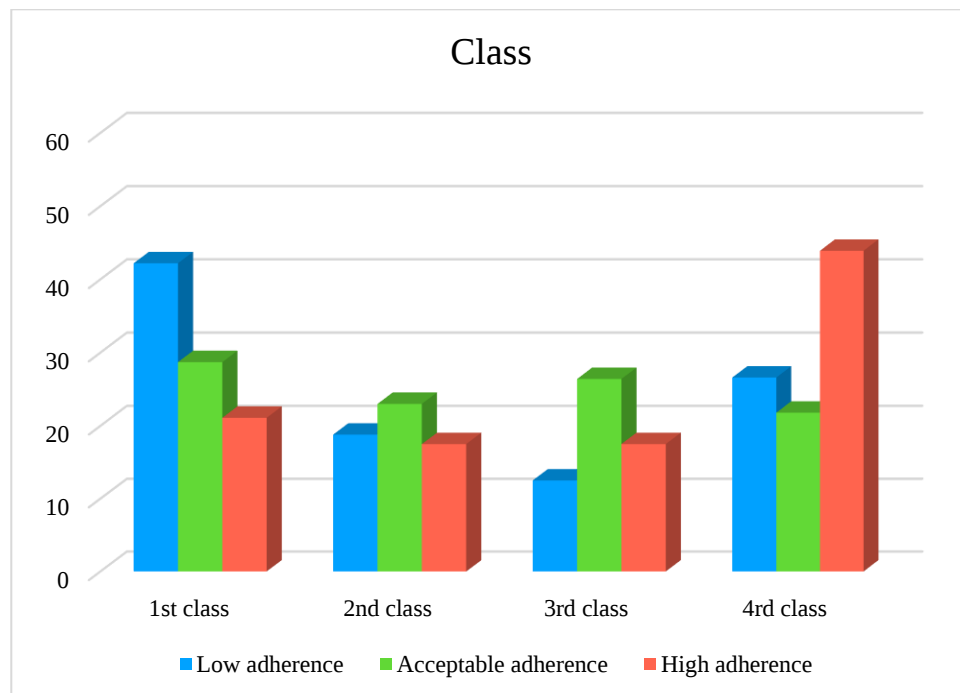


Figure 4.7: Distribution of Classes According to Mediterranean Diet Adherence Scale Adherence Levels

There was statistically significant difference between the regular physical activity status of the cases according to the adherence levels of the Mediterranean Diet Adherence Scale ($p=0.030$; $p<0.05$). The rate of doing regular physical activity in those with high adherence was found to be higher than in those with low adherence. (Figure 4.8)

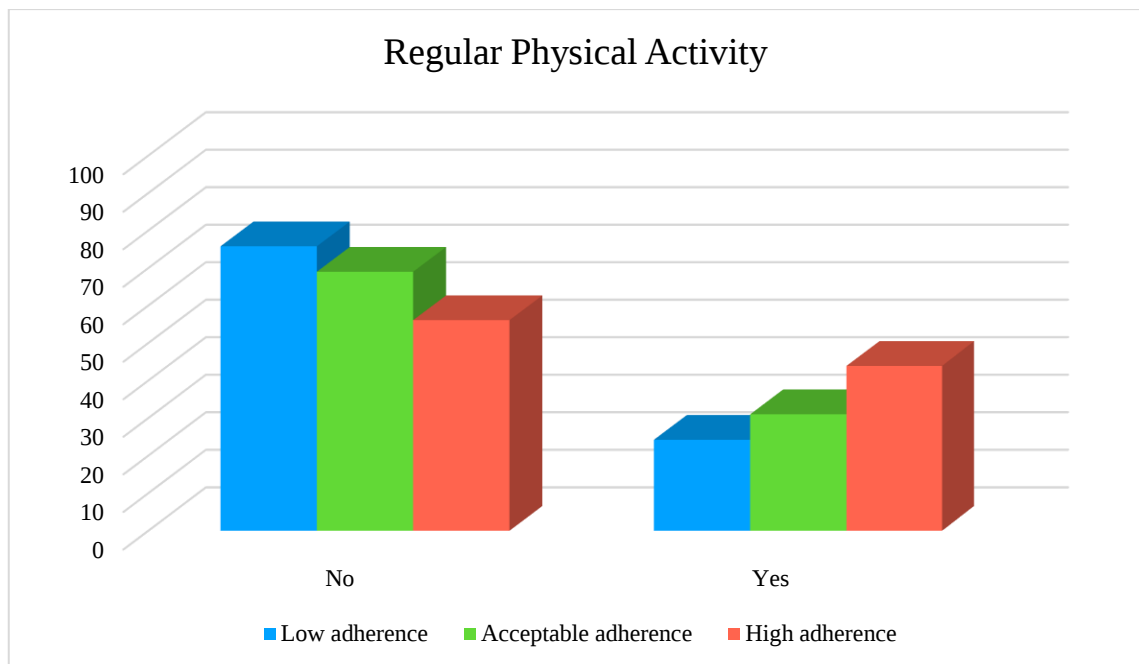


Figure 4.8: Distribution of Regular Physical Activity by Mediterranean Diet Adherence Scale Adherence Levels

Statistically significant difference was found between the alcohol use of the cases according to the adherence levels of the Mediterranean Diet Adherence Scale ($p=0.022$; $p<0.05$). The rate of high adherence is higher than the rate of low adherence in alcohol users. (Figure 4.9)

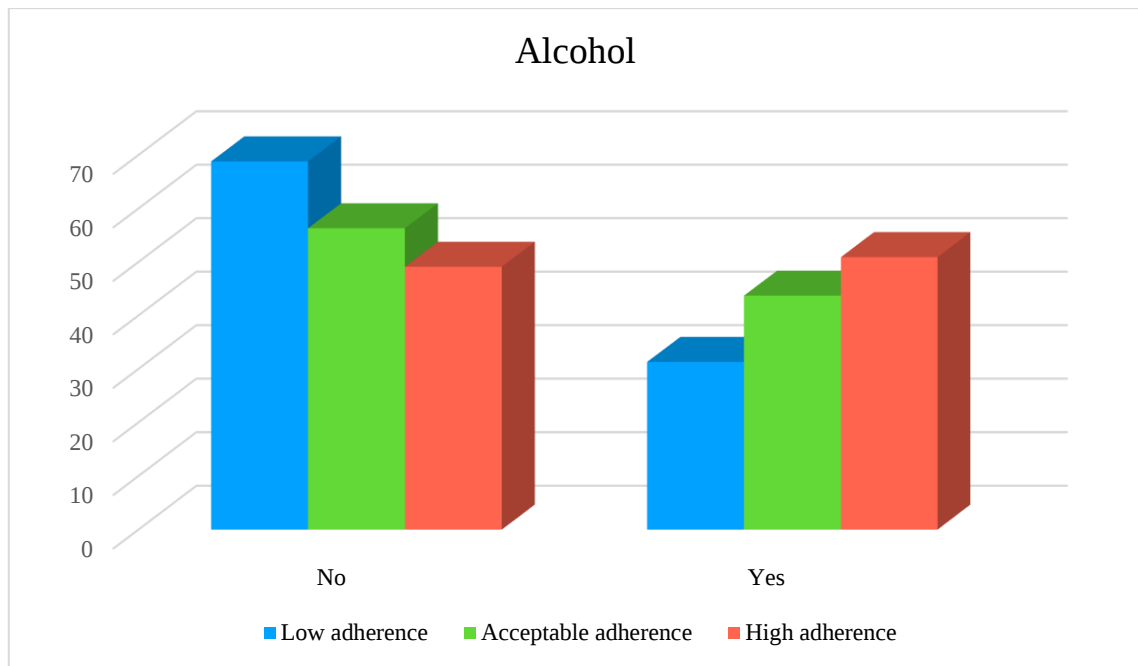


Figure 4.9: Distribution of alcohol use by Mediterranean Diet Adherence Scale Adherence Levels

Living place, economic status and smoking did not show any statistically significant difference according to the adherence levels of the Mediterranean Diet Adherence Scale ($p>0.05$).

No statistically significant difference was found between the sleep durations of the cases according to their adjustment levels ($p>0.05$). (Table 4.8)

Table 4.8: Evaluation of Sleep Duration According to Mediterranean Diet Adherence Scale Adherence Levels

		Mediterranean Diet Adherence Scale			<i>p</i>
		Low adherence	Acceptable adherence	High adherence	
Sleep time	<i>Mean±Ss</i>	7.33±1.21	7.40±1.29	7.38±1.16	^b 0.820
	<i>Median (Min-Max)</i>	7 (5-10)	7.5 (4-10)	8 (8-10)	

^bKruskal Wallis Test

No statistically significant difference was found between the PSQI total scores of the cases according to their level of agreement ($p>0.05$). (Table 4.9)

Table 4.9: Evaluation of the Total PSQI Scores According to the Levels of Adherence to the Mediterranean Diet Adherence Scale

		Mediterranean Diet Adherence Scale			<i>p</i>
		Low adherence	Acceptable adherence	High adherence	
PSQI total	<i>Mean±Ss</i>	6.41±2.65	6.13±2.56	5.85±2.51	^b 0.566
	<i>Median (Min-Max)</i>	6 (2-15)	6 (1-12)	5.5 (1-12)	
	Good	53 (43,1)	36 (43,9)	26 (50,0)	^a 0.696
	Poor	70 (56,9)	46 (56,1)	26 (50,0)	

^aFisher Freeman Halton Test

^bKruskal Wallis Test

No statistically significant correlation was found between the total score of PSQI and the total score of the Mediterranean Diet Adherence Scale ($p>0.05$). (Table 4.10)

Table 4.10: Relationship between Mediterranean Diet Adherence Scale and PSQI

		Mediterranean Diet Adherence Scale
PSQI	<i>r</i>	-0,065
	<i>p</i>	0,298

r: Spearman Correlation Coefficient

5.DISCUSSION

Adaptation to the MD may be impaired with university life (115). Our study also evaluated adherence to the MD during the university process. In our study, we found that 32% of the participants had a acceptable adherence, while 21% had a high adherence. Although the student population is conscious about nutrition, the level of high adherence to the Mediterranean diet is low. Similarly in the study of Papadaki et al. with 525 adolescents, only 21% of the young people were found to adapt to MD (116). In another study conducted by Meseguer et al. with 284 university students, it was concluded that only 5.3% of the participants had a high adherence with the MD (117). There are different results in the literature regarding the adaptation of students to the Mediterranean diet.

