

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

**HERBAL SUPPORT USAGE AMONG
CONSULTANTS WHO APPLY TO NUTRITION
AND DIETETICS DEPARTMENT OF A SPECIAL
HOSPITAL IN ISTANBUL TO LOSE WEIGHT**

MASTER THESIS

AYÇA GÜLERYÜZ

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SUPERVISOR

Assist. Prof. Dr. Binnur OKAN BAKIR

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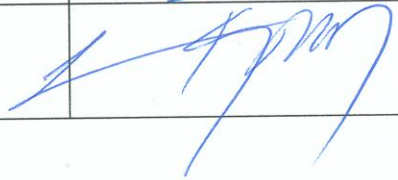
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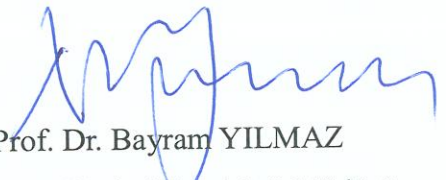
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	Unvanı, Adı-Soyadı (Kurumu)	İmza
Jüri Başkanı:	Dr. Öğr. Üyesi Elvan Yılmaz <i>Akyüz</i> Sağlık Bilimleri Üniversitesi	
Tez danışmanı:	Dr. Öğr. Üyesi Binnur Okan Bakır Yeditepe Üniversitesi	
Üye:	Dr. Öğr. Üyesi İrem Kaya Cebioğlu Yeditepe Üniversitesi	

ONAY

Bu tez Yeditepe Üniversitesi Lisansüstü Eğitim-Öğretim ve Sınav Yönetmeliğinin ilgili maddeleri uyarınca yukarıdaki jüri tarafından uygun görülmüş ve Enstitü Yönetim Kurulu'nun 17/05/2019 tarih ve 2019/08-01 sayılı kararı ile onaylanmıştır.


Prof. Dr. Bayram YILMAZ
Sağlık Bilimleri Enstitüsü Müdürü

DECLARATION

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

16.04.2019

Ayça Güteryüz



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LIST OF ABBREVIATIONS

BMI	Body Mass Index
CDC	The United States Centers for Disease Control and Prevention
EGCG	Epigallocatechin Gallate
HELENA	Healthy Lifestyle in Europe by Nutrition in Adolescence
HOMA-IR	Homeostatic Model Assessment of Insulin Resistance
LDL	Low Density Lipoprotein
TURDEP	Turkey Diabetes, Hypertension, Obesity and Endocrinology Diseases Prevalence Study
WC	Waist circumference
WHO	World Health Organization

ABSTRACT

Guleryuz, A. (2019). Herbal Support Usage Among Consultants Who Apply To Nutrition And Dietetics Department of a Special Hospital in Istanbul to Lose Weight. Yeditepe University, Institute of Health Science, Department of Nutrition and Dietetics, Master Thesis. İstanbul.

According to World Health Organization usage of herbal products is 70-80% of all over the world. In Turkey 32-72% of the population are using herbal products for medical issues. In general, herbal products seem to be natural and harmless. For this reason this study was designed to evaluate knowledge, conscious, preference and usage of consultants among 10 herbal products which are selected and placed in the survey (green tea, cinnamon, turmeric, ginger, white tea, black seed, flaxseed, charry stalk, mate tea, corn silk). Socio-demographic information (age, sex, education, etc.) of the participants were questioned and waist measurements were taken with a tape measure. Of the 133 people who completed the study, 75% were women and 25% were men. The age range of the participants is 22-66. When the waist circumference measurements of the participants were evaluated in terms of men and women, a significant relationship was found between the height of the waist circumference and herbal product usage in both groups (for women $p: 0,000 \leq 0,05$, for men $p: 0,041 \leq 0,05$). When the education levels of the participants were compared, no significant relationship was found with the usage of herbal products ($p: 0.143 > 0.05$). The main reasons for the use of herbal supplements by participants are weight loss. It was observed that participants who had difficulty in weight gain more use of herbal supplements. As far as human health is concerned, it is necessary to make people more aware of herbal supports, and to oversee the production, sales and usage of herbal products by the ministries.

Key words: Obesity, herbal supplements, diet

ÖZET

Gülyüz, A. (2019). İstanbul'da Zayıflamak İçin Özel Bir Hastanenin Beslenme ve Diyetetik Polikliniğine Başvuran Danışanların Zayıflama Diyetlerine Ek Olarak Bitkisel Destekleri Kullanımları. Yeditepe Üniversitesi Sağlık Bilimleri Enstitüsü, Beslenme ve Diyetetik Bölümü Master Tezi. İstanbul.

Milattan önce 3000 yıllarına kadar uzanan bitki kullanımı günümüzde Dünya Sağlık Örgütü'nün verilerine bakıldığında dünya nüfusunun %70-80'ini kapsamaktadır. Türkiye'de de bitkisel destekleri tedavi amaçlı kullanan nüfus %32-72'dir. Obezite ve çoğu hastalığın tedavisinde kullanılan bitkiler genel algıda doğal olduğu için zararsız gözüyle bakılmaktadırlar. Bu nedenle bu çalışmanın amacı bitkisel ürünler hakkında bireylerin bilgi düzeyleri, ankette yer alan 10 bitkinin (yeşilçay, tarçın, zerdeçal, beyaz çay, zencefil, çörekotu, keten tohumu, kiraz sapı, mate çayı, mısır püskülü) kullanım amaçları, yöntemleri, bitkileri temin ettikleri yerler hakkında bilgi edinebilmektir. Katılımcıların sosyo-demografik bilgileri (yaş, cinsiyet, eğitim vb.) sorgulanmış, bel ölçümleri mezura ile alınmıştır. Çalışmayı tamamlayan 133 kişinin %75'i kadın %25'i erkektir. Katılımcıların yaş aralığı 22-66'dır. Katılımcıların kadın ve erkek olarak ayrı ayrı bel çevresi ölçümleri değerlendirildiğinde iki grupta da bel çevresi yüksekliği ile bitki kullanımı arasında anlamlı ilişki bulunmuştur (kadınlar için; $p: 0,000 \leq 0,05$, erkekler için $p: 0,041 \leq 0,05$). Katılımcıların eğitim düzeyleri karşılaştırıldığında, bitkisel destek kullanımları ile anlamlı bir ilişki bulunamamıştır ($p: 0,143 > 0,05$). Bitkisel desteklerin katılımcılar tarafından kullanım nedenlerinin başında kilo kaybı gelmektedir. Kilo vermekte zorlanan katılımcıların bitkisel destekleri daha fazla kullandığı görülmüştür. İnsan sağlığı söz konusu olunca kişilerin bitkisel destekler hakkında daha fazla bilinçlendirilmesi, bakanlıklar tarafından bitkisel desteklerin üretim, satış ve kullanımlarının daha fazla denetlemesi gerekmektedir.

Anahtar Kelimeler: obezite, bitkisel destekler, diyet

1. INTRODUCTION AND AIM

According to the American Heart Foundation; obesity, is directly connected to major health problems such as heart disease, type 2 diabetes, cancer and stroke. It also causes raising insulin resistance, gallstones, osteoarthritis, and respiratory problems (1). All over the world obesity has rising numbers. According to report in 2014 it is about more than 1.9 billion adults who are overweight nearly 600 million of them is obese (2). Between 1980 and 2008 in some countries numbers of obese people became double (3). While underlying the causes of obesity, it should be remained that obesity is a complex problem (4). High caloric diets, sedentary lifestyle, social environment, genetic factors economic problems and education can be listed as causes of obesity (3-5). Outcomes of obesity such as diabetic complications, heart surgeries, stroke, liver diseases, some cancer types, pregnancy problems such as preeclampsia, gestational diabetes and with mental problems like depression made increase in medical costs of countries by every year. Also, productivity of the population is going down with obesity (4, 6). The management and treatment of obesity is the most important step for all over the world because it would help to reduce mortality and morbidity rates among obese people (7). There are many options to treat obesity such as physical activity, eating habit modification, anti-obesity drugs, bariatric surgery (8). According to the Pharmacological Management of Obesity: An Endocrine Society Clinical Practice Guideline main strategy should be appropriate diet, physical activity and lifestyle changes (9). People can lose weight by this way, but it is hard to follow up for a long time (10). Obese people can easily give up on changes and can be frustrated that's why they want some easy ways to lose weight or accelerate weight loss (9). Use of herbal supplements as one element of alternative medicine has been widely increased all over the world (11). Many researchers studied to investigate efficacy and safety of herbal supplements and, they searched herbal supplements for treatment of obesity (12). Belief about herbal supplements is not only losing weight also it will promote healthier lives (13).

Aim of the present study is to understand preferences of consultants about herbal supports who are applying to nutrition and dietetics department of a hospital. In addition, people who prefer herbal supplements, their aim of usage, usage areas, preparation, frequency of usage, place to purchase, purchase patterns, believes are examined to explain the relationship between the person's educational status, sex and age.

2. GENERAL INFORMATION / LITERATURE REVIEW

2.1 Obesity

According to the World Health Organization (WHO) excessive fat accumulation leads to obesity. It is a multi-faced chronic disease that is rapidly increasing. In high- and middle-income countries obesity is destructive for both health and wealth (14). Body mass index (BMI) is the most used method to determine obesity. Also, waist circumference and waist: hip ratio are other determinants of obesity (5, 15).

2.1.1 Diagnosis of Obesity

2.1.1.1. Body Mass Index (BMI)

BMI is a criterion used to determine nutritional status for adults and it helps to classify underweight, normal weight, overweight or obesity. It is defined as the weight in kilograms divided by the square of the height in meters (kg/m^2) (16). BMI classes are same for the both sex and it is also age independent. Evaluation of body weight according to BMI in adults is showed in Table 2.1 (16).

Table 2.1. Evaluation of body weight according to BMI in adults (16)

Nutritional status	BMI (kg/m^2)
Underweight	<18,5
Normal Weight	18,5-24,99
Pre-obesity	25,00-29,99
Obesity	$\geq 30,00$
Obesity Class 1	30,00-34,99
Obesity Class 2	35,00-39,99
Obesity Class 3	$\geq 40,00$

2.1.1.2. Waist Circumference and Waist to Hip Ratio

Waist circumference (WC) and waist to hip ratio are simple anthropometric methods. Abdominal fat accumulation is the key of that methods (5).

WC is used to determine excessive fat around the waist. WC of 102 centimeters or more in men or waist circumference of 88 centimeters or more in women is associated with obesity (5). Waist to hip ratio >1.0 in men and >0.85 in women shows abdominal fat

accumulation. Also, there would be another health problems such as type 2 diabetes, heart disease and high blood pressure. Table 2.2. shows waist circumferences among sex (5).

Table 2.2. Sex-specific waist circumference (5)

	WC (cm)
Women	≥ 88
Men	≥ 102

On the other hand, The Diabetes Canada 2018 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada provides a guideline for waist circumference targets based on sex and ethnicity. Table 2.3. shows waist circumferences among sex and ethnicity (15).

Table 2.3. Ethnic-specific values for waist circumference (15)

Country or ethnic group	Central obesity as defined by WC	
	Men - cm	Women -cm
European, Sub-Saharan African, Eastern Mediterranean and Middle Eastern (Arab)	94 or greater	80 or greater
South Asian, Chinese, Japanese, South and Central American	90 or greater	80 or greater

2.2 Prevalence of Obesity

The United States Centers for Disease Control and Prevention (CDC) reported that in 2015, 34.9% of the American adults were obese. Non-Hispanic black Americans have the highest obesity rate. Hispanic and non-Hispanic white Americans followed respectively. The CDC also reported that obesity was seen mostly between forty and fifty-nine years of age in adults (14).

According to the WHO reports in 2016, about 39% of women and 39% of men were overweight all over the world (17).

Turkey Diabetes, Hypertension, Obesity and Endocrinology Diseases Prevalence Study (TURDEP) II which is conducted by İstanbul University and Ministry of Health announced reports that obesity rate of Turkey has been found 32%. In general, 2/3 of adults are at least overweight or obese. Between TURDEP-I and II in 12-year period obesity rates, waist and hip circumferences had been increased. The weight of the adults was increased 6 kg, their waist circumference increased 6 cm, hip circumference increased 7 cm; obesity for all women and men increased by 44% in these (18).

