

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

**INVESTIGATION OF THE EFFECT OF
NUTRITION KNOWLEDGE LEVEL ON THE
HABIT OF READING FOOD LABELS IN FEMALE
INDIVIDUALS**

MASTER OF SCIENCE THESIS

BEGÜM KURT

SUPERVISOR
Assoc.Prof. Hülya DEMİR

Istanbul-2022

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

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DECLARATION

I declare that this thesis is my own work, that I have no unethical behavior at any stage from planning to writing, that I obtained all the information in the thesis within academic and ethical rules, that I cited all the information and comments not obtained by the thesis work and that I put these resources on the list of sources, and that I did not have any behavior that infringed patents and copyrights during the thesis study and writing.

28.06.2022

Signature

Begum Kurt



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LIST OF ABBREVIATIONS

%	Percent
U.S.	United States
AFA	Explaining Factor Analysis
DFA	Veriscing Factor Analysis
AI	Qualified Acquisition
BMI	Body Mass Index
CM	Centimeter
FDA	The Federal Drug Administration
g	Gram
%	Percent
kg	Kilogram
KKAL	Calorie
MAX	Maximum
n	Number
p	Value
SPSS	Statistical Package for the Social Sciences
TFC	Turkish Food Codex
FDA	The Federal Drug Administration
T.C.	Republic Of Turkey
WHO	World Health Organization
X	Average
EFSA	European Food Safety Authority
MUFA	Mono Unsaturated Fatty Acids
PUFA	Poly Unsaturated Fatty Acids
EU	European Union
TFA	Trans Fatty Acids
USDA	United States Department of Agriculture.
NLEA	Nutrition Labeling and Education Act
YETBİD	Nutrition Knowledge Level Scale for Adults

ABSTRACT

Kurt, Begüm (2022) Investigation of the Effect of Nutrition Knowledge Level on the Habit of Reading Food Labels in Female Individuals. Yeditepe Institute of Health Sciences, Department of Nutrition and Dietetics, Master Thesis, Istanbul.

This study was conducted to examine the effect of nutritional knowledge level of female individuals living in Istanbul between 01.02.2022 and 01.04.2022 on the habit of reading food labels. The study was conducted out with randomly selected 430 women between the ages of 19-64 who food shopping to home. Data Collection Information Form, which includes sociodemographic information, Nutrition Knowledge Level (YETBİD) Scale, which consists of the subtitles Elementary Nutrition and Food-Health Relationship and Food Preference, and Nutrition Label Reading Attitude Scale were applied to participants. A statistically significant correlation was found between the scores of the subjects in the YETBİD scale Elementary Nutrition and Nutrition-Health Knowledge and age ($p=0,015$; $p<0,05$). The scores of individuals under the age of 25 were found to be significantly higher. A significant correlation was found between the total score obtained from the Nutrition Label Reading Attitude Scale and those aged 55 and over. A statistically significant difference was found between the scores of the subjects from the YETBİD scale and their educational status ($p=0.001$; $p<0.01$). According to the results; The scores of the cases with postgraduate education were found to be significantly higher. ($p=0,001$; $p=0,021$; $p<0,05$). According to the scores obtained from the YETBİD scale, the scores of health workers were found to be significantly higher than those from other occupational groups. ($p=0.017$; $p<0.05$). It was determined that people who received healthy nutrition education scored significantly higher between the food preference sub-dimension and the Nutrition Label Reading Attitude Scale. A positive correlation was found between the scores of the subjects from the sub-dimension of the YETBİD scale and the total score of the Nutrition Label Reading Attitude Scale. ($r=0,140$; $p=0,004$; $p<0,01$) $r=0,137$; $p=0,004$; $p<0,01$). In the light of the results of the study, it is thought that it would be beneficial to organize trainings and seminars on elementary nutrition, food preferences and food labels in order to create a healthy and conscious society.

Keywords: Nutrition Knowledge Level, Nutritional Health Information, Food Label Reading Habit

ÖZET

Kurt, Begüm (2022) Kadın Bireylerde Beslenme Bilgi Düzeyinin Besin Etiket Okuma Alışkanlığı Üzerine Etkisinin İncelenmesi. Yeditepe Sağlık Bilimleri Enstitüsü, Beslenme ve Diyetetik Bölümü, Yüksek Lisans Tezi, İstanbul.

Bu çalışma 01.02.2022-01.04.2022 tarihleri arasında İstanbul ilinde yaşayan kadın bireylerin beslenme bilgi düzeyinin, besin etiketi okuma alışkanlığı üzerine etkisinin incelenmesi amacıyla yapılmıştır. Çalışma 19-64 yaş aralığında evine gıda alışverişi yapan rastgele seçilmiş 430 kadın ile gerçekleştirilmiştir. Kadınlara; sosyodemografik bilgilerini içeren Veri Toplama Bilgi Formu, Temel Beslenme ve Besin-Sağlık İlişkisi ve Besin Tercihi alt başlıklarından oluşan Beslenme Bilgi Düzeyi (YETBİD) Ölçeği ve Besin Etiket Okuma Tutum Ölçeği uygulanmıştır. Olguların YETBİD ölçeği Temel Beslenme ve Besin-Sağlık Bilgisi alt boyutundan aldıkları puanlar ile yaş arasında istatistiksel olarak anlamlı ilişki saptanmıştır ($p=0,015$; $p<0,05$). 25 yaş altı bireylerin aldıkları puanlar anlamlı düzeyde yüksek bulunmuştur. Besin Etiket Okuma Tutum Ölçeği'nden alınan toplam puan ile 55 yaş ve üzeri olanlar arasında anlamlı ilişki saptanmıştır. Olguların YETBİD ölçeğinden aldıkları puanlar ile eğitim durumu arasında istatistiksel olarak anlamlı farklılık saptanmıştır ($p=0,001$; $p<0,01$). Sonuçlarına göre; eğitim durumu lisansüstü olan olguların aldıkları puanlar anlamlı düzeyde yüksek saptanmıştır ($p=0,001$; $p=0,021$; $p<0,05$). YETBİD ölçeğinden alınan puanlara göre sağlık çalışanı olanların aldıkları puanlar, diğer meslek gruplarından olanlara göre anlamlı düzeyde yüksek bulunmuştur. ($p=0,017$; $p<0,05$). Sağlıklı beslenme eğitimi alan kişilerin besin tercihi alt boyutu ve Besin Etiket Okuma Tutum Ölçeği arasında anlamlı düzeyde yüksek puan aldıkları saptanmıştır. ($p=0,001$; $p<0,01$) ($p=0,002$; $p<0,01$). Olguların YETBİD ölçeğinden alt boyutundan aldıkları puanlar ile Besin Etiket Okuma Tutum Ölçeği toplam puanı arasında çok zayıf pozitif yönlü bir ilişki bulunmuştur ($r=0,140$; $p=0,004$; $p<0,01$) $r=0,137$; $p=0,004$; $p<0,01$). Çalışmadan çıkan sonuç ışığında sağlıklı ve bilinçli bir toplum oluşturabilmek için temel beslenme, besin tercihleri ve gıda etiketlerinde hakkında eğitimler ve seminerlerin düzenlenmesinin faydalı olacağı düşünülmektedir.

Anahtar Kelimeler: Beslenme Bilgi Düzeyi, Besin sağlık bilgisi, Besin etiketi okuma alışkanlığı

1.INTRODUCTION AND PURPOSE

The main condition for a healthy and productive life is that it receives the nutrients it needs adequately and balanced. The eating habits of individuals influenced many factors such as the development of food technology, the production and marketing of new products, the food preference and purchasing behaviors of female consumers who are most responsible for the adequate and balanced nutrition of family members have a significant impact (1). Nutrition labeling has great benefits in helping consumers make the right nutritional choices when purchasing food (2). Consumers are increasingly being offered information about health and nutrition interaction; Due to increasing consumer awareness, the content of nutrients becomes more important (2,3). Inadequate, inaccurate and incomprehensible information misleads consumers, preventing them from making healthy choices for themselves. At this point, food labels have a very important role for the individual to choose the most suitable food for himself and to maintain a healthy diet (3,4). Food labels should be able to give a consumers enough information about product to they are about to buy to be accurate understandable and ensure that individuals make the most appropriate choices for themselves (5). The label is a tool that identifies a product and is used to indicate the place, type, price of the product (2). Labelling in general has three main purposes:

- (a) provide adequate and accurate information on health, safety and economic concerns,
- (b) protect consumers and manufacturers from counterfeit, misleading packaging and advertising, and
- (c) promote fair competition and product marketing (3). Food labels provide information to consumers at the point of purchase and encourage consumers to make healthier choices (4,5). Therefore, food labels that provide information about the content are a very effective tool for consumers in choosing the right nutrients.

Although the frequency of reading food labels varies from country to country, the prevalence of reading food labels was found to be quite high (72.3%) in the study conducted by Besler and his colleagues (6) in Turkey. Another study conducted in Turkey stated that 75.7% of individuals read food labels. Many factors affect label use such as nutritional information, individual characteristics, gender, age, marital state, level of

education economic level, health interest and habits, lifestyle social eating habits. Individuals who are knowledgeable about nutrition use more food labels when purchasing nutrients. Factors affecting label use also affect nutritional information. Education, gender, income level and health status positively affect nutritional information. Nutritional information used by consumers allows individuals to make healthier choices. In other words, as individuals' nutritional knowledge increases, the use of food labels will increase and lead to healthier food choice (7). Research examining the effect of sex on the habit of reading food labels shows that women read food labels more than men (8,9). Since women are more likely to shop for nutrients, the rate of reading the food label is also higher in female individuals. In a study conducted in Nevşehir, similar results were obtained, and it was determined that women in the nuclear family took a more active role in purchasing, either alone or with their spouses, than the women in extended families. (10). In another study, it was determined that female individuals pay more attention to food label information and written expressions are more effective. Effective nutrition trainings organized to improve the cognitive and behavioral behavior of consumers towards nutrition and food labels are very important to increase the level of knowledges about this subject and to reach the right nutrients, that will lead them to make healthy choices (11). In addition to educational activities related to food labels, written/visual press and various social formations, the state and producers have a duty in this regard (12,13). Based on all this, this study will examine the effect of nutritional knowledge level in female individuals on the habit of reading food labels and aims to carry out educational studies in order to create an informed consumer population in the institutions and organizations deemed necessary. Study in this direction; It was made to examine the effect of the nutritional knowledge level of female individuals living in Istanbul on the habit of reading food labels.

2. LITERATURE REVIEW

2.1 Nutrition

Nutrition is one of the most important human needs for growth, maintenance of life and protection of health with adequate amount of nutrients needed by the body of convenient times (14). Nutrition starts in the mother's womb and continues at every period of our lives with by consuming the nutrient we need (15). Nutritional needs of each individual it varies according to physiological, genetic and environmental factors (16). Factors such as culture, socioeconomic status, environmental factor, religion, belief, geographical location and education are effective in shaping dietary habits. Dietary habits shape begins at an early ages and habits may change over time as it depends on many factors (15,16).

2.1.1. Adequate and Balanced Nutrition

Adequate and balanced way should consumed recommended amounts of all nutrients to form the basis of good health (17). And balanced diet (optimal nutrition); is the basic element of life, health and national development in the lifetime. Adequate and balanced nutrition is necessary for starting from the early period of development in the mother's womb, infancy, childhood, adolescence, adulthood and old age individuals can maintenance of life, complete their physical development, maintain mental health, performance productivity during the day and maintain general well-being (18). "Adequate Intake (AI)" of nutrients amounts vary according to individual of age, gender, physical activity level and physiological status (16). Adequate, balanced and healthy nutrition of people, gaining the right dietary habits; obesity, cardiovascular diseases, diabetes, cancer, etc. in society. occurrence of diseases such as reducing the risk of malnutrition, preventing vitamin and mineral deficiencies, protective agents that play a role in minimizing health problems related to nutrition is one of the factors (19).

2.1.2. Nutrients and Nutritional Elements

Nutrients is called to plant and animal tissues that, when eaten, provide nutritional elements for life. Proteins, carbohydrates, fats, vitamins and minerals in defined as nutritional elements (20). Nutritional elements satisfy a need body's daily energy and contribute growth, development and maintenance life concurrently it effective of tissues

and cells in the fulfillment and maintenance of their functions (21). Percentage of macronutrients taken with nutrition to be provided energy from by may vary according to the patients' nutritional habits, basal metabolic rate, physical activity status and the course of the disease (22).

In the any nutritional elements deficiency, disruption in body functions, growth and regression in development and various diseases may occur. Consuming excess of nutritional elements can also cause health problems. High carbohydrates and fat intake occur obesity, high protein intake occur diseases such as gout. Excess vitamin and minerals are known the cause of toxicity. Nutritional elements are divided into macro and micronutrients according to the functions and properties they provide to the body (16).

2.1.2.1. Macronutrients

The fundamental component of nutrition are protein, carbohydrates and fat, which are macronutrients. The calories in these foods provide our fundamental life energy. The building blocks of the body are the energy source required to perform tissue and cell repair activities (23).

2.1.1.1. Carbohydrates

Carbohydrates the main energy source of the body. Carbohydrates are organic compounds, composed of carbon, oxygen and hydrogen. 1 gram (g) of carbohydrates provides 4 kilocalories (kcal) of energy (16). Essential nutrients such as whole grains, vegetables, legumes, and fruit are rich in phytochemicals and fiber among the rich carbohydrates (24). Carbohydrates can be easily taken, abundant in nature give concurrently a sense of taste and satisfaction. They are energy compounds that can be used immediately in the body by easily interacting and reacting. In individuals following a normal diet, %55-60 of daily energy is provided from carbohydrates. Most of the organs in the body, especially the brain and muscles, primarily use their instant energy from carbohydrates. For this reason, the body's primary energy source and first fuel tank may be called (25).

Carbohydrates are divided into simple carbohydrates and complex carbohydrates. Simple carbohydrates contain less dietary fiber than complex carbohydrates. For this reason simple carbohydrates increase blood sugar more than complex carbohydrates (21).

Dietary fiber consists of food components resistant to digestive enzymes and its main sources are fruits, vegetables and grains. Dietary fibers are examined under two groups as soluble and insoluble (26).

Foods high in fiber create a feeling of satiety because they require long-term chewing. In addition, due to the low energy value of dietary fiber and its water-absorbing feature, it increases the viscosity of the stomach and has positive effects on intestinal motility (27). The main reason for the increase in the amount of stool in direct proportion to the increase in dietary fiber intake is due to the water-absorbing feature of the fibers. They play role in the prevention the constipation (28). Concurrently soluble fibers regulate the sugar level in the blood by providing glucose to be delivered to the blood circulation very slowly, balancing the rate of absorption of blood sugar by the body (29).

According to the American Heart Association eating plan, total dietary fiber intake from food should be in the range of 25-30 grams per day (30). The amount of dietary fiber (pulp) is indicated on the food label. Foods containing 5 g or more dietary fiber per serving are considered high fiber foods, foods containing 2.5-4 g dietary fiber per serving are considered good sources, and foods containing 2.5 g or less dietary fiber per serving are considered dietary fiber supplements (31).

2.1.1.2. Protein

Proteins are the basic building material of our cells that make up our body. Proteins are formed by the combination of amino acids. Amino acids are also nitrogen-containing organic molecules. Like carbohydrates and lipids, they are composed of carbon, hydrogen and oxygen. The difference is their nitrogen coverage (32).

Proteins are used as an energy source in the body as a result of insufficient carbohydrate and fat intake. 1 gram (g) of protein provides 4 kilocalories (kcal) of energy. There are 20 types of amino acids in the structure of proteins. It is divided into two as essential and nonessential amino acids. Non-essential amino acids do not need to be included in the diet, as they are produced in sufficient quantities by the body. Essential amino acids are not produced by the body, they must be taken with food (16).

Depending on the source and type of protein, its use in the body varies. The availability of proteins in the body is expressed as the "quality of proteins". Protein

quality depends on the type and amount of amino acids in the protein composition; The state of digestion and absorption changes depending on how it is ultimately converted into body proteins (33). Different foods contain different amounts of essential amino acids. Generally:

- Animal products (like chicken, beef or fish and dairy products) have all the essential amino acids and are known as 'complete' protein (or ideal or high-quality protein).
- Soy products, quinoa and the seed of a leafy green seed called amaranth (consumed in Asia and the Mediterranean) also have all the essential amino acids.
- Plant proteins (beans, lentils, nuts, and whole grains generally do not contain at least one of the essential amino acids and are considered "incomplete" proteins.

People following a strict vegetarian or vegan diet should choose a variety of protein sources from a combination of plant foods each day to ensure they are getting enough of the essential amino acid mix. When a vegetarian or vegan diet is followed, it must be consumed in combination with different foods in order to complete the protein needed. For example, a meal that includes grains and legumes, such as baked beans on toast, provides all the essential amino acids found in a typical meat dish (34). Proteins are divided into two as vegetable and animal proteins. Animal and vegetable proteins differ in terms of the amount and quality of protein they contain. While animal proteins are characterized as high-quality protein because they contain sufficient amounts of essential amino acids, vegetable proteins are called low-quality protein because they contain insufficient amounts of essential amino acids (21). The recommended daily amount of protein in diets is 0.8 grams per kilogram of body weight. In a sense, it's not a specific amount you should eat each day, but the minimum you need to keep from getting sick (35). Our body is made up of thousands of different proteins, each with different functions. There is a significant amount of protein in the structure of bones, muscles, cartilage, skin, hair and nails (36). It plays an important role in cell proliferation, tissue formation, repair and maintenance of lean body mass (37). In addition to these functions, they form active proteins secreted from many enzymes, hormones and immune cells (38).

2.1.1.3 Fats

Fats are organic compounds made up of fatty acids and glycerol (39). 1 g of fat provides 9 kcal of energy and fats provide more energy than other nutrients (15). Fatty acids vary in carbon chain length and degree of unsaturation. (number of double bonds in the carbon chain) Fatty acids are classified into the following categories:

- Saturated fatty acids
- Monounsaturated fatty acids
- Polyunsaturated fatty acids — n-6 fatty acids — n-3 fatty acids
- Trans fats (40)

The carbon atoms in saturated fatty acids are bonded to each other with a single bond. In general, these fatty acids have higher melting points and are solid at room temperature. Animal and vegetable fats often contain saturated fatty acids. Monounsaturated fatty acids: There are double bonds between the carbon atoms in their structure. The melting points decrease as the number of double bonds increases. Therefore, vegetable oils are liquid at room temperature. Monounsaturated fatty acids increase HDL cholesterol (good cholesterol) (41).

Polyunsaturated fatty acids are known as omega-3, omega-6 and omega-9 fatty acids. Omega-3 and omega-6 fatty acids cannot be synthesized in the human body, they must be taken from outside. Vegetable oils such as olive oil, hazelnut, canola, corn, soybean, sunflower oil and fish such as mackerel, tuna and salmon can be shown as the main sources of unsaturated fatty acids (42). Oils with high trans fatty acid (TFA) content have been included in our lives with the development of margarine production technology. The hydrogenation process used in the formation of TFA is used to extend the shelf life of these oils and to increase the durability of the oils. The main reason why food factories and businesses prefer trans fats is their low cost and longevity. It has been reported in many studies that TFA's increase the level of LDL cholesterol as in saturated fatty acids, decrease the level of HDL cholesterol, and in this context, trigger the formation of various diseases (43). In recent years, consumers in many countries have begun to be conscious of reducing the consumption of hydrogenated oils and trans fatty acids (44). It plays an important role in the absorption of fat-soluble vitamins such as A, D, E and K and carotenoids. Fats surround the organs and protect them from external

factors, and the fat layer under the skin prevents the body's heat loss. Fats are needed for the production of certain hormones and cholesterol (16). In addition to all these functions, fatty acids function in cell signaling and change the expression of specific genes. Plays a role in lipid and carbohydrate metabolism (45). 25-30% of daily energy should come from fat. (16) It is recommended that a maximum of 10% of the total energy from fat comes from saturated fat, 12-15% from monounsaturated fat, 7-10% from polyunsaturated fat, and at most 1% from trans fats (15). Consuming excess fat causes an increase in adipose tissue in the body. This may lead to conditions such as obesity, coronary heart diseases, and increased blood lipid levels (16).

2.1.2.2.Micronutrients

Micronutrients are vitamins and minerals that the body needs in very few amounts. On the other hand, their effects on body health are critical, and a deficiency of any of these can result in serious and even life-threatening conditions. They perform a number of functions, including enabling the body to produce enzymes, hormones, and other substances necessary for normal growth and development (46).