The age range of people can change their perspective on nutrition and affect the diet to be adopted (118). Therefore, in our study, we considered the effect of age on the adherence with the MD. We found the mean age of the students to be 20.99 ± 2.19 years, and we could not find a significant relationship between the age of the students and their adherence to the MD. As reported by the study shown by Vitale et al. on 411 healthy adults living in Italy, a positive relationship was found between older age and MD adherence, regarding socio-cultural factors (119). In a study by Papadaki et al. in Athens, Heraklion and Crete comparing anthropometric, socioeconomic, demographic and lifestyle characteristics with adolescents, a negative correlation was reported between a higher level of commitment to MD and older age (116). More studies are required to define the relationship between age and the MD.

Differences between the sexes may play a role in the increase or decrease in the importance given to nutritional status (120). A national study found that men tend to adopt a diet that includes high intake of meat and low intake of fruits and vegetables; showed that women were more likely to adopt a healthier diet attributed to high consumption of vegetables and fruits and low levels of meat (121). Therefore, in this study, we examined the relationship between sex and adherence to the MD. However, as a result, we could not find a meaningful connection between sex and adherence to the MD. This result can be associated with the fact that the sex distribution is predominantly women. While only 11 of the participants were men, 261 were women. In a study conducted by Andrade et al. included with 139 men and 349 women Portuguese adults, it was reported that

women's adherence to the Mediterranean diet was statistically significantly higher (122). In a cross-sectional study of Italian adults by Biasini et al. including 434 women and 404 men, women showed significantly higher scores than men (87). Parallel to these, another study conducted in Italian adult populations of 1099 women and 721 men found a higher level of adherence to MD in women compared to men (123). When we look at the studies that have found significant results in adherence to the MD between men and women, it is seen that the sex distribution is fairer. However, there are also studies showing the opposite. In another study involving 373 men and 346 women participants, it was found that adherence to the MD was higher in men (89).

Nutritional habits may be affected by marital status (124). In a study conducted by Andread Maugeri et al., which included 841 women participants, it was reported that married women had a higher adherence to the MD (125). In another study conducted by Angeliki Papadaki et al. on 590 adults, it was reported that the MD score of married/cohabiting participants was higher (126). In a study of adults in Morocco, married participants were more likely to adhere to the MD than those who were single, divorced, or widowed (127). In a cross-sectional observational study evaluating adherence to MD and related factors in Portuguese adults, it was observed that being married or living in a shared household was associated with increased rates of MD commitment (128). In our study, we could not compare it with being married or single because the number of married people was very low (an expected situation) due to being university students, we could not evaluate it.

BMI is the measurement used to describe anthropometric height/weight characteristics in adults and to categorize them into groups. In addition, it is commonly used as a risk factor for the development or prevalence of various health problems (129). In the study, we could not detect a relationship between the participants' BMI and MD adherence. Similarly, the study by Kyprianidou et al. did not find a significant result between BMI and adherence to the MD (130). In the study of Trichopoulou et al., adherence to the MD was reported essentially unrelated to BMI, with minor differences depending on model selection and no practical consequences (131). Shatwan et al. found an inverse relationship between adherence to the MD and BMI (132). In a study by Zappalà et al., individuals who adhered to the MD were similarly less likely to be obese. (133) More studies are needed to determine the adherence between BMI and the MD.

The impact of nutritional knowledge is important in promoting healthy lifestyles and raising awareness about the importance of diet. Higher education levels may be associated with healthy food consumption. (134) Therefore, the effect of class level on MD was investigated in the study. There was statistically significant difference between the MD adherence scale and the classes of the cases. The rate of low adherence in first-year students was found to be acceptable and higher than those with high adherence. On the contrary, in the 4th grades, the rate of high adherence was found to be higher than the rate of acceptable and low adherence. This shows that increasing the level of nutrition knowledge can increase adherence to the MD.

It is known that regular exercise together with a varied and balanced diet is associated with a longer and healthier life. (135) In addition, there are studies showing a positive correlation between physical activity and other healthy lifestyle habits, including proper nutrition and MD adherence. (136-138) Therefore, its effect on physical activity and the MD was investigated in the study. It was concluded that only 30.5% of the students did a regular physical activity. It was thought that this situation might be related to the limited time that students spare for physical activity. 75% of the students who exercise adequately according to the WHO recommendations. Statistically difference was found between physical activity and adherence to the MD. The regular physical activity rate of those with high adherence was found to be higher than those with low adherence. In future studies, detailed inquiries can be made with the physical activity scale to measure the relationship between physical activity and adherence to the Mediterranean diet.

Smoking can lead to improper eating habits along with a decrease in awareness of healthy living (139). For this reason, we examined the compatibility between students' smoking and the MD adherence in this study. In our study, it was observed that 28.3% of the students smoked. Similarly, in the study conducted by Elena Hadjimbei et al., smoking was found to be relatively high (24%) among students (140). In the study of Gezer et al. reported that red and processed meat consumption is higher in smokers (141) Maugeri et al. showed that smokers have higher levels of energy, total and saturated fat and cholesterol intake, and lower vitamin and fiber intake than non-smokers. (125) Berg et al. showed that reducing or quitting smoking was associated with increased fruit and vegetable intake and greater involvement in physical activity (142). Barbana et al. concluded that smoking habits were a possible lifestyle factor for adherence to the MD, and non-smokers had higher adherence (143). However, we could not find a

relationship between smoking and adherence to the MD in our study. Similarly, in a study conducted in Turkey, no difference was found between smoking and the Mediterranean diet (144).

Alcohol use is a serious public health problem worldwide due to its high prevalence and significant physical and psychosocial effects. Alcohol use is a risk factor associated with more than 200 pathologies (145). University population is highly sensitive to alcohol consumption due to many reasons such as ease of purchasing alcoholic beverages, the existence of consumption situations created by entering the university environment, independence and autonomy they have gained (146, 147). Alcohol consumption has an impact on nutrition and food choice (148). Therefore, in our study, we examined the relationship between alcohol consumption and adherence to the MD in university students. In our study, 39.3% of the students were using alcohol. In the study of Alexander Scholz et al., it was reported that 80.4% of the students used alcohol, and the MD score of the students who consumed beer and wine was found to be higher (149). It is thought that cultural and religious factors may be effective at this high level. Also, high alcohol consumption may positively affect adherence to the MD in conjunction with wine intake. We found the significant relationship between alcohol use and adherence to a MD in our study and found that the rate of high adherence in alcohol users was higher than the rate of low adherence. However on the other hand alcohol consumption may also be associated with a more unhealthy life. In a study conducted by Dallongeville J et al., on 682 students, it was found that university students with high-risk alcohol intake had low adherence to MD (150). In a study conducted in Spanish, no significant difference was found between adherence to the MD and consumption of alcoholic beverages (151).

On the other hand living with the family at home or in a dormitory away from the family may affect the nutritional habits of students (152). Parmar et al. concluded in their study that university students living away from home are highly vulnerable to unbalanced and malnutrition, interest in a new lifestyle, making their own food choices, and irregular daily routines (153). Therefore, in our study, the relationship between living place and adaptation to the MD was examined. In the study of Alghamdi et al., it was concluded that 80% of the students live with their families and the students staying in the dormitory have a higher risk of making unhealthy changes in their eating habits (154). El-Kassas et al. observed that 92.4% of the students live with their families, and they found that students living in dormitories show less adherence to the MD (155). Pelletier

et al. concluded that students living on campus do not eat healthy, do not take personal responsibilities, and consume unhealthy foods. (156). Beydemir et al. reported that students living in dormitories had lower adherence to the MD compared to students living with their families (144). However, in our study, we found that 50% of the students lived with their families, and we could not detect a relationship between the place of residence and Mediterranean diet adherence.

Socioeconomic status can affect diet quality (157). In the study led by Darmon N. et al., people with a higher socio-economic status consumed more fruits, vegetables, whole grains, low-fat products and fish, while those with a lower socio-economic status consumed more refined grains. and they have been observed to consume additional fats (158). From a geographic location perspective, the observed positive relation between the MD adherence and socioeconomic status is consistent with other evidence from adult populations in both Mediterranean and non-Mediterranean countries (159, 160). Another study by Alves et al. showed that higher adherence to MD was considerably and certainly related with higher total dietary cost (161). In parallel with this study, Schröder et al. found that high adherence to MD was more expensive than low adherence (162). Similarly, some studies have supported the idea that high dietary cost is more likely to be a barrier to adopting a healthy diet among people of lower socio-economic status (163-165). However, we could not find a significant relationship between the economic situation and the MD. In our study, the income and expenditure levels of most of the students were found to be equal to each other. The reason for this was thought to be that the students could get by with the economic support provided by their families during the university period. In addition, considering that the students are studying at a private university, it does not reflect the general population in terms of economy. In future studies, the difference between students studying at public and private universities can be investigated and the status of students working at a job at the same time can be questioned.

Nutritional behavior is associated with sleep duration (166, 167). According to the National Sleep Foundation, 7-9 hours of sleep time for adults is essential for optimal health (168). Therefore, in our study, we examined the relationship between students' adherence to the MD and sleep duration and quality. We could not find a statistically significant difference between the sleep durations of the subjects according to their MD adherence. Ferranti et al. reported a significant linear relationship between adherence to the MD and weekday sleep time and total sleep time (169). Similarly, in the Arslanbay

study, it was concluded that the sleep duration of the participants who did not fully comply with the MD was not at a sufficient level (170).