2.3 Etiology of Obesity

Obesity is stated as multicomponent chronic disease. There is no single cause of obesity. It is composed of genetic, endocrine, metabolic, social, cultural, behavioral and psychological components (19).

Although obesity is multifactorial, it is known that excessive calorie consumption has vital role. Foods consist of the nutrients which are needed for a healthy body. These nutrients give the energy that body needs (3). Energy intake and energy expenditure should be balanced for the maintaining of the body weight. Everyday body needs energy to maintain normal body metabolism. This is resting metabolic rate. Energy expenditure depends on resting metabolic rate or resting energy. If the energy intake is greater than the energy expenditure, balance is changing, and the excess energy is stored as fat in the fat tissues (2).

Resting energy expenditure uses calories from the foods. Other calories are used up with physical activity or other daily activities. There is a simple relationship between energy intake and energy use. Weight gain results from increased energy intake and reduced energy expenditure, or both (14).

According to a hypothesis obesity is congenital disease. Genetic factors are important for body weight (3). Being over weighted or obese is caused by existing genes and behaviors together. For example, body weight is similar in close relatives, especially in similar twins sharing the same genetic codes (14). But also, in a study it was shown that infant rats were tend to obesity when high fat diet during pregnancy and lactation (3). Another study supports that idea: because genetic and the environment is in the center of the body weight, people who are genetically susceptible, gene-environment interaction effects their risk for developing obesity (20).

On the other hand, a study suggests that hormonal regulators play vital role for body weight (21). This study says that appetite in adults is regulated by hormones. Hypothalamic diseases can cause overbearing and obese in animals and, in rare cases obesity in humans (14).

According to a study, leptin plays a vital role for obesity and energy balance. It was seen that hyperphagia and obesity in both humans and animals can be caused by leptin deficiency (22).

There is another hypothesis is suggested that endocrine system can be affected by exogenous chemicals which are called endocrine-disrupting chemicals. These chemicals can block the action of hormones. Obesity, type 2 diabetes mellitus and the metabolic syndrome might be seen frequently if endocrine system was affected (23).

Easy and fast access to high-caloric foods which is called obesogenic environment, and inactivity together can cause positive energy balance thus obesity (24).

In another theory, starting from the globalization, modern food markets came up and high caloric foods can be accessed easily and sold cheap. Also increase in urbanization changed lifestyle and environment. Less farming and less consumption of vegetables and fruits resulted. Fat and sugar content of foods such as fast-foods, sugar-sweetened beverages which contains high calories were started to be consumed by the population (20).

At the same time, increasing use of technology, motorization caused people to shift toward physically less mobile (25). Also, no accessible walking or biking places made people use transportation vehicles and reduced activities (4).

Recent studies have shown that sedentary lifestyle such as watching television and playing computer games are related with increased of obesity rates (26).

In 1983, for the first-time importance of gut microbiota on metabolism is observed by Wostmann et al. Research in recent years which supports Wostmann, that shows different gut microbiota between obese individuals and normal weight individuals (3).

2.4 Treatment of Obesity

2.4.1. Medical Nutrition Therapy

Nutritional treatment for obese people should focus on minimizing fat mass at the same time protecting lean body mass. Success on medical nutritional therapy means avoiding weight regain, providing well- being and improving self-esteem (27).

According to a study, energy intake is found to be positively correlated with BMI. Nutritional therapy is found to be one of the useful treatments of obesity (26). The mean daily energy requirement of a person is depending on the age, height, weight and activity level (3). Purpose of the nutritional therapy is reducing daily energy intake. There are many types of energy-restricted diets are used for weight loss: low-fat, high protein, low carbohydrate. In a study conducted by Sacks, F.M. showed that calorie restricted diets are clinically meaningful but different macronutrients are not significantly important (28). There is another study supports the same results (29). Noakes, M et al tested high protein diets and high carbohydrate diets, but both were calorie restricted diets. As a conclusion weight loss was observed in both diets (28, 29).

Despite losing weight with calorie restriction for the treatment of obesity is successful in short term, longer term weight gain is observed in many people.

Researchers claim that for the long-lasting behavioral changes, dieticians should teach the techniques of behavioral management with calorie restricted diets together (3, 26, 28,29).

2.4.2. Physical Activity

It has been showed that there is consistent evidence that low physical activity is associated with higher levels of body fat (30). It is clear that if energy expenditure increases, negative energy balance occurs, and it promotes growing of lean body mass (26). Physical activity also improves insulin sensitivity through weight reduction (5). Increased insulin sensitivity and increased lean body mass helps treatment of obesity. European projects, Healthy Lifestyle in Europe by Nutrition in Adolescence (HELENA), includes multicenter studies that aimed to show relationship between physical activity and obesity. HELENA pointed that adolescents consume high calories but having high levels of physical activity had less weight than those with a lower level of physical activity (31).

As a conclusion, authorities recommend physical activity to struggle with obesity. At least 150 minutes of activity should be done per week according to The Physical Activity Guidelines for Americans (20). This activity can be of moderate-intensity aerobic activities such as walking, biking, water aerobics etc. If it is vigorous-intensity aerobic activities such as jumping rope, swimming, jogging it is enough to do 75 minutes per week (20, 27).

2.4.3. Anti-Obesity Drugs

The other way of treatment of obesity is anti-obesity drugs. In recent years, there are clinical practice guidelines which are supporting treatment of obesity by medical cares, were published by the American Association of Clinical Endocrinologists and the American Endocrinology College (32, 33). 5 anti-obesity drugs are accepted as safe according to Food and Drug Administration (FDA): Orlistat (Xenical), Phentermine (Qsymia), Belviq (Lorcaserin), combination of Naltrexone and Bupropion and Saxaffena (Liraglutide) (34). Table 2.4 shows names, mechanism, dosage and major side effects of anti- obesity drugs which are approved by the FDA (34).

Table 2.4. Current FDA-Approved Anti-Obesity Drugs (34)

Generic Name	Brand Name	Mechanism of Action	Dosage	Effect on Lipid Profile	Amount of Weight Loss (Approximately) in kg	Major Side Effects
Orlistat	Xenical, Ali	Lipase inhibitor	120 mg	Lower LDL Lower total cholesterol Lower Triglycerides	5.8-6.7	Steatorrhea, flatulence
Lorcaserin	Belviq	Serotonin agonist (5-HT _{2C} receptor agonist)	10 mg	Lower Total cholesterol Lower Triglycerides Same LDL Same HDL	5.8	Headache, dizziness, and nausea
Phentermine/topiramate	Qsymia	Stimulator of synaptic noradrenaline, dopamine and serotonin release by augmenting the activity of glutamate aminobutyrate	3.75/23 mg 7.5/46 mg	Lower Total cholesterol Lower LDL Lower Triglycerides Higher HDL	8.1-10.2	Dry mouth, paresthesia, constipation, insomnia, dizziness
Naltrexone/bupropion	Contrav	Opioid receptor antagonist and reuptake inhibitor of dopamine and noradrenaline	32/360 mg	Lower Total cholesterol Lower LDL Lower Triglycerides Higher HDL	9.3	Nausea, headache, constipation, dizziness, vomiting, and dry mouth
Liraglutide	Saxenda	Glucagon-like peptide-1 (GLP-1) receptor agonist	3 mg	Lower Total cholesterol Lower LDL Lower Triglycerides Higher HDL	8.4	Nausea, hypoglycemia, diarrhea, constipation vomiting

2.4.4 Bariatric Surgery

Recently, bariatric surgery has been showed to cure obesity and obesity related health problems such as diabetes, metabolic syndromes, etc. (19). It is mostly recommended to people who have tried many times and failed of losing weight or weigh gaining recurrently (27).

According to National Institutes of Health at the consensus panel conference in 1991, favorable conditions for bariatric surgery were decided. Body Mass Index (BMI) should be more than $40 \text{ kg} / \text{m}^2$ or $35 \text{ kg} / \text{m}^2$ is eligible if there is a high risk for obesity-related diseases. There should be a team which is consist of health professionals, dieticians, psychologist and exercise physiologists. Patients who decided to have bariatric surgery should be informed in every detail and after surgery they should be closely monitored nutritional, medical and psychological aspects (35).

There are few types of bariatric procedures that they have different ways to treatment obesity. Biliopancreatic Diversion and Duodenal Node may be used to reduce the incidence of food insufficiency, Laparoscopic Adjustable Gastric Banding, Laparoscopic Sleeve Gastrectomy and Roux-Allergic Gastric Resistance Gastric Resection may decrease gastric volume (36).

2.4.5. Traditional and Complementary Medical Applications: Herbal Supports

On October 27, 2014, the Regulation on Traditional and Complementary Medicine was published in the Official Gazette (number: 29158) (37). These methods are acupuncture, apitherapy, phytotherapy, hypnosis, homeopathy, leech application, chiropractic, cup application, larval application, mesotherapy, prolotherapy, osteopathy, ozone application, reflexology, music therapy.

Herbal products are using as supportive of conventional therapy (38). Parts of herbs such as seed, leaf, root, stem, bud, flower are being used to treat many diseases. Also, its aim is maintaining healthy life of people (37).

Since 3000 BC herbal products have been used for the improvement of health. The term of "phytotherapy" is used for the first time in "Le Presse Medical" magazine in 1939. WHO mentioned that, about 70-80% of the world population, basic health care practices include herbal products. In Turkey 32%-72% of the population is using herbal based treatments (37). Despite usage of herbal products are so often, side effects of them are not known well. Because using herbal products consciously, the German Federal

Institute for Drug and Medical Planning and FDA have pointed that serious consequences of uncontrolled usage of herbal products (40). Also, in Turkey Ministry of Health made regulations about herbal products in 2011. In addition, by the 2012, legislative regulations have been made on herbal products in 119 countries all over the world (40).

2.4.5.1. Herbal Supports (Phytotherapy) in the Treatment of Obesity

Programs including moderate calorie restriction and physical exercise have achieved better results than anti-obesity drugs, bariatric surgery and herbal supports. Costs of bariatric surgeries and side effects of anti-obesity drugs make people use herbal products (10). Also people think that 'natural' always means 'safe', and a common belief that remedies from natural origin are harmless and carry no risk that's why herbal support usage became very common and also same study also claims that herbal products are easily available and affordable in low-income countries (41).

2.4.5.1.A. Green Tea

Green tea is found in the family of theaceae. After leaves of *Camelia sinensis* harvested only drying process is used. Drying process is better than semi-fermented or fermented processes. With the fermentation process there are loss of polyphenols. That's why green tea contains more polyphenols than partly fermented oolong tea or fermented black tea. Asian countries prefer green tea after water which is the most consumed drink. Over a hundred of years Asian people have been aware of the positive effects of green tea on health (42).

According to a study catechins and epigallocatechin gallate (EGCG) in green teas may reduce the weight of adipose tissue (10). Same study claims that the green tea treats obesity by regulating plasma leptin levels which is important communicator between neurons in the hypothalamus for regulating appetite (10).

Recently, the meta-analysis study indicated that the caffeine-EGCG ratio had vital role in weight loss or weight management (43). According to that meta-analysis study consumption of green tea causes significant increase in energy expenditure and fat oxidation by its caffeine-EGCG ratio (43).

A study had been designed to show that green tea has a role in insulin sensitivity (44). It promotes expression of genes of glucose transporter type 4, which takes place in glucose transportation in fat cells (44). At the end, increasing insulin sensitivity helps in weight loss.

There is other clinical trial that also show benefits of green tea on obesity (45). It is observed that people who are in trial lost 3.5-kg in body weight and have a 4.14-cm reduction in WC (45).

Another study has showed that weight loss and lower low-density lipoprotein (LDL) levels (45). Its limitation is unfollowed dietary intake and physical activity levels. Beside limitations, sometimes there are unexpected findings such as no changes among body weight and fat percentage of the participants who are taking green tea extract. According to Huang, J. et al., it may cause by high caffeine intake before the study. Lenon et al studied on herbs which should be combined with green tea for the best weigh loss results (46).

In addition to purpose of using green tea as weight loss it also plays important role as antioxidant, anti-carcinogen and heart protectant (44).

2.4.5.1.B. White Tea

White tea is made by *Camelia sinesis* which is harvesting too early and its leaves are dried by mist. To protect its white color of young leaves, during the process, sunlight should be avoided (42).

White tea has become a popular beverage due to its taste and health benefits. The most known benefits are: antioxidant, antimicrobial and anticancer, lipolytic effects (42, 47, 48).