2.1.2.2.1.Vitamins

Vitamins are small organic molecules that are necessary for the body to carry out metabolic functions and are needed by the body in very small amounts (from micrograms to milligrams per day) (47). We can examine the effects of vitamins on human health in three groups; supporting growth, supporting to create healthy generations and the normal functioning of the nervous and digestive systems, the proper use of nutrients and aid in body resistance (16). Vitamins are divided into fat-soluble and water-soluble vitamins. Vitamin A, vitamin D, vitamin E and vitamin K are fat-soluble and can be stored in the body. B-complex vitamins and vitamin C must be dissolved in water before being absorbed by the body. For this reason cannot be stored in body. Any water-soluble vitamin that is not used by the body is lost primarily through the urine (48). Vitamins (except vitamin K) must be taken with the diet, as they are not synthesized by the human body (21).

2.1.2.2.2 Minerals

About 4% to 5% of the human body is made up of minerals (16). According to the amount needed in the body, they are divided into macro minerals and micro minerals

(49). Calcium, phosphorus, potassium, sulfur, sodium and chlorine are called macro minerals. Iron, zinc, selenium, molybdenum, iodine, cobalt, copper, manganese, fluoride and chromium are called micro minerals (50). Minerals have important functions in body regulation. Some are the building blocks of hard tissues such as bones and teeth. In addition, it plays an important role in many areas such as the growth of the body and sustaining life, electrolyte balance, and cell work.

2.1.2.2.3 Water

Water is a vital source of life for all living things. Water, which acts as a solvent in the body, constitutes 42-71% of the human body. The water ratio of the body is higher in young people compared to age and it is higher in female individuals compared to men (21). Water plays an important role in functions such as digestion, absorption and transport of nutrients to cells, biochemical reactions in cells, transport of electrolytes, control of body temperature, and joint mobility (16). The US National Academies of Sciences, Engineering and Medicine stated that the daily water consumption amount should be as follows for men, approximately 15.5 glasses (3.7 liters) of water per day; for women, approximately 11.5 glasses (2.7 liters) of water per day. The amount of water to be consumed daily can be simply calculated as 30-35 ml x body weight (kg) (51). These recommendations cover fluids from water, other beverages, and food. About 20% of daily fluid intake usually comes from food and the remainder from beverages (52).

2.2.Nutrition Label

2.2.1. Definition of Nutrition Label

The nutritional label, which is the information presented about the food product, is the information text in which the amount of the nutritional elements (protein, fat, vitamin, mineral, etc.) determined by the laboratory analysis of the packaged foods and the percentage of the daily nutritional elements that the consumer needs to meet are stated (53,54). The purpose of the food label is to inform consumers, to facilitate their food choices, to provide nutritional information, thus to protect public health, to protect consumers and manufacturers from fake and misleading packaging and advertisements, and to support fair competition and product marketability (55). At the same time, this information helps consumers create an adequate and balanced diet, follow special diets (such as diabetes), and choose the most nutritious foods at the time of purchase (56,57).

Labeling is beneficial for consumers in order to facilitate their purchasing behavior and make their food choices correctly, and nowadays some information has to be presented. It is important that the information on the food label is created in a plain or simple language so that it can appeal to consumers from all segments (58,59). The nutritional label, which is used in many countries and for which rules have been developed, increases the nutritional awareness of consumers (60).

2.2.2. History of Nutrition Label

Until the 1960s, most Americans prepared their meals at home. With the increase in demand for ready-made products over time, there has been a public demand for the details of production information in prepared foods. In 1966, the USDA (United States Department of Agriculture) mandated that all products that participate in interstate commerce include a nutritional ingredient list so that the consumer can access accurate production information. In 1973, the issue of false health claims reached the Supreme Court, which ultimately ruled that nutritional facts are mandatory for all foods that have any health benefits, such as low fat, low cholesterol, or heart health. Additionally, any food that made any claim to prevent or cure a particular disease was actually considered an illegal drug. By 1990, the FDA (The Federal Drug Administration) mandated a detailed and standardized list of nutritional ingredients for all food products intended for sale through the Nutrition Labeling and Education Act (NLEA) (61). For the first time in the world, the Federal Drug Administration (The Federal Drug Administration) created information on food labels such as calories, fat, cholesterol, sodium, carbohydrates and protein, as well as certain vitamins and minerals. Initiated the use of the tag table (62,63). In 1994, a new standard was introduced by the FDA to specify the content of packaged foods (64). The purpose of this regulation, created by the FDA, is to prevent consumers from getting chronic diseases related to nutrition such as obesity, blood pressure and diabetes by making the right food choice (65). In 1995, according to the daily reference intakes of many vitamins and minerals, it was decided to add the trans fatty acid information to the nutritional labels in 2003 (66).



Figure 2.1. New Food Label (67)

The Turkish Food Codex, which was first issued in 2011 in Turkey, and the Labeling Regulation No. 28157 was finalized with the amendment numbered 28201 published in the Official Gazette in 2012 (68,69).

2.2.3. Food Labeling Rules and Content of Food Label in Turkey

All information on the food label should be explained in a clear and simple language. In order for consumers to benefit from the information written on the food label, the use of unnecessary expressions, information confusion and words that are difficult to understand should be avoided. Labeling language should be in Turkish, all texts should be indelible and readable (70). And every manufacturer should be encouraged to provide accurate nutritional information about their products (66). Nutritional labeling principles are made according to the Turkish Food Codex Labeling Regulation. On the labels of all packaged foods offered for sale in Turkey,

- Name of food
- Components list

- Substances or products that cause allergies or intolerances
- Quantity of components or component groups
- Net amount of food
- Recommended expiry date or expiry date
- Special storage and/or conditions of use
- Manufacturer's name or trade name and address information
- Name of the manufacturer or packaging company registration number or identification mark
- Country of origin
- Instructions for use of food
- The presence of alcohol content information on beverages containing more than 1.2% alcohol by volume
- Origin of the product
- Nutrition declaration declaration is obligatory (4,71).

Reference values on food labels are calculated over 2000 kcal. (68). This value is equivalent to the recommended daily energy intake of a moderately active woman. The European Food Safety Authority (EFSA) panel states that the 2000 kcal reference value used is a value that does not cause any nutritional deficiency in the general population, especially for risk groups in childhood, pregnancy and old age (72). Nutrients in the component of food products should be stated on the label as 100g, 100mg or a portion. If vitamins and minerals compensate at least 5% of the Nutritional Reference values in the food, this should also be included in the nutrition label (53,70).

According to the TGK Food Additives Regulation, it is obligatory to have additives on the packaging. The name and EC code(s) of the additive(s), if there are other substances added to facilitate the dilution, dissolution, standardization or storage of the additive, the name of the substance, the intended use should be listed according to the weight of the added substances. Additives obtained from animal sources must specify the type of animal (53,68,70). Otherwise, according to the TGK Food Labeling and Consumer Informing Regulation published in 2017, statements such as super, abundant, extra, more, high quality are used in a way to suggest that they are better than other products, and about any product that does not have a shelf life of 24 hours. "daily" is not allowed. It is not appropriate to use the expressions "home made", "as if the mother has

touched it" in industrial foods. It is not appropriate to state that a nutrient in the food is real as "genuine" or "real". The use of terms such as "no additives", "100% natural", "pure" is not allowed for products that are unnatural or additives are allowed (68, 73).

2.2.4.1. Careful Statements and Information on Food Packaging and Labels

The main goal of nutrition and health claims on food labels is to prevent diseases by providing individuals with the right eating habits. A nutrition statement means a message that suggests that it has beneficial properties in terms of the food or nutrients it contains. An example of a nutrition claim: contains omega 3 fatty acids, no trans fat, reduced sodium, high protein, etc. expressions can be given. Health claim: It is a term that indicates the positive effects of a food or nutrient on growth, development, regulation of bodily functions or protection of health. There are legal restrictions for a food to use the phrase "healthy product" and these statements have been scientifically proven. As an example of a health claim: For barley beta-glucans; It can be stated that "Barley beta-glucans reduce/lower blood cholesterol. High cholesterol is a risk factor in the development of coronary heart diseases", regarding the reduction of the risk of chronic diseases (68, 74).

According to the TKG Nutrition and Health Declarations Regulation, expressions such as treating, improving, and preventing should not be included in nutrition and health claims, instead the expression "reduced" for energy or fat reduced by 25% should be used. Statements written on the label should be based on generally accepted scientific evidence (53,68,70). In addition to other labeled food products, information on sugar, saturated fatty acids, fiber and salt/sodium content should be given in products with health claims (68). In the labeling, starch, sugar alcohol, monounsaturated fatty acids (TFA), polyunsaturated fatty acids (PUFA), cholesterol and vitamin and mineral amounts can be specified on the condition that they compensate at least 15% of the nutritional reference value. Mandatory allergen labeling rules for packaged foods are an important factor in protecting individuals from allergic reactions (75,76). Otherwise, the lack of a standard terminology, lack of control, insufficient information of the consumer, and different opinions on the definition of allergen ingredients constitute the main problems about allergens in packaged foods (77). Consumers often confuse the terms natural and organic with the term "healthy". According to TKG rules, for a food to be natural, it must not contain synthetic or artificial ingredients. In order to be organic, it must be produced in

accordance with the production rules of the Ministry of Food, Agriculture and Livestock. In the health claim, the total fat, saturated fat, cholesterol, sodium, vitamin, mineral and other components of the food should be at an optimum level. Increasing health awareness, curiosity about the nutritional properties of foods, and trust in organic foods are among the reasons that lead consumers to buy organic food (78). In order to enable consumers to choose organic products in a reliable and easy way, the European Union (EU) developed a common organic product logo, which is mandatory to be used in organic products in July 2010. Research has also shown that this logo is easy to understand and liked by consumers (79).

2.2.4.2. Label Reading Habit of Individuals

The benefit of labeling foods is great so that consumers do not have difficulty in purchasing foods and can make their food choices correctly (2). Insufficient, inaccurate and incomprehensible information mislead consumers and prevent them from making healthy choices for themselves. At this point, food labels have a very important role for the individual to choose the most suitable food for themselves and to maintain a healthy diet (4). Therefore, food labels should provide consumers with accurate, understandable and sufficient information about the product they are about to purchase, enabling individuals to make the most appropriate choices for them (5).

Today, consumers are increasingly provided with information on the interaction of health and nutrition; Due to the increasing consumer awareness, the content of nutrients is gaining more importance (3). Consumers' access to information about the products they buy from sources such as the internet and television becomes easier, and the information pollution about the products increases; may cause misdirection, consumption and use (80). In this direction, individuals want to have more information about the products they buy compared to the past, and shape their decisions in line with the information they obtain from the sources they can reach and from their social environment (81,82). Consumers place more and more importance on the health of the food products they buy and the reliability of the companies. Companies that know that their choices are shaped in line with these expectations of consumers also carry out studies in order to increase reliability (80).

2.2.4.3. Factors Affecting Nutrition Label Reading

Food choice and consumption is shaped by various factors such as basic culture, childhood experiences, beliefs, income rate and availability of food (83). The food label is a factor that directly affects the consumption of people (71). As a result of many studies conducted in various countries, demographic characteristics, age, gender, education level, income status of the individual, marital status, number of family members in the house where food is bought, body mass index of individuals, and healthy nutrition information of the consumer are the leading factors affecting the reading of food labels.

2.2.4.3.1. Educational status

There is a significant relationship between educational status and food label reading attitude. Studies show that people with higher levels of education are more inclined to read food labels (84). As the education level increases, it is seen that wrong and wrong practices decrease and some useful practices and habits related to health and nutrition increase (1). At the same time, it has been revealed that it causes individuals to be more concerned and careful about their health. It is seen that consumers who have completed high school are more inclined to read food labels (3,85).

In a study conducted to examine the relationship between nutrition label reading status and nutritional habits and health status, a questionnaire was applied to adult patients who came to Family Medicine Clinics in the US state of Missouri, and individuals who consumed less fat, more vegetables, fruits and fiber in their diets consumed more fat in their diets. It has been determined that they benefit from labels more when purchasing food compared to individuals (86,87). It is stated that the main reason for this is that consumers with a low level of education have more difficulty in reading and understanding food labels (88).

2.2.4.3.2. Age

Age factor is also an important factor in food label reading attitude (89). Young consumers were found to be more knowledgeable than older consumers (90). As age increases, more attention is paid to the content of fat and cholesterol (91). Although the elderly are more interested in healthy eating, their knowledge of healthy nutrition is less. The elderly are more concerned with their fat, sugar and salt content. According to the results of the research, it was seen that the elderly consumers had difficulty in understanding the font size of the food label, small and confused terminological words.

2.2.4.3.3. Gender

Most studies have found that gender plays an important role in the purchasing decision. Studies examining the effect of gender on the habit of reading food labels show that women read food labels more than men (8,9). Women pay more attention to information such as calories, vitamins and minerals on the nutrition label, they are also concerned about their fat, sugar and salt intake (84). Since more women take on food shopping, the rate of reading food labels is higher in female individuals. Today, women have started to be a leading representative of the family either alone or with their spouses in purchasing activities. In a study conducted in Nevşehir, similar results were obtained, and it was determined that women in the nuclear family took a more active role in purchasing, either alone or with their spouses, than the women in extended families (10). However, according to Aygen, gender does not have a significant effect on the attitude of reading food labels (3).

2.2.4.3.4. Marital Status

Marital status is a factor affecting food label reading attitude. Differences can be seen in people's food purchasing attitudes before and after marriage. Compared to singles, married individuals have a higher habit of reading labels (92,93). According to another study, the marital status of the participants has no effect on the use of food labels (85).

2.2.4.3.5. Income Level

Income levels of consumers have an impact on their purchases because higher income gives people freedom of comparison and alternative product quality. Individuals with higher incomes are also more likely to read food labels (85). It has been reported that individuals with low incomes attach more importance to the prices of foods than the information on the food labels, and therefore they read less food labels (94). On the other hand, there are studies showing that income level does not play an important role (88, 95). It may be that high-income consumers spend less time shopping due to long working hours and are not so concerned with nutrition labels (3). Studies show that there is a positive relationship between income level and individuals' ability to understand the information on food labels, but income level alone is not determinant (96,97).

2.2.4.3.6. Number of individuals in the household

The increase in the number of individuals in the household negatively affects the use of nutritional information (84, 95). The increase in the number of members in the household or the presence of children going to school reduces the probability of reading food labels (98). Large families are likely to read health declarations less often (99). Otherwise, there are studies showing that the number of households does not play a very important role.

2.2.4.3.7. Nutrition with Special Diet

Individuals with certain health problems need to be more careful when shopping for food. Consumers refer to nutrition labels to get information about the fat or cholesterol content in the product (88). It is stated that consumers, who are inconvenient to eat certain foods or various ingredients, especially for health reasons, read the labels more (3,100). Sugar amounts on food labels are usually read by diabetics (88). It was seen that participants with chronic diseases were more conscious about nutrition labels and frequently consulted label information (101).

2.2.4.3.8. Body Mass Index

Body Mass Index is one of the important measurement criteria in the factors that affect the food label selection. It is obvious that people with a high BMI value should pay attention to their nutrition. However, not every individual with a high BMI value may be interested in diet or be health oriented (102). Nutrition label reading status differs significantly according to body mass index. Normal-weight individuals read more food labels. Furthermore, normal-weight individuals read the brand, production date, expiry date, number of servings/portion weight on the packaged product more (103).

2.2.4.3.9. Geographical Location

Nutritional behaviors and consumer awareness also differ according to the place of residence. For example, urban Indian consumers are more conscious of food labels than rural consumers (104). One of the reasons for this is thought to be limited access to the media and lack of health education (85,105).

2.2.4.4. The Effect of Nutrition Label Reading and Nutrition Knowledge Level

Today, consumers can easily access nutrition news, nutrition and diet recommendations, and information sharing by official institutions about foods and nutrition, from different platforms such as the internet, newspapers, magazines, books, social media, radio, and television programs (106). As in other sources of information, it is seen that the contents published in search engines are accompanied by scientific-based nutritional information as well as posts that create misinformation and confusion, creating information pollution (107).

Nutritional knowledge level affects the use of food labels in at least 3 ways. First, the individual's nutritional information enables them to pay attention to the nutrition labels on the foods. Second, nutritional information allows to understand the information on the nutrition label and compare it with a product of a different brand when necessary.

Thirdly; Nutritional information increases attention to the information on the label in food selection, provides its understanding and affects food selection (108). One of the factors affecting the level of nutrition knowledge, the first thing that comes to mind is the social environment. In a study conducted with university students, the nutritional knowledge average score of the students living in the province was found to be significantly higher than the place they lived before the university (109). Individuals with higher education levels have a higher level of nutritional knowledge than those with lower levels of education (110). In a study investigating the effect of nutritional knowledge on diet quality, it was shown that socioeconomic status and nutritional knowledge also affect diet quality. There are differences in attitudes and awareness towards health-enhancing foods among gender, age and social groups (111). As stated above (112), it was observed that the nutritional knowledge levels of female individuals, individuals with higher education levels and those with a good socio-economic status were higher. It found significant gender and class differences in the UK in the ability to identify foods containing starch and fiber, where women outperformed men and middle- and upper-middle class participants outperformed working-class participants (113). These findings show parallelism with other studies.

3.MATERIALS AND METHODS

3.1. Place and Time of the Research

This research was conducted out between January 2, 2022 and April 10, 2022, using an online survey method, on randomly selected female individuals between the ages of 19-64 who food shopped for home. The study was conducted out by BezmiAlem Vakıf University Health Sciences Institute Non-Interventional Ethics Committee with the E-54022451-050.05.04-46376 numbered E-54022451-050.05.04-46376 Approval (Appendix 1).

3.2. Selection of the Research Population and Identification of Individuals

The universe of the research was conducted out with the online survey method in Istanbul between January 2, 2022 and April 10, 2022, and consisted of female individuals between the ages of 19-64 who food shopped for home.

3.2.1. Inclusion criteria for the study;

- Being woman
- Being literate
- Be between the ages of 19-64
- Accepting the voluntary consent form
- Do your own food shopping

3.2.2. Exclusion criteria for the study;

- Being a man
- Being illiterate
- Not be in the age range of 19-64
- Not accepting the voluntary consent form
- Not doing the food shopping yourself
- Breastfeeding, puerperal or pregnant
- They are people in intensive care or unconscious.
- Informed consent form was given to the individuals included in the study, and their consent was obtained by offering the option to accept / not accept.

3.2.3. Determination of the Sample

$$n = \frac{Nt^2pq}{d^2(N-1) + t^2pq}$$

N: Number of individuals in the universe

n: Number of individuals to be sampled

p: Frequency of occurrence of the investigated event

q: Frequency of absence of the investigated event

t: Theoretical value found from the t table at a certain degree of freedom and detected error level

d: The desired deviation according to the incidence of the event

$$n = \frac{(5.538.000)(1.96)^2(0.50)(0.50)}{(0.05)^2(5.438.000-1) + (1.96)^2(0.50)(0.50)}$$

n= 385 minimum total number of cases

The power of the study is expressed as $1-\beta$ (β = probability of type II error) and in general studies should have 80% power. In this study, according to TUIK 2020 data, the number of cases to be included in the study was determined as 385 in order to obtain 80% power at the $\alpha=0.05$ level out of a total of 5,438,000 female cases aged 19-64 years living in Istanbul, but considering the losses, it is more appropriate to take this number as 500. seen. Based on this result, 446 individuals were reached in the study, and it was conducted out with 430 individuals considering the exclusion criteria.

3.3. Data Collection and Evaluation

3.3.1. The work plan

The research started with the approval (Appendix 1) of BezmiAlem Vakıf University Health Sciences Institute Non-Interventional Ethics Committee dated 11/01/2022 and numbered E-54022451-050.05.04-46376. In the first part of the questionnaire, a questionnaire form (Appendix 2) containing general information was applied to determine the personal characteristics of the participants. The questionnaire contains information about the sociodemographic characteristics of individuals (age, educational status, employment status, etc.). In the second part, the Nutritional

Knowledge Level for Adults (YETBİD) Scale (Appendix 3) (Appendix 4) to measure the Nutrition knowledge level of the individuals, and the Nutrition Label Reading Attitude Scale (Appendix 5) to determine the Nutrition Label Reading Habits in the third part, was applied to the participants by the online questionnaire method.

Socio-Demographic and General Information: The socio-demographic and general information section consists of 15 questions. It contains information about the demographic characteristics of the female individuals participating in the study (age, height, weight, educational status, the portion of their income allocated to the nutrition part, etc.).