The quality of the diet is associated with better sleep quality (171). In a study by Muscogiuri et al., participants with better sleep quality showed higher adherence to MD compared to those with poorer sleep quality (101). Renau et al. similarly showed that a higher adherence score to the MD was positively associated with sleep quality, as well as language, core subjects, grade point average, and verbal ability (172). In another study conducted in Turkey in 2021, it was determined that increasing adherence with the Mediterranean type diet was effective in increasing sleep quality (173). In our study, the mean PSQI scores of the participants were 6.21 ± 2.59 , and we found that 44.7% of the students had good sleep quality. However, we could not detect a significant relationship between sleep quality and adherence to the MD.

As a result, the fact that the rate of high adherence in 4th grade students was higher than the rate of acceptable adherence and low adherence showed the importance of increasing nutritional awareness on adherence to the Mediterranean diet. Studies should be carried out to increase the awareness of nutrition among university students. It was found that the consumption of vegetables and fruits of the students was low, and the consumption of pastries and sweets was high. Planning the menus that will contribute to the adequate and balanced nutrition of university students at school at affordable costs can contribute to the regulation of nutritional habits. The level of physical activity of the students is low. The fact that the rate of doing regular physical activity in students with high adherence with MD is higher than those with low adherence indicates that physical activity may be related to their eating habits. In this direction, studies should be carried out to increase the adaptation of university students to MD that supports health and their participation in physical activity. In addition to these, studies should be carried out to increase the sleep quality of students. Our study was carried out during the COVID 19 pandemic. In our research, the effect of the pandemic on the nutritional habits and physical activities of the students was not questioned. In future studies can be organized by considering the effects of the pandemic. And also the student population can be chosen as state university and private university in order to evaluate socioeconomic factors.

6.REFERENCES

1. Ordovas JM, Ferguson LR, Tai ES, Mathers JC. Personalised nutrition and health. *BMJ*. 2018;361:bmj.k2173.
2. Alamgir K, Sami UK, Salahuddin K. Nutritional complications and its effects on human health. *J Food Sci Nutr* 2018; 1 (1): 17-20 *J Food Sci Nutr* 2018 Volume 1 Issue. 2018;1.
3. Elinder LS, Geissler C., Powers H. (eds). Human Nutrition. *European Journal of Public Health*. 2017;27(6):1118.
4. World Health Organization. *Diet, nutrition and the prevention of chronic diseases : report of a joint WHO/FAO expert consultation, Geneva, 28 January - 1 February 2002*. World Health Organization; 2003. Accessed April 8, 2022. <https://apps.who.int/iris/handle/10665/42665>
5. Deliëns T, Clarys P, De Bourdeaudhuij I, Deforche B. Determinants of eating behaviour in university students: a qualitative study using focus group discussions. *BMC Public Health*. 2014;14:53.
6. World Health Organization. Guideline: *Saturated fatty acid and trans-fatty acid intake for adults and children*;2018.
7. World Health Organization. Guideline: *Sugars intake for adults and children*. April 8, 2022. <https://www.who.int/publications/i/item/9789241549028>
8. World Health Organization. Guideline: *Sodium intake for adults and children*. April 8, 2022. <https://www.who.int/publications-detail-redirect/9789241504836>
9. Davis C, Bryan J, Hodgson J, Murphy K. Definition of the Mediterranean diet; a literature review. *Nutrients*. 2015;7(11), 9139-9153.
10. Bach-Faig A, Berry EM, Lairon D, et al. Mediterranean diet pyramid today. Science and cultural updates. *Public Health Nutr*. 2011;14(12A):2274-2284.
11. Madencioğlu S. *Yakın Doğu Üniversitesi Beslenme ve Diyetetik Bölümü Öğrencilerinin Akdeniz Diyetine Uyumlarının Belirlenmesi Üzerine Bir Araştırma*. Beslenme ve Diyetetik Ana Bilim Dalı, Yüksek Lisans Tezi. 2015.
12. Şahin Bayram S, Aktaş N. Selçuk Üniversitesi Öğrencilerinin Akdeniz Diyet Kalitelerinin Değerlendirilmesi. *Bes Diy Derg*. 2020;48(3):65-75.
13. Castro-Quezada I, Román-Viñas B, Serra-Majem L. The Mediterranean diet and nutritional adequacy: a review. *Nutrients*. 2014;6(1):231-248.

14. Kastorini CM, Milionis HJ, Goudevenos JA, Panagiotakos DB. Mediterranean diet and coronary heart disease: is obesity a link? - A systematic review. *Nutr Metab Cardiovasc Dis.* 2010;20(7):536-551.
15. Sofi F. The Mediterranean diet revisited: evidence of its effectiveness grows. *Curr Opin Cardiol.* 2009;24(5):442-446.
16. Trichopoulou A, Costacou T, Bamia C, Trichopoulos D. Adherence to a Mediterranean diet and survival in a Greek population. *N Engl J Med.* 2003;348(26):2599-2608.
17. Giugliano D, Esposito K. Mediterranean diet and metabolic diseases. *Curr Opin Lipidol.* 2008;19(1):63-68.
18. Gea A, Bes-Rastrollo M, Toledo E, et al. Mediterranean alcohol-drinking pattern and mortality in the SUN (Seguimiento Universidad de Navarra) Project: a prospective cohort study. *Br J Nutr.* 2014;111(10):1871-1880.
19. Şahin Bayram, S., & Aktaş, N. Selçuk Üniversitesi Öğrencilerinin Akdeniz Diyet Kalitelerinin Değerlendirilmesi. *Beslenme ve Diyet Dergisi*, 2020; 48(3), 65-75.
20. Burlingame B, Dernini S. Sustainable diets: the Mediterranean diet as an example. *Public Health Nutr.* 2011;14(12A):2285-2287.
21. Dernini S, Berry EM, Serra-Majem L, et al. Med Diet 4.0: the Mediterranean diet with four sustainable benefits. *Public Health Nutr.* 2017;20(7):1322-1330.
22. Gönder M, Akbulut G Güncel Akdeniz Diyeti ve Potansiyel Sağlık Etkileri. *Türkiye Klinikleri Sağlık Bilimleri Dergisi.* 2017; 2(2): 110 - 120.
23. Bach A, Serra-Majem L, Carrasco JL, et al. The use of indexes evaluating the adherence to the Mediterranean diet in epidemiological studies: a review. *Public Health Nutr.* 2006;9(1A):132-146.
24. Hutchins-Wiese HL, Bales CW, Porter Starr KN. Mediterranean diet scoring systems: understanding the evolution and applications for Mediterranean and non-Mediterranean countries. *Br J Nutr.* 2021;1-22.
25. Martínez-González MÁ, Corella D, Salas-Salvadó J, et al. Cohort profile: design and methods of the PREDIMED study. *Int J Epidemiol.* 2012;41(2):377-385.
26. Schröder H, Fitó M, Estruch R, et al. A short screener is valid for assessing Mediterranean diet adherence among older Spanish men and women. *J Nutr.* 2011;141(6):1140-1145.

27. Rumawas ME, Dwyer JT, McKeown NM, Meigs JB, Rogers G, Jacques PF. The development of the Mediterranean-style dietary pattern score and its application to the American diet in the Framingham Offspring Cohort. *J Nutr.* 2009;139(6):1150-1156. doi:10.3945/jn.108.103424
28. Serra-Majem L, Tomaino L, Dernini S, Berry EM, Lairon D, Ngo de la Cruz J, Bach-Faig A, Donini LM, Medina F-X, Belahsen R, Piscopo S, Capone R, Aranceta-Bartrina J, La Vecchia C, Trichopoulou A. Updating the Mediterranean Diet Pyramid towards Sustainability: Focus on Environmental Concerns. *International Journal of Environmental Research and Public Health.* 2020; 17(23):8758.
29. Minelli P, Montinari MR. The Mediterranean Diet And Cardioprotection: Historical Overview And Current Research. *J Multidiscip Healthc.* 2019;12:805-815.
30. Dinu M, Pagliai G, Casini A, Sofi F. Mediterranean diet and multiple health outcomes: an umbrella review of meta-analyses of observational studies and randomised trials. *Eur J Clin Nutr.* 2018;72(1):30-43.
31. Trichopoulou, A., Martínez-González, M.A., Tong, T.Y. *et al.* Definitions and potential health benefits of the Mediterranean diet: views from experts around the world. *BMC Med* 12, 112 (2014).
32. Dominguez LJ, Di Bella G, Veronese N, Barbagallo M. Impact of Mediterranean Diet on Chronic Non-Communicable Diseases and Longevity. *Nutrients.* 2021; 13(6):2028.
33. Sánchez-Sánchez ML, García-Vigara A, Hidalgo-Mora JJ, García-Pérez MÁ, Tarín J, Cano A. Mediterranean diet and health: A systematic review of epidemiological studies and intervention trials. *Maturitas.* 2020;136:25-37.
34. Wiechert M, Holzapfel C. Nutrition Concepts for the Treatment of Obesity in Adults. *Nutrients.* 2022; 14(1):169.
35. D'Innocenzo S, Biagi C, Lanari M. Obesity and the Mediterranean Diet: A Review of Evidence of the Role and Sustainability of the Mediterranean Diet. *Nutrients.* 2019;11(6):1306.
36. Ruiz-Canela M, Zazpe I, Shivappa N, et al. Dietary inflammatory index and anthropometric measures of obesity in a population sample at high cardiovascular risk from the PREDIMED (PREvención con DIeta MEDiterránea) trial. *Br J Nutr.* 2015;113(6):984-995.