According to Karori et al. they showed that white tea has the highest antioxidant activity through 2, 2- diphenyl- 1- picryl- hydrazyl- hydrate solution methods. However, Carloni et al. used another method 2, 2'- azino- bis (3- ethylbenzothiazoline-6- sulphonic acid), oxygen radical absorbance capacity, and LDL particles (49). They found that high catechin content tea has the highest antioxidant activity and green tea has the most. Catechin content was reported to be 1.94 mg / mL in green tea, 0.80 mg / mL in white tea and 0.24 mg / mL in black tea (49).

Kim et al. showed that white tea has the highest caffeine content compared to green tea, black tea and oolong tea (50).

In a review, in vitro study which is done by Mohsen and his colleague concluded as triglyceride incorporation into adipocytes was decreased when human subcutaneous pre-adipocytes incubated with white tea extract during adipogenesis (47). They also mentioned that lipolysis activity was increased in differentiated adipocytes when these

cells were exposed to white tea extract. Another supportive study showed that the lipolytic activity was triggered by white tea extract (48).

Despite the beneficial effects of white tea, here was not enough evidence that white tea is useful for body weight loss. Lillian et al. could not find any differences on body weight, or visceral adiposity through white tea consumed group (51).

Another study demonstrated that white tea, has beneficial effects on blood glucose levels but they couldn't show and effects on body weight (52).

2.4.5.1.C. Mate Tea

Yerba mate named *Ilexparaguariensis* is in Aquifoliaceae family and grown in South America (53). It contains great numbers of phenolic compounds such as purine alkaloids, flavonoids, tannins, chlorogenic acid and vitamins A, B complex, C, E. When polyphenol levels are compared, mate tea has higher levels than green tea.

A recent study has shown that Yerbamate reduced fat pads. In that study yerba mate inhibited adipogenesis, regulated inflammatory response and increased insulin sensitivity (54).

In a study which is studied on rats, they found no significant differences in blood plasma values and insulin plasma levels between the rats which fed with the yerba mate extract and not fed with yerba mate (control group) (54). But also, they found that yerba mate fluid extract protects against obesity on animals when rats fed with fat rich diets.

A recent search claimed that therapeutic properties of yerba mate on inflammation in some tissues such as hypothalamus, muscle, adipose tissue, and liver. They explained that potential therapeutic effects as presence of phenolic acids in the mate (55).

According to another study, yerba mate may reduce fatty tissue and as a conclusion it helped weight loss in high fat fed rats. According to that study yerba mate increased energy expenditure and fat oxidation. In addition, when they compared blood parameters, they found that plasma insulin and homeostatic model assessment of insulin resistance (HOMA-IR) were elevated in high-fat fed rats (55).

2.4.5.1.D. Black Seed

Black seed, *Nigella sativa*, belongs to the Ranunculaceae family. It has been used for health and treatment of diseases in many years in the Middle East and Southeast Asia (56). Black seed is composed of proteins, amino acids, carbohydrates, fibers, oils (especially polyunsaturated fatty acids), essential oil, minerals, alkaloids, flavonoids and

saponins. Also, it contains various antioxidant substances including thymoquinone and nigellone (57).

Black seed have been used as anti-microbial, antioxidant, anti-inflammatory, antitumor, hematologic, anti-hypertensive, anti-hypertensive in Southeast Asia, Central and Far East. Also, it has positive effects on health as anti-diabetic, antilipidemic, pituitary and anti-obesity (58).

In a study 100 voluntary obese women were included, they had low-calorie diets and took supplements with black seed. As a conclusion decrease in insulin concentrations and insulin resistance were observed (57).

In the review 13 studies claimed that, using black seed caused decreasing in satiety blood sugar levels in and in HbA1c. 8 of the study claimed that, black seed had a great effect on the weight loss (56).

According to another study it has found that in randomized double-blind pilot study, 123 participants had positive developments on BMI when participants used black seed (59).

2.4.5.1.E. Cinnamon

Cinnamon formerly *C. Zeylanicum* belongs to Lauraceae family. It is a small tropical tree planted in Sri Lanka, East and Central Asia (60).

Traditionally, cinnamon has been used to treat of throat or dental problems. Also, it is used as agents as anti-arthritis, antimicrobial, antifungal, antioxidant, anti-inflammatory.

Cinnamon has positive effects on glycemic control in humans and it improves insulin sensitivity (61). Cinnamaldehyde helps to increase glucose uptake into skeletal muscle.

In a study conducted by Hamid Mollazadeh and colleagues cinnamaldehyde reduced food intake and decreased rates of a gastric emptying in rats (60).

Cinnamon is composed of polyphenolic compounds, which has anti-obesogenic effects (60, 62). Liu, Y et al. used a cinnamon extract on overweight or obese pre-diabetic individuals as supplement for four-months. They observed that carnosine which binds to excess glucose in the blood and act as a natural antioxidant has increased in lean mass (62).

In a study it was shown that obese rats which had insulin-resistant, had improvement on insulin sensitivity with cinnamon usage (61). In addition, in the same

study, it has been observed that fat accumulation in the liver was decreased by the cinnamon extract. According to conclusions in that study, it is said that cinnamon may help maintain weight by maintaining glucose levels, not directly makes weight loss (61).

Although cinnamon has positive effects on health and weight, the European Food Safety Association recommended that use of cinnamon should be 0.1 mg / kg (62).

2.4.5.1.F. Flax seed

Flax seed, also known as *Linum usitatissimum*, is accepted as a functional food that is used for wide range of health benefits. Full seeds, oil and mucilage are different forms of flax seed and they may have different usage purposes (63).

Flax seed is one of the world's most known oilseed crops that major source of α -linolenic acid (18: 3; n-3) and is a source of lignan which have many health benefits (64).

Because flax seed has soluble and insoluble fibers, it has been used to treat constipation as a traditional medicine for many years (63).

In a study 27 men participants used flax seed and applied calorie-restricted diet. As a conclusion weight loss was observed. At the same time in flax seed using group had improvement on triglyceride levels and systolic blood pressure (65).

According to another study, which is on rats and it is found an important difference between rats fat with flax seed compared to high fat fad rats. In a group which was fed with flax seed, lost weight and there was also decrease in insulin resistance and blood plasma levels (66).

2.4.5.1.G. Corn Silk

Corn silk known as *Zea mays* L. is the style and stigma of corn berry, and it is mostly planted in Egypt. Even corn silk is a waste material of corn sowing, it includes polysaccharides, proteins, vitamins, minerals, alkaloids and tannins, as well as steroids.

Corn silk has been used for the treatment of edema, prostatitis and similar health conditions such as cystitis, gout, nephritis, kidney stones, and obesity for many years in Chinese herbal medicines (67, 68).

A pharmacological study which was done by in vitro and in vivo have shown that corn silk had role as antioxidants, hypoglycemia reduction, anti-depressant, anti-fatigue and effective diuretic agent (68).

In another study conducted by Wang, C et al. showed that participants which treated with corn silk had improvement on blood glucose and insulin sensitivity index (ISI) levels. Also corn silk had an important role on hypoglycemia (69).

2.4.5.1.H. Cherry Stalk

According to literature cherry stalk is known as *Prunus avium* L. Which is a tree from the Rosaceae family. Only health benefits of cherry stalk such as removing renal stones, edema and hypertension, has been reported by Iranian Traditional Medicine. It has reported that mild diuretic effects of cherry stalks may be caused the presence of flavanoid and potassium at high levels (70).

2.4.5.1.I. Ginger

Ginger is a widely used spice, also it is accepted as a functional food. Ginger which takes an important place in Asian medicine has many bioactive substances such as shogaol, and essential oils containing sesquiterpenes and monoterpenes (71). The most known effects of ginger are anti-arthritic, anti-migraine, anti-thrombotic, antiemetic, antioxidant, angiogenic roles in the body. However, ginger has the beneficial effects of health, in various studies have shown that it helps to treat obesity, metabolic syndrome and diabetes (71-73).

A study demonstrated that ginger may help rats to reduce body fat while they fed with a high fat diet. Even rats continued to feed a high fat diet, ginger supplement also reduced levels of glucose and insulin. At the same time serum total cholesterol, low density lipoprotein cholesterol, triacylglycerol, free fatty acids and phospholipids were decreased (72).

According to a study 80 healthy obese women had took 2 grams of ginger powder for 12 weeks. At the end BMI, serum insulin and HOMA-IR index were significantly reduced when compared to placebo group (72).

Another study, rodents fed with high fat diet took extra ginger supplements. As a conclusion they had significantly lower weight gain, fat accumulation, and leptin levels compared to control group (73).

2.4.5.1.J. Turmeric

Turmeric is a source of curcumin which is a strong polyphenol and it has been used in oriental cuisine as a yellow pigment, coloring and aroma for many years. The first

report on the effect of curcumin on human illness was published 80 years ago in *The Lancet* (47).

Rao et al. reported that rats fed with curcumin supplementation at 500-1000 mg / kg dose helped to decrease in weight gain after 4 weeks. Also, liver cholesterol, triglyceride and free fatty acid levels were decreased, and bile acid excretion was increased (74).

In vitro, in vivo or clinically anti-inflammatory, antioxidant, anti-carcinogenic, anti-aging, anti-infectious, neuro-protective and curcumin protective effects of turmeric have been studied (74).

According to research, curcumin which is polyphenol, had hypoglycemic effect in the liver of obese mice and it regulated the hepatic glucose production and energy production (71).

Jimenez Osorio, A. S. et al. analyzed the experimental and clinical studies in their review. The data showed us how turmeric is reducing insulin resistance and comorbidities such as obesity, prediabetes, diabetes and metabolic syndrome. According to that review turmeric regulates lipid metabolism insulin pathways and reduces metabolic stress and inflammation (74).

3. MATERIAL AND METHOD

3.1. Participants

During May-June-July in 2017 people who visited polyclinics of nutrition and dietetics department of Acibadem Bakırköy Hospital were asked to participate in the study. 150 people accepted to take the survey. 17 of the participants were excluded from the study because they were diagnosed as diabetes, renal failure, epilepsy, cancer, hypothyroid, hypertension, neuropathy or multiple sclerosis. Of the 133 participants who completed the study and had no diagnosed disease other than obesity, 100 were women and 33 were men.

3.2. Data Collection

The questionnaire form (Appendix 1) which was filled with face to face interview method. Questionnaire form composed of general information about participants (age, sex, education levels, etc.), body mass index, waist circumference (cm), diagnosed diseases, used medicines, difficulties in losing weight, and their usage of herbal supplements, buying patterns, etc. Answers were shown in the findings part. WC (cm) of the participants were measured the point of 2 cm above the umbilicus. Weight measurement was made by weighing device. BMI of participants were calculated according to WHO classifications (16).

3.3. Statistical Analysis

SPSS v22.0 was used for statistical analysis. Tests used: i. frequency analysis, ii. descriptive statistics analysis, iii. chi-square analysis, iv. independent group comparisons (independent t test) and v. correlation. Descriptive statistics such as frequency, arithmetic mean, standard deviation, minimum, maximum, frequency, percentage were used in the analysis of the data. The parametric statistical analysis was used in our data set. Independent t-test was used to compare the mean values of 2 independent groups. Pearson correlation coefficient was calculated for correlation analysis. Some of the questions had more than one choice. Also open-ended questions were asked to participants. That's why some statistical analyses could not be calculated over 100%.

3.4. Ethical Approval

For the research, ethical approval was obtained from Acibadem University Clinical Research Ethics Committee on 06.04.2017. With the decision number 2017-6/8 this study is ethically and scientifically appropriated to conduct (Appendix 2).

4. FINDINGS

Of the 133 people who completed the study, 75% were women, 25% were men, mean age of the participants was 36.5(\pm 9,76). Minimum age was 22 and maximum age was 64. Mean weight was 79,2 kg (\pm 12,95), mean height was 166,9(\pm 7,71) cm and mean BMI was calculated as 28,3kg/m²(\pm 3,55). Mean waist circumferences of participants are shown in table 4.1. WC (cm) values of women participating in the study significantly differ between herbal supplement users. (t:2,3655; p: 0,000 \leq 0,05). Average waist circumference value of women using herbal supplement (94,9cm \pm 12,7) was higher than the mean WC of women who do not use herbal supplement (86,8 \pm 9,2). Similarly, the mean WC (cm) values of the men participating in the study significantly differ according to the use of herbal supplements (t: 2,127; p: 0,041 \leq 0,05). Mean WC value of men using herbal supplements (106,8cm \pm 10,0) are higher than the mean WC value of men who do not use herbal supplement (98,9cm \pm 10,9).