Nutrition Knowledge Level (YETBİD) Scale: The Turkish validity and reliability study of the YETBİD Scale was conducted by Batmaz in 2018. Participants gave one of the answers to 20 propositions under the heading "Elementary Nutrition and food-health relationship" and 12 propositions under the heading "Food preference"; I agree, neither agree nor disagree, disagree, strongly disagree. Those who gave the answer I strongly agree to the correct propositions received 4 points, those who answered I agree received 3 points, those who gave the answer neither agree nor disagree received 2 points, those who gave the answer I disagree 1 point, and those who gave the answer I strongly disagree received 0 points. Those who gave the answer I strongly agree to false statements received 0 points, those who answered I agree received 1 point, those who said neither agree nor disagree received 2 points, those who disagreed received 3 points, and those who strongly disagree received 4 points. The maximum score that can be obtained under the heading of elementary nutrition is 80, and the maximum score that can be obtained under the heading of food preference is 48. Participants evaluated the relationship between nutrition-health and the accuracy of their food preferences in daily life with a separate VAS scale grading from 0 to 10. 10 of the 20 propositions under the "Relationship between Elementary Nutrition and Nutrition and Health" cover the issues related to vitamins and minerals, 4 of them fats, 2 of them carbohydrates, 2 of them proteins, 1 of them fiber and 1 of them about salt. Cronbach's Alpha coefficient method was used to determine the reliability of the measurement tool. In this method, "Cronbach's Alpha", which is the internal reliability coefficient of the sections in the nutrition knowledge level scale for adults, was calculated. The internal reliability coefficient of 20 items in the " elementary nutrition " title was Cronbach's Alpha=0.72, and the internal

reliability coefficient of 12 items in the "nutritional preference" title was Cronbach's Alpha =0.74 (130).

Nutrition Label Reading Attitude Scale: Participants gave one of the answers to the 30-question scaled questionnaire: I completely agree, I agree, I am undecided, I do not agree, I do not agree at all. Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) were used to ensure the construct validity of the 'Nutrition Label Reading Attitude Scale'. In 1999, university students' food label reading attitudes, behaviors and knowledge were investigated by Marietta et al. by developing a scale. The validity of the scale developed in this study was found by interviewing 5 experts, and its reliability was found by using the Cronbach's alpha test. The Cronbach's alpha coefficient of the questionnaire was found to be 0.80 (8). In a study conducted by Rasberry et al. in 2007 on reading food labels to students of a university located in Texas, USA, the scale developed by the researchers benefited from a survey conducted by Marietta et al. in 1999 (129). The reliability study of the scale was conducted and the Cronbach's alpha coefficient was found to be 0.54. The validity and reliability level of the scale was found to be low due to the low correlation of the items in the attitude scale, the Cronbach's alpha coefficient being 0.54, and the scale validity not being supported by factor analysis (129).

The reliability test of the questionnaire form used in Aygen's study in 2012, in which he investigated the attitudes and behaviors of consumers in Istanbul, Turkey, regarding food label examination, was conducted and the Cronbach's alpha coefficient was found to be 0.92. The internal validity of the questionnaire was created as a result of the interview with the food engineers. However, the validity and factor analysis studies of the questionnaire were not performed (3). Studies on food label reading attitude towards Turkish society are limited, and there is no measurement tool for measuring food label reading attitude in Turkish language with validity and reliability studies. Based on this information, it was decided to develop the Nutrition Label Reading Attitude Scale for the first time in Turkish.

The scale development study started by examining the data collection tools used in similar studies in the literature. During the development of the scale, the opinions of five experts were taken. Before the scale was presented to the participants, it was piloted more than once to the target audience, university students, its comprehensibility and

suitability were tested, the errors were corrected, and the scale took its final form. Construct validity is checked to ensure the validity of the scale. In psychology, the concept of structure is defined as elements that cannot be observed directly, but are known to exist in individuals and are related to each other. The purpose of construct validity is to theoretically explain these constructs that cannot be determined observationally. Exploratory Factor Analysis and Confirmatory Factor Analysis were used to ensure the construct validity of the scale. The factor loads of the propositions in the scale vary between 0.55 and 0.75. Cronbach's alpha coefficient, which is one of the most frequently used methods in determining the reliability of attitude scales, is an internal consistency method calculated by adding the variances of the items in a measurement tool and dividing them into the general variance of the scale. In general, it examines whether the items of the scale have a similar structure. In addition to the Cronbach's alpha coefficient, the split half test was used to determine the reliability of the scale, and the Cronbach's alpha coefficient was found to be 0.929. A Cronbach's alpha coefficient above 0.70 indicates that the scale is reliable. In determining the internal consistency of the measurement tool in the split-half method, the scale applied to the participants once is divided into two equal parts and the correlation between the parts is examined. The Spearman-Brown coefficient and the Guttman Split-half coefficient are decisive factors for reliability in the split-half method. The fact that these coefficients are above 0.70 indicates that the attitude scale is reliable. In the study, the Spearman-Brown coefficient was 0.873 and the Guttman Split-Half coefficient was 0.872. In addition, the split half test randomly divides the items in the scale into half and looks at the relationship between the sections. As a result of this test, the correlation between departments is 0.775, indicating that the relationship is strong. However, the split half test was performed once and no test re-test was applied. If the split half test is repeated, the correlation between the sections will be different according to the test re-test result (130). It was determined that the Nutrition Label Reading Attitude Scale, which was developed as a result of these tests, is a valid and reliable measurement tool.

3.3.2 Statistical Analysis

NCSS (Number Cruncher Statistical System) program was used for statistical analysis. Descriptive statistical methods (mean, standard deviation, median, frequency, percentage, minimum, maximum) were used while evaluating the study data. The

conformity of the quantitative data to the normal distribution was tested with the Shapiro-Wilk test and graphical examinations. Student-t test was used for comparisons between two groups of normally distributed quantitative variables, and Mann-Whitney U test was used for comparisons between two groups of non-normally distributed quantitative variables. One-way analysis of variance and binary evaluations with Bonferroni correction were used for comparisons between groups of more than two normally distributed quantitative variables. Kruskal-Wallis test and Dunn-Bonferroni test were used for comparisons between groups of more than two quantitative variables that did not show normal distribution. Spearman correlation analysis was used to evaluate the relationships between quantitative variables. Statistical significance was accepted as $p < 0.05$.

r	Comment
0.00 — 0.19	Too weak
0.20 — 0.39	Weak
0.40 — 0.59	Medium
0.60 — 0.79	Strong
0.80 — 1.00	Very strong

The evaluation of Cronbach's Alpha coefficient is made according to the following criteria:

If $0.0 < 0.40$, the scale is unreliable.

If $0.40 < 0.60$, the scale is low-confidence.

If $0.60 < 0.80$, it is quite reliable.

If $0.80 < 1.00$, the scale is highly reliable.

4. RESULTS

This study was conducted with a total of 430 women aged between 19 and 64, with a mean age of 38.54 ± 13.26 years. 13.3% (n=57) of the cases were 25 and under, 40.7% (n=175) were between 26-35 years old, 12.1% (n=52) were 36-45 years old. It was observed that 17.4% (n=75) were between the ages of 46-55 and 16.5% (n=71) were over 55 years of age.

Table 4.1. Distribution of Descriptive Characteristics

Age	Avg $\pm$ Ss	38.54 $\pm$ 13.26
	Median (Min-Max)	33 (19-64)
	Age $\leq$ 25	57 (13.3)
	Age 26-35	175 (40.7)
	Age 36-45	52 (12.1)
	Age 46-55	75 (17.4)
	Age >55	71 (16.5)
Height	Avg $\pm$ Ss	164.06 $\pm$ 5.91
	Median (Min-Max)	164 (150-180)
Weight	Ort $\pm$ Ss	65.64 $\pm$ 12.24
	Median (Min-Max)	64 (42-120)
BMI	Avg $\pm$ Ss	24.40 $\pm$ 4.43
	Median (Min-Max)	23.74 (16.4-42.5)
	Underweight	26 (6.0)
	Normal weight	231 (53.7)
	Overweight	124 (28.8)
	Obesity	49 (11.4)
Marital status	Married	220 (51.2)
	Single	210 (48.8)
Having a child	Yes	196 (45.6)
	None	234 (54.4)
Living with	Family	332 (77.2)

	Roommate	16 (3.7)
	Single	59 (13.7)
	Other	23 (5.3)
Educational status	Literate	1 (0.2)
	Primary education	2 (0.5)
	High School	49 (11.4)
	University	281 (65.3)
	Graduate	97 (22.6)
Occupation	White collar employee	200 (46.5)
	Teacher	48 (11.2)
	Health employee	45 (10.5)
	Student	36 (8.4)
	Housewife/Retired/Unemployed	52 (12.1)
	Other	49 (11.4)
Employment status	Yes	234 (54.4)
	No	196 (45.6)
Health problem	Yes	122 (28.4)
	None	308 (71.6)

The heights of the subjects participating in the study ranged between 150 and 180 cm, with an average of 164.06 ± 5.91 cm, their weight measurements between 42 and 120 kg, with an average of 65.64 ± 12.24 kg and a BMI of 16.4. and 42.5 kg/m², with an average of 24.40 ± 4.43 kg/m². 6% (n=26) of the cases were underweight, 53.7% (n=231) were normal weight, 28.8% (n=124) were overweight, and 11.4% (n=231) were overweight. 49) were observed to be obese. It was observed that 51.2% (n=220) of the cases were married and 48.8% (n=210) were single. It was observed that 45.6% (n=196) of the participants had children. Of the cases, 77.2% (n=332) lived with their family, 3.7% (n=16) with a roommate, 13.7% (n=59) single and 5.3% (n=23) stated that she lived with other people. 0.2% (n=1) of the participants were literate, 0.5% (n=2) had primary education, 11.4% (n=49) had high school, 65.3% (n=281) were university graduates and 22.6% (n=97) were postgraduates. 46.5% (n=200) of the cases were white collar employee, 11.2% (n=48) were teachers, 10.5% (n=45) were Health employee, 8.4% (n=36) were students, 12.1% (n=52) were housewives/retired/unemployed, and 11.4%

(n=49) were in other occupational groups. It was observed that 54.4% (n=234) of the cases were working, while 45.6% (n=196) were not working. While 28.4% (n=122) of the cases stated that they had a health problem, 71.6% (n=308) stated that they did not have any health problems.

Table 4.2. Distributions Regarding Nutrition

	n (%)
Budget allocated from %5	12 (2.8)
total income to nutrition %10	28 (6.5)
%20	69 (16.0)
%30	134 (31.2)
%40	113 (26.3)
≥50	74 (17.2)
Get healthy nutrition Yes	98 (22.8)
education No	332 (77.2)
Desire to receive healthy Yes	285 (66.3)
nutrition education No	145 (33.7)
The state of being on a Yes	334 (77.7)
diet any of time your life No	96 (22.3)

While 2.8% (n=12) of the participants stated that they allocate 5% of their total income to nutrition, 6.5% (n=28) allocate 10%, 16% (n=69) 20%, 31.2% (n=113) stated that they separated 40%, 17.2% (n=74) stated that they separated 50% and above.

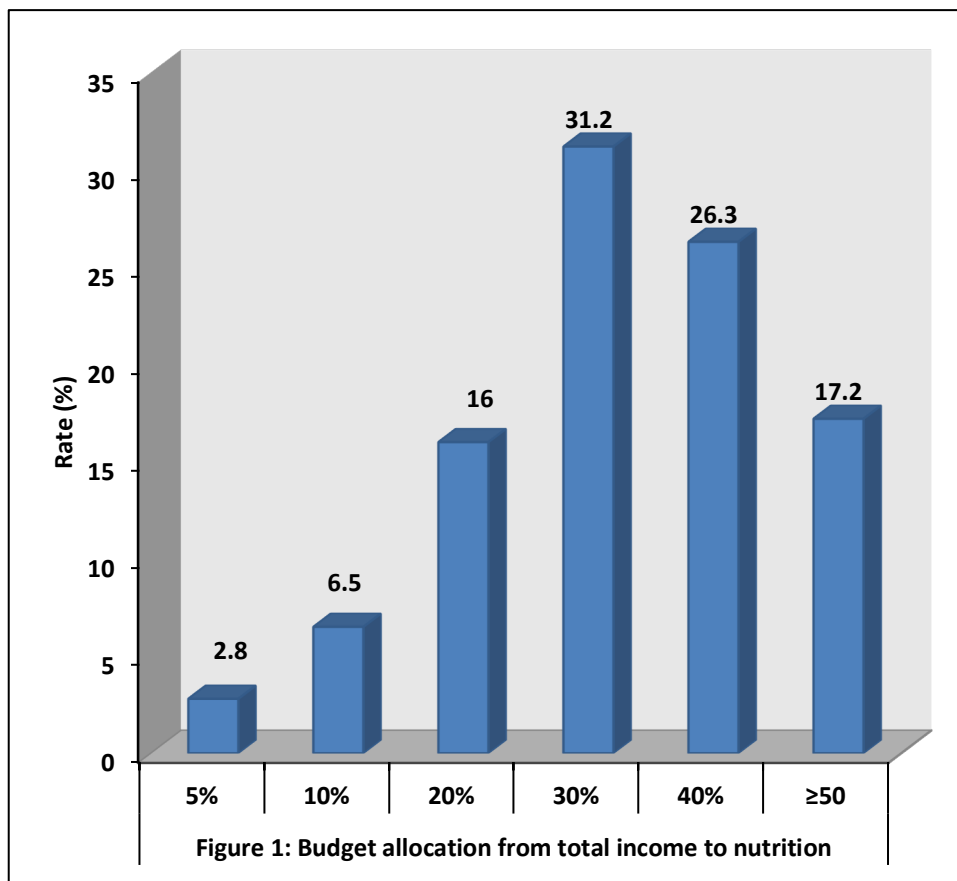


Figure 4.1. Budget allocation from total income to nutrition

While 22.8% (n=98) of the cases stated that they received healthy nutrition education, 66.3% (n=285) stated that they wanted to receive healthy nutrition education.

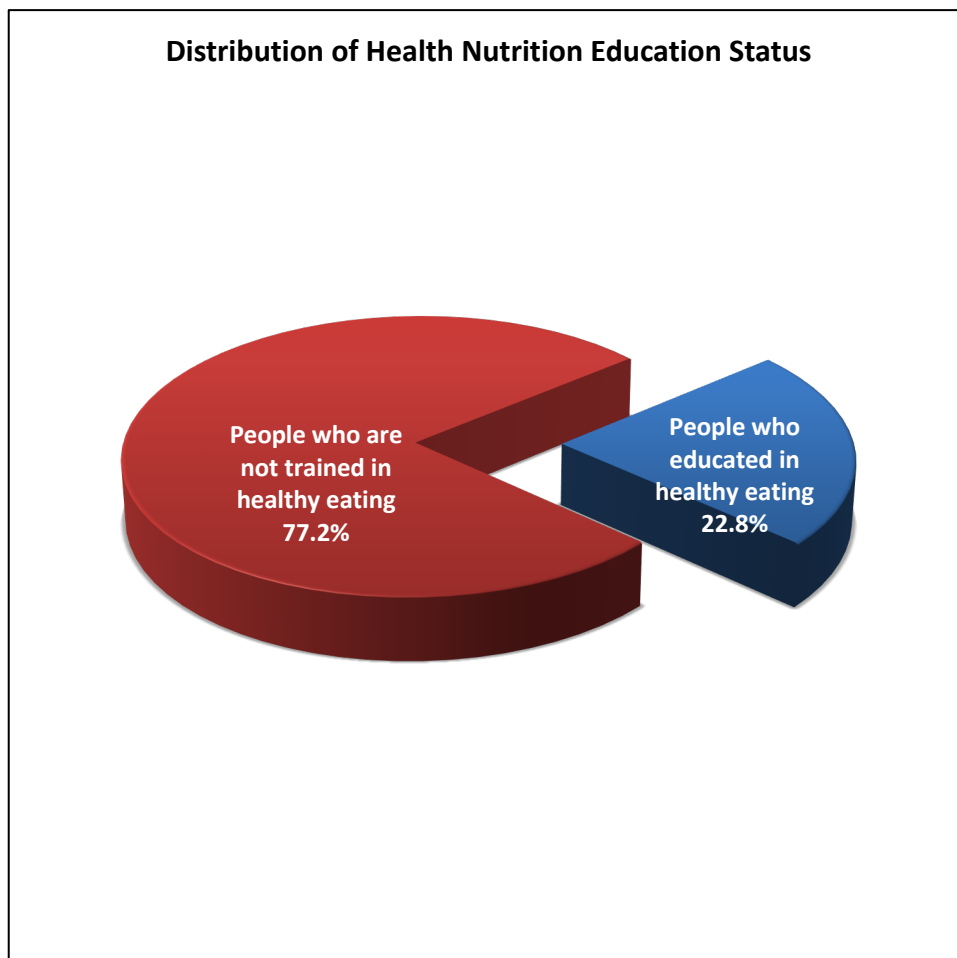


Figure 4.2. Health Nutrition Education Status

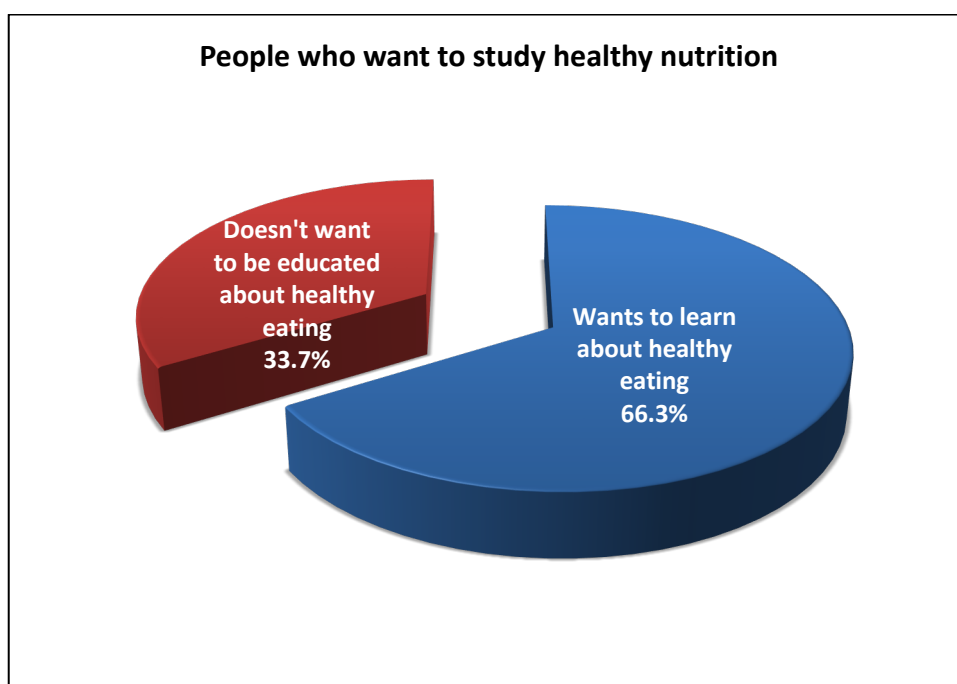


Figure 4.3. People who want to study healthy nutrition

77.7% (n=334) of the participants stated that they have been on a diet throughout their life.