37. Álvarez-Pérez J, Sánchez-Villegas A, Díaz-Benítez EM, et al. Influence of a Mediterranean Dietary Pattern on Body Fat Distribution: Results of the PREDIMED-Canarias Intervention Randomized Trial. *J Am Coll Nutr.* 2016;35(6):568-580.
38. Babio N, Toledo E, Estruch R, et al. Mediterranean diets and metabolic syndrome status in the PREDIMED randomized trial. *CMAJ.* 2014;186(17):E649-E657.
39. Gomez-Huelgas R, Jansen-Chaparro S, Baca-Osorio AJ, Mancera-Romero J, Tinahones FJ, Bernal-López MR. Effects of a long-term lifestyle intervention program with Mediterranean diet and exercise for the management of patients with metabolic syndrome in a primary care setting. *Eur J Intern Med.* 2015;26(5):317-323.
40. Esposito K, Kastorini CM, Panagiotakos DB, Giugliano D. Mediterranean diet and weight loss: meta-analysis of randomized controlled trials. *Metab Syndr Relat Disord.* 2011;9(1):1-12.
41. Childhood Obesity Surveillance Initiative (COSI) Factsheet. Highlights 2015-17 (2018). Accessed April 8, 2022. <https://www.euro.who.int/en/health-topics/disease-prevention/nutrition/publications/2018/childhood-obesity-surveillance-initiative-cosi-factsheet.-highlights-2015-17-2018>
42. Grosso G, Galvano F. Mediterranean diet adherence in children and adolescents in southern European countries. *NFS Journal.* 2016;3:13-19.
43. Ortner Hadžiabdić M, Vitali Čepo D, Rahelić D, Božikov V. The Effect of the Mediterranean Diet on Serum Total Antioxidant Capacity in Obese Patients: A Randomized Controlled Trial. *J Am Coll Nutr.* 2016;35(3):224-235.
44. Bendall CL, Mayr HL, Opie RS, Bes-Rastrollo M, Itsiopoulos C, Thomas CJ. Central obesity and the Mediterranean diet: A systematic review of intervention trials. *Crit Rev Food Sci Nutr.* 2018;58(18):3070-3084.
45. Romagnolo DF, Selmin OI. Mediterranean Diet and Prevention of Chronic Diseases. *Nutr Today.* 2017;52(5):208-222.
46. Eckel RH, Alberti KG, Grundy SM, Zimmet PZ. The metabolic syndrome. *Lancet.* 2010;375(9710):181-183.
47. Godos J, Zappalà G, Bernardini S, Giambini I, Bes-Rastrollo M, Martinez-Gonzalez M. Adherence to the Mediterranean diet is inversely associated with metabolic syndrome occurrence: a meta-analysis of observational studies. *Int J Food Sci Nutr.* 2017;68(2):138-148.

48. Esposito K, Maiorino MI, Bellastella G, Chiodini P, Panagiotakos D, Giugliano D. A journey into a Mediterranean diet and type 2 diabetes: a systematic review with meta-analyses. *BMJ Open*. 2015;5(8):e008222.
49. Saeedi P, Petersohn I, Salpea P, et al. Global and regional diabetes prevalence estimates for 2019 and projections for 2030 and 2045: Results from the International Diabetes Federation Diabetes Atlas, 9th edition. *Diabetes Res Clin Pract*. 2019;157:107843.
50. PREDIMED study investigators . Intake of Total Polyphenols and Some Classes of Polyphenols Is Inversely Associated with Diabetes in Elderly People at High Cardiovascular Disease Risk. *J Nutr*. 2015;146(4):767-777.
51. Guasch-Ferré M, Hruby A, Salas-Salvadó J, et al. Olive oil consumption and risk of type 2 diabetes in US women. *Am J Clin Nutr*. 2015;102(2):479-486.
52. Jannasch F, Kröger J, Schulze MB. Dietary Patterns and Type 2 Diabetes: A Systematic Literature Review and Meta-Analysis of Prospective Studies. *J Nutr*. 2017;147(6):1174-1182.
53. Bonaccio M, Di Castelnuovo A, Costanzo S, et al. Adherence to the traditional Mediterranean diet and mortality in subjects with diabetes. Prospective results from the MOLI-SANI study. *Eur J Prev Cardiol*. 2016;23(4):400-407.
54. Schwingshackl L, Missbach B, König J, Hoffmann G. Adherence to a Mediterranean diet and risk of diabetes: a systematic review and meta-analysis. *Public Health Nutr*. 2015;18(7):1292-1299.
55. Santangelo C, Filesi C, Vari R, et al. Consumption of extra-virgin olive oil rich in phenolic compounds improves metabolic control in patients with type 2 diabetes mellitus: a possible involvement of reduced levels of circulating visfatin. *J Endocrinol Invest*. 2016;39(11):1295-1301.
56. Sleiman D, Al-Badri MR, Azar ST. Effect of mediterranean diet in diabetes control and cardiovascular risk modification: a systematic review. *Front Public Health*. 2015;3:69.
57. Maiorino MI, Bellastella G, Petrizzo M, Scappaticcio L, Giugliano D, Esposito K. Anti-inflammatory Effect of Mediterranean Diet in Type 2 Diabetes Is Durable: 8-Year Follow-up of a Controlled Trial. *Diabetes Care*. 2016;39(3):e44-e45.
58. Fung TT, Rexrode KM, Mantzoros CS, Manson JE, Willett WC, Hu FB. Mediterranean diet and incidence of and mortality from coronary heart disease and stroke in women. *Circulation*. 2009;119(8):1093-1100.

59. Becerra-Tomás N, Blanco Mejía S, Viguiouk E, et al. Mediterranean diet, cardiovascular disease and mortality in diabetes: A systematic review and meta-analysis of prospective cohort studies and randomized clinical trials. *Crit Rev Food Sci Nutr*. 2020;60(7):1207-1227.
60. Noad RL, Rooney C, McCall D, et al. Beneficial effect of a polyphenol-rich diet on cardiovascular risk: a randomised control trial. *Heart*. 2016;102(17):1371-1379.
61. Estruch R, Ros E, Salas-Salvadó J, et al. Primary Prevention of Cardiovascular Disease with a Mediterranean Diet Supplemented with Extra-Virgin Olive Oil or Nuts. *N Engl J Med*. 2018;378(25):e34.
62. Gomez-Delgado F, Katsiki N, Lopez-Miranda J, Perez-Martinez P. Dietary habits, lipoprotein metabolism and cardiovascular disease: From individual foods to dietary patterns. *Crit Rev Food Sci Nutr*. 2021;61(10):1651-1669.
63. Bo S, Ponzio V, Goitre I, et al. Predictive role of the Mediterranean diet on mortality in individuals at low cardiovascular risk: a 12-year follow-up population-based cohort study. *Journal of translational medicine*. 2016;14(1):1-10.
64. Grosso G, Marventano S, Yang J, et al. A comprehensive meta-analysis on evidence of Mediterranean diet and cardiovascular disease: Are individual components equal?. *Crit Rev Food Sci Nutr*. 2017;57(15):3218-3232.
65. World Health Organization Fact Sheets: *Cancer*. Accessed April 8, 2022. <https://www.who.int/news-room/fact-sheets/detail/cancer>
66. Bayes J, Schloss J, Sibbritt D. Effects of Polyphenols in a Mediterranean Diet on Symptoms of Depression: A Systematic Literature Review. *Adv Nutr*. 2020;11(3):602-615. doi:10.1093/advances/nmz117
67. Gonzalez-Nahm S, Mendez M, Robinson W, et al. Low maternal adherence to a Mediterranean diet is associated with increase in methylation at the *MEG3-IG* differentially methylated region in female infants. *Environ Epigenet*. 2017;3(2):dvx007.
68. Morze J, Danielewicz A, Przybyłowicz K, Zeng H, Hoffmann G, Schwingshackl L. An updated systematic review and meta-analysis on adherence to mediterranean diet and risk of cancer. *Eur J Nutr*. 2021;60(3):1561-1586.
69. Divella R, Daniele A, Savino E, Paradiso A. Anticancer Effects of Nutraceuticals in the Mediterranean Diet: An Epigenetic Diet Model. *Cancer Genomics Proteomics*. 2020;17(4):335-350.

70. Selvakumar P, Badgeley A, Murphy P, et al. Flavonoids and Other Polyphenols Act as Epigenetic Modifiers in Breast Cancer. *Nutrients*. 2020;12(3):761.
71. Tozzi Ciancarelli Mg. Mediterranean Diet and Health Promotion: evidence and current concerns. *Medical Research Archives*. 2017;5.
72. Gentile CL, Weir TL. The gut microbiota at the intersection of diet and human health. *Science*. 2018;362(6416):776-780.
73. David LA, Maurice CF, Carmody RN, et al. Diet rapidly and reproducibly alters the human gut microbiome. *Nature*. 2014;505(7484):559-563.
74. Rinninella E, Cintoni M, Raoul P, et al. Food Components and Dietary Habits: Keys for a Healthy Gut Microbiota Composition. *Nutrients*. 2019;11(10):2393.
75. De Filippis F, Pellegrini N, Vannini L, et al. High-level adherence to a Mediterranean diet beneficially impacts the gut microbiota and associated metabolome. *Gut*. 2016;65(11):1812-1821.
76. Pastori D, Carnevale R, Nocella C, et al. Gut-Derived Serum Lipopolysaccharide is Associated With Enhanced Risk of Major Adverse Cardiovascular Events in Atrial Fibrillation: Effect of Adherence to Mediterranean Diet. *J Am Heart Assoc*. 2017;6(6):e005784.
77. Garcia-Mantrana I, Selma-Royo M, Alcantara C, Collado MC. Shifts on Gut Microbiota Associated to Mediterranean Diet Adherence and Specific Dietary Intakes on General Adult Population. *Front Microbiol*. 2018;9:890.
78. Carlos S, De La Fuente-Arrillaga C, Bes-Rastrollo M, et al. Mediterranean Diet and Health Outcomes in the SUN Cohort. *Nutrients*. 2018;10(4):439.
79. Thorburn AN, Macia L, Mackay CR. Diet, Metabolites, and “Western-Lifestyle” Inflammatory Diseases. *Immunity*. 2014;40(6):833-842.
80. Suárez M, Boqué N, Del Bas JM, Mayneris-Perxachs J, Arola L, Caimari A. Mediterranean Diet and Multi-Ingredient-Based Interventions for the Management of Non-Alcoholic Fatty Liver Disease. *Nutrients*. 2017;9(10):1052.
81. Pounis G, Costanzo S, Bonaccio M, et al. Reduced mortality risk by a polyphenol-rich diet: An analysis from the Moli-sani study. *Nutrition*. 2018;48:87-95.
82. Tresserra-Rimbau A, Rimm EB, Medina-Remón A, et al. Polyphenol intake and mortality risk: a re-analysis of the PREDIMED trial. *BMC Med*. 2014;12:77.
83. Tresserra-Rimbau A, Medina-Remón A, Pérez-Jiménez J, et al. Dietary intake and major food sources of polyphenols in a Spanish population at high cardiovascular risk: the PREDIMED study. *Nutr Metab Cardiovasc Dis*. 2013;23(10):953-959.