Table 4.1. Comparison of herbal supplement usage between men and women with mean waist circumferences

Sex	Preferring herbal supplement	Number of people(n)	Waist circumference (cm)			
			Mean	S.S.	t	p*
Women	Yes	50	94,9	12,7	3,655	,000*
	No	50	86,8	9,2		
Men	Yes	14	106,8	10,0	2,127	,041*
	No	19	98,9	10,9		

*p \leq 0,05 is accepted as statistically significance.

When the educational status is evaluated; 1.5% of the participants were graduated from primary school, 4% were graduated from secondary school, 31.5% were graduated from high school, 51% were graduated from bachelor's degree and 12% stated that they were graduated from PhD programs. There was no significant relationship between the educational status and the use of herbal supplements in the study participants. χ^2 :6,186; p:0,143 $>$ 0,05) (table 4.2).

On the other hand, 3% of the people who use herbal supplement were graduated from primary school, 2% were graduated from secondary school, 39% were graduated from high school, 45% of them had their bachelor's degree and 11% were PhD graduates.

6% of those who do not use herbal supplement were graduated from secondary school, 25% were graduated from high school, 57% were undergraduate and 13% of them completed PhD programs.

Table 4.2. Comparison of herbal supplement usage according to educational status

Education level	Preferring herbal supplement				χ^2	P*
	Yes		No			
	n	%	n	%		
Primary School	2	3,0	0	0,0		
Secondary School	1	2,0	4	6,0		
High School		39,0	17	25,0	6,186	0,143
Bachelor's degree	29	45,0	39	57,0		
Postgraduate	7	11,0	9	13,0		

* $p \leq 0,05$ is accepted as statistically significance.

It is founded that; eighty-eight of 133 people believe that herbal supplements are effective in weight loss control. However, 16 of these 80 people mentioned that they prefer not to use it, even though they think that herbal supplements work (table 4.3). They reasoned it that: there is no need to be consumed by healthy people, I do not have enough knowledge, I think my diet is enough to lose weight, not easily accessible. In addition, all the people who did not think that herbal supplements were effective also not using herbal supplements.

Table 4.3. Comparison of the usage of herbal supplements among beliefs on benefits on health

Herbal supplement helps to improve my health (consumers idea)	Preferring Herbal Supplement			
	Yes		No	
	n	%	n	%
Yes	64	80,0	16	20,0
No	0	0,0	53	100,0

48% of 133 participants who completed the study stated that they used herbal supplements for weight loss or weight control and 52% were not using any kind of herbal supplements (table 4.4). When the reasons of those who do not use herbal supplements are evaluated they were as; I do not have enough knowledge, not useful, I think it is harmful, not easily accessible, there is no need to be consumed by healthy people, I think my diet is enough to weight loss (table 4.5). Because each participant could choose more than one reason; in the table 4.5 total percentage is not equal to 100.

Table 4.4. Use of herbal supplements

Use of herbal supplements	n	%
Yes	64	48,0
No	69	52,0

Table 4.5. Reasons why participants do not use herbal supplements

The reason why they do not use herbal supplements for weight loss control	n	%
I do not have enough knowledge	18	27,0
Not useful	8	12,0
I think it is harmful	12	18,0
Not easily accessible	3	4,0
There is no need to be consumed by healthy people	19	28,0
I think my diet is enough to weight loss	18	27,0

There was a significant relationship between the use of herbal supplements and chronic constipation ($\chi^2:4,992$; $p:0,025 \leq 0,05$) (table 4.6). Of the 133 people, 24 had chronic constipation and 109 did not have any chronic constipation. It was found that 27% of the people using herbal supplements had chronic constipation, and 10% of people who did not use herbal supplement had chronic constipation.

Table 4.6. Comparison of herbal supplement preferences according to chronic constipation status

Chronic Constipation	Preferring Herbal Supplement				χ^2	P*
	Yes		No			
	n	%	n	%		
Yes	17	27,0	7	10,0	4,992	0,025*
No	47	73,0	62	90,0		

*p<0,05 is accepted as statistically significance.

50.4% of the participants stated that they had difficulty in weight loss and 49.6% stated that they were having difficulties to lose weight. People who have mentioned that they have difficulty in weight loss listed the reasons as, respectively; improper food preference, increased appetite, lack of physical activity, decreased metabolic rate, inconsistent meal times, gastrointestinal problems, lack of motivation, busy schedule, lack of nutritional information, night eating, have no idea about herbal supplements, disease, and insufficient water drinking (Table 4.7).

Table 4.7. Believes on difficulties in losing weight and their reasons

Difficulties in losing weight	(n)	%
Yes	67	50,4
No	66	49,6
Reason		
Improper food preference	12	18,0
Increased appetite	11	17,0
Lack of physical activity	9	13,6
Decreased metabolic rate	8	12,0
Inconsistent mealtimes	7	10,6
Gastrointestinal problems	6	9,0
Lack of motivation	5	7,6
Busy Schedule	3	4,5
Lack of nutritional information	1	1,5
Night eating	1	1,5
Have no idea about herbal supplements	1	1,5
Disease	1	1,5
Lack of drinking water	1	1,5

There is a significant relationship between the use of herbal supplements and their beliefs on having difficulties in weight loss (χ^2 : 3,996; $p:0,046 \leq 0,05$) (table 4.8). 59% of people who use herbal supplement think that they have difficulties in weight loss, 41% stated that it is not hard to lose weight; 42% of those who did not use herbal supplement stated that it is not hard to lose weight and 58% stated that they had difficulties.

Table 4.8. Comparison of herbal supplement usage according to the difficulty in weight loss

Difficulty in losing weight	Usage of herbal supplement				χ^2	P*
	Yes		No			
	n	%	n	%		
Yes	38	59,0	29	42,0	3,996	0,046*
No	26	41,0	40	58,0		

* $p \leq 0,05$ is accepted as statistically significance.

11% of the participants stated that they have used herbal supplement and 89% of the participants have never used them. When we analyzed 64 participants with herbal supplement use among themselves, the most preferred herb was cinnamon (86%). The use of herbal supplements respectively were cinnamon (81%), green tea (81%), ginger (59%), black seed (52%), flax seed (31%), cherry stalk (25%), white tea (23%), turmeric (23%), mate tea (16%) and corn silk (9%) (table 4.9). According to answers; single participant may use more than one herbal supplement.

Table 4.9. Herbal Supplement Preference

Herbs	n	%
Cinnamon	55	86,0
Green tea	52	81,0
Ginger	38	59,0
Black Seed	33	52,0
Flaxseed	20	31,0
Cherry Stalk	16	25,0
White Tea	15	23,0
Turmeric	15	23,0
Mate tea	10	16,0
Corn silk	6	9,0

Intended use of cinnamon, usage areas, preparation for consumption, frequency of use, places to purchase, purchase pattern, taking preferences, believes about getting benefit or not from the cinnamon are shown in the table 4.10. respectively.

Table 4.10. Cinnamon

Aim of using cinnamon	n	%
Edema	11	20,0
Decreasing fat mass /weight loss	14	25,0
Gastrointestinal problems	4	7,0
Gas problems	5	9,0
Feeling of fullness	47	85,0
Other	6	11,0
Common usage of Cinnamon		
Dinner	43	78,0
Tea	33	60,0
Other	8	15,0
Preparation cinnamon to usage		
Boiling /Decoction	12	22,0
Brewing/ Infusion	20	36,0
Grinding	16	29,0
Using as it is	41	75,0
Frequency of use cinnamon		
1 time in a day	21	38,0
2 times in a day	6	11,0
3 times in a day	3	5,5
More than 3 in a day	17	31,0
2-3 days in a week/month	8	14,5
Purchasing cinnamon from		
Herbalist	35	65,0
Internet	1	2,0
Market	37	69,0
Purchase pattern of cinnamon		
Unpacked	24	44,0
Packaged	38	70,0
Learning about cinnamon from		
TV	27	50,0
Internet	25	46,0
Medical stuff	33	61,0
Magazine/newspaper	18	33,0
Friend recommendation	32	59,0
Believes about getting benefit from cinnamon preference		
Yes	49	91,0
No	5	9,0

Cinnamon which is the most preferred herbal supplement by the participants, has been determined as feeling of fullness. Other option refers to: flavor of cinnamon, believes in reduction in insulin resistance, and providing blood sugar regulation. Participants used cinnamon as most food / spice. Other refers to: participants use cinnamon in water. 75% of cinnamon users use cinnamon as it is. Those who use cinnamon once a day for 38% and more than 3 times a day are 31%. Although we see that cinnamon is provided from the mostly markets, there are 65% of participants buy cinnamon from herbalists. 70% of the participants who use cinnamon prefer to buy packaged while 44% buy unpacked. Doctor or dietitian is one of the sources affect participants to use cinnamon.

Intended use of green tea, usage areas, preparation for consumption, frequency of use, places to purchase, purchase pattern, taking preferences, believes about getting benefit or not from the green tea are shown in the table 4.11. respectively.

Table 4.11. Green Tea

Aim of using green tea	n	%
Edema	34	65,0
Decreasing fat mass /weight loss	37	71,0
Gastrointestinal Disorders	12	23,0
Gas problems	2	4,0
Feeling of fullness	19	37,0
Other	2	4,0
Common usage of Green Tea		
As tea	52	100,0
Preparation green tea to usage		
Boiling(decoction)	5	10,0
Brewing(infusion)	47	90,0
Frequency to use Green Tea		
Once in a day	24	46,0
Twice in a day	16	31,0
Three times in a day	7	13,0
More than 3 in a day	5	10,0
Purchasing Green Tea from		
Pharmacy	2	4,0
Herbalist	22	42,0
Internet	1	2,0
Market	37	71,0
Preference to purchase green tea as		
Unpacked	22	42,00
Packaged	35	67,00
Learning about green tea from		
TV	17	33,0
Internet	24	47,0
Medical stuff	28	55,0
Magazine / Newspaper	12	24,0
Friend, Family advise	17	33,0
Believes about getting benefit from Green Tea		
Yes	48	94,0
No	3	6,0

The results show that participants use green tea because they think that green tea helps losing fat mass. 90% of green tea consumers use the method of brewing. Green tea is mainly shown by the results using 1 or 2 times per day. Majority of participants buy it from the market and prefer in packages. 55% of the green tea users are recommended by doctor / dietician. But the number of people who are affected by internet is 47%. As a

result of the analysis, the number of people who benefit from the use of green tea is 94%, while the number of people who do not benefit is 6%.

Intended use of ginger, usage areas, preparation for consumption, frequency of use, places to purchase, purchase pattern, taking preferences, believes about getting benefit or not from the ginger are shown in the table 4.12 respectively.

Table 4.12. Ginger

Aim of using Ginger	n	%
Edema	17	47,0
Decreasing fat mass /weight loss	17	47,0
Gastrointestinal Disorders	8	22,0
Gas	7	19,0
Feeling of fullness	13	36,0
Other	4	11,0
Common usage areas of Ginger		
Dinner	28	74,0
As tea	29	76,0
Preparing Ginger for use		
Boiling (decoction)	12	32,0
Brewing (infusion)	24	63,0
Grinding	13	34,0
Use as it is	16	42,0
Other	1	3,0
Frequency to consume Ginger		
Once in a day	29	76,3
Twice in a day	7	18,4
2-3 days in a week / month	2	5,3
Purchasing Ginger from		
Herbalist	19	50,0
Internet	2	5,0
Market	25	66,0
Purchase pattern of Ginger		
Unpacked	29	76,0
Packaged	13	34,0
Learning about Ginger from		
TV	18	47,0
Internet	20	53,0
Medical stuff	24	63,0
Magazine / newspaper	9	24,0
Friend or Family advise	18	47,0
Believes about getting benefit from Ginger consumption		
Yes	38	100,0

When the results are examined, the participants are used with the idea that ginger is decreasing fat mass /weight loss and for edema. There was not much difference between the use of ginger as a spice and tea. It is prepared for use mostly infusion. The results show that ginger was used predominantly once a day. It has been shown that ginger users buy ginger in the market mostly unpacked. With the advice of doctor / dietician, the number of people using ginger is the majority. All the ginger users think that they benefit from ginger.