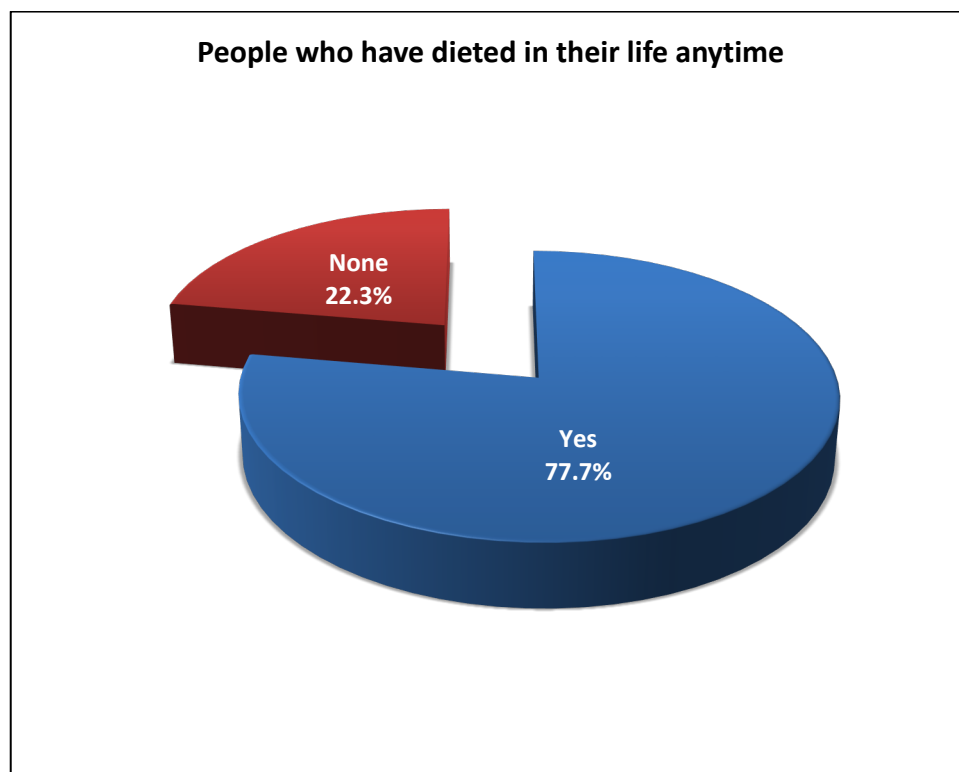


Figure 4.4. People who have dieted in their life anytime

Table 4.3. Distribution of the Answers Given to the Questions of the Nutrition Label Reading Attitude Scale

	Strongly Disagree		Disagree		Undecided		Agree		Totally Agree	
	n	%	n	%	n	%	n	%	n	%
I read the nutritional label of the packaged products I buy	42	9.8	48	11.2	54	12.6	175	40.7	111	25.8
I can understand the contents of the food label	38	8.8	47	10.9	105	24.4	166	38.6	74	17.2
Nutrition label is important for me to buy the product	35	8.1	41	9.5	68	15.8	157	36.5	129	30.0
I don't look at the food labels of products with nice packaging.	201	46.7	134	31.2	50	11.6	36	8.4	9	2.1

I find the nutritional label content of the products I buy sufficient	61	14.2	115	26.7	169	39.3	74	17.2	11	2.6
I need a nutritional label to be able to buy products	27	6.3	49	11.4	60	14.0	121	28.1	173	40.2
The production date of the packaged products I buy is important to me.	24	5.6	23	5.3	29	6.7	79	18.4	275	64.0
The expiry date of the packaged products I buy is important to me.	19	4.4	8	1.9	7	1.6	58	13.5	338	78.6
The origin (country of manufacture) of the product I purchased is important to me	52	12.1	55	12.8	83	19.3	103	24.0	137	31.9
The shelf life of the product I buy is important to me.	19	4.4	23	5.3	33	7.7	115	26.7	240	55.8
The manufacturer of the product I buy is important to me.	35	8.1	40	9.3	62	14.4	146	34.0	147	34.2
The address of the manufacturer of the product I purchased is important to me.	100	23.3	105	24.4	114	26.5	69	16.0	42	9.8
The quantity (gram. volume) of the product I buy is important to me.	31	7.2	35	8.1	51	11.9	157	36.5	156	36.3
The ingredient list of the product I purchased is important to me	24	5.6	15	3.5	51	11.9	137	31.9	203	47.2
The allergen list of the product I buy is important to me.	41	9.5	59	13.7	58	13.5	120	27.9	152	35.3
The way of consumption of the product I buy (eg: drink	31	7.2	32	7.4	55	12.8	148	34.4	164	38.1

it cold) is important to me.

I care that the product I purchased gives a storage instruction (eg. store at room temperature).

It is important for me to have a production permit on the product I purchased.

It is important to me that the nutritional content of the product I buy is healthy.

I look at the food labels of the brands I know.

I look at the food labels of brands I don't know.

I do not look at the nutrition label on the back of the products that have a front package label (nutritional information on the front of the package).

I find it unnecessary to look at the nutritional label of products with advertisements

For the first time. I look at the food labels of the products I will buy.

I consume more products with health claims

I look at TSE. Ministry of Health approvals

21	4.9	18	4.2	29	6.7	142	33.0	220	51.2
26	6.0	29	6.7	44	10.2	117	27.2	214	49.8
17	4.0	20	4.7	43	10.0	137	31.9	213	49.5
33	7.7	54	12.6	78	18.1	136	31.6	129	30.0
31	7.2	32	7.4	41	9.5	110	25.6	216	50.2
125	29.1	103	24.0	107	24.9	68	15.8	27	6.3
209	48.6	121	28.1	61	14.2	30	7.0	9	2.1
35	8.1	26	6.0	31	7.2	118	27.4	220	51.2
33	7.7	25	5.8	94	21.9	139	32.3	139	32.3
32	7.4	42	9.8	74	17.2	121	28.1	161	37.4

I look at the nutritional labels of high-priced foods.	50	11.6	53	12.3	88	20.5	105	24.4	134	31.2
I look at the nutritional labels of low-priced foods.	48	11.2	50	11.6	79	18.4	108	25.1	145	33.7
I look at the food labels of the products on sale.	39	9.1	43	10.0	81	18.8	102	23.7	165	38.4
I look for additives (preservatives, colorants) with E code on packaged food products.	38	8.8	58	13.5	68	15.8	117	27.2	149	34.7

Table 3 shows the distribution of the answers given by the subjects participating in the study to the questions of the Nutrition Label Reading Attitude Scale. Scale scores 1st, 2nd, 3rd, 6th, 7th, 8th, 9th, 10th, 11th, 13th, 16th, 17th, 18th, 19th, 20th, 21st, It was obtained by the sum of the 27th, 28th, 29th and 30th questions. The total scores of the subjects from the Nutrition Label Reading Attitude Scale ranged from 20 to 100, with an average of 77.41 ± 16.96 points. When the internal consistency of the scale was examined, it was determined as $\alpha=0.945$, and it can be said that the scale has high reliability.

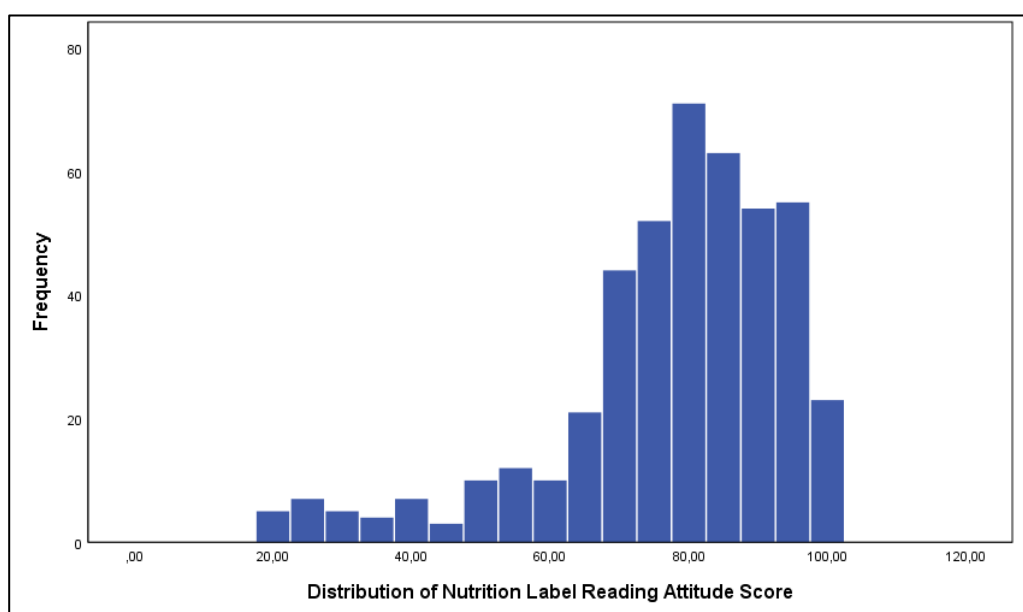


Figure 4.5. Distribution of Nutrition Label Reading Attitude Score

Table 4.4. Distribution of the Answers to the Elementary Nutrition and Nutritional Health Knowledge Questions on the Nutrition Knowledge Level Scale for Adults

	Strongly Agree		Agree		Agree Neither		Disagree		Strongly Disagree	
	n	%	n	%	n	%	n	%	n	%
Natural. freshly squeezed juices do not contain sugar	36	8.4	46	10.7	32	7.4	122	28.4	194	45.1
Carrots are a good source of vitamin A.	222	51.6	150	34.9	35	8.1	13	3.0	10	2.3
Vitamins and minerals give energy	125	29.1	160	37.2	49	11.4	48	11.2	48	11.2
Carbohydrates are the main source of energy	150	34.9	149	34.7	65	15.1	45	10.5	21	4.9
The nutritional value of frozen products is lower than fresh food.	122	28.4	130	30.2	80	18.6	61	14.2	37	8.6
Fruits are high in protein	33	7.7	60	14.0	109	25.3	126	29.3	102	23.7
Eggs and red meat are similar in terms of the amount of protein they contain.	126	29.3	165	38.4	72	16.7	40	9.3	27	6.3
Consuming olive oil raises cholesterol	37	8.6	40	9.3	84	19.5	121	28.1	148	34.4
Dried bean curd is high in fiber	134	31.2	147	34.2	106	24.7	24	5.6	19	4.4
Fats in processed meat products such as salami and sausage are harmful to health.	273	63.5	97	22.6	22	5.1	14	3.3	24	5.6
Calcium mineral found in milk and dairy products is	246	57.2	114	26.5	32	7.4	18	4.2	20	4.7

important for bone and dental health.

The best source of vitamin D, which is necessary for the prevention of osteoporosis, is the sun.

279 64.9 100 23.3 21 4.9 8 1.9 22 5.1

Vitamin E is a very effective vitamin for eyesight.

133 30.9 110 25.6 112 26.0 43 10.0 32 7.4

Vitamin C in orange strengthens

immunity and protects against cold and flu infections.

244 56.7 132 30.7 25 5.8 13 3.0 16 3.7

Consuming whole grain (brown) bread is beneficial for the nervous system because of the vitamins it contains.

149 34.7 146 34.0 93 21.6 17 4.0 25 5.8

Excessive consumption of salt does not affect blood pressure

26 6.0 25 5.8 35 8.1 89 20.7 255 59.3

Red meat is effective in

preventing forgetfulness

181 42.1 143 33.3 71 16.5 17 4.0 18 4.2

because it contains vitamin B12.

Red and purple vegetables and fruits are protective against cancer

215 50.0 120 27.9 67 15.6 13 3.0 15 3.5

Fish has a higher saturated fat content than red meat.

97 22.6 92 21.4 137 31.9 44 10.2 60 14.0

They contain less energy than fats, protein and carbohydrates.	68	15.8	92	21.4	108	25.1	52	12.1	110	25.6
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Table 4 shows the distribution of the answers given by the subjects participating in the study to the Nutrition Knowledge Level Scale for Adults, Elementary Nutrition and Nutrition-Health Knowledge questions. The scores of the subjects in the Adult Nutrition Knowledge Level Scale Elementary Nutrition and Nutrition-Health Knowledge sub-dimension ranged from 8 to 78, with an average of 54.63 ± 9.57 points. When the internal consistency of the scale was examined, it was determined as $\alpha=0.740$, and it can be said that the reliability of the scale is high.

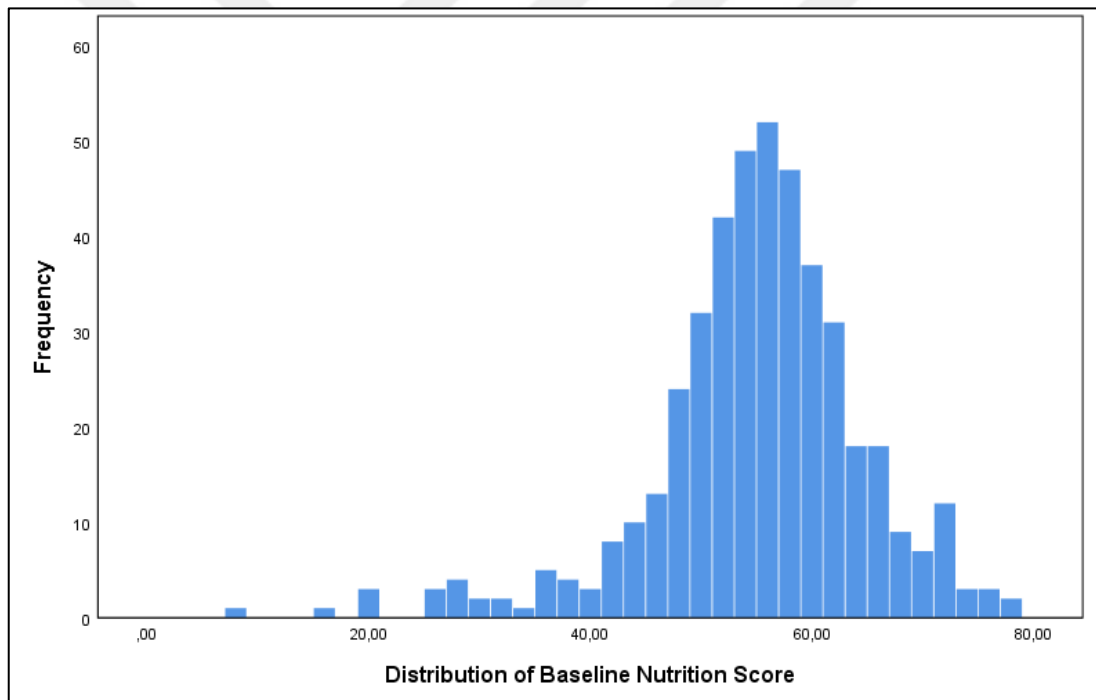


Figure 4.6. Distribution of Baseline Nutrition Score

Table 4.5. Distribution of the Answers to the Food Preference Questions on the Nutrition Knowledge Level Scale for Adults

	Strongly Agree		Agree		Agree Neither		Neither Disagree		Strongly Disagree	
	Agree		Agree		Agree Neither		Disagree		Disagree	
	n	%	n	%	n	%	n	%	n	%
It is healthier for diabetics to consume the fruit itself (without peeling if possible) instead of fruit juice.	3	0,7	10	2,3	52	12,1	145	33,7	220	51,2
Consuming fiber foods instead of sugary foods prevents constipation	6	1,4	7	1,6	27	6,3	108	25,1	282	65,6
An individual who wants to reduce the amount of fat he takes with food should prefer grilled chicken instead of frying chicken.	9	2,1	2	0,5	12	2,8	110	25,6	297	69,1
A person who wants to increase the protein intake in a meal should prefer spinach with egg instead of bulgur and spinach.	8	1,9	9	2,1	47	10,9	120	27,9	246	57,2
It is a better choice to consume whole wheat crackers instead of sweet biscuits for snacks.	9	2,1	9	2,1	45	10,5	125	29,1	242	56,3
It is more beneficial to put 3-4 dried apricots in the	7	1,6	2	0,5	8	1,9	79	18,4	334	77,7

children's lunch box instead of wafers.											
It is more appropriate for an adult to meet his fluid needs by consuming water instead of beverages such as tea and coffee.	16	3.7	1	0.2	11	2,6	72	16,7	330	76,7	
It is more beneficial to take vitamins and minerals from the form of drugs rather than directly from food.	166	38.6	108	25.1	93	21,6	38	8,8	25	5,8	
Proteins in foods of animal origin (such as meat, fish, milk, eggs) are very important for body health.	7	1.6	13	3.0	28	6,5	125	29,1	257	59,8	
White bread is healthier than whole grain (brown) bread	266	61.9	66	15.3	28	6,5	36	8,4	34	7,9	
To reduce the salt intake, cabbage salad should be preferred instead of sauerkraut.	17	4.0	13	3.0	76	17,7	127	29,5	197	45,8	
Someone who wants to reduce the amount of fat they get from food can choose light milk.	47	10.9	45	10.5	109	25,3	107	24,9	122	28,4	

The distribution of the answers given by the subjects participating in the study to the Nutrition Knowledge Level Scale for Adults Food Preference questions is shown in Table 5. The scores of the subjects in the Nutrition Knowledge Level Scale for Adults

Food Preference sub-dimension ranged from 4 to 48, with a mean score of 39.46 ± 6.49 . When the internal consistency of the scale was examined, it was determined as $\alpha=0.795$, and it can be said that the reliability of the scale is high.

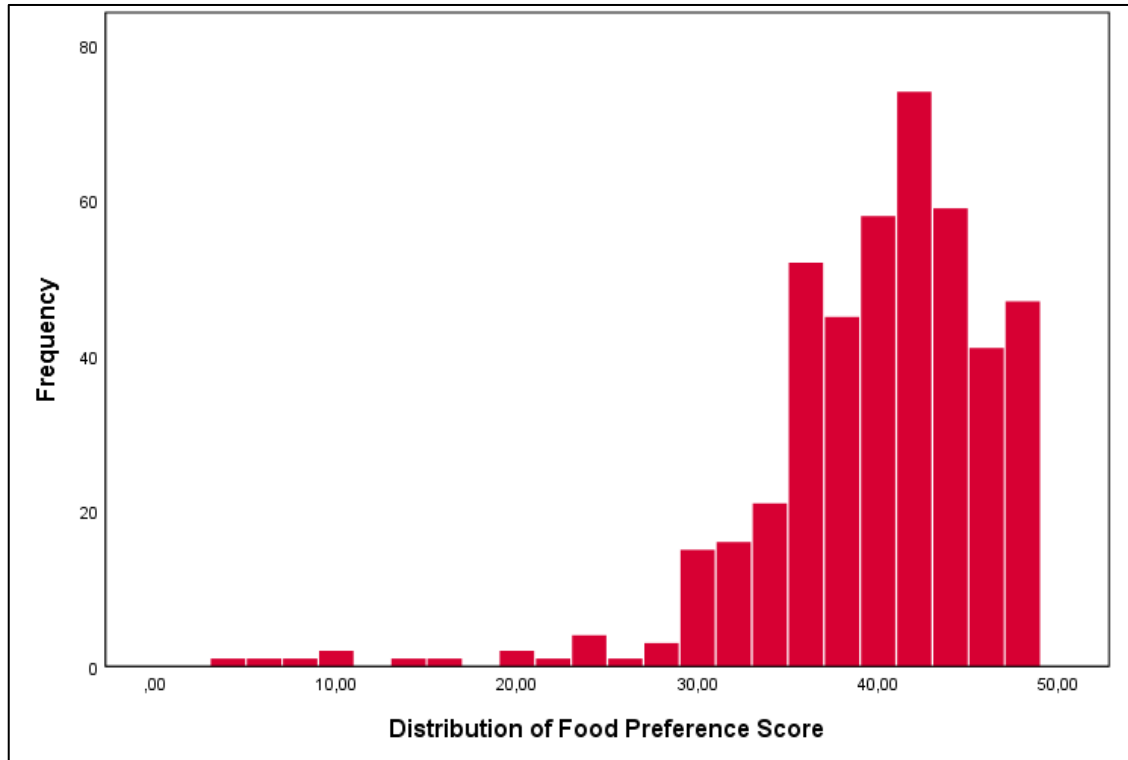


Figure 4.7. Distribution of Food Preference Score

Table 4.6. Distributions of the Nutrition Knowledge Level for Adults Scale

No relationship (0)	1	2	3	4	5	6	7	8	9	High correlation (10)
n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Degree of relationship between nutrition and health										
0 (0,0)	0 (0.0)	0 (0.0)	0 (0.0)	6 (1.4)	11 (2.6)	6 (1.4)	30 (7.0)	64 (15.2)	65 (15.2)	245 (57.4)
Insufficient, little (0)	1	2	3	4	5	6	7	8	9	Very good enough (10)

n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
2 (0.5)	3 (0.7)	7 (1.6)	18 (4.2)	31 (7.3)	50 (11.7)	90 (21.1)	96 (22.5)	73 (17.1)	35 (8.2)	21 (4.9)

“What is the degree of the relationship between nutrition and health?” of the cases participating in the study. And “How accurate do you find your food preferences that you apply in your daily life?” The distribution of their answers to the statement is shown in Table 6.

Table 4.7. Evaluation of the Relationship Between the Nutrition Label Reading Attitude Scale and the Nutrition Knowledge Level Scale for Adults Scores

				Nutrition Label Reading Attitude Scale Total Score
Nutrition Knowledge Level Scale for Adults	Elementary Nutrition and Nutritional Health Knowledge Information	Nutrition and Health	r	0.140
			p	0.004**
Food Preference			r	0.137
			p	0.004**

r= Spearman's Correlation Coefficient **p<0.01

The scores of the subjects participating in the study in the Nutrition Knowledge Level Scale for Adults "Elementary Nutrition and Nutritional Health Knowledge" sub-dimension and the total score of the Nutrition Label Reading Attitude Scale were positively correlated (Nutrition Label Reading Attitude score increased as the Elementary Nutrition and Nutritional Health Knowledge score increased) at the level of 0.140. very weak correlation was found statistically significant ($r=0.140$; $p=0.004$; $p<0.01$). The positive correlation between the scores of the subjects participating in the study in the Nutrition Knowledge Level Scale for Adults "Food Preference" sub-dimension and the total score of the Nutrition Label Reading Attitude Scale (As the Food Preference score increases, the Nutrient Label Reading Attitude score increases) at the level of 0.137, a

very weak correlation was found to be statistically significant ($r=0.137$; $p=0.004$; $p<0.01$).