84. Simpson SJ, Le Couteur DG, Raubenheimer D, et al. Dietary protein, aging and nutritional geometry. *Ageing Res Rev.* 2017;39:78-86.
85. Canudas S, Becerra-Tomás N, Hernández-Alonso P, et al. Mediterranean Diet and Telomere Length: A Systematic Review and Meta-Analysis. *Adv Nutr.* 2020;11(6):1544-1554.
86. Liyanage T, Ninomiya T, Wang A, et al. Effects of the Mediterranean Diet on Cardiovascular Outcomes-A Systematic Review and Meta-Analysis. *PLoS One.* 2016;11(8):e0159252.
87. Biasini B, Rosi A, Menozzi D, Scazzina F. Adherence to the Mediterranean Diet in Association with Self-Perception of Diet Sustainability, Anthropometric and Sociodemographic Factors: A Cross-Sectional Study in Italian Adults. *Nutrients.* 2021;13(9):3282.
88. Tong TYN, Imamura F, Monsivais P, et al. Dietary cost associated with adherence to the Mediterranean diet, and its variation by socio-economic factors in the UK Fenland Study. *Br J Nutr.* 2018;119(6):685-694.
89. Mohtadi K, Msaad R, Benalioua N, et al. Sociodemographic and Lifestyle Factors Associated with Adherence to Mediterranean Diet in Representative Adult Population in Casablanca City, Morocco: A Cross-Sectional Study. *J Nutr Metab.* 2020;2020:3105271.
90. Pribisalić A, Popović R, Salvatore FP, et al. The Role of Socioeconomic Status in Adherence to the Mediterranean Diet and Body Mass Index Change: A Follow-Up Study in the General Population of Southern Croatia. *Nutrients.* 2021;13(11):3802.
91. Jiménez Boraita R, Arriscado Alsina D, Gargallo Ibort E, Dalmau Torres JM. Factors associated with adherence to a Mediterranean diet in adolescents from La Rioja (Spain). *Br J Nutr.* 2020;1-8.
92. Cavaliere A, De Marchi E, Banterle A. Exploring the Adherence to the Mediterranean Diet and Its Relationship with Individual Lifestyle: The Role of Healthy Behaviors, Pro-Environmental Behaviors, Income, and Education. *Nutrients.* 2018;10(2):141.
93. Godos J, Grosso G, Castellano S, Galvano F, Caraci F, Ferri R. Association between diet and sleep quality: A systematic review. *Sleep Med Rev.* 2021;57:101430.
94. St-Onge MP, Mikic A, Pietrolungo CE. Effects of Diet on Sleep Quality. *Adv Nutr.* 2016;7(5):938-949.
95. Godos J, Ferri R, Caraci F, et al. Adherence to the Mediterranean Diet is Associated with Better Sleep Quality in Italian Adults. *Nutrients.* 2019;11(5):976.

96. Jaussent I, Dauvilliers Y, Ancelin ML, et al. Insomnia symptoms in older adults: associated factors and gender differences. *Am J Geriatr Psychiatry*. 2011;19(1):88-97.
97. Naja F, Hasan H, Khadem SH, et al. Adherence to the Mediterranean Diet and Its Association With Sleep Quality and Chronotype Among Youth: A Cross-Sectional Study. *Front Nutr*. 2022;8:805955.
98. Gupta K, Jansen EC, Campos H, Baylin A. Associations between sleep duration and Mediterranean diet score in Costa Rican adults. *Appetite*. 2022;170:105881.
99. Campanini MZ, Guallar-Castillón P, Rodríguez-Artalejo F, Lopez-Garcia E. Mediterranean Diet and Changes in Sleep Duration and Indicators of Sleep Quality in Older Adults. *Sleep*. 2017;40(3):10.1093/sleep/zsw083.
100. Zuraikat FM, Makarem N, St-Onge MP, Xi H, Akkapeddi A, Aggarwal B. A Mediterranean Dietary Pattern Predicts Better Sleep Quality in US Women from the American Heart Association Go Red for Women Strategically Focused Research Network. *Nutrients*. 2020;12(9):2830.
101. Muscogiuri G, Barrea L, Aprano S, et al. Sleep Quality in Obesity: Does Adherence to the Mediterranean Diet Matter?. *Nutrients*. 2020;12(5):1364.
102. Rosi A, Giopp F, Milioli G, et al. Weight Status, Adherence to the Mediterranean Diet, Physical Activity Level, and Sleep Behavior of Italian Junior High School Adolescents. *Nutrients*. 2020;12(2):478.
103. Tanton J, Dodd LJ, Woodfield L, Mabhala M. Eating Behaviours of British University Students: A Cluster Analysis on a Neglected Issue. *Adv Prev Med*. 2015;2015:639239.
104. Sogari G, Velez-Argumedo C, Gómez MI, Mora C. College Students and Eating Habits: A Study Using An Ecological Model for Healthy Behavior. *Nutrients*. 2018;10(12):1823.
105. Sprake EF, Russell JM, Cecil JE, et al. Dietary patterns of university students in the UK: a cross-sectional study. *Nutrition Journal*. 2018;17(1):90.
106. Abraham S, Noriega BR, Shin JY. College students eating habits and knowledge of nutritional requirements. *Journal of Nutrition and Human Health*. 2018;2(1):13-17.
107. Centers for Disease Control and Prevention. "Body mass index: Considerations for practitioners." *Cdc [Internet]* 2011; 1-4.

108. World Health Organization. *WHO guidelines on physical activity and sedentary behaviour: at a glance*. World Health Organization; 2020. Accessed April 8, 2022. <https://apps.who.int/iris/handle/10665/337001>
109. Martínez-González MÁ. et al. Cohort profile: design and methods of the PREDIMED study. *International Journal of Epidemiology*. 2012;41(2):377-85.
110. Pehlivanoğlu EFÖ, Balcioğlu H, Ünlüoğlu İ. Akdeniz Diyeti Bağlılık Ölçeği'nin Türkçe'ye Uyarlanması Geçerlilik ve Güvenilirliği. *Osmangazi Tıp Dergisi*. 2020;42(2):160-164.
111. León-Muñoz LM, Guallar-Castillón P, Graciani A, et al. Adherence to the Mediterranean diet pattern has declined in Spanish adults. *J Nutr*. 2012;142(10):1843-1850.
112. Buysse DJ, Reynolds CF 3rd, Monk TH, Berman SR, Kupfer DJ. The Pittsburgh Sleep Quality Index: a new instrument for psychiatric practice and research. *Psychiatry Res*. 1989;28(2):193-213.
113. AGARGUN M. Pittsburgh Uyku Kalitesi indeksinin Gecerligi ve Guvenirligi. *Turk Psikiyatri Dergisi*. 1996;7:107-115.
114. Buysse DJ, Reynolds CF 3rd, Monk TH, Hoch CC, Yeager AL, Kupfer DJ. Quantification of subjective sleep quality in healthy elderly men and women using the Pittsburgh Sleep Quality Index (PSQI). *Sleep*. 1991;14(4):331-338.
115. Ferreira-Pêgo C, Rodrigues J, Costa A, Sousa B. Adherence to the Mediterranean diet in Portuguese university students: Adesão à Dieta Mediterrânea em estudantes universitários Portugueses. *Journal Biomedical and Biopharmaceutical Research*. 2019;16:41-49.
116. Papadaki S, Mavrikaki E. Greek adolescents and the Mediterranean diet: factors affecting quality and adherence. *Nutrition*. 2015;31(2):345-349.
117. García-Meseguer MJ, Burriel FC, García CV, Serrano-Urrea R. Adherence to Mediterranean diet in a Spanish university population. *Appetite*. 2014;78:156-164.
118. Stewart-Knox BJ, Poínhos R, Fischer ARH, et al. Sex and age differences in attitudes and intention to adopt personalised nutrition in a UK sample. *Z Gesundh Wiss*. 2021;1-7.
119. Vitale M, Racca E, Izzo A, et al. Adherence to the traditional Mediterranean diet in a population of South of Italy: factors involved and proposal of an educational field-based survey tool. *Int J Food Sci Nutr*. 2019;70(2):195-201.