Intended use of black seed, usage areas, preparation for consumption, frequency of use, places to purchase, purchase pattern, taking preferences, believes about getting benefit or not from the black seed are shown in the table 4.13 respectively.

Table 4.13. Black seed

Aim of using Black Seed	n	%
Edema	10	30,0
Decreasing fat mass /weight loss	10	30,0
Gastrointestinal Disorders	24	73,0
Gas	5	15,0
Feeling of fullness	11	33,0
Common usage areas of Black Seed		
Dinner	33	100,0
As tea	2	6,0
Preparation of Black Seed to usage		
Brewing (infusion)	1	3,0
Graining	7	22,0
Consuming as it is	28	88,0
Frequency to consume Black Sesame		
Once in a day	17	52,0
Twice in a day	5	15,0
Three times in a day	1	3,0
2-3 days in a week/month	10	30,0
Purchasing Black Sesame from		
Herbalist	15	45,0
Market	26	79,0
Preference to purchase Black Sesame as		
Unpacked	11	33,0
Packaged	27	82,0
Learning about Black Sesame from		
TV	15	45,0
Internet	10	30,0
Medical stuff	23	70,0
Magazine / newspaper	7	21,0
Friend or Family advise	14	42,0
Believes about getting benefit from Ginger consumption		
Yes	31	94,0
No	2	6,0

When the results of the questionnaire are examined, the participants are used because they think that the black seed is the most intestinal function regulator. The use of black seed 100% food / spice was found. Black seed is prepared for use without any processing, by the majority. When the frequency of use of black seed is considered, it is shown that the maximum use is once a day. Most black seed users buy it from the market and packaged. With the recommendation of a doctor / dietician, the number of people

who prefer black seed is more common. 96% of the users were satisfied with the results of the black seed.

Intended use of flaxseed, usage areas, preparation for consumption, frequency of use, places to purchase, purchase pattern, taking preferences, believes about getting benefit or not from the flaxseed are shown in the table 4.14. respectively.

Table 4.14. Flaxseed

Aim of using Flaxseed	n	%
Edema	3	15,0
Decreasing fat mass /weight loss	4	20,0
Gastrointestinal Disorders	16	80,0
Gas problems	1	5,0
Feeling of fullness	10	50,0
Common usage areas of Flaxseed		
Dinner	20	100,0
Preparing Flaxseed for use		
Graining	12	40,0
Consuming as it is	41	80,0
Frequency to consume Flaxseed		
Once in a day	16	80,0
Twice in a day	2	10,0
2-3 days in a week/month	2	10,0
Purchasing Flaxseed from		
Pharmacy	1	5,0
Herbalist	10	50,0
Market	13	65,0
Preference to purchase Flaxseed as		
Unpacked	7	35,0
Packaged	15	75,0
Learning about Flaxseed from		
TV	10	50,0
Internet	9	45,0
Medical stuff	15	75,0
Magazine / newspaper	6	30,0
Friend or Family advise	8	40,0
Believes about getting benefit from Flaxseed consumption		
Yes	19	95,0
No	1	5,0

When the results of the questionnaire are examined, the intention of use of flax seed seems mostly gastrointestinal problems. The use of flaxseed was analyzed 100% as food / spice. Flaxseed is prepared for use without any processing, by the majority. When the frequency of use of flaxseed is considered, it is shown that the maximum use is once a day. Most flaxseed users buy it from the market and packaged. With the recommendation of a doctor / dietician, the number of people who prefer flaxseed is more common. 95% of the users were satisfied with the results of the black seed.

Intended use of cherry stalk, usage areas, preparation for consumption, frequency of use, places to purchase, purchase pattern, taking preferences, believes about getting benefit or not from the cherry stalk are shown in the table 4.15. respectively.

Table 4.15. Cherry Stalk

Aim of using Cherry Stalk	n	%
Edema	15	94,0
Decreasing fat mass /weight loss	5	31,0
Gastrointestinal Disorders	2	13,0
Common usage areas of Cherry Stalk		
Dinner	1	6,0
As tea	16	100,0
Preparing Cherry Stalk for use		
Boiling (decoction)	5	31,0
Brewing (infusion)	10	63,0
Consuming as it is	1	6,0
Frequency to consume Cherry Stalk		
Once in a day	8	50,0
Twice in a day	1	6,0
More than 3 in a day	1	6,0
2-3 days in a week/month	6	38,0
Purchasing Cherry Stalk from		
Herbalist	8	50,0
Market	8	50,0
Other	3	19,0
Preference to purchase Cherry Stalk as		
Open	10	63,0
Packaged	9	56,0
As Supplement (tablet)	1	6,0
Learning about Cherry Stalk from		
TV	5	31,0
Internet	6	38,0
Medical stuff	5	31,0
Magazine / newspaper	3	19,0
Friend or Family advise	6	38,0
Believes about getting from Cherry Stalk consumption		
Yes	12	75,0
No	4	25,0

When the results of the survey were analyzed; participants use the cherry stalk for what they think it if for edema. The use of the cherry stalk was 100% tea. Widely used by brewing. When the frequency of the use of cherry stem is examined, it is shown that the maximum use is 1 time per day. Cherry stalk users buy it from both market and herbalists. Internet and friends, parents, neighboring advices have been identified as the most influential sources for the use of cherry stalk. 75% of the users reported that they benefited from the use of the cherry stalk.

Intended use of white tea, usage areas, preparation for consumption, frequency of use, places to purchase, purchase pattern, taking preferences, believes about getting or not from the white tea are shown in the table 4.16. respectively.

Table 4.16. White Tea

Aim of using White Tea	n	%
Edema	12	80,0
Decreasing fat mass /weight loss	9	60,0
Gastrointestinal Disorders	3	20,0
Gas	4	27,0
Feeling of fullness	4	27,0
Other	1	7,0
Common usage areas of White Tea		
As tea	15	100,0
Preparing White Tea for consumption		
Boiling(decoction)	2	13,0
Brewing (infusion)	13	87,0
Frequency to consume White Tea		
Once in a day	13	87,0
Twice in a day	2	13,0
Purchasing White Tea from		
Herbalist	4	29,0
Market	11	79,0
Preference to purchase White Tea as		
Unpacked	4	27,0
Packaged	11	73,0
Learning about White Tea from		
TV	5	33,0
Internet	11	73,0
Medical stuff	5	33,0
Magazine / newspaper	2	13,0
Friend or Family advise	1	7,0
Believes about getting benefit from White Tea consumption		
Yes	13	87,0
No	2	13,0

According to the results of the survey; participants use white tea because they mostly think it helps for edema. White tea is preferred as tea by all users. It is used as brewed by all participants. When the usage of white tea is examined, it is shown that the maximum use is once a day. Most white tea users buy mate tea from markets and

packaged. Internet is the most influential sources for the use of white tea. 87% of the users reported that they benefited from the use of the white tea.

Intended use of turmeric, usage areas, preparation for consumption, frequency of use, places to purchase, purchase pattern, taking preferences, believes about getting benefit or not from the turmeric are shown in the table 4.17 respectively.

Table 4.17 Turmeric

Aim of using Turmeric	n	%
Edema	4	27,0
Decreasing fat mass /weight loss	9	60,0
Gastrointestinal Disorders	5	33,0
Gas	1	7,0
Feeling of fullness	5	33,0
Other	4	27,0
Common usage of Turmeric		
Dinner	11	73,0
As tea	2	13,0
Other	3	20,0
Preparing Turmeric for consumption		
Brewing (infusion)	1	7,0
Graining	7	47,0
Consuming as it is	6	40,0
Other	2	13,0
Frequency to consume Turmeric		
Once in a day	8	53,0
Twice in a day	3	20,0
2-3 days in a week/month	4	27,0
Purchasing Turmeric from		
Pharmacy	3	20,0
Herbalist	10	67,0
Internet	1	7,0
Market	5	33,0
Preference to purchase Turmeric as		
Unpacked	9	60,0
Packaged	6	40,0
As Supplement(tablet)	2	13,0
Learning about Turmeric from		
TV	6	40,0
Internet	6	40,0
Medical stuff	5	33,0
Magazine / newspaper	5	33,0
Friend or Family advise	4	27,0
Believes about getting benefit from Turmeric consumption		
Yes	12	80,0
No	3	20,0

According to the results of the survey; The participants use the turmeric because they think it is useful for decreasing fat mass /weight loss. Most Turmeric users prefer to use it as a spice / curry grinder. It is used as milled by majority. When the frequency of use is shown, it is shown that the maximum use is once a day. Most Turmeric users prefer

to purchase it from herbalists and prefer it unpackaged. 3 people who are using it in supplement form stated that they bought it from the pharmacy. The number of people who prefer turmeric is influenced by internet and television is significantly high. 80% of the users reported that they benefit from the use of turmeric.

Intended use of mate tea, usage areas, preparation for consumption, frequency of use, places to purchase, purchase pattern, taking preferences, believes about getting benefit or not from the mate tea are shown in the table 4.18. respectively.

Table 4.18. Mate Tea

Aim of using Mate Tea	n	%
Edema	5	56,0
Decreasing fat mass /weight loss	6	67,0
Gastrointestinal Disorders	1	11,0
Feeling of fullness	1	11,0
Common usage areas of Mate Tea		
As tea	9	100,0
Preparing Mate Tea for consumption		
Boiling (decoction)	1	11,0
Brewing (infusion)	9	100,0
Frequency of use Mate Tea		
Once in a day	9	100,0
Purchasing Mate Tea from		
Pharmacy	1	11,0
Herbalist	8	89,0
Market	2	22,0
Purchase pattern of Mate Tea		
Unpacked	7	78,0
Packaged	4	44,0
Learning about Mate Tea from		
TV	2	22,0
Internet	5	56,0
Medical stuff	3	33,0
Magazine / newspaper	1	11,0
Friend or Family advise	4	44,0
Believes about getting benefit from Mate Tea consumption		
Yes	7	70,0
No	3	30,0

According to the results of the survey; participants use mate tea because they think it is the most successful Decreasing fat mass /weight loss . Mate tea is preferred as tea by all users. It is used as brewed by all participants. When the usage of Mate tea is examined, it is shown that the maximum use is once a day. Most Mate tea users buy mate tea from herbalist and buy it unpackaged. The number of people who prefer mate tea is influenced by the Internet.70% of the users reported that they benefited from the use of Mate tea.

Intended use of corn silk, usage areas, preparation for consumption, frequency of use, places to purchase, purchase pattern, taking preferences, believes about getting benefit or not from the corn silk are shown in the table 4.19. respectively.

Table 4.19. Corn Silk

Aim of using Corn Silk	n	%
Edema	3	50,0
Decreasing fat mass /weight loss	3	50,0
Gastrointestinal Disorders	5	83,0
Feeling of fullness	2	33,0
Common usage areas of Corn Silk		
As tea	6	100,0
Preparing Corn for usage		
Boiling (decoction)	3	50,0
Brewing (infusion)	3	50,0
Frequency to consume Corn Silk		
Once in a day	2	33,0
2-3 days in a week/month	4	67,0
Purchasing Corn Silk from		
Herbalist	6	100,0
Internet	1	17,0
Market	1	17,0
Purchase pattern of Corn Silk		
Unpacked	6	100,0
Learning about Corn Silk from		
TV	2	33,0
Internet	4	67,0
Magazine/newspaper	1	17,0
Friend or Family advise	4	67,0
Believes about getting benefit from Corn Silk consumption		
Yes	6	100,0

According to the results of the survey; participants use corn silk for losing fat and edema. All participants prefer corn silk as tea. Considering the frequency of use of corn silk, it is shown that the maximum usage is 2-3 times per week / month. Participants who consume corn silk prefer to purchase corn silk from herbalist and as unpackaged. People who prefer the corn silk influenced through internet, friends and parent's advice. 100% of the users reported that they benefited from the use of corn silk.

5. DISCUSSION

In order to evaluate the use of herbal supplements who applied to the nutrition and dietetics polyclinics of a private hospital in İstanbul, 48% of the participants who is in the study reported that they used herbal supplements with their diet. These results were found to be lower than the results obtained from a similar study in Kayseri province (53.6%) (75). But Nur et al. who studied in 28 provinces found lower percentage of usage of herbal supplements (39.2%) (76). The difference in the number of participants, percentage of sex, range of age and area that study took place, may have affected the usage of herbal supplements.