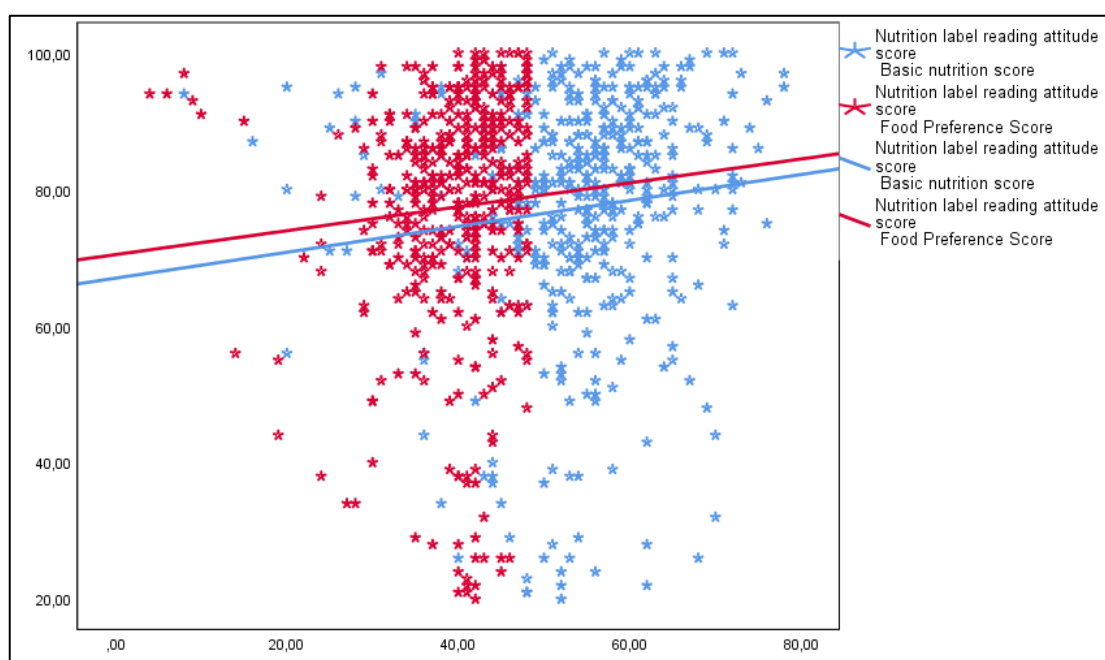


Figure 4.8. Distribution of the Relationship Between Nutrition Label Reading Attitude Score and Baseline Nutrition Score and Food Preference Scores

Comparisons of the Nutrition Label Reading Attitude Scale

Table 4.8. Evaluation of Food Label Reading Attitude Scale Scores by Descriptive Characteristics

		Nutrition Reading Attitude Total Score	Label Scale Test Value
		Avg $\pm$ Sd	Median (Min- Max) p
Age	Age ≤ 25 (n=57)	72.79 $\pm$ 17.73	77 (26- 97) χ^2 :14.534
	Age range 26-35 (n=175)	77.55 $\pm$ 14.57	80 (24- 100) $a0.006^{**}$

	Age 36-45 (n=52)	84 (38- 80.10±15.91 100)	
	Age range 46-55 (n=75)	81 (22- 75.80±19.14 97)	
	Age >55 (n=71)	85 (20- 80.51±19.41 100)	
BMI	Underweight (n=26)	81 (24- 74.77±23.06 100)	χ^2 :2.466
	Normal Weight (n=231)	81 (22- 78.13±15.85 100)	^a 0.481
	Overweight (n=124)	80.5 (20- 77.83±17.22 100)	
	Obese (n=49)	78 (21- 74.37±17.71 98)	
Marital status	Married (n=220)	82 (21- 77.88±18.18 100)	Z:-1.519
	Single (n=210)	80 (20- 76.92±15.61 100)	^b 0.129
Having a child	Yes (n=196)	81 (20- 76.80±19.21 100)	Z:-0.466
	None (n=234)	80 (26- 77.93±14.85 100)	^b 0.641
living with	Family (n=332)	81 (21- 78.41±16.42 100)	χ^2 :17.353
	Roommate (n=16)	63.5 (29- 63.13±14.33 91)	^a 0.001**
	Single (n=59)	81 (20- 75.47±18.10 98)	
	Other (n=23)	85 (24- 77.91±19.38 98)	
	High school (n=52)	81 (20- 74.37±21.61 98)	χ^2 :1.693

Educational Status	University (n=281)	77.06±16.90	80 (22-100)	^a 0.429
	Graduate (n=97)	80.06±13.86	82 (28-100)	
Employment status	Yes (n=234)	78.96±14.74	81 (22-100)	Z:-1.131
	No (n=196)	75.56±19.16	80 (20-100)	
Occupation	White collar employee (n=200)	78.72±15.49	81 (21-100)	χ^2 :5.924
	Teacher (n=48)	78.60±16.58	82 (22-100)	
	Health employee (n=45)	79.49±16.48	82 (28-100)	
	Student (n=36)	73.44±16.70	77 (29-96)	
	Housewife/Retired/Unemployed (n=52)	74.50±21.11	81 (21-98)	
	Other (n=49)	75.02±18.48	79 (20-100)	
Health problem	Yes (n=122)	77.73±17.19	82 (20-100)	Z:-0.448
	None (n=308)	77.29±16.90	80 (22-100)	

^aKruskal Wallis Test ^bMann Whitney U Test

^{**}p<0,01

A statistically significant difference was found between the total scores of the patients on the Nutrition Label Reading Attitude Scale according to age groups (p=0.006; p<0.01). According to the results of the pairwise comparison made to determine the difference; The scores of the subjects aged 25 and under from the total scale were found to be significantly lower than those over the age of 55 (p=0.006; p<0.01).

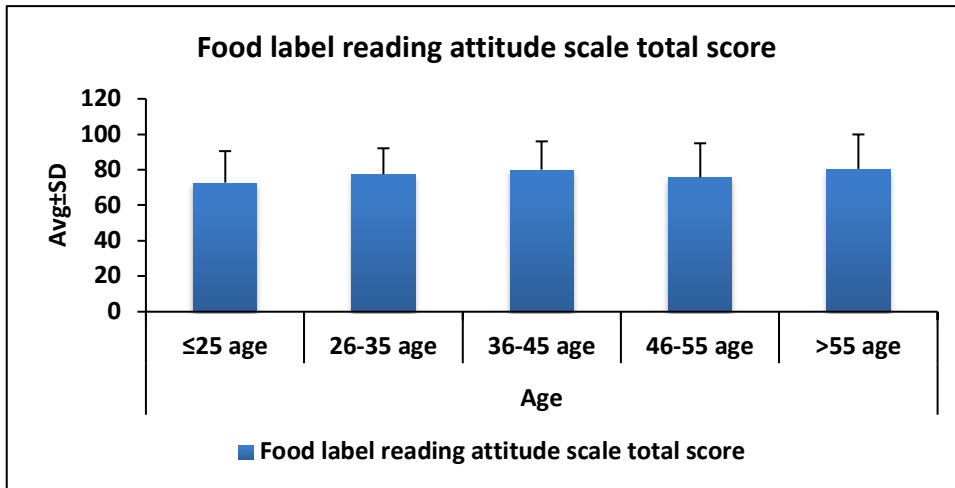


Figure 4.9. Distribution of the Total Scores of the Attitude Scale for Reading Food Labels by Age Groups

No statistically significant difference was found between the total scores of the patients on the Nutrition Label Reading Attitude Scale according to the genders ($p>0.05$). No statistically significant difference was found between the total scores of the patients on the Nutrition Label Reading Attitude Scale according to their BMI levels ($p>0.05$). No statistically significant difference was found between the scores of the cases obtained from the Nutrition Label Reading Attitude Scale according to marital status ($p>0.05$). No statistically significant difference was found between the total scores of the patients on the Nutrition Label Reading Attitude Scale according to the status of having children ($p>0.05$). A statistically significant difference was found between the total scores of the patients on the Nutrition Label Reading Attitude Scale according to the person they lived in ($p=0.001$; $p<0.01$). According to the results of the pairwise comparison made to determine the difference; The scores of the cases living with roommates from the total scale were found to be significantly lower than those living with family, alone and with other people ($p=0.001$; $p=0.009$; $p=0.003$; $p<0.01$).

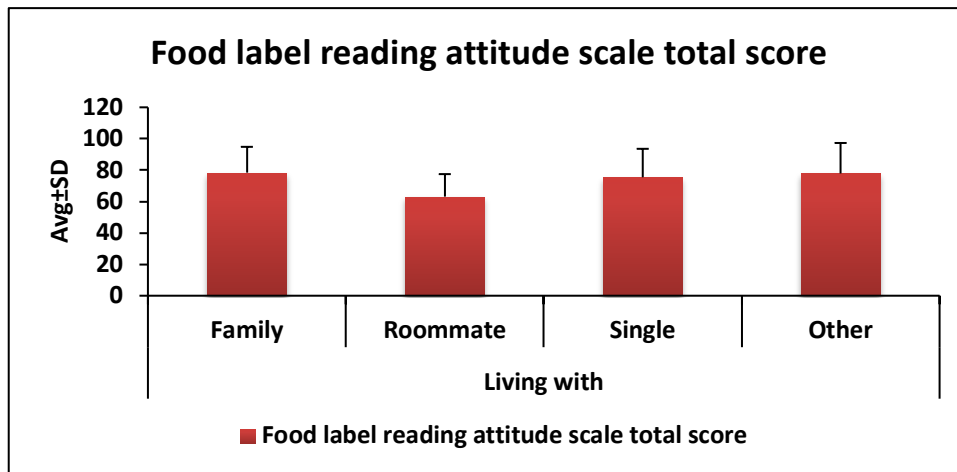


Figure 4.10. Distribution of the Total Scores of the Attitude Scale for Reading Food Labels by Person

No statistically significant difference was found between the total scores of the patients on the Nutrition Label Reading Attitude Scale according to their education level ($p>0.05$). No statistically significant difference was found between the total scores of the patients on the Nutrition Label Reading Attitude Scale according to their employment status ($p>0.05$). No statistically significant difference was found between the scores of the subjects from the Total Nutrition Label Reading Attitude Scale according to occupations ($p>0.05$). No statistically significant difference was found between the total scores of the patients on the Nutrition Label Reading Attitude Scale, depending on whether they had a health problem ($p>0.05$).

Table 4.9. Evaluation of Food Label Reading Attitude Scale Scores According to Descriptive Characteristics

			Nutrition Label Reading Attitude Scale Total Score		Test Value
			Avg ±Sd	Median (Min-Max)	p
Budget allocated from total income to nutrition	%5 (n=12)		71.00±24.27	78 (21-94)	χ^2 :6.635
	%10 (n=28)		78.29±16.36	82 (29-97)	^a 0.249
	%20 (n=69)		78.62±12.99	80 (28-100)	
	%30 (n=134)		79.73±16.33	83 (22-100)	

		%40 (n=113)	75.49±17.04	78 (20-100)	
		≥50 (n=74)	75.73±19.68	80.5 (21-100)	
Get healthy nutrition education	Yes (n=98)	81.51±15.94	83 (20-100)	Z:-3.067	
	No (n=332)			^b 0.002**	
		76.20±17.09	80 (21-100)		
Desire to receive healthy nutrition education	Yes (n=285)	77.04±16.95	80 (20-100)	Z:-0.793	
	No (n=145)			^b 0.428	
		78.14±17.01	81 (22-100)		
Lifelong dieting status	Yes (n=334)	77.25±17.09	80 (20-100)	Z:-0.429	
	No (n=96)	77.96±16.58	81 (26-100)	^b 0.668	
^a Kruskal Wallis Test ^b Mann Whitney U Test **p<0,01					

No statistically significant difference was found between the total scores of the subjects from the Nutrition Label Reading Attitude Scale according to the budget allocated for nutrition from the total income ($p>0.05$).

The scores of the subjects who received healthy nutrition education on the Nutrition Label Reading Attitude Scale were found to be statistically significantly higher than the subjects who did not receive education ($p=0.002$; $p<0.01$).

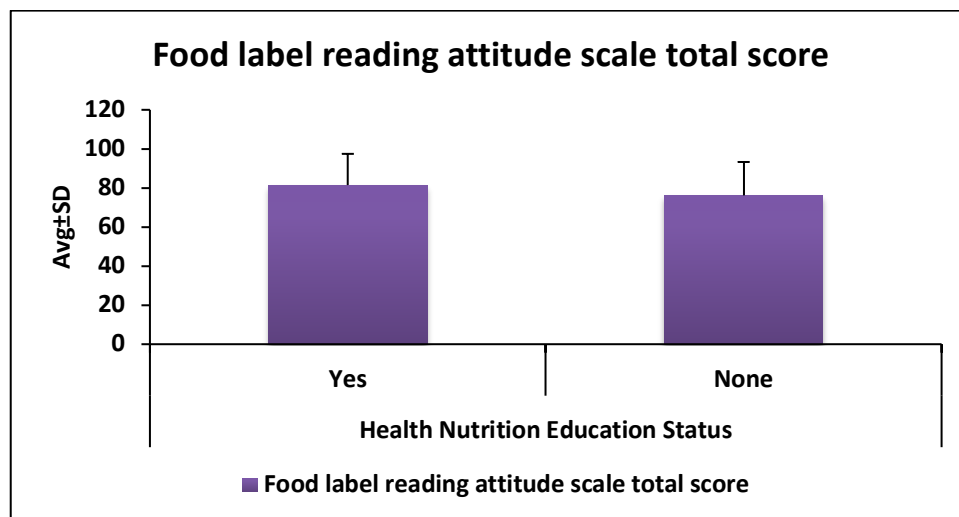


Figure 4.11. Distribution of the Total Scores of the Attitude Scale for Reading Food Labels by Health Nutrition Education Status

There was no statistically significant difference between the scores of the subjects from the Total Nutrition Label Reading Attitude Scale according to their desire to receive healthy nutrition education ($p>0.05$). No statistically significant difference was found

between the total scores of the patients on the Nutrition Label Reading Attitude Scale according to their lifelong dieting status ($p>0.05$).

Comparisons of the Nutrition Knowledge Level Scale for Adults

Table 4.10. Evaluation of Elementary Nutrition and Nutrition-Health Knowledge Sub-Dimension Scores of the Adult Nutrition Level Scale by Descriptive Characteristics

		Elementary and Sub-Dimensional Score	Nutrition and Nutrition-Health Score	Test Value
		Avg±Sd	Median (Min- Max)	p
Age	Ages ≤25 (n=57)		57 (31-	F:3.109
		57.33±8.52	76)	
	Age range 26-35 (n=175)		55 (25-	°0.015*
		55.18±9.41	78)	
	Age range 36-45 (n=52)		54 (28-	
		53.83±8.14	74)	
BMI	Age range 46-55 (n=75)		53 (8-72)	
		51.77±11.11		
	Ages >55(n=71)		56 (20-	
		54.72±9.36	75)	
	Underweight (n=26)		55 (40-	F:0.695
		55.92±7.60	72)	
	Normal Weight (n=231)		55 (20-	°0.555
		55.06±9.46	78)	
	Overweight (n=124)		54.5 (8-	
		53.93±9.92	75)	
	Obese (n=49)		54 (20-	
		53.69±10.17	71)	
Marital status	Married (n=220)	53.21±10.07	54 (8-78)	t:-3.182
	Single (n=210)		56 (25-	°0.002**
		56.12±8.78	78)	

Having a child	Yes (n=196)	53.19±9.85	54 (8-75)	t:-2.889
	None (n=234)		56 (25-78)	^d 0.004**
		55.84±9.17		
living with	Family (n=332)	54.13±9.93	55 (8-78)	F:2.616
	Roommate (n=16)		51 (41-69)	^c 0.051
		52.25±6.57		
	Single (n=59)		56 (42-78)	
		57.46±8.05		
			57 (31-69)	
		56.30±8.31		
Educational Status	High school (n=52)		51.5 (16-66)	F:8.258
		50.92±8.12		
	University (n=281)	54.37±8.96	55 (8-76)	^c 0.001**
			58 (20-78)	
		57.37±11.15		
Employment status	Yes (n=234)		55 (16-78)	t:0.941
		55.03±9.77		
			55 (8-72)	^d 0.347
Occupation	White Collar Employee (n=200)	53.84±9.87	55 (8-78)	F:7.167
	Teacher (n=48)		57 (25-73)	^c 0.001**
		55.44±9.07		
	Health employee (n=45)		62 (27-78)	
		61.00±9.92		
	Student (n=36)		56.5 (45-76)	
		57.61±7.04		
	Housewife/Retired/Unemployed (n=52)		53 (28-70)	
		52.31±7.43		
			52 (16-70)	
		51.51±9.19		
Health problem	Yes (n=122)		54.5 (16-76)	t:-1.480
		53.55±10.62		
			55 (8-78)	^d 0.140
		55.06±9.10		

^cOneway ANOVA

^dStudent-t Test

**p<0,01

A statistically significant difference was found between the scores of the subjects in the "Elementary Nutrition and Nutrition-Health Information" sub-dimension of the Adult Nutrition Level Scale according to age groups ($p=0.015$; $p<0.05$). According to the results of the pairwise comparison made to determine the difference; The scores of those aged 25 and under from the scale sub-dimension were found to be significantly higher than those aged between 46-55 years ($p=0.009$; $p<0.01$).

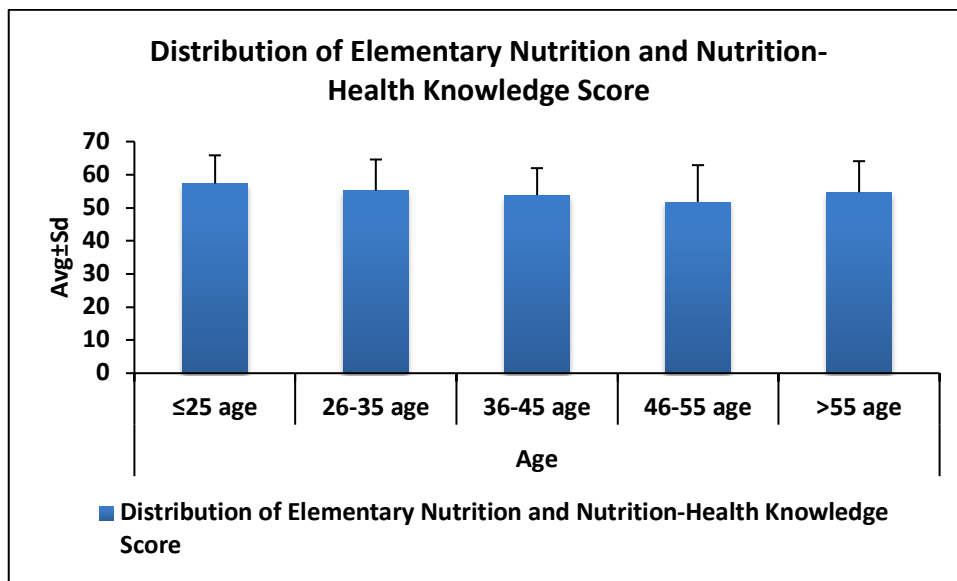


Figure 4.12. Nutrition Level Scale for Adults by Age Groups Elementary Nutrition and Nutrition-Health Knowledge Score Distribution

There was no statistically significant difference between the scores of the subjects in the "Elementary Nutrition and Nutrition-Health Information" sub-dimension of the Adult Nutrition Level Scale ($p>0.05$). No statistically significant difference was found between the scores of the subjects in the "Elementary Nutrition and Nutrition-Health Information" sub-dimension of the Adult Nutrition Level Scale according to their BMI levels ($p>0.05$). The scores of single subjects in the Adult Nutrition Level Scale "Elementary Nutrition and Nutritional-Health Knowledge" sub-dimension were found to be statistically significantly higher than married subjects ($p=0.002$; $p<0.01$).