120. Vlassoff C. Gender differences in determinants and consequences of health and illness. *J Health Popul Nutr.* 2007;25(1):47-61.
121. Gregório MJ, Rodrigues AM, Eusébio M, et al. Dietary Patterns Characterized by High Meat Consumption Are Associated with Other Unhealthy Life Styles and Depression Symptoms. *Front Nutr.* 2017;4:25.
122. Andrade V, Jorge R, García-Conesa MT, et al. Mediterranean Diet Adherence and Subjective Well-Being in a Sample of Portuguese Adults. *Nutrients.* 2020;12(12):3837.
123. Dinu M, Pagliai G, Giangrandi I, et al. Adherence to the Mediterranean diet among Italian adults: results from the web-based Medi-Lite questionnaire. *Int J Food Sci Nutr.* 2021;72(2):271-279.
124. Haapala I, Prättälä R, Patja K, et al. Age, marital status and changes in dietary habits in later life: a 21-year follow-up among Finnish women. *Public Health Nutr.* 2012;15(7):1174-1181.
125. Maugeri A, Barchitta M, Fiore V, et al. Determinants of Adherence to the Mediterranean Diet: Findings from a Cross-Sectional Study in Women from Southern Italy. *Int J Environ Res Public Health.* 2019;16(16):2963.
126. Papadaki A, Wood L, Sebire SJ, Jago R. Adherence to the Mediterranean diet among employees in South West England: Formative research to inform a web-based, work-place nutrition intervention. *Prev Med Rep.* 2015;2:223-228.
127. El Rhazi K, Nejjar C, Romaguera D, et al. Adherence to a Mediterranean diet in Morocco and its correlates: cross-sectional analysis of a sample of the adult Moroccan population. *BMC Public Health.* 2012;12:345.
128. Teixeira B, Afonso C, Sousa AS, et al. Adherence to a Mediterranean Dietary Pattern status and associated factors among Portuguese older adults: Results from the Nutrition UP 65 cross-sectional study. *Nutrition.* 2019;65:91-96.
129. Nuttall FQ. Body Mass Index: Obesity, BMI, and Health: A Critical Review. *Nutr Today.* 2015;50(3):117-128.
130. Kyprianidou M, Panagiotakos D, Faka A, Kambanaros M, Makris KC, Christophi CA. Adherence to the Mediterranean diet in Cyprus and its relationship to multi-morbidity: an epidemiological study. *Public Health Nutr.* 2021;24(14):4546-4555.
131. Trichopoulou A, Naska A, Orfanos P, Trichopoulos D. Mediterranean diet in relation to body mass index and waist-to-hip ratio: the Greek European Prospective Investigation into Cancer and Nutrition Study. *Am J Clin Nutr.* 2005;82(5):935-940.

132. Shatwan IM, Alhinai EA, Alawadhi B, Surendran S, Aljefree NM, Almoraie NM. High Adherence to the Mediterranean Diet Is Associated with a Reduced Risk of Obesity among Adults in Gulf Countries. *Nutrients*. 2021;13(3):995.
133. Zappalà G, Buscemi S, Mulè S, et al. High adherence to Mediterranean diet, but not individual foods or nutrients, is associated with lower likelihood of being obese in a Mediterranean cohort. *Eat Weight Disord*. 2018;23(5):605-614.
134. Buscemi S. What are the determinants of adherence to the mediterranean diet? *Int. J. Food Sci. Nutr*. 2021;72:143–144.
135. Ruegsegger GN, Booth FW. Health Benefits of Exercise. *Cold Spring Harb Perspect Med*. 2018;8(7):a029694.
136. Arcila-Agudelo AM, Ferrer-Svoboda C, Torres-Fernández T, Farran-Codina A. Determinants of Adherence to Healthy Eating Patterns in a Population of Children and Adolescents: Evidence on the Mediterranean Diet in the City of Mataró (Catalonia, Spain). *Nutrients*. 2019;11(4):854.
137. Iaccarino Idelson P, Scalfi L, Valerio G. Adherence to the Mediterranean Diet in children and adolescents: A systematic review. *Nutr Metab Cardiovasc Dis*. 2017;27(4):283-299.
138. Fernández-Iglesias R, Álvarez-Pereira S, Tardón A, Fernández-García B, Iglesias-Gutiérrez E. Adherence to the Mediterranean Diet in a School Population in the Principality of Asturias (Spain): Relationship with Physical Activity and Body Weight. *Nutrients*. 2021;13(5):1507.
139. Loef M, Walach H. The combined effects of healthy lifestyle behaviors on all cause mortality: a systematic review and meta-analysis. *Prev Med*. 2012;55(3):163-170.
140. Hadjimbei E, Botsaris G, Gekas V, Panayiotou A. Behavioral Factors Associated with Adherence to the Mediterranean Diet in Young University Students - A Cross-Sectional Study. *Journal of Nutritional Medicine and Diet Care*. 2019;5.
141. Gezer, C. *Yakın Doğu Üniversitesi Beslenme ve Diyetetik bölümü öğrencilerinin diyet kalite indeksi ve yaşam tarzı indekslerinin belirlenmesi üzerine bir çalışma*. Lefkoşa, Yakın Doğu Üniversitesi, 2011.
142. Berg CJ, Thomas JL, An LC, et al. Change in smoking, diet, and walking for exercise in Blacks. *Health Educ Behav*. 2012;39(2):191-197.

143. Barnaba L, Intorre F, Azzini E, et al. Evaluation of adherence to Mediterranean diet and association with clinical and biological markers in an Italian population. *Nutrition*. 2020;77:110813.
144. Baydemir C, Ozgur EG, Balci S. Evaluation of adherence to Mediterranean diet in medical students at Kocaeli University, Turkey. *J Int Med Res*. 2018;46(4):1585-1594.
145. *Global Status Report on Alcohol and Health, 2014.*; 2014. Accessed April 8, 2022. http://apps.who.int/iris/bitstream/10665/112736/1/9789240692763_eng.pdf?ua=1
146. Flórez L. Diagnostico e intervención del consumo excesivo de alcohol en ambientes educativos. *TIPICA: Boletín Electrónico de Salud Escolar[Internet]*. 2007;3(2).
147. Torres González MC, Palma Riveros MM, Iannini Uribe J, Moreno Luna S. Validación de la prueba Young Adult Alcohol Problems Screening Test, YAAPST, en un grupo de estudiantes universitarios de la Pontificia Universidad Javeriana de Bogotá. *Universitas Psychologica*. 2006;5(1):175-190.
148. Kim SY, Breslow RA, Ahn J, Salem N Jr. Alcohol consumption and fatty acid intakes in the 2001-2002 National Health and Nutrition Examination Survey. *Alcohol Clin Exp Res*. 2007;31(8):1407-1414.
149. Scholz A, Navarrete-Muñoz EM, Garcia de la Hera M, et al. Alcohol consumption and Mediterranean Diet adherence among health science students in Spain: the DiSA-UMH Study. *Gac Sanit*. 2016;30(2):126-132.
150. Dallongeville J, Marécaux N, Fruchart JC, Amouyel P. Cigarette smoking is associated with unhealthy patterns of nutrient intake: a meta-analysis. *J Nutr*. 1998;128(9):1450-1457.
151. López-Moreno M, Garcés-Rimón M, Miguel M, Iglesias López MT. Adherence to Mediterranean Diet, Alcohol Consumption and Emotional Eating in Spanish University Students. *Nutrients*. 2021;13(9):3174.
152. Papadaki A, Hondros G, A Scott J, Kapsokefalou M. Eating habits of university students living at, or away from home in Greece. *Appetite*. 2007;49(1):169-176.
153. Parmar P, Damor R, Modi A, Patel D, Godara N, Kosambiya J. Exploring the Dietary Habit of Medical Students' and their Perception about its Effect on Health. *Indian Journal of Public Health Research & Development*. 2017;8:154.

154. Alghamdi ES, Farrash MS, Bakarman MA, Mukhtar AM. Dietary Habits of University Students Living at Home or at University Dorm: A Cross-Sectional Study in Saudi Arabia. *Global Journal of Health Science*. 2018;10(10):p50.
155. El-Kassas G, Ziade F. Exploration of the Dietary and Lifestyle Behaviors and Weight Status and Their Self-Perceptions among Health Sciences University Students in North Lebanon. *Biomed Res Int*. 2016;2016:9762396.
156. Pelletier JE, Laska MN. Campus food and beverage purchases are associated with indicators of diet quality in college students living off campus. *Am J Health Promot*. 2013;28(2):80-87.
157. Rehm CD, Monsivais P, Drewnowski A. Relation between diet cost and Healthy Eating Index 2010 scores among adults in the United States 2007-2010. *Prev Med (Baltim)* 2015;73:70–5.
158. Darmon N, Drewnowski A. Does social class predict diet quality?. *Am J Clin Nutr*. 2008;87(5):1107-1117.
159. González CA, Argilaga S, Agudo A, et al. [Sociodemographic differences in adherence to the Mediterranean dietary pattern in Spanish populations] *Gac Sanit*. 2002;16(3):214–21.
160. Marques-Vidal P, Waeber G, Vollenweider P, Bochud M, Stringhini S, Guessous I. Sociodemographic and Behavioural Determinants of a Healthy Diet in Switzerland. *Ann Nutr Metab*. 2015;67(2):87-95.
161. Alves RM, Lopes CMM, Rodrigues SSP, Perelman J. Adhering to a Mediterranean diet in a Mediterranean country: an excess cost for families? [published online ahead of print, 2021 Jul 5]. *Br J Nutr*. 2021;1-8.
162. Schröder H, Gomez SF, Ribas-Barba L, et al. Monetary Diet Cost, Diet Quality, and Parental Socioeconomic Status in Spanish Youth. *PLoS One*. 2016;11(9):e0161422.
163. Affret A, Severi G, Dow C, et al. Socio-economic factors associated with a healthy diet: results from the E3N study. *Public Health Nutr*. 2017;20(9):1574-1583.
164. Mackenbach JD, Brage S, Forouhi NG, et al. Does the importance of dietary costs for fruit and vegetable intake vary by socioeconomic position? *Br J Nutr*. 2015;114(9):1464–70.
165. Green R, Cornelsen L, Dangour AD, et al. The effect of rising food prices on food consumption: systematic review with meta-regression. *BMJ*. 2013;346:f3703.