Of the 133 individuals who completed the study, 52% said that they did not use herbal products. The reasons for not using herbal supplements, respectively : I do not have enough knowledge %27, Not useful 12%, I think it is harmful 18%, Not easily accessible 4%, There is no need to be consumed by healthy people 28%, I think my diet is enough to weight loss 27%. In a similar study, in Kansas City, 211 people out of 267 participants (79%) did not use herbal supplements (77). When all participants were asked about the reliability of herbal products, 66% thought that herbal supplements would not pose a health risk. Only 27% of the participants doubted the purity of herbal supplements, while 45% thought the products were not standardized by the producers. Our study and the study in Kansas City have the similar results. Most of the participants do not use herbal support. And, participants in both studies think that herbal support is not harmful, but they do not have enough knowledge about it. In another study Kaner, G. et al. showed that that approximately one third of the users of herbal product used herbal products without doing any research (75). The lack of knowledge about herbal supplements is quite high according to the supported results.

In the results obtained in our study, it was found that 78% of the 64 participants who used the herbal supplements were women. Similar studies have shown that women have higher usage of herbal products (75, 76). According to another study there was no significant difference between women and men participant in terms of herbal supplement usage (78).

When the education level of the participants is compared in this study, 95% of the 64 individuals who prefer to use herbals are graduated from at least high school. Similar to this research, it has been shown in studies (75, 76) that the use of herbal support is higher in individuals with higher education levels. We expected that participants with

higher education levels would be lower usage of herbal plants. But our results and similar studies indicates the opposite.

In our study, the average BMI of herbal supplement using women is 29kg/m². The study of Aydın, S. et al. supports these findings that BMI of herbal supplement using women is found to be over 25 kg/m² (79).

In a study which is conducted with nurses that working in a medical center in Malatya over 252 participants only 20 nurses were found to be using herbal supplements in contrast to 48% of the 133 participants in our study have reported that they use herbal supplements (80). According to another study done by Ergen, A. et al. also demonstrated that increased awareness about nutritional support products (81). In our study %61,8 of the participants stated that they knew herbal supplements but usage of herbal extracts by the participants was 28.3%. When we consider these studies, population which was chosen, number of samples, demographic properties were all different. Because there is no study representing all the society, it is hard to make a general judgment.

Considering the purpose of use of herbal supplements; Koç, H. showed that 2.8% of the participants used herbal products for weight loss. Kaner, G. et al. in their study 14.6% over the 855 participants, use herbal supplements for obesity (75, 80). In our study, 48% of 133 people reported their aim for using herbal supplements as for weight loss or weight control. According to Kaner, G. et al. showed that 59 of 458 people used the herbs to regulate the intestinal function. Differently, in our study aims of use of herbal supplements as a regulator of intestinal functions are analyzed separately. We see that the highest amount of usage of herbal for intestinal system is corn silk with 83% and then the flax seed comes with 80% usage. 21.8% of green tea, 21% of ginger, 72.7% of black seed, 12.5% of cherry stalk, 18.7% of white tea, 33% of turmeric was shown in the survey.

October 1, 1985 date and 5777 by the Ministry of Health on "Herbalists, Spice and similar shops are" related circulars have been identified and regulated in 1999 (82). It is forbidden for the herbalists to advise and prepare herbals, herbal mixtures, herbal products against various diseases. According to this circular report herbs would be stored in sealed containers and would be presented to the customer in healthy conditions. However, many herbal mixtures and products are found in randomly prepared in the shops. There is a study conducted in Isparta and Afyon stated that 47.4% of the herbalists had their own mixtures and sold these mixtures and 52.6% of them did not have their own mixtures (83). Although 52.6% of the herbalists stated that they do not have mixtures, it was observed in the research that almost every transfer was done by mixing the plants

and selling them in stores. Standardization is one of the main problems of herbs by herbalists (41). 'Standardization' describes all measurements made during the production process and quality controls to ensure reproducible quality. Unfortunately, standardization is not possible if herbal product does not produced and tested in laboratories. That's why optimum effect of the herbs taken from herbalists is unobtainable. Another problem is about herbals that they have poor storage conditions and they are susceptible to contamination. Contamination of herbal products can be due to various reasons. Plants growing close to asphalt and in places near thermoelectric power plants contain 3-4 times more heavy metal than normal. Unhealthy storage conditions, chemical products added for preservation, pesticides used by unconscious producers were the main reasons for other contamination (84).

Despite all risks, in our study, 50 of the 64 people who used herbal supplements from the participants stated that they bought at least one is unpacked. The remaining 14 participants stated that they purchased their herbal supplements from markets and packed. If we consider the places where individuals purchase herbal supplements: we see that all the participants using corn silk prefer buying the herb from herbalists. More than half of the participants who are buying mate tea, turmeric, cinnamon, ginger, flax seed and cherry stalk prefer herbalist to markets. Another study supported our results that they showed most of the participants (men: 75.8%; women: 86.6%) receive herbal supplements from the herbalists (75).

In a study conducted on the use of herbal supplements in university students and their families more than half of the participants (men: 51.5%; women: 56.0%) said that they were influenced by their neighbors and relatives (75). In our study, the number of participants who are using herbal supplements stated that they were using herbs on recommendations from friends, neighbors or relatives is quite high. In our study when we analyzed every single herbal, the most influenced participants by environmental factors are corn silk users. 67 % of corn silk users were mentioned that they were affected by their families, friends or relatives. Participants who used other herbals were affected by friends, family or relatives respectively: cinnamon 59%, ginger 47%, mate tea 44%, black seed 42%, flax seed 40%, cherry stalk 38%, green tea 33%, turmeric 27%, white tea 7%. In other studies which are supporting our study, it was found that the participants were affected by television to use herbal supports (75, 85). Ergen A. mentioned that people with a high television watching rate and low education levels are more interested in herbal

mixtures and are perceived as a kind of medicine (81). However, no significant relationship was found between education level and herbal use in our study.

According to Kaner, G. et al. 387 participants from 458 people who use herbal products say that they benefit from herbal use and / or suggest others to use it, while 71 people say they do not benefit and / or do not recommend (75). In our study it was analyzed separately to the benefits of the participants for each herbal. Participants using corn silk and ginger stated that they had 100% benefits from the usage of herbs. For the other herbals are listed respectively as their benefit rates: 95% flaxseed, 94% green tea and black seed, %91 cinnamon, 87% white tea, 80 % turmeric, 75% charray stalk, 70% mate tea.

In our study, the frequency of use of green tea is 51.6%. In a similar study conducted by Kandıralı, Ş, the frequency of use of green tea is 88.6% (86). Sheik, R et al. showed that 28.8% of the participants use the green tea every day, and people who use green tea is said to be effective in losing weight (87). According to another study in Karachi, 67 of the 100 participants use the greenery every day (88). In this study, all the participants who consumed green tea, prefer green tea at least once every day and that 5 people consumed green tea 3 or more a day. The aim of the participants 71% are losing fat and 65% of edema problems.

Kandıralı, Ş. showed the frequency of use of ginger is 68.6%. In our study, the frequency of ginger use is 59% (86). Another study in Adıyaman province, ginger is used for appetite and relaxing effect of the stomach and it is used mostly as a spice in the food (89). In our study, 13% of people who use ginger have said that they use ginger because they give appetite suppressant and feeling of satiety. In addition, 7% used to eliminate gas problems. There are 47% of people who use it for weight loss because they think it mostly help for edema problems and help for losing weight.

In a study conducted by Demircioğlu, Y., 445 of the 626 participants used cinnamon (71.7%) (90). However, the use of cinnamon for medical treatment was found to be quite low. 58.2% of the participants stated that they used cinnamon to beautify the smell and taste of the foods. In another study cinnamon was included in the first five most commonly used herbals (30,1%) (75). In our study, the frequency of cinnamon use is 86%. 78% of the participants preferred the use of the cinnamon as a flavor on food or water. It is used as tea is 60%. Those who say that I use cinnamon as an appetite suppressant are 85%, as a fat burner and edema problem 25%.

Tekün, E found that the awareness of white tea was 33%. In this study, 16 of the participants using 64 herbals prefer to use white tea. Ulusoy, A. et al made the study while white tea is known to be 11.5%, only 2.3% of the participants are using white tea (92).

According to the study Değirmenci, Y. et al., 94 of the 624 participants (15%) participated in the study using turmeric (90). It is reported that 94 people using turmeric used only 8 people for herbal treatment of turmeric. The remaining 20 of them use the food to enhance the taste, to make the beauty of the 19,9 is to beautify the look of the, 7 is to make the appetite and 33 is to think about the antimicrobial effect. Those who use herbal treatment primarily use turmeric for complaints of gas problems and digestion. Another similar study conducted between 2008-2012 in South Korea there were 2,216,996 participants (93). There were 664 people in the similar age group who are using turmeric. In the present study, 15 out of 64 participants (23%) reported using turmeric. According to the results of this study, most of the turmeric is used as a spice in the meal (73%). 60% of those who use it as herbal treatment stated that they used to lose weight and then 33% for intestinal function.

In a study conducted in university students and their families black seed was among the first 5 most preferred herbal among 95 herbals (75). The use of black seed by the participants is 28.4%. In the study performed with 39 men participants with central obesity, the use of black seed was found to be effective in the waist circumference and body weight in the participants (94). In this study, 30% of 33 people who use black seed as a fat burner, 33% as an appetite suppressant. However, in another study it was shown that black seed supplement was not significantly effective on waist circumference (95). Studies have been shown to be used in gastrointestinal complaints of black seed (96, 97). In this study, 73% of the people who use black seed are intended to regulate the intestinal functions, and the aim of 15% is to eliminate gas complaints. Black seed oil was used in the article which compiled the most studies to show the effect of black seed on health (97). However, in this survey study, most of the participants who used black seed were used as it was. Only 22% of the participants used the black seed as ground.

The use of Mate, which is mostly used in Brazil, Uruguay, Paraguay and Argentina, has started in the Middle East, Germany and America in recent years (98). In this study, we may see that there are not many people are using mate tea in Turkey. 16% of the participants were using mate tea and 30% stated that they did not benefit from mate tea. 67% of participants are using mate tea for losing fat. Although some supportive data were presented in a study that examined Mate tea, no specific information was found that

the addition of any particular mate was effective to reduce body weight (98). Since the use of Yerba mate in Brazil is known to be very common, it has been questioned about the consumption of coffee and mate tea during the pregnancy period (99). 88.7% of the participants stated that they consumed yerba mate and coffee during their pregnancy, but no significant relationship was found between the hyperactivity and caffeine at the end of the 11-year cohort study on their children (99).

The use of flax seed in food sector due to high nutritional value as well as usage in various areas such as clothing, soap, dyeing has increased the researches which have done on this herbal. However, the importance given to this herbal in our country has decreased over the years. The area of flax seed cultivation, which was 8.700 hectares in 1980, decreased to 350 hectares in 2001 (100). Flaxseed imported to meet the needs of flax seeds in our country in recent years, the seeds are sold without specifying the origin and the seeds offered for sale does not have any standard (101). In this present study, 50% of people using flaxseed stated that they received flax seed from the herbalist. If there are no standards of flax seed which is imported, controls and tests should be done often by the government and herbalists should be audited regularly.

In a study conducted in the Black Sea region, 280 participants and 87 herbals were questioned in the study the most commonly known among the herbals used in the corn silk is intended to relieve the symptoms of urinary tract infections other than food and animal feed (102). In our study, only 6 of the 64 people use corn silk. Participants also prefer corn silk because it regulates intestinal function most. Another purpose of the participants who use corn silk is to eliminate the problems of edema. In another study it was shown that polyphenolic properties of corn silk when infused in 100 degrees of water (103). In this study, all the corn silk participants use herb as tea, but 50% of them brew and 50% of them boil while they are preparing for use. 33% of the participants using the corn silk said that they used it once a day. Rest of the users prefer corn silk 2-3 times a week or month. However, in one study, the recommended dose is to consume between 2 and 8 grams of the herbal by brewing 3 times a day (104).

In our study, 16 participants were using cherry stalk. 94% of cherry stalk users think that it is useful for urinary excretion. Participants were boiling cherry stalk itself. On the other hand, in a clinical study in Tehran the cherry stem was powdered and encapsulated and given to the participants as 2 grams / day (70). At the end of the study there was an increase in urine output. In another study which is conducted by Öztürk, M. et al. noted benefits of cherry as antidiarrheal, anti-inflammatory, laxative, anthelmintic,

antitussive (105). But that study did not mention about cherry stalk and its benefits. When literature review was made there were no enough academic studies. That's why we could not discuss cherry stalk much.