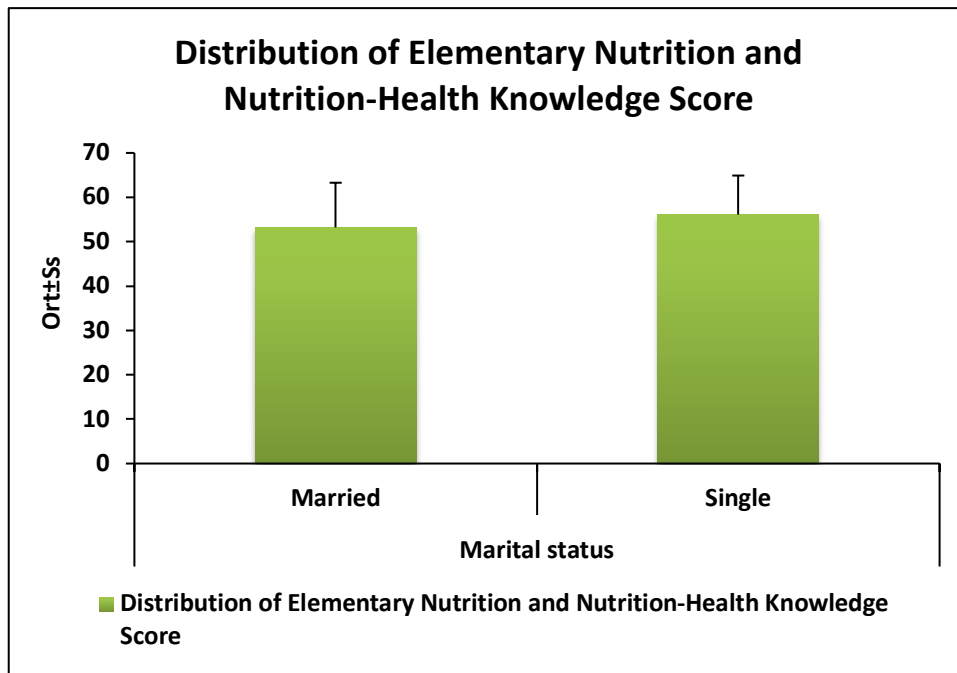


Figure 4.13. Distribution of Basic Nutrition and Nutrition-Health Knowledge Scores of the Adult Nutrition Level Scale by Marital Status

The scores of the subjects with children in the "Elementary Nutrition and Nutrition-Health Knowledge" sub-dimension of the Adult Nutrition Level Scale were found to be statistically significantly higher than those who did not have children ($p=0.004$; $p<0.01$).

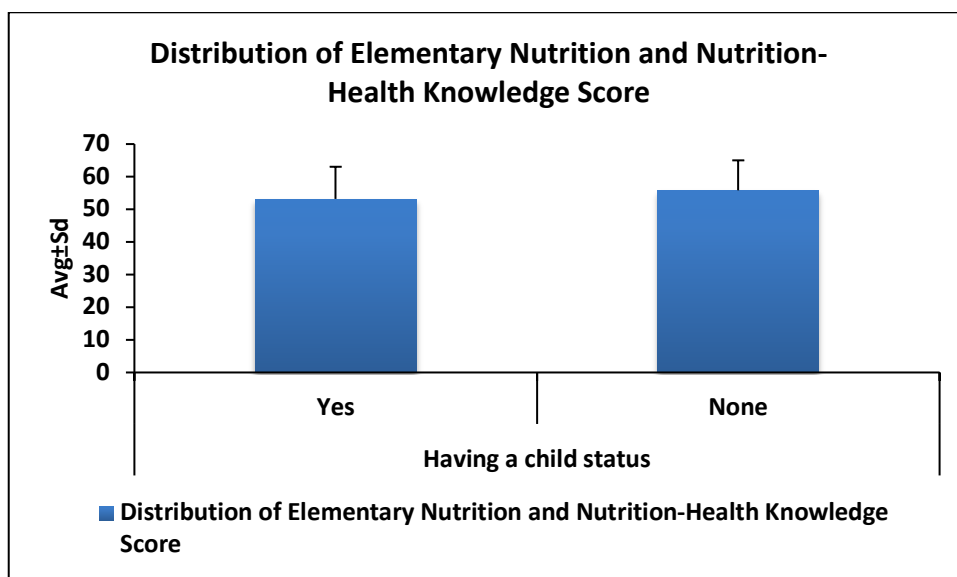


Figure 4.14. Distribution of Basic Nutrition and Nutrition-Health Knowledge Scores of the Adult Nutrition Level Scale by Having a Child Status

While there was no statistically significant difference between the scores of the subjects in the "Elementary Nutrition and Nutrition-Health Knowledge" sub-dimension of the Adult Nutrition Level Scale according to the person they live in ($p=0.051$; $p>0.05$); The scores of the cases living with roommates were found to be remarkably low. A statistically significant difference was found between the scores of the subjects in the "Elementary Nutrition and Nutrition-Health Knowledge" sub-dimension of the Adult Nutrition Level Scale according to their education level ($p=0.001$; $p<0.01$). According to the results of the pairwise comparison made to determine the difference; The scores of the subjects with postgraduate education in the sub-dimension of the scale were found to be significantly higher than the subjects with a high school or lower education level and a university ($p=0.001$; $p=0.021$; $p<0.05$). Likewise, the scores of those with a university education level in the scale sub-dimension were also found to be higher than those with a high school education level or below ($p=0.047$; $p<0.05$).

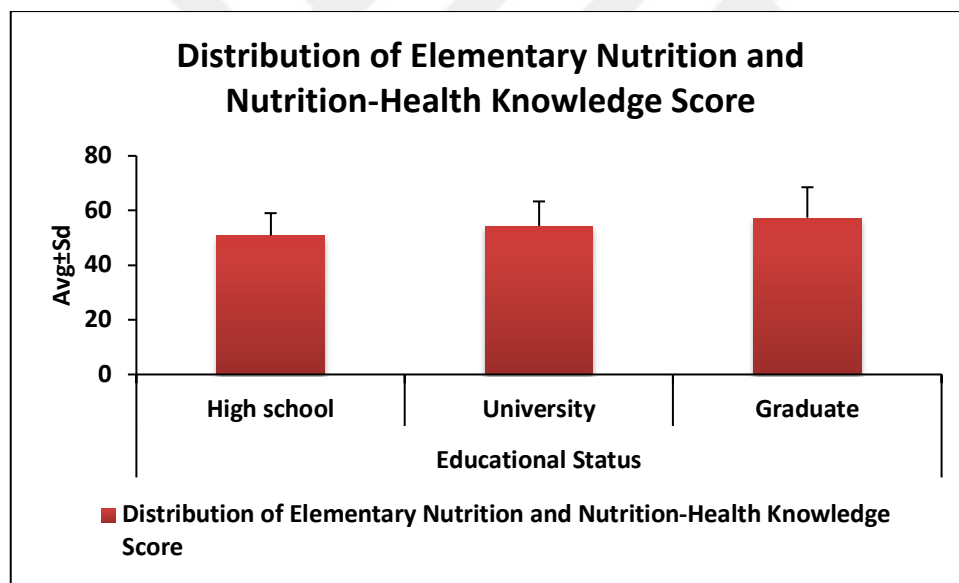


Figure 4.15. Distribution of Elementary Nutrition and Nutrition-Health Knowledge Scores of the Adult Nutrition Level Scale by Educational Status

No statistically significant difference was found between the scores of the subjects in the "Elementary Nutrition and Nutrition-Health Knowledge" sub-dimension of the Adult Nutrition Level Scale according to their employment status ($p>0.05$). A statistically significant difference was found between the scores of the subjects in the "Elementary Nutrition and Nutrition-Health Knowledge" sub-dimension of the Adult Nutrition Level Scale according to occupations ($p=0.001$; $p<0.01$). According to the

results of the pairwise comparison made to determine the difference; The scores of the health workers from the scale sub-dimension were found to be significantly higher than those of the white collar, the youngest/retired/unemployed and other occupational groups ($p=0.001$; $p=0.001$; $p=0.001$; $p<0.01$). Likewise, the scores of the students in the scale sub-dimension were found to be significantly higher than those in other occupational groups ($p=0.042$; $p<0.05$).

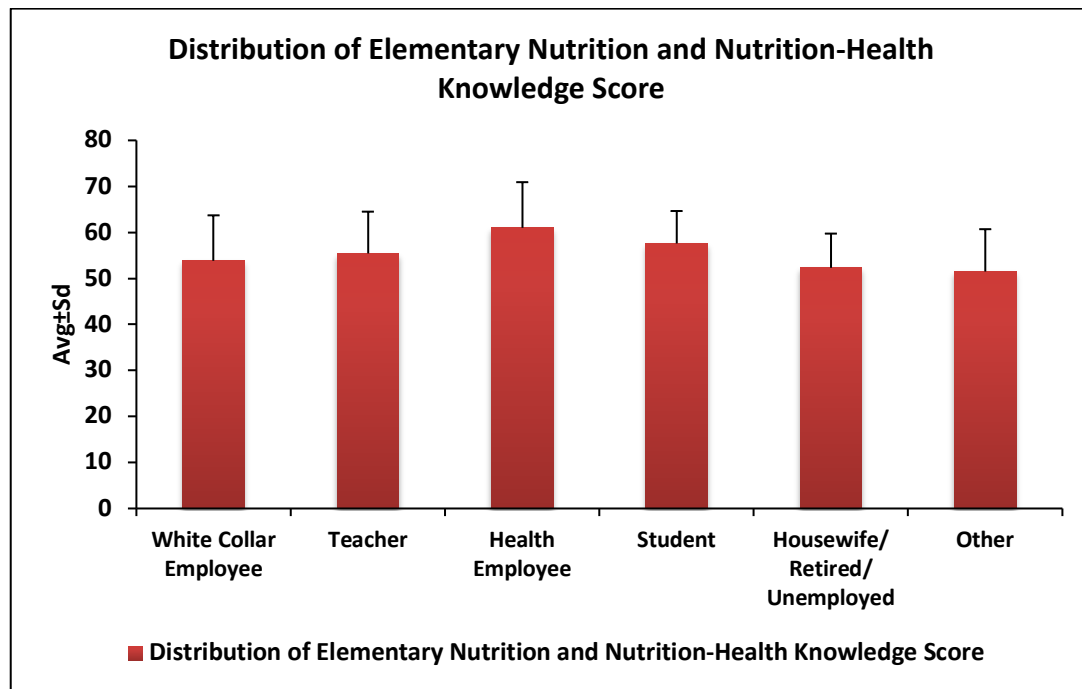


Figure 4.16. Nutrition Level Scale for Adults by Occupation Elementary Nutrition and Nutrition-Health Knowledge Score Distribution

No statistically significant difference was found between the scores of the subjects in the "Elementary Nutrition and Nutrition-Health Knowledge" sub-dimension of the Adult Nutrition Level Scale ($p>0.05$).

Table 4.11. Evaluation of Elementary Nutrition and Nutrition-Health Knowledge Sub-Dimension Scores of the Adult Nutrition Level Scale by Descriptive Characteristics

			Elementary Nutrition-Health Score	Nutrition and Sub-Dimensional (Min- Max)	Test Value p
Budget allocated from total income to nutrition	%5 (n=12)		55.92±7.09	56 (46-72)	χ^2 :7.984
	%10 (n=28)		55.18±10.92	57 (20-70)	^a 0.157
	%20 (n=69)		54.58±8.21	54 (30-75)	
	%30 (n=134)		55.41±10.44	57 (8-78)	
	%40 (n=113)		54.35±9.17	54 (16-76)	
	≥50 (n=74)		53.30±9.61	54 (25-72)	
Get healthy nutrition education	Yes (n=98)		56.5±12.20	57 (16-78)	t:1.833
	No (n=332)				^d 0.069
			54.08±8.58	55 (8-78)	
Desire to receive healthy nutrition education	Yes (n=285)		54.47±9.14	55 (25-78)	t:-0.482
	No (n=145)				^d 0.630
			54.94±10.38	56 (8-78)	
Lifelong dieting status	Yes (n=334)		54.87±9.43	55 (8-78)	t:0.953
	No (n=96)		53.81±10.04	54 (20-78)	^d 0.341

^aKruskal Wallis Test ^dStudent-t Test

No statistically significant difference was found between the scores of the subjects in the "Elementary Nutrition and Nutrition-Health Information" sub-dimension of the Adult Nutrition Level Scale according to the budget allocated for nutrition from the total income ($p>0.05$).

No statistically significant difference was found between the scores of the subjects in the "Elementary Nutrition and Nutrition-Health Knowledge" sub-dimension of the Adult Nutrition Level Scale according to the status of receiving healthy nutrition education ($p>0.05$).

No statistically significant difference was found between the scores of the subjects in the "Elementary Nutrition and Nutrition-Health Knowledge" sub-dimension of the Adult Nutrition Level Scale according to their desire to receive healthy nutrition education ($p>0.05$).

No statistically significant difference was found between the scores of the subjects in the "Elementary Nutrition and Nutrition-Health Knowledge" sub-dimension of the Adult Nutrition Level Scale according to the status of dieting throughout their lives ($p>0.05$).

Table 4.12. Evaluation of Adult Nutrition Level Scale Food Preference Sub-Dimension Scores by Descriptive Characteristics

		Food Preference Sub-Dimension Score	Test Value
		Avg±Sd	Median (Min-Max) p
Age	Ages ≤25 (n=57)	39.44±5.05	40 (24-48) χ^2 :1.757
	Age range 26-35 (n=175)	39.06±6.87	40 (6-48) ^a 0.780
	Age range 36-45 (n=52)	40.04±6.53	41 (10-48)
	Age range 46-55 (n=75)	39.53±7.01	41 (4-48)
	Ages >55 n=71)	39.97±6.07	41 (15-48)
BMI	Underweight (n=26)	39.88±6.46	42 (24-48) χ^2 :1.328
	Normal Weight (n=231)	39.52±6.58	41 (6-48) ^a 0.723
	Overweight (n=124)	38.94±6.95	40 (4-48)
	Obese (n=49)	40.31±4.74	41 (30-48)
Marital status	Married (n=220)	39.74±7.00	41 (4-48) Z:-1.754
	Single (n=210)	39.18±5.92	40 (9-48) ^b 0.079
	Yes (n=196)	40.08±6.24	41 (4-48) Z:-1.943

Having a child	None (n=234)	38.94±6.67	40 (6-48)	^b 0.052
living with	Family (n=332)	39.58±6.27	40.5 (4-48)	χ^2 :2.585
	Roommate (n=16)	37.38±6.91	36.5 (22-48)	^a 0.460
	Single (n=59)	39.51±6.86	41 (9-48)	
	Other (n=23)	39.09±8.44	41 (8-48)	
Educational Status	High school (n=52)	38.65±7.50	40 (10-48)	χ^2 :1.436
	University (n=281)	39.38±6.41	41 (4-48)	^a 0.488
	Graduate (n=97)	40.12±6.15	40 (8-48)	
Employment status	Yes (n=234)	39.67±6.67	41 (6-48)	Z:-1.251
	No (n=196)	39.22±6.29	40 (4-48)	^b 0.211
Occupation	White Collar Employee(n=200)	39.36±6.86	40 (4-48)	χ^2 :14.043
	Teacher (n=48)	40.15±6.97	42 (8-48)	^a 0.015*
	Health Employee(n=45)	41.82±4.58	43 (30-48)	
	Student (n=36)	39.22±5.03	39 (28-48)	
	Housewife/Retired/Unemployed (n=52)	38.50±7.24	41 (10-48)	
	Other (n=49)	38.24±5.74	38 (24-48)	
Health problem	Yes (n=122)	39.90±5.56	41 (19-48)	Z:-0.442
	None (n=308)	39.29±6.83	40 (4-48)	^b 0.658

^aKruskal Wallis Test ^bMann Whitney U Test

According to age, gender, BMI, marital status, having a child, living person, education level, employment status, and the presence of health problems, the scores of the cases in the "Food Preference" sub-dimension of the Adult Nutrition Level Scale do not show a statistically significant difference ($p > 0.05$). A statistically significant

difference was found between the scores of the subjects in the "Food Preference" sub-dimension of the Adult Nutrition Level Scale according to occupations ($p=0.015$; $p<0.05$). According to the results of the pairwise comparison made to determine the difference; The scores of health workers from the scale sub-dimension were found to be significantly higher than those from other occupational groups ($p=0.017$; $p<0.05$).

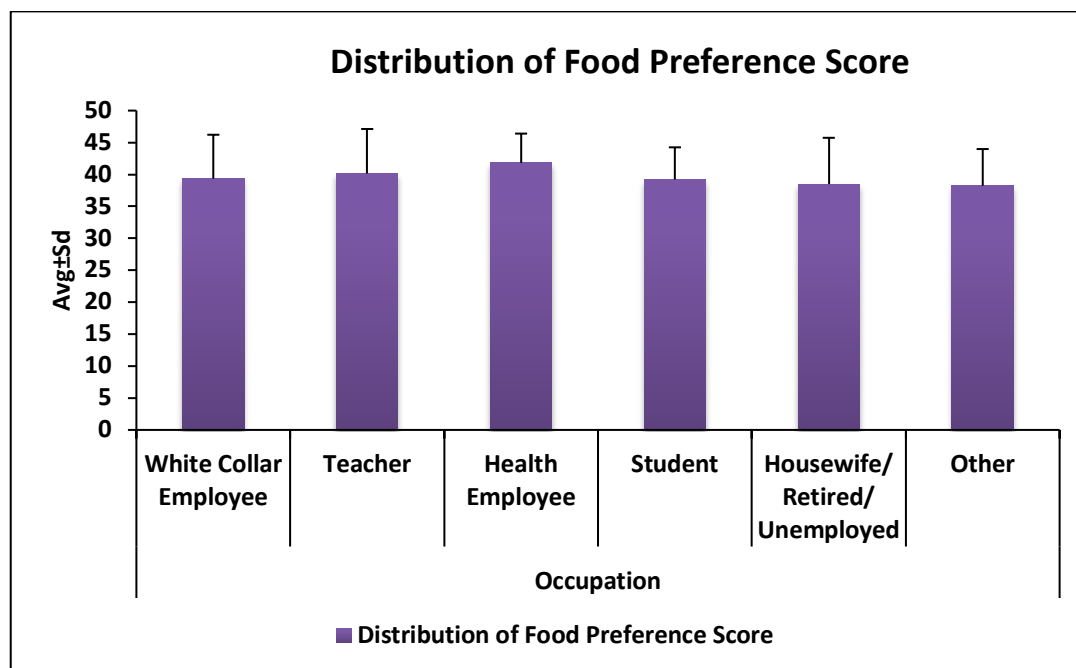


Figure 4.17. Distribution of Food Preference Score in the Adult Nutrition Level Scale by Occupation

Table 4.13. Evaluation of Adult Nutrition Level Scale Food Preference Sub-Dimension Scores by Descriptive Characteristics

			Food Preference Sub-Dimension		
			Score		Test Value
			Avg±Sd	Median (Min-Max)	p
Budget allocated from total income to nutrition	%5 (n=12)		38.83±3.49	38 (34-45)	χ^2 :5.170
	%10 (n=28)		41.68±3.93	42 (34-48)	a0.395
	%20 (n=69)		39.46±5.78	41 (22-48)	
	%30 (n=134)		39.19±8.02	41 (4-48)	
	%40 (n=113)		39.34±5.96	40 (6-48)	

		≥50 (n=74)	39.41±5.95	40.5 (19-48)	
Get healthy nutrition education	Yes (n=98)	41.24±5.12	42 (24-48)	Z:-3.262	^b 0.001**
	No (n=332)				
		38.94±6.77	40 (4-48)		
Desire to receive healthy nutrition education	Yes (n=285)	39.24±6.55	40 (6-48)	Z:-1.069	^b 0.285
	No (n=145)				
		39.91±6.39	41 (4-48)		
Lifelong dieting status	Yes(n=334)	39.54±6.56	40.5 (4-48)	Z:-0.580	^b 0.562
	No (n=96)	39.19±6.27	40 (15-48)		
^a Kruskal Wallis Test		^b Mann Whitney U Test		^{**} p<0,01	

No statistically significant difference was found between the scores of the subjects in the "Food Preference" sub-dimension of the Adult Nutrition Level Scale according to the budget allocated for nutrition from the total income ($p>0.05$). The scores of the subjects who received healthy nutrition education in the "Food Preference" sub-dimension of the Adult Nutrition Level Scale were found to be statistically significantly higher than the subjects who did not receive education ($p=0.001$; $p<0.01$).

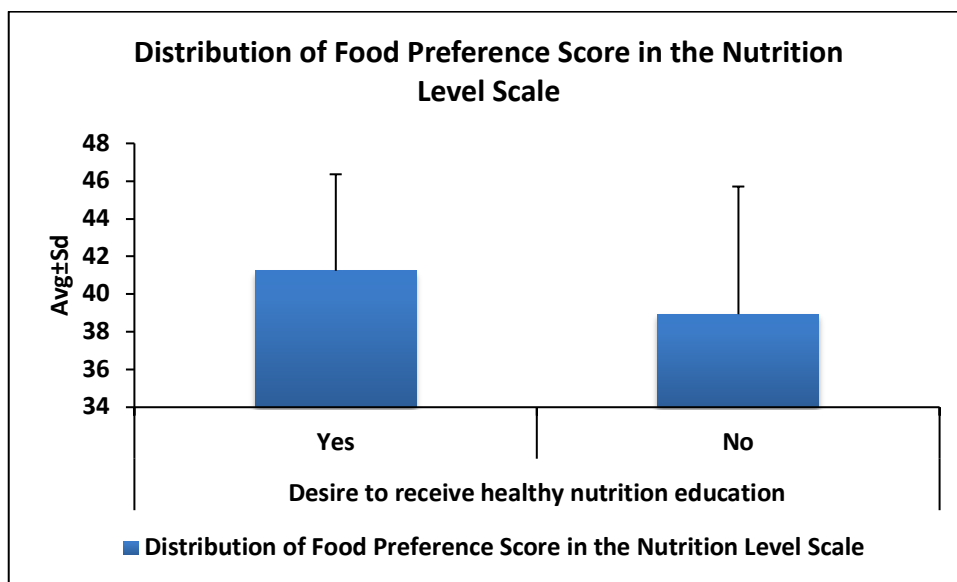


Figure 4.18. Distribution of Food Preference Score in the Nutrition Level Scale for Adults by Receiving Healthy Nutrition Education

According to the desire to receive healthy nutrition education and the status of dieting throughout life, the scores of the subjects in the "Food Preference" sub-dimension

of the Adult Nutrition Level Scale did not show a statistically significant difference ($p>0.05$).