166. Ohida T, Kamal AM, Uchiyama M, et al. The influence of lifestyle and health status factors on sleep loss among the Japanese general population. *Sleep*. 2001;24(3):333-338.
167. Imaki M, Hatanaka Y, Ogawa Y, Yoshida Y, Tanada S. An epidemiological study on relationship between the hours of sleep and life style factors in Japanese factory workers. *J Physiol Anthropol Appl Human Sci*. 2002;21(2):115-120.
168. Hirshkowitz, Max et al. "National Sleep Foundation's sleep time duration recommendations: methodology and results summary." *Sleep health* vol. 1,1 (2015): 40-43.
169. Ferranti R, Marventano S, Castellano S, et al. Sleep quality and duration is related with diet and obesity in young adolescent living in Sicily, Southern Italy. *Sleep Sci*. 2016;9(2):117-122.
170. Aşit M. *Yetişkin bireylerde Akdeniz diyet skoru ile beslenme alışkanlıkları ve antropometrik ölçümler arasındaki ilişkinin değerlendirilmesi*, Edirne, Trakya Üniversitesi, 2018.
171. Özdoğan G, Yücecan S. Determining The Diet Quality, Sleep Quality and Obesity Status of Undergraduate Students: A Cross-Sectional Study. *Progr Nutr*. 2021;23(4):e2021190-e2021190.
172. Adelantado-Renau M, Beltran-Valls MR, Esteban-Cornejo I, Martínez-Vizcaíno V, Santaliesra-Pasías AM, Moliner-Urdiales D. The influence of adherence to the Mediterranean diet on academic performance is mediated by sleep quality in adolescents. *Acta Paediatr*. 2019;108(2):339-346.
173. Özcan BA, Yeşilkaya * Burcu, Yılmaz HÖ, Günel AM, Özdemir AA. Effects of Adherence to the Mediterranean Diet on Depression, Anxiety, and Sleep Quality During the Covid-19 Pandemic in Turkey. *International Journal of Innovative Research and Reviews*. 2021;5(2):39-44.

7.APPENDIX

7.1.Volunteer Form

Sayın Katılımcı;

Bu çalışma İstanbul Bilgi Üniversitesi ve Yeditepe Üniversitesi'nde okuyan Beslenme ve Diyetetik öğrencilerinin Akdeniz diyetine uyumunu etkileyen faktörlerin belirlenmesi ve bu faktörler doğrultusunda üniversite öğrencilerine yönelik önerilerin geliştirilmesi amacıyla Diyetisyen Berna Şenay tarafından yapılacaktır. Bu çalışmada 260 katılımcıya ulaşılması planlanmaktadır.

Araştırmaya katılmak tamamen gönüllülük esasına dayanmaktadır. Araştırmada yer almayı reddedebilirsiniz ya da başladıktan sonra herhangi bir zamanda bırakabilirsiniz. Çalışmaya katılmama, çalışmadan çıkma veya çıkarılma durumlarında herhangi bir ceza ya da yararınıza olan hakların kaybı kesinlikle söz konusu olmayacaktır.

Ankette sizden kimlik belirleyici hiçbir belge istenmemektedir. Cevaplarınız gizli tutulacak ve sadece araştırmacı tarafından değerlendirilecektir. Araştırma bir anket çalışmasıdır ve hiçbir tehlikeli yanı bulunmamaktadır. Elde edilecek olan bilgiler, Etik Kurul, kurum ve diğer sağlık otoritelerinin orijinal tıbbi kayıtlarına doğrudan erişimleri olacaktır. Fakat bu gönüllü onam formunun imzalanması ile bu bilgiler gizli tutulacaktır.

Araştırmaya katılımınız için sizden herhangi bir ücret istenmeyecek ve katılımınız karşılığında size herhangi bir ücret ödenmeyecektir. Sizden beklenen, bilgilendirilmiş gönüllü onam formunu doldurup bu araştırmaya katkı sağlamayı kabul ettikten sonra doldurulması talep edilen anketleri doldurmanızdır.

Bu çalışmaya katılabilmeniz için;

- 18 - 65 yaş aralığında olmanız
- Yeditepe ve Bilgi Üniversitesinde öğrenim gören Beslenme ve Diyetetik bölümü öğrencisi olmanız
- Özel bir diyet kısıtlaması gerektiren hastalığa sahip olmamanız gerekmektedir.

Araştırmacı: Dyt. Berna Şenay

Yeditepe Üniversitesi Sağlık Bilimleri Enstitüsü Beslenme ve Diyetetik Yüksek Lisans Öğrencisi

Sorumlu Arařtırmacı: Dr. Öğr. Üyesi Binnur Okan Bakır

Yeditepe Üniversitesi Sağlık Bilimleri Enstitüsü Beslenme ve Diyetetik Bölümü Öğretim Üyesi

Bilgilendirilmiş Gönüllü Onam Formunu okudum ve ilgili tarafından yazılı olarak bilgilendirildim. Araştırmaya gönüllü olarak katıldığımı, istediğim zaman gerekçeli veya gerekçesiz olarak araştırmadan ayrılabilceğimi ve kendi isteğime bakılmaksızın araştırmacı tarafından araştırma dışı bırakılabileceğimi biliyorum. Hiçbir baskı altında kalmadan ve kendi rızamla bu araştırmaya katılmayı kabul ediyorum.

Gönüllü;

Araştırmacı;

Tanık;

Ad, Soyad:

Ad, Soyad:

Ad, Soyad:

Tarih:

Tarih:

Tarih:

İmza:

İmza:

İmza:

7.2.Questionnaire Form

1. Yaş:.....
2. Vücut ağırlığı kg
3. Boy uzunluğucm
4. Öğrenim gördüğü üniversite (Yeditepe/Bilgi)
5. Sınıf Düzeyi (1,2,3,4)
6. Medeni Hal (Evli/Bekar)
7. Cinsiyet (Kadın/Erkek)
8. Yaşanılan yer (Yurtta/ Arkadaşlarımla-yalnız öğrenci evinde /Ailem ile birlikte evde)
9. Ekonomik durum (Gelirim giderimden az/ Gelirim giderime eşit/Gelirim giderimden fazla)
10. Düzenli olarak fiziksel aktivite yapıyor musunuz? (Evet/Hayır)
11. Cevabınız evet ise türünü, sıklığını ve süresini belirtiniz..... dakika.....gün/haftada
12. Sigara kullanıyor musunuz?(Evet/Hayır)
13. Alkol kullanıyor musunuz? (Evet/Hayır)
14. Cevabınız evet ise sıklığını belirtiniz.(.... Bardak/kadehgün/haftada)
15. Doktor tarafından tanısı konmuş kronik bir hastalığınız var mı? Varsa belirtiniz. (Evet/Hayır)

7.3.Mediterranean Diet Ahderence Score

	Yemeklerde temel yağ olarak zeytinyağı kullanıyor musunuz?	-Haftada en az 2 kez -Haftada 2 kezden az
	Günde ne kadar zeytinyağı tüketiyorsunuz? (Kızartmalarda, salatalarda, ev dışında yenilen yemeklerde kullanılanlarda vb.) (1 yemek kaşığı=13.5 g*)	-48 gr'dan fazla (3.5 yemek kaşığı) -48 gr'dan az (3.5 yemek kaşığı)
	Günde kaç porsiyon sebze tüketiyorsunuz? (1 porsiyon= 200 g)	-Günde 2 porsiyon daha fazla - Günde 2 porsiyondan az
	Günde kaç porsiyon meyve (taze sıkılmış meyve suları dahil) tüketiyorsunuz? (Toplam meyve porsiyonu= Total meyve g/80) (Taze meyve suyu porsiyonu= Her 100 ml** için 1 porsiyon)	-Günde 3 porsiyon ve daha fazla -Günde 3 porsiyondan az
	Günde kaç porsiyon kırmızı et tüketiyorsunuz?	-Günde 100 g ve daha fazla -Günde 100gramdan az
	Günde kaç porsiyon tereyağı veya margarin tüketiyorsunuz? (1 yemek kaşığı=12 g)	-Günde 1 yemek kaşığı ve daha fazla -Günde 1 yemek kaşığından az
	Günde ne kadar şekerli ya da tatlandırılmış içecekler tüketirsiniz? (1 porsiyon=100 ml)	-Günde 1 porsiyon ve daha fazla -Günde 1 porsiyondan az
	Şarap içer misiniz? Haftada ne kadar tüketiyorsunuz? (1 kadeh= 125 ml)	-Hayır, kullanmıyorum. -Haftada 7 kadeh ve daha fazla -Haftada 7 kadehten az
	Haftada kaç porsiyon bakliyat tüketiyorsunuz? (1 porsiyon= 150 g)	-Haftada 3 porsiyon ve daha fazla -Haftada 3 porsiyondan az

	Haftada kaç porsiyon balık / deniz ürünü tüketiyorsunuz? (1 porsiyon = 100-150 g balık veya 4-5 adet veya 200 g kabuklu deniz ürünleri)	-Haftada 3 porsiyon ve daha fazla -Haftada 3 porsiyondan az
	Haftada kaç kez işlenmiş tatlı ya da hamur işi (ev yapımı olmayan) tüketiyorsunuz?	-Haftada 3'den az -Haftada 3 ve daha fazla
	Haftada kaç defa fındık (yer fıstığı dahil) tüketiyorsunuz? (1 porsiyon = 30 g)	-Haftada 3 porsiyon ve daha fazla -Haftada 3 porsiyondan az
	Sığır eti, domuz eti, hamburger veya sosis yerine tavuk, hindi veya tavşan eti yemeyi mi tercih edersiniz?	-evet -hayır
	Haftada kaç kere haşlanmış sebze, makarna, pilav veya diğer yemeklerinize domates, sarımsak, soğan veya pırasa soslu zeytinyağı kullanırsınız?	-Haftada 2 defa ve daha fazla -Haftada 2 defadan az

7.4.Pittsburgh Sleep Quality Index

1. Geçen ay geceleri genellikle ne zaman yattınız?genel yatış saati

2. Geçen ay geceleri uykuya dalmanız genellikle ne kadar zaman (dakika) aldı?dakika

3. Geçen ay sabahları genellikle ne zaman kalktınız?genel kalkış saati

4. Geçen ay geceleri kaç saat uyudunuz (bu süre yatakta geçirdiğiniz süreden farklı olabilir)saat (bir gecede ki uyku süresi)

Aşağıdaki soruların her biri için uygun cevabı seçiniz.