6. CONCLUSION

Obesity is a complex chronic disease that has growing numbers all around the world. Eating habits, lifestyle, genetic and environmental factors may be the reasons of obesity. Dieting, doing exercises and changes in daily habits should be the treatment of obesity. Unfortunately, busy work or school schedules, rush in daily life sway people to find something easy and fast. That's why anti-obesity drugs, bariatric surgeries and herbal product usage have emerged. But anti-obesity drugs may have side effects, bariatric surgeries may be expensive. People think that herbal products are natural and harmless. Also, internet, media, friends or relatives may be the other influencers to use herbal products. Herbalists are easy way to find any kind of herbs. Also, mixtures of herbs prescript as weight loss products. However, when it comes to human health, legal regulations for herbal products are primary importance. Regulating herbal shops about safety storage, toxicology, prescriptions should be conduct by Minister of Health. Turkey has abundant lind in terms of herbs. Unfortunately, not all people are conscious about herbal products. Wrong usage of herbal products or lack of appropriate standards are the key factors of toxicity and it may cause serious injuries, life-threatening conditions, and even death (106). Raising the awareness of the consumers should be needed. Further researches would help to understand the relationship better between obesity and herbal products.

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Appendix 1. The Questionnaire Form

1. BÖLÜM

1-Doğum tarihiniz

2-Cinsiyetiniz

Kadın

Erkek

3-Boyunuz

4-Kilonuz

5-Bel çevresi

6- Eğitim durumunuz

Okuma- yazma yok

Okuma- yazma var

İlkokul mezunu

Ortaokul mezunu

Lise mezunu

Lisans mezunu

Lisans üstü

7-Teşhisi konulmuş hastalığınız var mı?

Evet Varsa nedir?

Hayır

8-Kullanmakta olduğunuz ilaç/ takviye var mı?

Evet Kullandığınız ilaç veya takviyeler:

Hayır

9-Kronik kabızlığınız var mı?

Evet

Hayır

10-Kilo vermekte zorlandığınızı düşünüyor musunuz? Sizce neden?

11- Bitkisel desteklerin kilo kontrol/kaybında etkili olduğunu düşünüyor musunuz

Evet

Hayır

12-Bitkisel destekleri kilo kaybı veya kontrolü için kullanıyor musunuz

Evet

Hayır

12. soruya Cevabınız HAYI R ise nedeni

Yeterince bilgim yok

- Faydalı değil
- Zararlı olduğunu düşünüyorum
- Kolay erişilebilir değil, her yerde bulamıyorum
- Sağlıklı insanlar tarafından tüketilmesine gerek yok
- Zayıflamak için diyetimin yeterli olduğunu düşünüyorum
- Diğer.....

12. soruya cevabınız EVET ise aşağıdaki sorulara devam ediniz

2. BÖLÜM

13-Yeşilçay kullanır mısınız?

Evet

Hayır

Cevabınız evet ise aşağıdaki 14-21. sorulara cevap veriniz:

14-Yeşilçayı diyetinizde hangi amaçla kullanıyorsunuz? (Birden fazla seçenek işaretleyebilirsiniz)

Ödem atıcı

Yağ yakıcı

Bağırsak fonksiyonlarını düzenleyici

Gaz problemini giderici

Tokluk hissi /iştah kapatıcı

Diğer.....

15-Yeşilçayı kullanım alanlarınız (Birden fazla seçenek işaretleyebilirsiniz)

Yemekte, baharat olarak

Çay olarak

Diğer.....

16-Yeşilçayı tüketime nasıl hazırlarsınız? (Birden fazla seçenek işaretleyebilirsiniz)

Kaynatarak (dekoksiyon)

Demleyerek (infüzyon)

Öğütürük

Diğer

17-Yeşilçayı kullanım sıklığınız

Günde 1

Günde 2

Günde 3

Günde 3 ten çok

18-Yeşilçayı temin ettiğiniz yer veya yerler (Birden fazla seçenek işaretleyebilirsiniz)

Eczane

Aktar

İnternet

Market

Diğer.....

19-Yeşilçayı satın alırken nasıl olmasını tercih ediyorsunuz (Birden fazla seçenek işaretleyebilirsiniz)

- Açık
Ambalajlı
Supplement olarak (tablet formunda)

20-Yeşilçay hakkında etkilendiğiniz kaynak nedir? (Birden fazla seçenek işaretleyebilirsiniz)

- TV
Doktor veya diyetisyen
Dergi / gazete
Arkadaş, ebeveyn, komşu tavsiyesi
Diğer.....

21-Yeşilçay kullanımından fayda gördüğünüzü düşünüyor musunuz?

- Evet
Hayır

22-Beyaz çay kullanır mısınız?

- Evet
Hayır

Cevabınız evet ise aşağıdaki 23-30. sorulara cevap veriniz:

23-Beyaz çayı diyetinizde hangi amaçla kullanıyorsunuz? (Birden fazla seçenek işaretleyebilirsiniz)

- Ödem atıcı
Yağ yakıcı
Bağırsak fonksiyonlarını düzenleyici
Gaz problemini giderici
Tokluk hissi /iştah kapatıcı
Diğer.....

24- Beyaz çayı kullanım alanlarınız (Birden fazla seçenek işaretleyebilirsiniz)

- Yemekte, baharat olarak
Çay olarak
Diğer.....

25-Beyaz çayı tüketime nasıl hazırlarsınız? (Birden fazla seçenek işaretleyebilirsiniz)

- Kaynatarak (dekoksiyon)
Demleyerek (infüzyon)
Öğütterek
Diğer

26-Beyaz çayı kullanım sıklığınız

- Günde 1
Günde 2
Günde 3

Günde 3 ten çok

27-Beyaz çayı temin ettiğiniz yer veya yerler (Birden fazla seçenek işaretleyebilirsiniz)

- Eczane
Aktar
İnternet
Market
Diğer.....

28-Beyaz çayı satın alırken nasıl olmasını tercih ediyorsunuz (Birden fazla seçenek işaretleyebilirsiniz)

- Açık
Ambalajlı
Supplement olarak (tablet formunda)

29-Beyaz çay hakkında etkilendiğiniz kaynak nedir? (Birden fazla seçenek işaretleyebilirsiniz)

- TV
Doktor veya diyetisyen
Dergi / gazete
Arkadaş, ebeveyn, komşu tavsiyesi
Diğer.....

30-Beyaz çay kullanımından fayda gördüğünüzü düşünüyor musunuz?

- Evet
Hayır

31-Mate çayı kullanır mısınız?

- Evet
Hayır

Cevabınız evet ise aşağıdaki 32-39.sorulara cevap veriniz:

32-Mate çayı diyetinizde hangi amaçla kullanıyorsunuz? (Birden fazla seçenek işaretleyebilirsiniz)

- Ödem atıcı
Yağ yakıcı
Bağırsak fonksiyonlarını düzenleyici
Gaz problemini giderici
Tokluk hissi /iştah kapatıcı
Diğer.....

33-Mate çayı kullanım alanlarınız (Birden fazla seçenek işaretleyebilirsiniz)

- Yemekte, baharat olarak
Çay olarak
Diğer.....

34- Mate çayı tüketime nasıl hazırlarsınız? (Birden fazla seçenek

İşaretleyebilirsiniz)

- Kaynatarak (dekoksiyon)
- Demleyerek (infüzyon)
- Öğüterek
- Diğer

35-Mate çayı kullanım sıklığınız

- Günde 1
- Günde 2
- Günde 3
- Günde 3 ten çok

36-Mate çayı temin ettiğiniz yer veya yerler (Birden fazla seçenek işaretleyebilirsiniz)

- Eczane
- Aktar
- İnternet
- Market
- Diğer.....

37-Mate çayını satın alırken nasıl olmasını tercih ediyorsunuz (Birden fazla seçenek işaretleyebilirsiniz)

- Açık
- Ambalajlı
- Supplement olarak (tablet formunda)

38-Mate çayı hakkında etkilendiğiniz kaynak nedir? (Birden fazla seçenek işaretleyebilirsiniz)

- TV
- Doktor veya diyetisyen
- Dergi / gazete
- Arkadaş, ebeveyn, komşu tavsiyesi
- Diğer.....

39-Mate çayı kullanımından fayda gördüğünüzü düşünüyor musunuz?

- Evet
- Hayır

40-Zencefil kullanır mısınız?

- Evet
- Hayır

Cevabınız evet ise aşağıdaki 41-48. sorulara cevap veriniz:

41-Zencefil diyetinizde hangi amaçla kullanıyorsunuz? (Birden fazla seçenek işaretleyebilirsiniz)

- Ödem atıcı
- Yağ yakıcı
- Bağırsak fonksiyonlarını düzenleyici

- Gaz problemini giderici
Tokluk hissi /iřtah kapatıcı
Diđer.....

42-Zencefil kullanım alanlarınız (Birden fazla seçenek iřaretleyebilirsiniz)

- Yemekte, baharat olarak
Çay olarak
Diđer.....

43-Zencefil tüketime nasıl hazırlarsınız? (Birden fazla seçenek iřaretleyebilirsiniz)

- Kaynatarak (dekoksiyon)
Demleyerek (infüzyon)
Öğüterek
Diđer

44-Zencefil kullanım sıklığınız

- Günde 1
Günde 2
Günde 3
Günde 3 ten çok

45-Zencefil temin ettiğiniz yer veya yerler (Birden fazla seçenek iřaretleyebilirsiniz)

- Eczane
Aktar
İnternet
Market
Diđer.....

46-Zencefil satın alırken nasıl olmasını tercih ediyorsunuz (Birden fazla seçenek iřaretleyebilirsiniz)

- Açık
Ambalajlı
Supplement olarak (tablet formunda)

47-Zencefil hakkında etkilendiğiniz kaynak nedir? (Birden fazla seçenek iřaretleyebilirsiniz)

- TV
Doktor veya diyetisyen
Dergi / gazete
Arkadař, ebeveyn, komřu tavsiyesi
Diđer.....

48-Zencefil kullanımından fayda gördüğünüzü düşünüyor musunuz?

- Evet
Hayır

49-Çörek otu kullanır mısınız?

- Evet

Hayır

Cevabınız evet ise aşağıdaki 50-57. sorulara cevap veriniz:

50- Çörek otunu diyetinizde hangi amaçla kullanıyorsunuz? (Birden fazla seçenek işaretleyebilirsiniz)

- Ödem atıcı
Yağ yakıcı
Bağırsak fonksiyonlarını düzenleyici
Gaz problemini giderici
Tokluk hissi /iştah kapatıcı
Diğer.....

51- Çörek otunu kullanım alanlarınız (Birden fazla seçenek işaretleyebilirsiniz)

- Yemekte, baharat olarak
Çay olarak
Diğer.....

52- Çörek otunu tüketime nasıl hazırlarsınız? (Birden fazla seçenek işaretleyebilirsiniz)

- Kaynatarak (dekoksiyon)
Demleyerek (infüzyon)
Öğütterek
Olduğu gibi
Diğer

53-Çörek otu kullanım sıklığınız

- Günde 1
Günde 2
Günde 3
Günde 3 ten çok
Diğer...

54-Çörek otu temin ettiğiniz yer veya yerler (Birden fazla seçenek işaretleyebilirsiniz)

- Eczane
Aktar
İnternet
Market
Diğer.....

55-Çörek otu satın alırken nasıl olmasını tercih ediyorsunuz (Birden fazla seçenek işaretleyebilirsiniz)

- Açık
Ambalajlı
Supplement olarak (tablet formunda)

56-Çörek otu hakkında etkilendiğiniz kaynak nedir? (Birden fazla seçenek işaretleyebilirsiniz)

- TV
- Doktor veya diyetisyen
- Dergi / gazete
- Arkadaş, ebeveyn, komşu tavsiyesi
- Diğer.....

57-Çörek otu kullanımından fayda gördüğünüzü düşünüyor musunuz?

- Evet
- Hayır

58-Kiraz sapı kullanır mısınız?

- Evet
- Hayır

Cevabınız evet ise aşağıdaki 59-66. sorulara cevap veriniz:

59- Kiraz sapını diyetinizde hangi amaçla kullanıyorsunuz? (Birden fazla seçenek işaretleyebilirsiniz)

- Ödem atıcı
- Yağ yakıcı
- Bağırsak fonksiyonlarını düzenleyici
- Gaz problemini giderici
- Tokluk hissi /iştah kapatıcı
- Diğer.....