Statistical Reviews

NCSS (Number Cruncher Statistical System) program was used for statistical analysis. Descriptive statistical methods (mean, standard deviation, median, frequency, percentage, minimum, maximum) were used while evaluating the study data. The conformity of the quantitative data to the normal distribution was tested with the Shapiro-Wilk test and graphical examinations. Student-t test was used for comparisons between two groups of normally distributed quantitative variables, and Mann-Whitney U test was used for comparisons between two groups of non-normally distributed quantitative variables. One-way analysis of variance and binary evaluations with Bonferroni correction were used for comparisons between groups of more than two normally distributed quantitative variables. Kruskal-Wallis test and Dunn-Bonferroni test were used for comparisons between groups of more than two quantitative variables that did not show normal distribution. Spearman correlation analysis was used to evaluate the relationships between quantitative variables. Statistical significance was accepted as $p<0.05$.

r	Comment
0.00 — 0.19	Too weak
0.20 — 0.39	Weak
0.40 — 0.59	Medium
0.60 — 0.79	Strong
0.80 — 1.00	Very strong

The evaluation of Cronbach's Alpha coefficient is made according to the following criteria:

If $0.0 < 0.40$, the scale is unreliable.

If $0.40 < 0.60$, the scale is low-confidence.

If $0.60 < 0.80$, it is quite reliable.

If $0.80 < 1.00$, the scale is highly reliable.

5. DISCUSSION AND CONCLUSION

In a study conducted on 803 Belgian women in which their knowledge levels on nutrition were examined, a significant difference was found between the nutritional knowledge levels and the age factor. In spite of this study kept the age range in the 18-39 age range, significant results were achieved (114). In the study of Gündoğdu, on the other hand, it was concluded that the relationship between teachers' knowledge levels about nutrition and their ages ($p=0.049$; $p<0.05$) was statistically significant and that older teachers had higher average scores than younger ones (115). In another study conducted with 1062 adults, they were classified into four groups according to age ranges: 18-29 age group, 30-39 age group, 40-49 age group and 50 years and over. Scores related to nutritional knowledge were found to be significant between the groups ($p=0.014$). A significant difference was found especially between the 18-29 and 40-49 age groups. It was determined that the highest scores among all groups belonged to the people between the ages of 40-49 (116). In a study conducted by Cekal, the nutritional information of the participants was evaluated according to their age groups. It was determined that the frequency of individuals with adequate and good nutrition knowledge in the age group 64 and below (76.3%) was higher than the individuals in the 65 and older age group (74.2%). However, this difference was not statistically significant ($p>0.05$). The researcher stated that this is an expected situation, because the education level of middle-aged people aged 64 and below is higher than those aged 65 and over, that is, elderly individuals (117).

According to the data of the study conducted in Edirne Family Health Center, it is seen that the level of knowledge and awareness in people increases in general with the middle age period, and it is seen that individuals overcome their lack of knowledge with their experiences. There was no significant difference between age groups in the food preference score ($p=0.396$). While there is a significant difference between age groups in nutritional knowledge ($p=0.020$), this difference is not observed in food preference. The reason is that having nutritional knowledge does not bring any obligation regarding the application (118). When we look at the results of our study, the results showed parallelism, and according to the results of the pairwise comparison made to determine the difference; The scores of those aged 25 and under from the scale sub-dimension were found to be significantly higher than those aged between 46-55 years ($p=0.009$; $p<0.01$).

As a result of the questionnaire applied to 1011 randomly selected individuals over the age of 15 living in various regions of Croatia, it was examined whether there was a change in the level of use of the information on the food label with age; It was determined that 36% of the participants never used label information, 25% rarely, 15% frequently, and 19% always read the information on the food label. In addition, it has been determined that female participants with the highest education level and still continuing their education are the individuals who use the information on the food label the most (3). Campos et al. In the study he carried out, he stated that the habit of reading labels is higher in young and middle-aged individuals, while the result of a different study showed that the use of nutrition labels in adolescents was low (119,120).

In some studies conducted in Turkey, it has been determined that the interest in reading labels is higher in the 30-49 age group (6,121,122). In the study conducted by Güneş et al. in Istanbul, no significant relationship was found between the habit of reading labels and age. Although most of the participants have the habit of reading labels, the rate of those who do not have the habit is 15.0% (122).

In our study, a statistically significant difference was found between the total scores of the patients on the Nutrition Label Reading Attitude Scale according to age groups ($p=0.006$; $p<0.01$). According to the results of the pairwise comparison made to determine the difference; The scores of the cases aged 25 and under from the total scale were found to be significantly lower than those over 55 years of age. In a study conducted among Kastamonu University Health School students, the nutritional knowledge scores of 222 students according to BMI groups were compared. When the nutritional knowledge score averages between the groups were compared, it was determined that there was no significant difference ($p=0.79$), although the score of the thin group was higher than that of the overweight and obese individuals (123). Another study was conducted to determine the BMI of 1340 students and the relationship between nutritional knowledge and nutritional behavior. According to this study, there is no significant relationship between nutritional knowledge and nutritional behaviors and BMI. It was found that $p=0.156$ for BMI with nutritional knowledge and $p=0.654$ for BMI with nutritional behavior. However, according to the results of the study, the nutritional knowledge of the poor in average scores was found to be higher than the other groups. In terms of feeding behavior, the mean scores of the lean and normal group were found to

be higher than those of the obese group (124). In our study, as in these results, the scores of BMI subjects and YETBİD-Food Preference and YETBİD - "Elementary Nutrition and Nutrition-Health Information" sub-dimensions do not show a statistically significant difference.

Approximately $\frac{3}{4}$ of the individuals who participated in a study between the ages of 19-64 in which 600 individuals participated, 87 of whom were normal weight, 280 were slightly obese and 233 were obese, did not read the food labels. However, nutritional label reading status differs significantly according to body mass index ($p<0.001$). Normal-weight individuals read more food labels (125). Campos et al. Although it was stated in the study that there was a positive relationship between the increase in label reading habits in weight control, a significant relationship was not found in this study with BMI values (120). In parallel, no statistically significant difference was found between the scores of the subjects in the Total Nutrition Label Reading Attitude Scale according to their BMI levels. In a study conducted with 1062 people aged 18-65 who applied to health centers and categorized according to their educational status, individuals were divided into six groups as illiterate, literate, primary school, secondary school, high school, university and above. Significant differences were observed between the nutritional knowledge scores of the groups. ($p=0.000$). The group with university or higher education has significantly higher scores than the other groups. In the same study, significant differences were found in the feeding behaviors between the groups ($p=0.000$). The group of individuals with university or higher education has higher scores than other groups. As the level of education decreased, a parallel decrease was observed in the scores (116). In another study conducted in Southern Australia, the education levels of the participants were compared with those who received education at high school and below, technology and trade high schools and those who received education at the higher education level. Those who received education at the higher education level scored higher than the other two groups. While the higher education group received an average of 76.27 points, the group with technology and trade high schools received 69.08 points, and the group with high school and below education received 59.87 points. Those with high school or lower education have low nutritional knowledge average scores (126). According to a study conducted in Edirne province, the healthy eating index was compared according to the educational status of the people. In the study, six classifications were made as literate, not literate, primary school, secondary school, high

school, college. The scores of the groups were found to be close to each other and no significant difference was found between the groups ($p=0.209$) (127). Similarly, in Aksulu's study, no significant relationship was found with regard to education (122). In our study, the scores of the subjects in the YETBİD "Food Preference" sub-dimension according to their education level did not show a statistically significant difference. However, a statistically significant difference was found between the scores they got from the "Basic Nutrition and Nutrition-Health Information" sub-dimension ($p=0.001$; $p<0.01$). According to the results of the pairwise comparison made to determine the difference; The scores of the subjects with postgraduate education in the sub-dimension of the scale were found to be significantly higher than the subjects with a high school or below education level and a university ($p=0.001$; $p=0.021$; $p<0.05$). Likewise, the scores of those with a university education level in the scale sub-dimension were also found to be higher than those with a high school education level and below. In a study conducted on 313 consumers, 99 men and 214 women, in the province of Istanbul, it was aimed to evaluate the labels of the consumers and to determine the inadequacies in the label information. According to the research results; Label reading habit among consumers was 56% and a positive correlation was found between the increase in education level and label reading habit ($p < 0.05$) (128). Similarly, other studies show that people with higher levels of education are more inclined to read food labels (4,84). In our study, no statistically significant difference was found between the total scores of the subjects from the Nutrition Label Reading Attitude Scale according to their educational status. The reason for this can be thought to be related to the high education level of the majority of the individuals participating in the study.

In a study conducted with 380 female individuals between the ages of 20-49, health problem and nutritional knowledge score and food preference score averages were compared. There was a significant difference between individuals according to the nutritional knowledge score ($p=0.004$). The mean score of nutritional knowledge level was found to be higher in those with health problems than in those without health problems. There was a significant difference between food preference scores and nutrition-related disease groups ($p=0.037$). It was observed that individuals with health problems had higher food preference scores than those without. When they were divided into groups according to diseases, it was found that the group with nutrition-related disease had a higher score than the other groups (118). In another study, 17.4% of the group of 104

participants had at least one health problem. Nutritional knowledge and food preference scores of people with health problems are higher than people without health problems (111). While 17.3% of individuals participating in a different study have a health problem, 82.7% do not have any health problems. The mean elementary nutrition scores of the participants with health problems were 55.3 ± 5.9 , and the mean food preference scores were 39.2 ± 4.9 . The average elementary nutrition scores of the participants without health problems were 52.5 ± 8.4 , and the average food preference scores were 37.9 ± 5.7 . In this direction, no statistically significant relationship was found between the presence of health problems and basic nutrition and food preference scores. ($p > 0.05$) (130). When we look at the results of our study, it is seen that it is in parallel with this study. According to the health problem, the scores of the cases from the YETBİD sub-dimension do not show a statistically significant difference. When compared with different research groups, it is thought that the reason for this may be related to factors such as the fact that 71.6% of the individuals participating in the study did not have any health problems, and their age and average BMI. Lewis et al. It has been determined that individuals with nutritional diseases read labels more frequently and in more detail than those who do not (101). In another study, there was no statistically significant difference between the variables of having any health problem and the frequency of reading label information ($p > .05$) (3). In our study, no statistically significant difference was found between the total scores of the patients on the Nutrition Label Reading Attitude Scale ($p > 0.05$).

As a result of many studies, it was supported that individuals with female gender, married marital status, and high education and income levels read food labels more (131,132,133). Nutritional knowledge score and food preference score were compared according to the percentage of income allocated for kitchen expenses by individuals participating in a study. Considering the mean scores of the groups, there are significant differences ($p = 0.004$). The scores of the group that allocates 40% of its income to kitchen expenditures were found to be significantly different than the groups that allocated 10% and below and 20% of its income ($p = 0.019$, $p = 0.013$). It has been concluded that individuals with high scores in the nutritional knowledge score are in the group that distinguishes 10% and below, and individuals with low scores are in the group that distinguishes 40%. There were no significant differences between the groups according to food preference scores ($p = 0.540$) (118). In a study in which volunteers registered at the Family Health Center participated, a comparison was made between the percentage

of people's income to kitchen expenses and the average of nutritional knowledge score and food preference score. There was a significant difference between the groups ($p=0.004$). The mean scores of those who divided 10% and below and those who separated 20% were significantly higher than the other groups. In a study conducted with women, a significant difference was found in the level of nutrition knowledge between blue-collar employees and those who have a job ($p=0.001$). It has been observed that the nutritional knowledge score of the people who have a job, namely white collar, is higher than the average score of the blue collar group (who works with more physical strength) (114). In a different study, it was observed that adequate and balanced nutrition could not be provided when people did not have sufficient economic power, and there was no significant difference in the average of food preference scores. ($p=0.540$)(126). In our study, no statistically significant difference was found between the budget allocated for nutrition from the total income and the scores obtained from the sub-dimensions of YETBİD- “Elementary Nutrition and Nutrition-Health Knowledge” and YETBİD-Food Preference ($p>0.05$). In a study examining the opinions of 1200 consumers aged 18-65 years old living in various regions of 10 provinces of Turkey about food labels, nutrition and health claims, and their use, it was determined that the majority of both women and men rarely read food labels. According to the results of the research, it was determined that the percentage of reading the food label increased with the increase in the education and income levels of the individuals ($p < 0.05$) (134). In previous studies, it was determined that individuals with a high income level read food labels more, while in a study on women, it was determined that individuals with an income level of 2000 TL and below read food labels more (6, 135). One of the possible reasons for the different results in this study is that most of the individuals participating in the study are housewives whose income is below 2000TL. The other is that individuals with low income level state that they are more careful and selective when purchasing food due to their weak purchasing power (136). In some studies, it has been shown that low income levels of people reduce their access to information (84,137). In our study, no statistically significant difference was found between the budget allocated to nutrition from the total income and the scores they got from the Nutrition Label Reading Attitude Scale questionnaire ($p>0.05$).

In a study comparing marital status nutritional knowledge score and food preference, individuals were divided into 3 groups as married, single and divorced. When the

nutritional knowledge scores were examined, it was seen that the married people had higher scores. No significant difference was found in food preferences (118). According to the data of a study conducted in Australia, there is a significant difference between marital status and nutritional knowledge score ($p=0.019$). Married people have significantly higher scores (126). According to another study, while the average of nutritional knowledge of singles is lower, it has been seen that the average of nutritional knowledge of married or living together is higher. There was a significant difference between these two groups ($p<0.05$) (118). In another study, it was observed that the average scores of singles and married people from the level of nutritional knowledge were very close to each other, and it was determined that no significant result could be determined in the study ($p=0.591$) (116). In our study, no statistically significant difference was found between marital status and YETBİD- "Basic Nutrition and Nutrition- Health Knowledge and YETBİD-Food Preference" sub-dimension ($p>0.05$). Observing a difference in nutritional knowledge according to the marital status of individuals may not be sufficient on its own. There was a statistically significant difference between marital status and label reading frequency ($p<0.05$). While there was no statistical difference between married and single individuals; Marital status of married and single individuals were found to read more labels than divorced individuals. A statistically significant difference was found between marital status and attitudes towards nutrition and food label information ($p<0.05$). Married individuals have more attitudes towards nutrition and food labels (138). In our study, no statistically significant difference was found between marital status and the scores obtained from the Nutrition Label Reading Attitude Scale ($p>0.05$). The reason for this may be that the individuals participating in the study had a high level of education and were more conscious consumers.

According to a study conducted in a primary school, it was found that 71.9% of the teachers in charge did not take a course on nutrition. It was revealed that the nutritional knowledge level of the individuals who took the course was higher than those who did not (139). As a result of a study conducted in various health institutions in Istanbul, it was determined that the average of general nutrition and medical nutrition knowledge among health professionals who received nutrition education was statistically significantly higher than the average of those who did not receive nutrition education ($p<0.01$) (140). In the research conducted by Karayormuk with vocational high school students, it was

determined that university students who took nutrition lessons for the questions asked to determine their level of nutrition knowledge got higher scores than the group who did not take nutrition lessons and this was statistically significant ($p < 0.05$) (141). Similar to these studies, in our study, the scores of the subjects who received healthy nutrition education in the YETBİD - Food Preference sub-dimension were found to be statistically significantly higher than the subjects who did not receive education ($p = 0.001$; $p < 0.01$) but according to the status of receiving healthy nutrition education there was no statistically significant difference between the scores of the cases obtained from the YETBİD - “Elementary Nutrition and Nutrition-Health Information sub-dimension” ($p > 0.05$).

In the study conducted by Hawthorne et al., it was aimed that adolescents better understand nutritional labels by providing nutrition education. In this study, which was conducted on 34 young people, a 70% increase was observed between the points they received before the training and the points they received after the training (142). In a study conducted on students, healthy nutrition and nutrition label reading trainings were given and it was seen that this training created an awareness in the students. Compared to the control group, 98.3% of the students in the study group started to make their food choices according to the label information after the training (143). In our study, the scores of the subjects who received healthy nutrition education on the Nutrition Label Reading Attitude Scale were found to be statistically significantly higher than the subjects who did not receive education ($p = 0.002$; $p < 0.01$). In one study, the rate of those who diet is 15.8%, and the rate of those who do not is 84.2%. Considering the average of food preference scores, no significant difference was found between the dieting and non-diet groups ($p = 0.107$). However, the mean food preference scores were found to be higher in dieters than in non-dietists (130). In a similar study, no significant difference was found between those who diet and those who do not ($p = 0.765$). However, when the mean scores of the groups were examined, contrary to our study, the mean score of those who did not diet was found to be higher than those who did not diet. Likewise, food preference scores were found to be better in non-diet than dieters (111). In a study conducted on female individuals in Edirne, nutritional knowledge and food preference scores were compared according to the dieting status of the individuals. When the nutritional knowledge scores between dieters and non- dieters were compared, it was seen that dieters scored higher on average than those who did not diet. According to the results of the survey, there was a

significant difference between the groups ($p=0.028$). Considering the food preference scores, there is no significant difference between the groups, although the average score of those who diet is higher than those who do not. ($p=0.107$) (118). In our study, no statistically significant difference was found between dieting and YETBİD- “Elementary Nutrition and Nutrition-Health Information” and YETBİD-Food Preference sub-dimensions ($p>0.05$).

Current research on adult nutrition label use in Minneapolis has highlighted that individuals who read food labels include healthier food ingredients in their diets (144). Campos et al. reported that there was a positive correlation between increased label reading habit in weight control. Although it was stated in the study, no significant relationship was found with BMI values in another study (120,122). In our study, no statistically significant difference was found between dieting and the scores they got from the Nutrition Label Reading Attitude Scale ($p>0.05$). More studies on this subject are needed. In a study examining the nutritional habits of some occupational groups in the province of Istanbul and the factors affecting these habits, the participants were asked about the effect of their occupation on their eating habits. Other, police, media, engineers and senior employees show the highest rate of "yes, definitely" answer. The answer of "no, I don't think" was given at the highest rate among trainers, housewives, desk workers and students. Considering the data, the answer of the participants was half. Half said it had an effect and the other half said it had no effect (145). In a different study, the majority of individuals (79%) stated that their occupation did not affect their choices when purchasing food. Many studies have found similar results (122,146). A statistically significant difference was found between the scores of the subjects in the YETBİD-Food Preference sub-dimension according to occupations ($p=0.015$; $p<0.05$). According to the pairwise comparison results made to determine the difference; The scores of the health employees from the scale sub-dimension were found to be significantly higher than those from other occupational groups ($p=0.017$; $p<0.05$). A statistically significant difference was found between the scores of the subjects from the YETBİD- “Elementary Nutrition and Nutrition-Health Information” sub-dimension according to occupations ($p=0.001$; $p<0.01$). According to the results of the pairwise comparison made to determine the difference; The scores of health employees from the scale sub-dimension were found to be significantly higher than those of white-collar employees,

housewife/retired/unemployed and other occupational groups ($p=0.001$; $p=0.001$; $p=0.001$; $p<0.01$).

Likewise, the scores of the students in the scale sub-dimension were found to be significantly higher than those in other occupational groups ($p=0.042$; $p<0.05$). This result of the study suggests that health employees are more knowledgeable and conscious about basic nutrition and that they use this information while making food choices. No statistically significant difference was found between the working status of individuals and reading food labels. ($p>0.005$) There was no statistically significant difference between working status and attitudes towards nutrition and food label information ($p>0.05$) (138). No statistically significant difference was found between the scores of the subjects from the total of the Nutrition Label Reading Attitude Scale according to occupations ($p>0.05$). It is thought that the reason for this is that the number of people in the study group is predominantly from health workers. More research on the subject is needed. In a study, it was seen that parents with two or more children have more knowledge about food sources and diet-disease relationships, and basic nutritional knowledge is significantly higher (126). In our study, the scores of the subjects in the YETBİD-Food Preference sub-dimension did not show a statistically significant difference according to having children. However, the scores they got from the "Elementary Nutrition and Nutrition-Health Science" sub-dimension were found to be statistically significantly higher than those who did not have children ($p=0.004$; $p<0.01$). In this respect, the reason why people do not reflect this on their food preferences although their knowledge of elementary nutrition is significantly high, may be due to the economic factor, the number of members in the family or the inability to spend much time for food shopping. There are many studies showing that parents' nutritional knowledge levels affect children's eating behaviors (147). In a study conducted by Zaidi and Muhammad on food label reading, it was observed that even individuals with a high level of education and small children in their families do not read food labels and only pay attention to the production and expiration dates of the brands they are considering (148). In a study conducted by Gracia et al to evaluate the benefits of mandatory nutritional label applications, it was concluded that the number of individuals in the family and children living in crowded families were less likely to use food labels (149). As a result of the surveys conducted in another study, between those who have children and those who do not; No statistically significant relationship was found between those who have a health

problem that may affect food choice in themselves or any of their family members and those who do not, in terms of the frequency of reading label information (3).