5. Geçen ay aşağıdaki durumlarda belirtilen uyku problemlerini ne sıklıkla yaşadınız?

(a) 30 dakika içinde uykuya dalamadınız

a) Geçen ay boyunca hiç

b) Haftada 1'den ↓

c) Haftada 1 veya 2 kez

d) Haftada 3 veya ↑

(b) Gece yarısı veya sabah erkenden uyandınız

a) Geçen ay boyunca hiç

b) Haftada 1'den ↓

c) Haftada 1 veya 2 kez

d) Haftada 3 veya ↑

(c) Banyo yapmak üzere kalkmak zorunda kaldınız

a) Geçen ay boyunca hiç

b) Haftada 1'den ↓

c) Haftada 1 veya 2 kez

d) Haftada 3 veya ↑

(d) Rahat bir şekilde nefes alıp veremediniz

- a) Geçen ay boyunca hiç
- b) Haftada 1'den ↓
- c) Haftada 1 veya 2 kez
- d) Haftada 3 veya↑

(e) Öksürdünüz veya gürültülü bir şekilde horladınız

- a) Geçen ay boyunca hiç
- b) Haftada 1'den ↓
- c) Haftada 1 veya 2 kez
- d) Haftada 3 veya↑

(f) Aşırı derecede üşüdünüz

- a) Geçen ay boyunca hiç
- b) Haftada 1'den ↓
- c) Haftada 1 veya 2 kez
- d) Haftada 3 veya↑

(g) Aşırı derecede sıcaklık hissettiniz

- a) Geçen ay boyunca hiç
- b) Haftada 1'den ↓
- c) Haftada 1 veya 2 kez
- d) Haftada 3 veya↑

(h) Kötü rüyalar gördünüz

- a) Geçen ay boyunca hiç
- b) Haftada 1'den ↓
- c) Haftada 1 veya 2 kez
- d) Haftada 3 veya↑

(i) Ağrı duydunuz

- a) Geçen ay boyunca hiç
- b) Haftada 1'den ↓
- c) Haftada 1 veya 2 kez
- d) Haftada 3 veya↑

(j) Diğer nedenler lütfen belirtiniz

Geçen ay diğer nedenlerden dolayı ne kadar sıklıkla uyku problemi yaşadınız

- a) Geçen ay boyunca hiç
- b) Haftada 1'den ↓
- c) Haftada 1 veya 2 kez
- d) Haftada 3 veya↑

6. Geçen ay uyku kalitenizi bütünü ile nasıl değerlendirirsiniz.

- a) Çok iyi
- b) Oldukça iyi
- c) Oldukça kötü
- d) Çok kötü

7. Geçen ay uyumanıza yardımcı olması için ne kadar sıklıkla uyku ilacı (reçeteli veya reçetesiz) aldınız?

- a) Geçen ay boyunca hiç
- b) Haftada 1'den ↓
- c) Haftada 1 veya 2 kez
- d) Haftada 3 veya↑

8. Geçen ay araba sürerken, yemek yerken veya sosyal bir aktivite esnasında ne kadar sıklıkla uyanık kalmak için zorlandınız?

- a) Geçen ay boyunca hiç
- b) Haftada 1'den ↓
- c) Haftada 1 veya 2 kez
- d) Haftada 3 veya↑

9. Geçen ay bu durum işlerinizi yeteri kadar istekle yapmanızda ne derecede problem oluşturdu?

- a) Hiç problem oluşturmadı
- b) Yalnızca çok az bir problem oluşturdu
- c) Bir dereceye kadar problem oluşturdu
- d) Çok büyük bir problem oluşturdu

10. Bir yatak partneriniz var mı?

- a) Bir yatak partneri veya oda arkadaşı yok
- b) Diğer odada bir partneri veya oda arkadaşı var
- c) Partneri aynı odada fakat aynı yatakta değil
- d) Partner aynı yatakta

11. Eğer bir oda arkadaşı veya yatak partneriniz varsa ona aşağıdaki durumları ne kadar sıklıkta yaşadığınızı sorun.

(a) Gürültülü horlama

- a) Geçen ay boyunca hiç
- b) Haftada 1'den ↓
- c) Haftada 1 veya 2 kez
- d) Haftada 3 veya ↑

(b) Uykuda iken nefes alıp verme arasında uzun aralıklar

- a) Geçen ay boyunca hiç
- b) Haftada 1'den ↓
- c) Haftada 1 veya 2 kez
- d) Haftada 3 veya ↑

(c) Uyurken bacaklarda seğirme veya sıçrama

- a) Geçen ay boyunca hiç
- b) Haftada 1'den ↓
- c) Haftada 1 veya 2 kez
- d) Haftada 3 veya ↑

(d)Uyku esnasında uyumsuzluk veya şaşkınlık

- a) Geçen ay boyunca hiç
- b) Haftada 1'den ↓
- c) Haftada 1 veya 2 kez
- d) Haftada 3 veya↑

(e)Uyurken olan diğer huzursuzluklarınız; lütfen belirtiniz.....

- a) Geçen ay boyunca hiç
- b) Haftada 1'den ↓
- c) Haftada 1 veya 2 kez
- d) Haftada 3 veya↑

7.5 Ethics



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

Versiyon No
1.0
Sayfa 1 / 2

KARAR FORMU

15.10.2021

ETİK KURUL BİLGİLERİ	Etik Kurulun Adı	Yeditepe Üniversitesi Girişimsel Olmayan Klinik Araştırmalar Etik Kurulu
	Açık Adres	Yeditepe Üniversitesi Dış Hekimliği Fakültesi, Bağdat Cad. No. 238 Göztepe 34728 Kadıköy, İstanbul
	İnternet Sayfası	http://goetik.yeditepe.edu.tr/
	Telefon	0216 363 60 44
	E-posta	goetik@yeditepe.edu.tr

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

KARAR BİLGİLERİ	Başvuru Numarası	202108086
	Toplantı Tarihi	15.10.2021
	Toplantı Yeri	Çevirim içi (Google Meet)
	Karar No	4

Araştırmacının Başlığı: Beslenme ve Diyetetik öğrencilerinin akdeniz diyetine uyumunda etkili faktörler: kesitsel bir çalışma

Araştırmacılar: Berna Şenay, Binnur Okan Bakır



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GİRİŞİMSEL OLMAYAN KLİNİK ARAŞTIRMALAR
ETİK KURULU

Versiyon No
1.0
Sayfa 2 / 2

BAŞVURU NUMARASI: 202108086

KARAR

15.10.2021

☒ KABUL	☐ RET ☐ KAPSAM DIŞI (GİRİŞİMSEL) ☐ BİLİMSEL VE/VEYA ETİK KURALLARA AYKIRI ☐ BİR SORUMLU ARAŞTIRMACININ (TEZ İŞE TEZ DANIŞMANI), BİR TOPLANTIYA İKİ (2) ADETTEN FAZLA ÇALIŞMA BAŞVURUSUNDA BULUNMASI ☐ KURUM İÇİ BAŞVURULARINDA YEDİTEPE UZANTI E-POSTA HESABI İLE GİRİŞ YAPILMAMIŞ OLMASI ☐ ŞARTLI KABULDE BELİRTİLEN REVİZYONLARIN ZAMANINDA VE/VEYA İSTENİLDİĞİ ŞEKİLDE YAPILMAMIŞ OLMASI
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Yeditepe Üniversitesi Girişimsel Olmayan Klinik Araştırmalar Etik Kurulu adına
Prof. Dr. Didem Özdemir ÖZENEN
Başkan

Araştırmanın Başlığı	Beslenme ve Diyetetik öğrencilerinin akdeniz diyetine uyumunda etkili faktörler: kesitsel bir çalışma
Araştırmacılar	Berna Şenay, Binnur Okan Bakır

T.C. YEDİTEPE ÜNİVERSİTESİ

GİRİŞİMSEL OLMAYAN KLİNİK ARAŞTIRMALAR ETİK KURULU BAŞKANLIĞI' NA,

Sorumlu araştırmacısı olan **Beslenme ve Diyetetik Öğrencilerinin Akdeniz Diyetine Uyumunda Etkili Faktörler: Kesitsel Bir Çalışma** başlıklı araştırma önerisinin veri toplama kısmı kurumumuzda yapılacaktır. Gereğini arz ederim.

Kurum Bilgileri

Adı	Anabilim Dalı / Bölüm Adı
Yeditepe Üniversitesi	Beslenme ve Diyetetik Bölümü

Kurum Yetkilisi

Ünvanı, Adı - Soyadı	Görevi	İmza
Prof. Dr. B. Serdar Öztezcan	Dekan	

Evrak Tarih ve Sayısı: 11.05.2021-4321



SAĞLIK BİLİMLERİ FAKÜLTESİ DEKANLIĞI

Sayı : E-73823035-604.99-4321 Konu: Çalışma Onayı (Berna Şenay)

**YEDİTEPE ÜNİVERSİTESİ GİRİŞİMSSEL OLMAYAN KLİNİK ARAŞTIRMALAR
ETİK KURULU**

11.05.2021

Yeditepe Üniversitesi Sağlık Bilimleri Enstitüsü Beslenme ve Diyetetik Bölümü'nde Yüksek Lisans eğitime devam etmekte olan Berna Şenay'ın " Beslenme ve Diyetetik Öğrencilerinin Akdeniz Diyetine Uyumunda Etkili Faktörler: Kesitsel Çalışma" başlıklı Yüksek Lisans tezi kapsamında gerçekleştireceği örneklem çalışmasını Fakültemiz Beslenme ve Diyetetik bölümü öğrencileriyle yürütmesi uygun bulunmuştur. Bilgilerinizi rica ederim.

Prof. Dr. Arife Kebire Nilgün SARP Dekan

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