60- Kiraz sapı kullanım alanlarınız (Birden fazla seçenek işaretleyebilirsiniz)

- Yemekte, baharat olarak
- Çay olarak
- Diğer.....

61-Kiraz sapını tüketime nasıl hazırlarsınız? (Birden fazla seçenek işaretleyebilirsiniz)

- Kaynatarak (dekoksiyon)
- Demleyerek (infüzyon)
- Öğütürük
- Olduğu gibi
- Diğer

62- Kiraz sapı kullanım sıklığınız

- Günde 1
- Günde 2
- Günde 3
- Günde 3 ten çok
- Diğer

63-Kiraz sapını temin ettiğiniz yer veya yerler (Birden fazla seçenek işaretleyebilirsiniz)

- Eczane
- Aktar
- İnternet

Market
Diğer.....

64- Kiraz sapını satın alırken nasıl olmasını tercih ediyorsunuz (Birden fazla seçenek işaretleyebilirsiniz)

Açık
Ambalajlı
Supplement olarak (tablet formunda)

65- Kiraz sapı hakkında etkilendiğiniz kaynak nedir? (Birden fazla seçenek işaretleyebilirsiniz)

TV
Doktor veya diyetisyen
Dergi / gazete
Arkadaş, ebeveyn, komşu tavsiyesi
Diğer.....

66- Kiraz sapı kullanımından fayda gördüğünüzü düşünüyor musunuz?

Evet
Hayır

67-Zerdeçal kullanır mısınız?

Evet
Hayır

Cevabınız evet ise aşağıdaki 68-75. sorulara cevap veriniz:

68-Zerdeçalı diyetinizde hangi amaçla kullanıyorsunuz? (Birden fazla seçenek işaretleyebilirsiniz)

Ödem atıcı
Yağ yakıcı
Bağırsak fonksiyonlarını düzenleyici
Gaz problemini giderici
Tokluk hissi /iştah kapatıcı
Diğer.....

69-Zerdeçalı kullanım alanlarınız (Birden fazla seçenek işaretleyebilirsiniz)

Yemekte, baharat olarak
Çay olarak
Diğer.....

70-Zerdeçalı üketime nasıl hazırlarsınız? (Birden fazla seçenek işaretleyebilirsiniz)

Kaynatarak (dekoksiyon)
Demleyerek (infüzyon)
Öğüterek
Olduğu gibi
Diğer

71-Zerdeçal kullanım sıklığınız

- Günde 1
Günde 2
Günde 3
Günde 3 ten çok
Diğer....

72-Zerdeçalı temin ettiğiniz yer veya yerler (Birden fazla seçenek işaretleyebilirsiniz)

- Eczane
Aktar
İnternet
Market
Diğer.....

73-Zerdeçalı satın alırken nasıl olmasını tercih ediyorsunuz (Birden fazla seçenek işaretleyebilirsiniz)

- Açık
Ambalajlı
Supplement olarak (tablet formunda)
Diğer

74-Zerdeçal hakkında etkilendiğiniz kaynak nedir? (Birden fazla seçenek işaretleyebilirsiniz)

- TV
Doktor veya diyetisyen
Dergi / gazete
Arkadaş, ebeveyn, komşu tavsiyesi
Diğer.....

75-Zerdeçal kullanımından fayda gördüğünüzü düşünüyor musunuz?

- Evet
Hayır

76-Mısır püskülü kullanır mısınız?

- Evet
Hayır

Cevabınız evet ise aşağıdaki sorulara 77-85. cevap veriniz:

77-Mısır püskülünü diyetinizde hangi amaçla kullanıyorsunuz? (Birden fazla seçenek işaretleyebilirsiniz)

- Ödem atıcı
Yağ yakıcı
Bağırsak fonksiyonlarını düzenleyici
Gaz problemini giderici
Tokluk hissi /iştah kapatıcı
Diğer.....

78-Mısır püskülünü kullanım alanlarımız (Birden fazla seçenek işaretleyebilirsiniz)

- Yemekte, baharat olarak

Çay olarak
Diğer.....

79-Mısır püskülünü tüketime nasıl hazırlarsınız ? (Birden fazla seçenek işaretleyebilirsiniz)

Kaynatarak (dekoksiyon)
Demleyerek (infüzyon)
Öğüterek
Olduğu gibi
Diğer

80-Mısır püskülü kullanım sıklığınız

Günde 1
Günde 2
Günde 3
Günde 3 ten çok
Diğer....

81-Mısır püskülünü temin ettiğiniz yer veya yerler (Birden fazla seçenek işaretleyebilirsiniz)

Eczane
Aktar
İnternet
Market
Diğer.....

82-Mısır püskülünü satın alırken nasıl olmasını tercih ediyorsunuz (Birden fazla seçenek işaretleyebilirsiniz)

Açık
Ambalajlı
Supplement olarak (tablet formunda)

83-Mısır püskülü hakkında etkilendiğiniz kaynak nedir? (Birden fazla seçenek işaretleyebilirsiniz)

TV
Doktor veya diyetisyen
Dergi / gazete
Arkadaş, ebeveyn, komşu tavsiyesi
Diğer.....

85-Mısır püskülünün kullanımından fayda gördüğünüzü düşünüyor musunuz?

Evet
Hayır

86-Tarçın kullanır mısınız?

Evet
Hayır

Cevabınız evet ise aşağıdaki 87-94. sorulara cevap veriniz:

87-Tarçın diyetinizde hangi amaçla kullanıyorsunuz? (Birden fazla seçenek işaretleyebilirsiniz)

- Ödem atıcı
- Yağ yakıcı
- Bağırsak fonksiyonlarını düzenleyici
- Gaz problemini giderici
- Tokluk hissi /iştah kapatıcı
- Diğer.....

88- Tarçını kullanım alanlarınız (Birden fazla seçenek işaretleyebilirsiniz)

- Yemekte, baharat olarak
- Çay olarak
- Diğer.....

89- Tarçını tüketime nasıl hazırlarsınız ? (Birden fazla seçenek işaretleyebilirsiniz)

- Kaynatarak (dekoksiyon)
- Demleyerek (infüzyon)
- Öğüterek
- Olduğu gibi
- Diğer

90- Tarçın kullanım sıklığınız

- Günde 1
- Günde 2
- Günde 3
- Günde 3 ten çok
- Diğer....

91- Tarçını temin ettiğiniz yer veya yerler (Birden fazla seçenek işaretleyebilirsiniz)

- Eczane
- Aktar
- İnternet
- Market
- Diğer.....

92-Tarçın satın alırken nasıl olmasını tercih ediyorsunuz (Birden fazla seçenek işaretleyebilirsiniz)

- Açık
- Ambalajlı
- Supplement olarak (tablet formunda)

93- Tarçın hakkında etkilendiğiniz kaynak nedir? (Birden fazla seçenek işaretleyebilirsiniz)

- TV
- Doktor veya diyetisyen
- Dergi / gazete
- Arkadaş, ebeveyn, komşu tavsiyesi
- Diğer.....

94- Tarçın kullanımından fayda gördüğünüzü düşünüyor musunuz?

Evet

Hayır

95-Keten tohumu kullanır mısınız?

Evet

Hayır

Cevabınız evet ise aşağıdaki 96-103. sorulara cevap veriniz:

96-Keten tohumunu diyetinizde hangi amaçla kullanıyorsunuz? (Birden fazla seçenek işaretleyebilirsiniz)

Ödem atıcı

Yağ yakıcı

Bağırsak fonksiyonlarını düzenleyici

Gaz problemini giderici

Tokluk hissi /iştah kapatıcı

Diğer.....

97-Keten tohumunu kullanım alanlarınız (Birden fazla seçenek işaretleyebilirsiniz)

Yemekte, baharat olarak

Çay olarak

Diğer.....

98-Keten tohumunu tüketime nasıl hazırlarsınız? (Birden fazla seçenek işaretleyebilirsiniz)

Kaynatarak (dekoksiyon)

Demleyerek (infüzyon)

Öğütürük

Olduğu gibi

Diğer

99-Keten tohumu kullanım sıklığınız

Günde 1

Günde 2

Günde 3

Günde 3 ten çok

Diğer....

100-Keten tohumunu temin ettiğiniz yer veya yerler (Birden fazla seçenek işaretleyebilirsiniz)

Eczane

Aktar

İnternet

Market

Diğer.....

101-Keten tohumu satın alırken nasıl olmasını tercih ediyorsunuz (Birden fazla seçenek işaretleyebilirsiniz)

- Açık
Ambalajlı
Supplement olarak (tablet formunda)

102-Keten tohumu hakkında etkilendiğiniz kaynak nedir? (Birden fazla seçenek işaretleyebilirsiniz)

- TV
Doktor veya diyetisyen
Dergi / gazete
Arkadaş, ebeveyn, komşu tavsiyesi
Diğer.....

103-Keten tohumu kullanımından fayda gördüğünüzü düşünüyor musunuz?

- Evet
Hayır



SAYI: ATADEK-2017/6
KONU: Etik Kurul Kararı

Sayın Ayça Güteryüz,

Sorumluğunu yürüttüğünüz **“İstanbul'da Zayıflamak İçin Özel Bir Hastanenin Beslenme Ve Diyet Polikliniğine Başvuran Danışanların Zayıflama Diyetlerine Ek Olarak Bitkisel Destekleri Kullanımları”** başlıklı proje 06.04.2017 tarih 2017/6 Sayılı Atadek Kurul Toplantısında görüşülmüş olup 2017-6/8 karar numarası ile tıbbi etik yönden uygun bulunmuştur.



Prof.Dr. İsmail Hakkı ULUS
ATADEK Kurul Başkanı

ACIBADEM ÜNİVERSİTESİ
TIBBİ ARAŞTIRMALAR DEĞERLENDİRME KURULU (ATADEK)

Etik onay istenen tıbbi araştırmanın başlığı:

İstanbul'da Zayıflamak İçin Özel Bir Hastanenin Beslenme Ve Diyet Polikliniğine Başvuran Danışanların Zayıflama Diyetlerine Ek Olarak Bitkisel Destekleri Kullanımları

Etik onay istenen tıbbi araştırmanın yürütücüsü (sorumlusu):

Diyetisyen Ayça Güleriyüz

Karar:

Kabul (Etik olarak uygun) (X)

Revizyon ()*

Etik olarak uygun değil ()**

Toplantı Tarihi:06/04/2017

Karar Numarası: 2017-6/8

		Karara	Karara
Kurul Üyesi-Unvan Ad-Soyad	İmza	Katılıyorum	Katılmıyorum***
Prof. Dr. İsmail Hakkı Ulus (Başkan)		(X)	()
Prof. Dr. Güldal Süyen (Başkan Yrd)		(X)	()
Prof.Dr. Mert Ülgen		(X)	()
Doç.Dr. Ükke Karabacak		()	()
Doç.Dr. A.Elif Eroğlu Büyüköner		()	()
Doç.Dr. Berrin Karadağ		()	()
Yrd.Doç.Dr. Fatih Artvinli		(X)	()
Yrd.Doç.Dr. Günseli Bozdoğan		(X)	()

Appendix 3. Resume

Kişisel Bilgiler

Adı	Ayça	Soyadı	Güleryüz
Doğum Yeri	Konak	Doğum Tarihi	13.08.1991
Uyruğu	T.C	TC Kimlik No	29959271194
E-mail	aycakpln@gmail.com	Tel	05364186832

Öğrenim Durumu

Derece	Alan	Mezun Olduğu Kurumun Adı	Mezuniyet Yılı
Yüksek Lisans	Beslenme ve Diyetetik	T.C Yeditepe Üniversitesi	2019
Lisans	Beslenme ve Diyetetik	T.C Yeditepe Üniversitesi	2015
Lise	Fen -Matematik	İSTEK Bilge Kağan Anadolu Lisesi	2010

İş Deneyimi (Sondan geçmişe doğru sıralayın)

Görevi	Kurum	Süre (Yıl - Yıl)
Diyetisyen	Acıbadem Hastaneleri	2016-Halen
Diyetisyen	Fit Together	2015-2016

Bilgisayar Bilgisi

Program	Kullanma becerisi
Microsoft Office	İyi

*Çok iyi, iyi, orta, zayıf olarak değerlendirin