No statistically significant difference was found between the total scores of the patients on the Nutrition Label Reading Attitude Scale according to the status of having children ($p>0.05$). This result may be due to the limited time devoted to food shopping in the family and the fact that the food label usage priorities are limited only to the price and expiration date. According to the results of previous studies, the fact that nutrition information has no effect on the use of food labels confirms the weak link between knowledge and behavior hypothesis, but when we look at the findings of this study, it shows that the majority of individuals use nutritional information in food selection while shopping for food. It is thought that the reason for this situation is that people may have avoided saying "I don't know" or "I don't use the information" while answering the survey questions (150). In a study conducted in the United Kingdom, the results of a survey of a total of 2940 randomly selected consumers were examined. The research was conducted out to determine the level of consumers' use of the information on the food labels, their competency to understand the label, the determination of the nutritional knowledge level and the effect on the use of the food label selection. As a result of the study, it was determined that the level of understanding the information on the food label was related to the main nutritional information, and the use of the information on the food label was mainly related to the interest in healthy eating and both were affected by demographic variables. According to this; Participants had a high rate of examining and understanding food labels, and a positive correlation was found between the increase in knowledge level and the level of label reading (151).

There are also many studies showing the effect of reading food labels on healthy food choices. These results show that there is a positive relationship between the level of nutrition knowledge and the use of food labels. However, in order for people to read the food label, they must also have the knowledge of nutrition label interpretation (152,153,154,155). There was a very weak correlation of 0.140 between the scores of the subjects participating in the study from the YETBİD "Elementary Nutrition and Nutritional Health Knowledge" sub-dimension and the total score of the Nutrition Label Reading Attitude Scale (with the increase in the Elementary Nutrition and Nutritional Health Information score, the Nutrition Label Reading Attitude score increases) found

significant ($r=0.140$; $p=0.004$; $p<0.01$). The positive correlation between the scores of the subjects participating in the study in the YETBİD-Food Preference sub-dimension and the total score of the Nutrition Label Reading Attitude Scale (As the Nutrition Preference score increases, the Nutrition Label Reading Attitude score increases) at the level of 0.137, a very weak correlation was found to be statistically significant. ($r=0.137$; $p=0.004$; $p<0.01$).

Significant differences were found between the scores of the women participating in the study in the YETBİD-Elementary Nutrition and Nutritional Health Information sub-dimension according to age groups. Although the scores of young individuals are higher than the elderly, when the Attitudes of Reading Food Labels are examined, it has been revealed that the elderly group has higher scores.

When evaluated according to education levels, it was seen that the scores obtained from the YETBİD-Elementary Nutrition and Nutritional Health Information sub-dimension increased as the education level increased.

When we look at the professions, although it was determined that there was a significant difference in the scores of the health care workers in the YETBİD -Food Preference sub-dimension, there was no significant difference in the attitude of reading the food label. YETBİD- " Elementary Nutrition and Nutrition-Health Knowledge sub-dimension scores were examined, it was determined that health workers and students scored higher than other occupational groups.

It has been revealed that there is a positive relationship between the food preference and the attitude of reading the food label of the female individuals who received healthy nutrition education.

The scores of female individuals who have children in the YETBİD-Elementary Nutrition and Nutritional Health Information sub-dimension were found to be significantly higher.

When the relationship between nutrition knowledge level, which is one of the main aims of the study, and the attitude of reading food labels, it was revealed that there is a positive relationship.

6. RECOMMENDATIONS

- 1) Considering the results of this study, in order to raise healthy future generations, elementary nutrition lessons for primary school students should be on the agenda and topics related to food labels should be included in these lessons.
- 2) In order to create a conscious society, seminars and trainings should be organized on subjects such as elementary nutrition, food preferences and things to be considered on food labels in a clear and clear language that the public can understand.
- 3) Raising children by parents who know about healthy and balanced nutrition, especially during growth and development periods, is of great importance in order to protect them from possible future diseases. In this respect, it is one of the issues that should be noted that the prospective parents should be trained in order to learn about proper nutrition before birth.
- 4) In order for people from all walks of life to read and understand food labels easily, the font size on the label should be enlarged and written in a clear and understandable language. Adding conspicuous phrases so that individuals with chronic diseases can choose foods suitable for them can facilitate label reading and food preferences.
- 5) It is thought that detailed research on the reasons why people do not read the information on the food packaging and taking the necessary actions on the subject will increase the attitude of reading the food label. In order for this study to reach permanent solutions, there is a need to shed light on more comprehensive and more researches in different populations.

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8. APPENDICES

Appendix 1: Informed Consent Form

Araştırmanın Adı: Kadın Bireylerde Beslenme Bilgi Düzeyinin Besin Etiket Okuma Alışkanlığı Üzerine Etkisinin İncelenmesi

Bu araştırma Yeditepe Üniversitesi Sağlık Bilimleri Enstitüsü Beslenme ve Diyetetik Bölümü Yüksek Lisans Öğrencisi Dyt. Begüm Kurt tarafından yürütülmektedir. Bu anket çevrim içi olarak yürütülecek olup bilimsel bir tez için hazırlanmıştır ve bilgilerinizin gizliliği ön planda tutulacaktır. Kadın Bireylerde Beslenme Bilgi Düzeyinin Besin Etiket Okuma Alışkanlığı Üzerine Etkisinin İncelenmesi amacıyla yürütülecek olup, tüketicilerin kendisine ve aile fertlerine besin seçimi yaparken etiket okuma alışkanlığının olup olmadığı, nelere dikkat ettiği, sağlıklı beslenme ile ilgili bilgi düzeyini ve seçimlerine etkisinin araştırılması hedeflenmektedir.

Yukarıda bilgileri yer almakta olan bir araştırma çalışmasına katılmanız istenmektedir. Çalışmaya katılıp katılmama kararı tamamen gönüllülük esasına dayanmaktadır. Eğer çalışmaya katılma kararı verirsiniz, **Çalışmaya Katılma Onayı Formu'nu** okudum, Kabul ediyorum seçeneğini işaretleyiniz. Çalışmadan herhangi bir zamanda ayrılmakta özgürsünüz. Çalışmaya katıldığınız için size herhangi bir ödeme yapılmayacak ya da sizden herhangi bir maddi katkı/malzeme katkısı istenmeyecektir. Araştırmada kullanılacak tüm malzemeler ve yapılabilecek tüm harcamalar araştırmacı tarafından karşılanacaktır. Araştırmaya ayırdığınız zaman ve destek için teşekkür ederim.

Yukarıda açıklanan Bilgilendirilmiş Gönüllü Onam Formu'nu okudum. Çalışmaya katılmayı kabul ediyorum.

- Evet, kabul ediyorum.
- Hayır, kabul etmiyorum.

Yardımcı Araştırmacı: Begüm Kurt

Tel: 0537 399 03 00

Sorumlu Araştırmacı: Prof. Dr. Hülya Demir

Appendix 2: Genel ve Sosyodemografik Bilgiler

Bu anket bilimsel bir tez için hazırlanmıştır. Kadın Bireylerde Beslenme Bilgi Düzeyinin Besin Etiketleri Okuma Alışkanlığı Üzerine Etkisinin İncelenmesi amacıyla planlanacaktır. Araştırmaya ayırdığınız zaman ve destek için teşekkür ederim. Yukarıda açıklanan Bilgilendirilmiş Gönüllü Onam Formu'nu okudum. Çalışmaya katılmayı kabul ediyorum.

a)Evet, onaylıyorum

b)Hayır onaylamıyorum

GENEL VE SOSYODEMOGRAFİK BİLGİLER

1)CİNSİYET

a)Kadın b) Erkek

2)Yaş (Doğum yılı olarak belirtiniz, örn: 1985)

3)Boy (.....cm)

4)Kilo (.....kg)

5)Medeni Durum

a)Evli b)Bekar

6)Kiminle yaşıyorsunuz? /Evde yaşayan birey sayısı?

a)Aile ile b) Ev arkadaşı c) Yalnız d)Diğer

7)Toplam gelirinizden beslenmeye ayırdığınız bütçe yüzde nedir?

a)%5 b)%10 c)%20 d)%30 e)%40 f)%50 ve üstü

8)Öğrenim durumunuz nedir? (Lütfen bitirmiş olduğunuz veya halen okuyor olduğunuz okulu işaretleyiniz)

a)Okur-yazar b)ilköğretim c)lise d)üniversite e)Lisansüstü

9)Şuan çalışıyor musunuz?

a)Evet b)Hayır

10)Mesleğiniz nedir?.....

11)Çocuğunuz var mı?

a)Evet b)Hayır

12)Herhangi bir sağlık probleminiz var mı?

a)Evet b)Hayır c)evet ise belirtiniz (.....)

13)Sağlıklı beslenme eğitimi aldınız mı?

a)Evet b)Hayır

14)Sağlıklı beslenme eğitimi almak ister misiniz?

a)Evet b)Hayır

15)Hayatınız boyunca diyet uyguladınız mı?

a)Evet b)ha

Appendix 3: YETBİD Ölçeği Temel beslenme ve Besin Sağlık Bilgisi

YETİŞKİNLER İÇİN BESLENME BİLGİ DÜZEYİ (YETBİD) ÖLÇÜĞÜ TEMEL BESLENME VE BESİN-SAĞLIK BİLGİSİ

		Kesinlikle katılıyor	Katılıyor	Ne Katılıyor Ne Katılmıyor	Katılmıyor	Kesinlikle katılmıyor
1	Doğal, taze sıkılmış meyve suları şeker içermez.					
2	Havuç iyi bir A vitamini kaynağıdır.					
3	Vitamin ve mineraller enerji verir.					
4	Karbonhidratlar temel enerji kaynağıdır.					
5	Dondurulmuş ürünlerin besin değeri taze besinlerden daha düşüktür.					
6	Meyvelerin protein içeriği yüksektir.					
7	Yumurta ile kırmızı et, içerdikleri protein miktarı açısından benzerdir.					
8	Zeytinyağı tüketmek kolesterolü yükseltir.					
9	Kuru fasulye piyazının lif içeriği yüksektir.					
10	Salam ve sosis gibi işlenmiş et ürünlerinin içerisinde bulunan yağlar sağlık için zararlıdır.					
11	Süt ve süt ürünlerinde bulunan kalsiyum minerali kemik ve diş sağlığı için önemlidir.					
12	Kemik erimesinden korunmada gerekli olan D vitaminin en iyi kaynağı güneştir.					
13	E vitamini görme duyusu için oldukça etkili bir vitamindir.					
14	Portakalda bulunan C vitamini bağışıklığı güçlendirerek soğuk algınlığı ve gribal enfeksiyonlara karşı korur.					

15	İçerdiği vitaminlerden dolayı tam tahıllı(esmer) ekmek tüketmek sinir sistemi için faydalıdır.					
16	Tuzun fazla tüketilmesi tansiyonu etkilemez.					
17	Kırmızı et B12 vitamini içerdiği için unutkanlığı önlemede etkilidir.					
18	Kırmızı ve mor renkli sebze ve meyveler kanserden koruyucudur.					
19	Balığın doymuş yağ içeriği kırmızı etten daha yüksektir.					
20	Yağlar, protein ve karbonhidratlara göre daha az enerji içerirler.					

***Beslenme ve sağlık arasındaki ilişkinin derecesi nasıldır? Değerlendiriniz.

0	1	2	3	4	5	6	7	8	9	10
←hiç ilişki olmaması										yüksek ilişki
olması →										

Appendix 4: YETBİD Ölçeği Besin Tercihi

BESİN TERCİHİ

		Kesinlikle katılıyorum	Katılıyorum	Ne Katılıyorum Ne Katılmıyorum	Katılmıyorum	Kesinlikle katılmıyorum
1	Şeker hastalarının meyve suyu yerine meyvenin kendisini (mümkünse kabuğunu soymadan) tüketmeleri daha sağlıklıdır.					
2	Şekerli besinler yerine lifli besinler tüketmek kabızlığı önler.					
3	Gıdalarla aldığı yağ miktarını azaltmak isteyen bir birey tavuk kızartma yerine tavuk ızgara tercih etmelidir.					
4	Bir öğündeki aldığı proteini artırmak isteyen kişi, bulgurlu ıspanak yemeği yerine yumurtalı ıspanak yemeğini tercih etmelidir.					
5	Ara öğünde tatlı bisküvi yerine kepekli galeta tüketmek daha doğru bir seçimdir.					
6	Çocukların beslenme çantasına gofret yerine 3-4 adet kuru kayısı koymak daha faydalıdır.					
7	Bir yetişkinin sıvı ihtiyacını çay ve kahve gibi içecekler yerine su tüketerek karşılaması daha doğrudur.					

8	Vitamin ve mineralleri doğrudan besinlerden almak yerin, ilaç şeklindeki vitaminlerden almak daha faydalıdır.						
9	Hayvansal kaynaklı besinlerin(et, balık, süt, yumurta gibi) içerisindeki proteinler, vücut sağlığı için çok önemlidir.						
10	Beyaz ekmek, tam tahıllı(esmer) ekmeğe göre daha sağlıklıdır.						
11	Alınan tuzu azaltmak için lahana turşusu yerine lahana salatası tercih edilmelidir.						
12	Gıdalardan aldığı yağ miktarını azaltmak isteyen birisi light süt tercih edebilir.						

***Günlük hayatınızda uyguladığınız besin tercihlerinizi ne kadar doğru buluyorsunuz? Değerlendiriniz?

0	1	2	3	4	5	6	7	8	9	10
←yetersiz, az derecede yeterli →								çok iyi derecede		

KATILIMINIZ İÇİN TEŞEKKÜR EDERİZ...

Appendix 5: Besin Etiketi Okuma Tutum Ölçeği

BÖLÜM III. BESİN ETİKETİ OKUMA TUTUM ÖLÇEĞİ

Aşağıda besin etiketi okumayla ilgili 30 önerme yer almaktadır. Lütfen sizin için uygun olan ifadeyi (X) ile işaretleyiniz.	Hiç katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Tamamen katılıyorum
1.Satın aldığım ambalajlı ürünlerin besin etiketini okurum	()	()	()	()	()
2.Besin etiketinin içeriğini anlayabiliyorum	()	()	()	()	()
3.Besin etiketi ürünü satın alabilmem için önemlidir	()	()	()	()	()
4.Ambalajı güzel olan ürünlerin besin etiketine bakmam	()	()	()	()	()
5.Satın aldığım ürünlerin besin etiketi içeriğini yeterli buluyorum	()	()	()	()	()
6.Ürünleri satın alabilmem için besin etiketinin olması gerekir	()	()	()	()	()
7.Satın aldığım ambalajlı ürünlerin üretim tarihi benim için önemlidir	()	()	()	()	()
8.Satın aldığım ambalajlı ürünlerin son tüketim tarihi benim için önemlidir	()	()	()	()	()
9.Satın aldığım ürünün menşei (üretildiği ülke) benim için önemlidir	()	()	()	()	()
10.Satın aldığım ürünün raf ömrü benim için önemlidir	()	()	()	()	()
11.Satın aldığım ürünün üretici firması benim için önemlidir	()	()	()	()	()
12.Satın aldığım ürünün üretici firmasının adresi benim için önemlidir	()	()	()	()	()
13.Satın aldığım ürünün miktarı (gramı, hacmi) benim için önemlidir	()	()	()	()	()
14.Satın aldığım ürünün içindekiler listesi benim için önemlidir	()	()	()	()	()
15.Satın aldığım ürünün alerjen listesi benim için önemlidir	()	()	()	()	()
16.Satın aldığım ürünün tüketim şekli (ör. Soğuk içiniz) benim için önemlidir.	()	()	()	()	()
17.Satın aldığım ürünün saklama talimatı (ör. Oda sıcaklığında saklayınız) vermesini önemserim	()	()	()	()	()
18.Satın aldığım ürünün üzerinde üretim izninin olması benim için önemlidir	()	()	()	()	()
19.Satın aldığım ürünlerin besin içeriğinin sağlıklı olması benim için önemlidir.	()	()	()	()	()
20.Bildğim markaların besin etiketine bakarım	()	()	()	()	()
21.Bilmediğim markaların besin etiketine bakarım	()	()	()	()	()
22.Ön paket etiketi (paketin önünde yazan besin bilgisi) olan ürünlerin, arkasındaki besin etiketine bakmam	()	()	()	()	()
23.Reklamları olan ürünlerin besin etiketine bakmayı gereksiz bulurum	()	()	()	()	()
24.İlk defa alacağım ürünlerin besin etiketine bakarım	()	()	()	()	()
25.Sağlık beyanı içeren ürünleri daha çok tüketirim	()	()	()	()	()
26.TSE, Sağlık bakanlığı onaylarına bakarım	()	()	()	()	()
27.Fiyatı yüksek olan yiyeceklerin, besin etiketine bakarım	()	()	()	()	()
28.Fiyatı düşük olan yiyeceklerin, besin etiketine bakarım	()	()	()	()	()
29.İndirimde olan ürünlerin, besin etiketlerine bakarım	()	()	()	()	()
30.Ambalajlı besin ürünlerinin üzerind E kodu olan katkı maddelerine (koruyucu, renklendirici) bakarım	()	()	()	()	()

Appendix 6: Ethical Committee Declaration

Evrak Tarih ve Sayısı: 11.01.2022-46376



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

Sayı : E-54022451-050.05.04-46376
Konu : Etik Kurul Kararı - Hülya DEMİR

11.01.2022

Sayın Hülya DEMİR
Yeditepe Üniversitesi Sağlık Bilimleri Fakültesi Beslenme ve Diyetetik Bölümü

2021/418 numaralı "Kadın Bireylerde Beslenme Bilgi Düzeyinin Besin Etiket Okuma Alışkanlığı Üzerine Etkisinin İncelenmesi" başlıklı başvurunuz Üniversitemiz Etik Kurullar Birimi' nin 28.12.2021 tarihli, 27 sayılı Girişimsel Olmayan Araştırmalar Etik Kurul toplantısında değerlendirilmiş olup, mevcudun oybirliğiyle onaylanmasına karar verilmiştir.

Gereğini ve bilgilerinizi arz/rica ederim.

Prof.Dr. İsmail MERAL
Başkan

Bu belge, güvenli elektronik imza ile imzalanmıştır.

Doğrulama Kodu :BSU46RC313 Pin Kodu :18722 Belge Takip Adresi : <https://turkiye.gov.tr/ebd?eK=5394&eD=BSU46RC313&eS=46376>
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e-Posta:info@bezmialem.edu.tr İnternet Adresi:www.bezmialem.edu.tr



Appendix 7: Curriculum Vitae

Kişisel Bilgiler

Adı	BEGÜM	Soyadı	KURT
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Öğrenim Durumu

Derece	Alan	Mezun Olduğu Kurumun Adı	Mezuniyet Yılı
Yüksek Lisans	Beslenme ve Diyetetik	Yeditepe Üniversitesi	2022
Lisans	Beslenme ve Diyetetik	Bahçeşehir Üniversitesi	2018
Lise	Sayısal	Dr. İlhami Tankut Anadolu Lisesi	2014

İş Deneyimi (Sondan geçmişe doğru sıralayın)

Görevi	Kurum	Süre (Yıl - Yıl)
DİYETİSYEN	HEALTHFIT SAĞLIKLI BESLENME VE CATERING HİZMETLERİ	2019-HALEN

Bilgisayar Bilgisi

Program	Kullanma becerisi
MICROSOFT OFFICE	ÇOK İYİ

*Çok iyi, iyi, orta, zayıf olarak değerlendirin

Diğer (Görev Aldığı Projeler/Sertifika/Ödülleri)

Faculty of pharmacy and medicine, department of medico-surgical sciences and biotechnologies, bariatric centre of excellence
Nutrition in rehabilitation and sports medicine
Obesity and Metabolism: Role of the Microbiota
7. Ulusal Obezite Kongresi
Onkoloji ve Beslenme Sempozyumu